CONGENITAL HEART SURGERY DATABASE TRAINING MANUAL

V3.41



Table of Contents

Administrative 2
Demographics 5
Birth Information 9
Noncardiac Congenital Anatomic Abnormalities 36
Chromosomal Abnormalities 41
Syndromes 49
Hospitalization 60
Pre-Operative Factors 66
Diagnosis 76
Status Post 112
Procedures 135
Procedure Specific Factors 161
Operative 206
ECMO or CPB Examples 209
Blood and Blood-Related Products 255
CABG Procedures 296
Valve Procedures 298
VAD Procedures 379
Complications 391
Discharge / Readmission 408
Patient Process Measures 422
Anesthesia 435
Anesthesia Administrative 435
Anesthesia Pre-operative 439
Anesthesia Monitoring 449
Anesthesia Anesthetic Techique 467
Anesthesia Airway 482
Anesthesia Intra-operative Pharmacology (including CPB) 488
Anesthesia Pharmacology on Arrival to ICU/PACU 500
Anesthesia ICU / PACU Care 501
Anesthesia Adverse Events 510

Current Date: 7/15/2019

Note: **- ALL fields defined in these specifications with "Core: Yes" are to be collected by all sites.**

- A data record must be created for each time the patient enters the Operating Room.

- Fields indicated with a gray background are no longer being collected.

Administrative

Long Name:	Participant ID	*SeqNo:*	10
Short Name:	**ParticID**	*Core:*	Yes
Section Name:	Administrative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Participant ID is a unique number assigned to each database participant by the STS. A database participant is defined as one entity that signs a Participation Agreement with the STS, submits one data file to the harvest, and gets back one report on their data. The participant ID must be entered into each record. Each participant's data, if submitted to harvest, must be in one data file. If one participant keeps their data in more than one file (e.g., at two sites), then the participant must combine them back into one file for harvest submission. If two or more participants share a single purchased software, and enter cases into one database, then the data must be extracted into two different files, one for each participant ID, with each record having the correct participant ID number.		
Intent / Clarification:			
Data Source:	User or Automatic		
Format:	Text		

Long Name:	STS Data Version	*SeqNo:*	20
Short Name:	**DataVrsn**	*Core:*	Yes
Section Name:	Administrative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Version number of the STS Data Specifications/Dictionary, to which each record conforms. It will identify which fields should have data, and what are the valid data for each field. This must be entered into the record automatically by the software at the time the record is created.		
Intent / Clarification:			
Data Source:	Automatic		

Format: Text

Long Name: Software Vendor Identifier
Short Name: **VendorID**
Section Name: Administrative
DBTableName: Operations
Definition: Identifying code (assigned by STS) given to identify software vendor (up to 8 characters). Vendors should use standard name identification across sites. Changes to Software Vendor Identifier must be reported to the STS.

SeqNo: 40
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: Automatic
Format: Text

Long Name: Software Version
Short Name: **SoftVrsn**
Section Name: Administrative
DBTableName: Operations
Definition: Vendor's software product name and version number identifying the software which created this record. Vendor controls the value in this field.

SeqNo: 50
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: Automatic
Format: Text

Long Name: Operation Table Record Identifier
Short Name: **OperationID**
Section Name: Administrative
DBTableName: Operations
Definition: An arbitrary, unique value generated by the software that permanently identifies each operation record in the participant's database. The value of the identifier is a combination of a code assigned to the software developer by the STS, and a value generated by the software to create a unique value. Once

SeqNo: 60
Core: Yes
Harvest: Yes

assigned to a record, this number can never be changed or reused. The data warehouse will use this value to communicate issues about individual records with the participant. This field is the primary key that links this record with the associated records in the Diagnosis, Risk Factors, Preoperative Factors, Procedures, Complications, Anesthesia Adverse Events, Preoperative Medications, Intraoperative Pharmacology, and ICU Pharmacology tables.

Intent / Clarification:

Data Source: Automatic
Format: Text

Long Name: Operations Link to Demographics Table
Short Name: **PatID**
Section Name: Administrative
DBTableName: Operations
Definition: An arbitrary, unique value generated by the software that permanently identifies each patient demographic record in the participant's database. This field is the foreign key that links this record with the associated record in the Demographics table.

SeqNo: 70
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: Automatic
Format: Text

Long Name: Patient Participating In STS-Related Clinical Trial
Short Name: **ClinTrial**
Section Name: Administrative
DBTableName: Operations
Definition: Indicate which, if any, STS-related clinical trial in which the patient is participating. The STS will assign a code to each clinical trial as they begin collecting data.

SeqNo: 81
Core: Yes
Harvest: Yes

Intent / Clarification:

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

Code:	Value:

1	None
2	Trial 1
3	Trial 2
4	Trial 3
5	Trial 4
6	Trial 5
7	Trial 6

Long Name:	Patient Participating In STS-Related Clinical Trial - Patient ID	*SeqNo:*	82
Short Name:	**ClinTrialPatID**	*Core:*	Yes
Section Name:	Administrative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the patient identifier used to identify the patient in the clinical trial.		

Intent / Clarification:

Data Source:	User
Format:	Text
ParentLongName:	Patient Participating In STS-Related Clinical Trial
ParentShortName:	**ClinTrial**
ParentHarvestCodes:	<>1 And Is Not Missing
ParentValues:	Is Not "None" And Is Not Missing

Demographics

Long Name:	Demographics Table Patient Identifier	*SeqNo:*	90
Short Name:	**PatID**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Yes
DBTableName:	Demographics		
Definition:	An arbitrary value (not a recognizable ID like Social Security Number or Medical Record Number) that uniquely and permanently identifies each patient. The value of the identifier is a combination of a code assigned to the software developer by the STS, and a value generated by the software to create a unique value. Once assigned to a patient, this can never be changed or reused. This field is the primary key that links this demographics record with the associated records in the Non-Cardiac Abnormalities, Noncardiac Congenital Anatomic		

Abnormalities, Chromosomal Abnormalities, and Syndromes tables.

Intent / Clarification:

Data Source: Automatic
Format: Text

Long Name: Demographics Table Data Version
Short Name: **DemogDataVrsn**
Section Name: Demographics
DBTableName: Demographics
Definition: Version number of the STS Data Specifications/Dictionary, to which this Demographics record conforms as assigned by the software. This value will determine which fields should have data and what the valid data are for each field. This must be entered into the record automatically by the software at the time the record is created. See Software Specifications document for description of how this value can be modified after the record was created.

SeqNo: 100
Core: Yes
Harvest: Optional

Intent / Clarification:

Data Source: Automatic
Format: Text

Long Name: Patient National Identification (Social Security Number)
Short Name: **PatNationalID**
Section Name: Demographics
DBTableName: Demographics
Definition: Indicate the patient's Social Security Number (SSN). Although this is the Social Security Number in the USA, other countries may have a different National Patient Identifier Number. For example in Canada, this would be the Social Insurance Number. This field should be collected in compliance with state/local privacy laws.

SeqNo: 110
Core: Yes
Harvest: Optional

Intent / Clarification:

Data Source: User
Format: Text

Long Name:	Medical Record Number	*SeqNo:*	120
Short Name:	**MedRecN**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Optional
DBTableName:	Demographics		
Definition:	Indicate the patient's medical record number at the hospital where surgery occurred. This field should be collected in compliance with state/local privacy laws.		
Intent / Clarification:			
Data Source:	User		
Format:	Text		

Long Name:	Patient Last Name	*SeqNo:*	140
Short Name:	**PatLName**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Optional
DBTableName:	Demographics		
Definition:	Indicate the patient's last name documented in the medical record. This field should be collected in compliance with state/local privacy laws.		
Intent / Clarification:			
Data Source:	User		
Format:	Text		

Long Name:	Patient First Name	*SeqNo:*	150
Short Name:	**PatFName**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Optional
DBTableName:	Demographics		
Definition:	Indicate the patient's first name documented in the medical record. This field should be collected in compliance with state/local privacy laws.		
Intent / Clarification:			
Data Source:	User		

Format: Text

Long Name: Patient Middle Name
Short Name: **PatMName**
Section Name: Demographics
DBTableName: Demographics
Definition: Indicate the patient's middle name or middle initial as documented in the medical record. Leave "blank" if no middle name. This field should be collected in compliance with state/local privacy laws.

SeqNo: 170
Core: Yes
Harvest: Optional

Intent / Clarification:

Data Source: User
Format: Text

Long Name: Patient's Region
Short Name: **PatRegion**
Section Name: Demographics
DBTableName: Demographics
Definition: Indicate the region of the country (i.e., state or province) in which the patient permanently resides at time of admission.

SeqNo: 180
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Text

Long Name: Patient's Postal Code
Short Name: **PatPostalCode**
Section Name: Demographics
DBTableName: Demographics
Definition: Indicate the ZIP Code of the patient's residence. Outside the USA, this data may be known by other names such as Postal Code. This field should be collected in compliance with state/local privacy laws.

SeqNo: 190
Core: Yes
Harvest: Optional

Intent / Clarification:

Data Source: User
Format: Text

Long Name: Patient's Country
Short Name: **PatientCountry**
Section Name: Demographics
DBTableName: Demographics
Definition: Indicate the patient's country of residence at time of admission. This field should be collected in compliance with state/local privacy laws.

SeqNo: 201
Core: Yes
Harvest: Optional

Intent / Clarification:

Data Source: User
Format: Text

Birth Information

Long Name: Born By IVF
Short Name: **BornByIVF**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate whether the patient was conceived by in vitro fertilization.

SeqNo: 202
Core: Yes
Harvest: Yes

Intent / Clarification: If Born By IVF is not known, leave the field blank.

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

Code:	Value:
1	Yes
2	No

Long Name: Patient Adopted
Short Name: **PatientAdopted**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate whether the patient is adopted by the current legal guardians/parents.

SeqNo: 203
Core: Yes
Harvest: Yes

Intent / Clarification: If Patient Adopted is not known, leave the field blank.

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

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Birth Location Is Known
Short Name: **BirthLocKnown**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate whether the location (city, state, country) of the patient's birth is known.

SeqNo: 208
Core: Yes
Harvest: Yes

Intent / Clarification:

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

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Born at Home
Short Name: **BornHome**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate whether the patient was born at home.

SeqNo: 209
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Birth Location Is Known
ParentShortName: **BirthLocKnown**

ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Hospital Name Known
Short Name: **HospNameKnown**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate whether the name of the hospital is known.

SeqNo: 210
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Born at Home
ParentShortName: **BornHome**
ParentHarvestCodes: 2
ParentValues: = "No"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Birth Hospital Name
Short Name: **BirthHospName**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate the name of the hospital where the patient was born.

SeqNo: 211
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Hospital Name Known
ParentShortName: **HospNameKnown**
ParentHarvestCodes: 1
ParentValues: = “Yes”

Long Name:	Birth Hospital TIN	*SeqNo:*	212
Short Name:	**BirthHospTIN**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Yes
DBTableName:	Birth Information		
Definition:	Indicate the Taxpayer Identification Number for the hospital where the patient was born. This field will be blank for Non-US participants.		

Intent / Clarification:

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

ParentLongName:	Hospital Name Known
ParentShortName:	**HospNameKnown**
ParentHarvestCodes:	1
ParentValues:	= "Yes"

May 2019: Our hospital serves patients from several states as well as Canada. I know that Canadian hospitals will not have a TIN, but I am having difficulty finding TINs for many of the other hospitals. Is there a database that that STS users can access or a download somewhere so we can get these numbers? Any information would be helpful.
Here's a link which may help: https://www.cms.gov/OpenPayments/Downloads/2018-Reporting-Cycle-Teaching-Hospital-List-pdf.pdf **It may not be exhaustive (as it specifies "teaching hospitals") but could be used to create a parred down list with relevant nearby hospitals for sites.**

Long Name:	City of Birth	*SeqNo:*	219
Short Name:	**BirthCit**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Yes
DBTableName:	Birth Information		
Definition:	Indicate the city in which the patient was born.		

Intent / Clarification:

Data Source:	User
Format:	Text

ParentLongName:	Birth Location Is Known
ParentShortName:	**BirthLocKnown**
ParentHarvestCodes:	1
ParentValues:	= "Yes"

Long Name:	Birth Region	*SeqNo:*	220

Short Name:	**BirthSta**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Yes
DBTableName:	Birth Information		
Definition:	Indicate the region of the country (i.e., state or province) in which the patient was born.		

Intent / Clarification:

Data Source: User
Format: Text

ParentLongName: Birth Location Is Known
ParentShortName: **BirthLocKnown**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Long Name:	Country of Birth	*SeqNo:*	231
Short Name:	**BirthCountry**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Yes
DBTableName:	Birth Information		
Definition:	Indicate the country in which patient was born. This field should be collected in compliance with state/local privacy laws.		

Intent / Clarification:

Data Source: User
Format: Text

ParentLongName: Birth Location Is Known
ParentShortName: **BirthLocKnown**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Long Name:	Mode of Delivery Known	*SeqNo:*	232
Short Name:	**DelivModeKnown**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Yes
DBTableName:	Birth Information		
Definition:	Indicate whether the mode of delivery is known.		

Intent / Clarification:

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

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Mode of Delivery
Short Name: **DelivMode**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate the mode of delivery.

SeqNo: 233
Core: Yes
Harvest: Yes

Intent / Clarification: The intent is to collect how labor began. "Other C-Section" should be used to capture an unscheduled, emergent C-Section such as in a situation where the baby needs to be delivered emergently (severe eclampsia, abruption, fetal distress, etc.)

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

ParentLongName: Mode of Delivery Known
ParentShortName: **DelivModeKnown**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Spontaneous onset labor with vaginal delivery
2	Spontaneous onset labor with cesarean section
3	Induction of labor with vaginal delivery
4	Induction of labor with subsequent cesarean section
5	Scheduled cesarean section
6	Other cesarean section

Long Name: Mother's Gravidity And Parity Known
Short Name: **GravParKnown**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate whether the patient's mother's gravidity and parity are known.

SeqNo: 234
Core: Yes
Harvest: Yes

Intent / Clarification:

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

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Mother's Gravidity
Short Name: **Gravidity**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate the number of times the mother of the patient has been pregnant, regardless of whether these pregnancies were carried to term. This includes the current pregnancy.

SeqNo: 235
Core: Yes
Harvest: Yes

Low Value: 1
High Value: 30

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Mother's Gravidity And Parity Known
ParentShortName: **GravParKnown**
ParentHarvestCodes: 1
Parent Value: = "Yes"

July 2019: Do these refer to the mother's gravidity and parity at the time of the patient's birth, or at the time when the operation was performed? Particularly in older patients, the mother may have had several more pregnancies after the birth of the patient who is having the operation. **These are to be collected at the time of the patient's birth.**

Long Name: Mother's Parity
Short Name: **Parity**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate the number of >20-week births the patient's mother has had. Pregnancies with multiple babies (twins, triplets, etc.) count as 1 birth.

SeqNo: 236
Core: Yes
Harvest: Yes

Low Value: 0
High Value: 30

Intent / Clarification: Include current patient in count.

Data Source: User

Format: Integer

ParentLongName: Mother's Gravidity And Parity Known
ParentShortName: **GravParKnown**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: APGAR Scores Known *SeqNo:* 237
Short Name: **ApgarKnown** *Core:* Yes
Section Name: Demographics *Harvest:* Yes
DBTableName: Birth Information
Definition: Indicate whether the patient's APGAR scores are known.

Intent / Clarification:

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

Code:	Value:
1	Yes
2	No

Long Name: APGAR Score At 1 Minute *SeqNo:* 238
Short Name: **Apgar1** *Core:* Yes
Section Name: Demographics *Harvest:* Yes
DBTableName: Birth Information
Definition: Indicate the patient's APGAR score at 1 minute after birth.
Low Value: 0
High Value: 10

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: APGAR Scores Known
ParentShortName: **ApgarKnown**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: APGAR Score At 5 Minutes *SeqNo:* 239
Short Name: **Apgar5** *Core:* Yes

Section Name: Demographics *Harvest:* Yes
DBTableName: Birth Information
Definition: Indicate the patient's APGAR score at 5 minutes after birth.
Low Value: 0
High Value: 10

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: APGAR Scores Known
ParentShortName: **ApgarKnown**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Mother's Name Known *SeqNo:* 240
Short Name: **MatNameKnown** *Core:* Yes
Section Name: Demographics *Harvest:* Yes
DBTableName: Birth Information
Definition: Indicate whether the name of patient's biological mother at time of patient's birth is known. If the patient is adopted and the name of the patient's biological mother is not known, indicate whether the name of the patient's adopted mother is known. This field should be collected in compliance with state/local privacy laws.

Intent / Clarification:

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

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Mother's Last Name *SeqNo:* 250
Short Name: **MatLName** *Core:* Yes
Section Name: Demographics *Harvest:* Optional
DBTableName: Birth Information
Definition: Indicate the last name of patient's biological mother at time of patient's birth, if it is known. If the patient is adopted, if the last name of the patient's biological mother is known, please enter the last initial of the patient's biological

mother. If the patient is adopted, if the last name of the patient's biological mother is not known, please enter the last name of the patient's adopted mother.

Intent / Clarification:

Data Source: User
Format: Text

ParentLongName: Mother's Name Known
ParentShortName: **MatNameKnown**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Long Name: Mother's First Name
Short Name: **MatFName**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate the first name of patient's biological mother at time of patient's birth, if it is known. If the patient is adopted, if the first name of the patient's biological mother is known, please enter the first name of the patient's biological mother. If the patient is adopted, if the first name of the patient's biological mother is not known, please enter the first name of the patient's adopted mother. This field should be collected in compliance with state/local privacy laws.

SeqNo: 260
Core: Yes
Harvest: Optional

Intent / Clarification:

Data Source: User
Format: Text

ParentLongName: Mother's Name Known
ParentShortName: **MatNameKnown**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Long Name: Mother's Middle Name
Short Name: **MatMName**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate the middle name of patient's biological mother at time of patient's birth, if it is known. If the patient is adopted, if the first name of the patient's biological mother is known,

SeqNo: 280
Core: Yes
Harvest: Optional

please enter the first name of the patient's biological mother. If the patient is adopted, if the first name of the patient's biological mother is not known, please enter the first name of the patient's adopted mother. This field should be collected in compliance with state/local privacy laws.

Intent / Clarification:

Data Source: User
Format: Text

ParentLongName: Mother's Name Known
ParentShortName: **MatNameKnown**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Long Name: Mother's National Identification (Social Security Number) Known
SeqNo: 290
Short Name: **MatSSNKnown**
Core: Yes
Section Name: Demographics
Harvest: Yes
DBTableName: Birth Information
Definition: Indicate whether the Social Security Number (SSN) of patient's biological mother at time of patient's birth is known. If the patient is adopted and the SSN of the patient's biological mother is not known, please indicate whether the SSN of the patient's adopted mother is known. This field should be collected in compliance with state/local privacy laws.

Intent / Clarification:

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

Harvest Codes and Value Definitions:

Code:	Value:	Definition:
1	Yes	The mother's national identification number (such as Social Security Number) is known and will be collected.
2	No	The mother's national identification number (such as Social Security Number) is not known and will be not collected.
3	Refused	Patient chose not to provide the information.

Long Name: Mother's National Identification (Social Security Number)
SeqNo: 300

Short Name:	**MatSSN**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Optional
DBTableName:	Birth Information		
Definition:	Indicate the Social Security Number (SSN) of patient's biological mother at time of patient's birth, if it is known. Although this is the SSN in the USA, other countries may have a different National Patient Identifier Number. For example in Canada, this would be the Social Insurance Number. If the patient is adopted, if the SSN of the patient's biological mother is known, please enter the SSN of the patient's biological mother. If the patient is adopted, if the SSN of the patient's biological mother is not known, please enter the SSN of the patient's adopted mother. This field should be collected in compliance with state/local privacy laws.		
Intent / Clarification:			
Data Source:	User		
Format:	Text		
ParentLongName:	Mother's National Identification (Social Security Number) Known		
ParentShortName:	**MatSSNKnown**		
ParentHarvestCodes:	1		
ParentValues:	= "Yes"		

Long Name:	Date of Birth	*SeqNo:*	310
Short Name:	**DOB**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Optional
DBTableName:	Birth Information		
Definition:	Indicate the patient's date of birth using 4-digit format for year. This field should be collected in compliance with state/local privacy laws.		
Intent / Clarification:			
Data Source:	User		
Format:	Date - mm/dd/yyyy		

Long Name:	Birth Weight Known	*SeqNo:*	320
Short Name:	**BirthWtKnown**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Yes

DBTableName: Birth Information
Definition: Indicate whether the patient's birth weight is known.

Intent / Clarification:

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

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Birth Weight
Short Name: **BirthWtKg**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate the patient's APGAR score at 1 minute after birth.
Low Value: 0.100
High Value: 10.000

SeqNo: 330
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Real, at least 3 decimal places

ParentLongName: Birth Weight Known
ParentShortName: **BirthWtKnown**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Sex At Birth
Short Name: **Gender**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate the patient's gender at birth as male, female or ambiguous.

SeqNo: 340
Core: Yes
Harvest: Yes

Intent / Clarification:

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

Harvest Codes:

Code:	*Value:*

1	Male
2	Female
3	Ambiguous

Long Name: Premature Birth
Short Name: **Premature**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate whether the patient was born prematurely as defined by a gestational period of less than 37 weeks.

SeqNo: 350
Core: Yes
Harvest: Yes

Intent / Clarification:

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

Harvest Codes:

Code:	*Value:*
1	Yes
2	No
3	Unknown

Long Name: Gestational Age At Birth Known
Short Name: **GestAgeKnown**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate whether the patient's gestational age at birth is known.

SeqNo: 360
Core: Yes
Harvest: Yes

Intent / Clarification:

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

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Gestational Age At Birth In Weeks
Short Name: **GestAgeWeeks**
Section Name: Demographics

SeqNo: 370
Core: Yes
Harvest: Yes

DBTableName: Birth Information
Definition: Indicate the number of full weeks in the patient's estimated gestational age at birth. This field is a required field for neonates and infants and is an optional field for children and adults.
Low Value: 16
High Value: 44

Intent / Clarification: If the patient's gestational age is 36 and 5/7, please enter '36'.

Data Source: User
Format: Integer

ParentLongName: Gestational Age At Birth Known
ParentShortName: **GestAgeKnown**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Gestational Age at Birth In Days
Short Name: **GestAgeDays**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate the number of additional days in the patient's estimated gestational age at birth. (Example, for 36 weeks and 5 days, enter "5".) This field is a required field for neonates and infants and is an optional field for children and adults.
Intent / Clarification: If the patient's gestational age is 36 and 5/7, please enter '5'

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

ParentLongName: Gestational Age At Birth Known
ParentShortName: **GestAgeKnown**
ParentHarvestCodes: 1
Parent Value: = "Yes"

SeqNo: 371
Core: Yes
Harvest: Yes

Harvest Codes:

Code:	Value:
0	0
1	1
2	2
3	3
4	4
5	5
6	6
9	Unknown

Long Name:	Multiple Gestation	*SeqNo:*	372
Short Name:	**MultGest**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Yes
DBTableName:	Birth Information		
Definition:	Indicate whether the patient was part of a multiple gestation, such as twins or triplets.		
Intent / Clarification:	Include multiples even if expired in utero as the pregnancy originated as multiple gestations.		
Data Source:	User		
Format:	Text (categorical values specified by STS)		

Harvest Codes:

Code:	*Value:*
1	Yes
2	No
3	Unknown

Long Name:	Antenatal Diagnosis of Congenital Heart Disease	*SeqNo:*	373
Short Name:	**AntenatalDiag**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Yes
DBTableName:	Birth Information		
Definition:	Indicate whether a cardiac anomaly was diagnosed antenatally (e.g., fetal ultrasound).		
Intent / Clarification:			
Data Source:	User		
Format:	Text (categorical values specified by STS)		

Harvest Codes:

Code:	Value:
1	Yes
2	No
3	Unknown

Long Name:	Pregnancy Related Complications	*SeqNo:*	375
Short Name:	**PregComplications**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Yes
DBTableName:	Birth Information		
Definition:	Indicate whether the mother had any pregnancy-related complications.		

Intent / Clarification:

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

Harvest Codes:

Code:	*Value:*
1	Yes
2	No
3	Unknown

Long Name: Pre-Eclampsia
Short Name: **PregCompPreE**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate whether the mother had pre-eclampsia.

SeqNo: 377
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Pregnancy Related Complications
ParentShortName: **PregComplications**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No
3	Unknown

Long Name: Gestational Diabetes (GDM)
Short Name: **PregCompGestDM**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate whether the mother had gestational diabetes.

SeqNo: 378
Core: Yes
Harvest: Yes

Intent / Clarification: Code 'yes' to Gestational Diabetes if the Mother had any type of diabetes during pregnancy (Type 1, Type 2 or Gestational).
The intent is to capture the presence of any diabetes during gestation.

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

ParentLongName: Pregnancy Related Complications
ParentShortName: **PregComplications**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No
3	Unknown

March 2019: What if the mom has type 1 diabetes? Should this be selected in that case or recorded under other? Although PregCompOther is to indicate whether the mother had PREGNANCY-RELATED complications and type 1 diabetes is not pregnancy related. **If there is maternal diabetes present (Type 1, 2 or gestational) code 'yes' to the field Gestational Diabetes**

Long Name: Hypertension
Short Name: **PregCompHTN**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate whether the mother had hypertension during pregnancy.

SeqNo: 379
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Pregnancy Related Complications
ParentShortName: **PregComplications**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No
3	Unknown

Long Name: HELLPP Syndrome
Short Name: **PregCompHELLPP**
Section Name: Demographics
DBTableName: Birth Information

SeqNo: 380
Core: Yes
Harvest: Yes

Definition: Indicate whether the mother had HELLP Syndrome (HELLP stands for H- hemolysis, EL-elevated liver enzymes, LP – low platelet counts).

Intent / Clarification:

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

ParentLongName: Pregnancy Related Complications
ParentShortName: **PregComplications**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No
3	Unknown

Long Name: Polyhydramnios *SeqNo:* 381
Short Name: **PregCompPolyhydra** *Core:* Yes
Section Name: Demographics *Harvest:* Yes
DBTableName: Birth Information
Definition: Indicate whether the mother had polyhydramnios.

Intent / Clarification:

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

ParentLongName: Pregnancy Related Complications
ParentShortName: **PregComplications**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No
3	Unknown

Long Name: Oligohydramnios *SeqNo:* 382
Short Name: **PregCompOligohydra** *Core:* Yes

Section Name: Demographics *Harvest:* Yes
DBTableName: Birth Information
Definition: Indicate whether the mother had oligohydramnios.

Intent / Clarification:

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

ParentLongName: Pregnancy Related Complications
ParentShortName: **PregComplications**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No
3	Unknown

May 2019: I have a patient who was delivered early due to anhydramnios. Since this is not an option, should I select oligohydramnios since no amniotic fluid (anhydramnios) is technically severe oligohydramnios? **Yes, code as oligohydramnios.**

Long Name: Hydrops *SeqNo:* 383
Short Name: **PregCompHydrops** *Core:* Yes
Section Name: Demographics *Harvest:* Yes
DBTableName: Birth Information
Definition: Indicate whether the mother had Hydrops.

Intent / Clarification:

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

ParentLongName: Pregnancy Related Complications
ParentShortName: **PregComplications**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No
3	Unknown

Long Name:	Other Pregnancy-Related Complications	*SeqNo:*	384
Short Name:	**PregCompOther**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Yes
DBTableName:	Birth Information		
Definition:	Indicate whether the mother had other pregnancy related complications.		
Intent / Clarification:	Maternal smoking and alcohol abuse which does not result in Fetal Alcohol Syndrome should be captured here, amongst other pregnancy-related complications.		
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Pregnancy Related Complications		
ParentShortName:	**PregComplications**		
ParentHarvestCodes:	1		
ParentValues:	= "Yes"		

Harvest Codes:

Code:	Value:
1	Yes
2	No
3	Unknown

Long Name:	Race Documented	*SeqNo:*	385
Short Name:	**RaceDocumented**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Yes
DBTableName:	Birth Information		
Definition:	Indicate whether race is documented.		
Intent / Clarification:			
Data Source:	User		
Format:	Text (categorical values specified by STS)		

Harvest Codes:

Code:	Value:
1	Yes
2	No
3	Patient declined to disclose

Long Name:	Race - Caucasian	*SeqNo:*	390
Short Name:	**RaceCaucasian**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Yes
DBTableName:	Birth Information		
Definition:	Indicate whether the patient's race, as determined by the patient or family, includes Caucasian. This includes a person having origins in any of the original peoples of Europe, the Middle East, or North Africa. Definition source: Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity : The minimum categories for data on race and ethnicity for Federal statistics, program administrative reporting, and civil rights compliance reporting. (www.whitehouse.gov/omb/fedreg/1997standards.html)		

Intent / Clarification:

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

ParentLongName: Race Documented
ParentShortName: **RaceDocumented**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Race - Black / African American	*SeqNo:*	400
Short Name:	**RaceBlack**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Yes
DBTableName:	Birth Information		
Definition:	Indicate whether the patient's race, as determined by the patient or family, includes Black / African American. This includes a person having origins in any of the black racial groups of Africa. Terms such as "Haitian" or "Negro" can be used in addition to "Black or African American." Definition source: Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity : The minimum categories for data on race and ethnicity for Federal statistics, program administrative reporting, and civil rights compliance reporting. (www.whitehouse.gov/omb/fedreg/1997standards.html)		

Intent / Clarification:

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

ParentLongName: Race Documented
ParentShortName: **RaceDocumented**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Race - Asian
SeqNo: 410
Short Name: **RaceAsian**
Core: Yes
Section Name: Demographics
Harvest: Yes
DBTableName: Birth Information
Definition: Indicate whether the patient's race, as determined by the patient or family, includes Asian. This includes a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam. Definition source: Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity : The minimum categories for data on race and ethnicity for Federal statistics, program administrative reporting, and civil rights compliance reporting. (www.whitehouse.gov/omb/fedreg/1997standards.html)

Intent / Clarification:

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

ParentLongName: Race Documented
ParentShortName: **RaceDocumented**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Race - American Indian / Alaskan Native
SeqNo: 420

Short Name:	**RaceNativeAm**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Yes
DBTableName:	Birth Information		
Definition:	Indicate whether the patient's race, as determined by the patient or family, includes American Indian / Alaskan Native. This includes a person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment. Definition source: Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity: The minimum categories for data on race and ethnicity for Federal statistics, program administrative reporting, and civil rights compliance reporting. (www.whitehouse.gov/omb/fedreg/1997standards.html)		
Intent / Clarification:			
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Race Documented		
ParentShortName:	**RaceDocumented**		
ParentHarvestCodes:	1		
ParentValues:	= "Yes"		

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Race - Native Hawaiian / Pacific Islander	*SeqNo:*	430
Short Name:	**RaceNativePacific**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Yes
DBTableName:	Birth Information		
Definition:	Indicate whether the patient's race, as determined by the patient or family, includes Native Hawaiian / Pacific Islander. This includes a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands. Definition source: Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity : The minimum categories for data on race and ethnicity for Federal statistics, program administrative reporting, and civil rights compliance reporting. (www.whitehouse.gov/omb/fedreg/1997standards.html)		
Intent / Clarification:			
Data Source:	User		

Format: Text (categorical values specified by STS)

ParentLongName: Race Documented
ParentShortName: **RaceDocumented**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Race - Other
Short Name: **RaceOther**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate whether the patient's race, as determined by the patient or family, includes any other race.

SeqNo: 440
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Race Documented
ParentShortName: **RaceDocumented**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Hispanic Or Latino Ethnicity
Short Name: **Ethnicity**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate if the patient is of Hispanic or Latino ethnicity as determined by the patient / family. Hispanic or Latino ethnicity includes patient report of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.

SeqNo: 450
Core: Yes
Harvest: Yes

Intent / Clarification:

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

Harvest Codes and Value Definitions:

Code:	Value:	
1	Yes	
2	No	
3	Not Documented	This includes unknown or patient declined.

Long Name: Date of Last Follow-Up
Short Name: **LFUDate**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate the date on which the last follow-up was made. If patient dies in the hospital, this value will be the same as the date of death. If no follow-up is made after patient is discharged, this value will be the same as the discharge date.

SeqNo: 460
Core: Yes
Harvest: Yes

Intent / Clarification: This field could be updated when the 30- or 365-day follow-up occurs or at any other point in which the patient's status is known (e.g. lab or clinic visits, subsequent admissions, contact with provider or family, etc.)

Data Source: User
Format: Date - mm/dd/yyyy

Long Name: Last Follow-Up New York Heart Association Classification
Short Name: **LFUNYHA**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate the patient's New York Heart Association (NYHA) classification at the time of the last follow-up. If no follow-up is made after patient is discharged, this value will be the same as the classification at the time of their last discharge.

SeqNo: 470
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Date - mm/dd/yyyy

Harvest Codes and Value Definitions:

Code:	Value:	Definition:

5	Not assessed	The NYHA Classification was not assessed/documented at last follow-up
1	NYHA 1	Asymptomatic
2	NYHA 2	Symptomatic with exertion
3	NYHA 3	Symptomatic with activities of daily living
4	NYHA 4	Symptomatic at rest

Long Name: Mortality Status At Last Follow-Up
Short Name: **LFUMortStat**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate the mortality status of the patient at the time of the last follow-up. If no follow-up is made after patient is discharged, this value will be the same as the Mortality Status At Hospital Discharge.

SeqNo: 480
Core: Yes
Harvest: Yes

Intent / Clarification:

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

Harvest Codes:

Code:	*Value:*
1	Alive
2	Dead

Long Name: Mortality Date
Short Name: **MtDate**
Section Name: Demographics
DBTableName: Birth Information
Definition: Indicate the patient's date of death.

SeqNo: 490
Core: *Yes*
Harvest: *Yes*

Intent / Clarification:

Data Source: User
Format: Date - mm/dd/yyyy

ParentLongName: Mortality Status At Last Follow-Up
ParentShortName: **LFUMortStat**
ParentHarvestCodes: 2
Parent Value: = "Dead"

Noncardiac Congenital Anatomic Abnormalities

Long Name:	Noncardiac Congenital Anatomic Abnormalities Table Unique Record Identifier	*SeqNo:*	510
Short Name:	**NCAAUniqueID**	*Core:*	Yes
Section Name:	Noncardiac Congenital Anatomic Abnormalities	*Harvest:*	Yes
DBTableName:	NCAA		
Definition:	Unique identifier for the record in the Noncardiac Congenital Anatomic Abnormalities table.		
Intent / Clarification:			
Data Source:	Automatic		
Format:	Text		

Long Name:	Noncardiac Congenital Anatomic Abnormalities Link to Demographics Table	*SeqNo:*	520
Short Name:	**PatID**	*Core:*	Yes
Section Name:	Noncardiac Congenital Anatomic Abnormalities	*Harvest:*	Yes
DBTableName:	NCAA		
Definition:	An arbitrary, unique value generated by the software that permanently identifies each patient demographic record in the participant's database. This field is the foreign key that links this record with the associated record in the Demographics table.		
Intent / Clarification:			
Data Source:	Automatic		
Format:	Text		

Long Name:	Major Noncardiac Abnormality	*SeqNo:*	530
Short Name:	**NCAA**	*Core:*	Yes
Section Name:	Noncardiac Congenital Anatomic Abnormalities	*Harvest:*	Yes
DBTableName:	NCAA		
Definition:	Indicate all of the major noncardiac abnormalities the patient has or select None.		
Intent / Clarification:			
Data Source:	User		
Format:	Text (categorical values specified by STS)		

Harvest Codes and Value Definitions:

Code:	Value:	Definition:
5	None	No known major noncardiac abnormality.
80	Major abnormality of head, Choanal atresia	A congenital anomaly in which a bony or membranous occlusion blocks the passageway between the nose and pharynx. The condition, caused by the failure of the nasopharyngeal septum to rupture during embryonic development, may result in ventilation problems in the neonate and requires surgical correction.
90	Major abnormality of head, Cleft lip	A congenital anomaly consisting of one or more clefts in the upper lip that result from the failure of the maxillary and median nasal processes to close during embryonic development. Treatment is surgical repair in infancy.
100	Major abnormality of head, Cleft palate	A congenital fissure in the roof of the mouth, resulting from incomplete fusion of the palate during embryonic development. It may involve only the uvula or extend through the entire palate.
440	Major abnormality of head, Craniosynostosis	
450	Major abnormality of head, Macrocephaly	Macrocephaly is defined as a head circumference which is greater than 2 standard deviations larger than the average for a given age and sex. It refers to an abnormally large head inclusive of the scalp, cranial bone and intracranial contents. Macrocephaly may be due to megalencephaly (true enlargement of the brain) or due to other conditions such as hydrocephalus or cranial thickening.
460	Major abnormality of head, Microcephaly	Microcephaly is defined as smaller than normal circumference of the head because the cerebral cortex has not developed properly or has stopped growing. Microcephaly can be present at birth or may develop in the first few years of life.
470	Major abnormality of head, Micrognathia	
120	Major abnormality of brain, Hydrocephalus	Hydrocephalus is excessive CSF accumulation in the brain creating potentially harmful pressure. It may be congenital or acquired. Congenital hydrocephalus is present at birth and may be caused by either events or influences that occur during fetal development, or genetic abnormalities. Acquired hydrocephalus develops at the time of birth or at some point afterward. This type of hydrocephalus can affect individuals of all ages and may be caused by injury or disease.
480	Major abnormality of brain, Tuberous Sclerosis	
160	Major abnormality of spinal cord, Myelomeningocele	Developmental defect of the central nervous systemprotrude through a gap in the vertebral column; frequently accompanied by hydrocephalus and mental retardation. A hernial sac containing a portion of the spinal cord, its meninges, and cerebrospinal fluid protrudes through a congenital cleft in the vertebral column. The defect is covered by a thin membrane or skin.
170	Major abnormality of spinal cord, Spina bifida	Characterized by defective closure of the vertebral canal with herniation of the spinal cord and/or meninges. May cause skull enlargement due to an accumulation of cerebrospinal fluid. In its most severe form, termed spinal rachischisis, the entire spinal canal is open, exposing the spinal cord and nerves. More commonly, the abnormality appears as a localized mass on the back that is covered by skin or by the meninges.
660	Major abnormality of spinal cord, Tethered Cord	
190	Major abnormality of spine, Scoliosis	Scoliosis is a lateral (side-to-side) curve in the spine, usually combined with a rotation of the vertebrae. "Most commonly presents as idiopathic (90%) but

		can present as a congenital or acquired defect.
640	Major abnormality of vertebra, Hemi-vertebrae	
650	Major abnormality of vertebra, Butterfly vertebrae	
490	Major abnormality of larynx - trachea - or bronchus, Laryngeal cleft	
210	Major abnormality of larynx - trachea - or bronchus, Laryngomalacia	Abnormal laxity of the laryngeal support cartilage resulting in excessive inward collapse and collapse of the lumen with inspiration during spontaneous ventilation. Characterized by inspiratory stridor.
220	Major abnormality of larynx - trachea - or bronchus, Congenital tracheal stenosis	Primary Tracheal narrowing at any level between the larynx and carina with significantly smaller than expected luminal diameter (not secondary to trauma or prolonged intubation). Frequently related to complete cartilaginous tracheal rings.
230	Major abnormality of larynx - trachea - or bronchus, Tracheomalacia	Abnormal laxity of the tracheal supporting structures resulting in inward collapse of the lumen during expiration during spontaneous ventilation. Characterized by expiratory stridor. May extend down into bronchi (tracheobronchial malacia).
70	Major abnormality of larynx - trachea - or bronchus, Tracheoesophageal fistula (TEF)	Presence of any type of patent communication below the larynx connecting the tracheo-bronchial tree to the esophagus. May be associated with other anomalies, including VATER, VACTERL and tracheal clefts. Typically congenital, but may occur due to trauma or pressure necrosis.
240	Major abnormality of larynx - trachea - or bronchus, Bronchomalacia	A deficiency in the cartilaginous wall of the bronchus that may lead to atelectasis or obstructive emphysema.
500	Major abnormality of chest wall, Pectus carinatum	
510	Major abnormality of chest wall, Pectus Excavatum	
520	Major abnormality of lung, Alveolar capillary dysplasia	
260	Major abnormality of lung, Congenital lobar emphysema (CLE)	A developmental anomaly of the lower respiratory tract characterized by isolated hyperinflation of a lobe in the absence of extrinsic bronchial obstruction.
270	Major abnormality of lung, Cystic congenital adenomatous malformation of the lung (CAM)	Cystic congenital adenomatous malformation of the lung (CAM): A spectrum of cystic and solid lesions of the lung that result from abnormal embryogenesis and typically present with symptoms of respiratory distress in newborns and infants.
280	Major abnormality of lung, Cystic fibrosis	Cystic fibrosis (also known as CF or mucoviscidosis) is an autosomal recessive genetic disorder affecting most critically the lungs, and also the pancreas, liver, and intestine. It is characterized by abnormal transport of chloride and sodium across an epithelium, leading to thick, viscous secretion.
530	Major abnormality of lung, Hypoplastic lung	
290	Major abnormality of lung, Pulmonary lymphangiectasia	Pulmonary lymphangiectasia (PL) is a rare developmental disorder involving the lung characterized by pulmonary subpleural, interlobar, perivascular and peribronchial lymphatic dilatation. PL presents at birth with severe respiratory distress, tachypnea and cyanosis, with a very high mortality rate at or within a few hours of birth. Secondary PL may be caused by a cardiac lesion.
20	Major abnormality of	A developmental defect of the diaphragm that allows abdominal viscera to

	abdominal wall, Congenital diaphragmatic hernia (CDH), Bochdalek hernia	herniate into the chest. The volume of herniated contents may be small or large enough to contain most of the gut, spleen, or liver.
30	Major abnormality of abdominal wall, Gastroschisis	A congenital defect characterized by a defect in the anterior abdominal wall through which the intestines protrude. There is no sac covering the intestines. The defect is usually located to the right of the umbilicus.
60	Major abnormality of abdominal wall, Omphalocele	A defect in the medial anterior abdominal wall through which intraabdominal contents are extruded. The defect is covered by amnion and peritoneum and usually occurs at the base of the umbilical cord. The abdominal herniation usually includes small bowel and may include large bowel and/or liver.
540	Major abnormality of gastrointestinal system, Esophageal atresia	
550	Major abnormality of gastrointestinal system, Pyloric stenosis	
310	Major abnormality of gastrointestinal system, Biliary atresia	Biliary atresia is characterized by absence or discontinuity of the extrahepatic biliary system, resulting in obstruction to bile flow.
320	Major abnormality of gastrointestinal system, Duodenal atresia	Congenital absence or closure of a portion of the duodenum.
330	Major abnormality of gastrointestinal system, Duodenal stenosis	Stricture or narrowing of a portion of the duodenum.
340	Major abnormality of gastrointestinal system, Jujenal atresia	The congenital absence or closure of the middle section of the small intestine.
350	Major abnormality of gastrointestinal system, Jujenal stenosis	A constriction or narrowing of the middle section of the small intestine.
360	Major abnormality of gastrointestinal system, Ileal atresia	Congenital absence or closure of a portion of the ileum.
370	Major abnormality of gastrointestinal system, Ileal stenosis	Stricture or narrowing of a portion of the ileum.
50	Major abnormality of gastrointestinal system, Intestinal malrotation	Abnormal placement and fixation of intestines.
40	Major abnormality of gastrointestinal system, Hirschsprung's disease(Congenital aganglionic megacolon)	A disorder of the enteric nervous system characterized by an absence of ganglion cells in the distal colon resulting in a functional obstruction.
380	Major abnormality of gastrointestinal system, Stenosis of large intestine	A constriction or narrowing of the distal portion of the intestine, extending from its junction with the small intestine to the anus and comprising the cecum, colon, rectum, and anal canal.
390	Major abnormality of gastrointestinal system, Atresia of large intestine	Colonic atresia is usually segmental, most often involving the ascending colon, and may be accompanied of the small intestine, rectum, or anal canal.

400	Major abnormality of gastrointestinal system, Atresia of rectum	Congenital absence or closure of a portion of the rectum. Atresia of the rectum proper, or a portion of the rectum, is very rare. It can occur with or without anomalies of the small intestine, colon, or anal canal.
410	Major abnormality of gastrointestinal system, Stenosis of rectum	A constriction or narrowing of the terminal portion of the large intestine, extending from the sigmoid flexure to the anal canal.
10	Major abnormality of gastrointestinal system, Anal Atresia (imperforate anus)	Anal atresia, or imperforate anus, is a specific type of what are commonly referred to as anorectal malformations. Atresia of the anal canal occurs with or without a fistulous opening to an ectopic location on the perineum, within the urinary system, or into the vaginal vestibule.
560	Major abnormality of genitalia, Ambiguous genitalia	
570	Major abnormality of genitalia, Hypospadiasis	
580	Major abnormality of genitalia, Rectovaginal fistula	
590	Major abnormality of genitalia, Undescended testis	
600	Major abnormality of kidney, Horseshoe kidney	
610	Major abnormality of kidney, Hydronephronsis	
620	Major abnormality of kidney, Polycystic kidney	
630	Major abnormality of kidney, Single kidney	
990	Other	Other major non-cardiac abnormality.

Long Name:	Major Noncardiac Abnormality - Other - Specify	*SeqNo:*	540
Short Name:	**NCAAOthSp**	*Core:*	Yes
Section Name:	Noncardiac Congenital Anatomic Abnormalities	*Harvest:*	Yes
DBTableName:	NCAA		
Definition:	Indicate the other major noncardiac abnormality.		

Intent / Clarification:

Data Source:	User
Format:	Text

ParentLongName:	Major Noncardiac Abnormality
ParentShortName:	**NCAA**
ParentHarvestCodes:	990
ParentValues:	= "Other"

Chromosomal Abnormalities

Long Name:	Chromosomal Abnormalities Table Unique Record Identifier	*SeqNo:*	550
Short Name:	**ChromAbUniqueID**	*Core:*	Yes
Section Name:	Chromosomal Abnormalities	*Harvest:*	Yes
DBTableName:	ChromAbnormalities		
Definition:	Unique identifier for the record in the Chromosomal Abnormalities table.		

Intent / Clarification:

Data Source: Automatic
Format: Text

Long Name:	Chromosomal Abnormalities Link to Demographics Table	*SeqNo:*	560
Short Name:	**PatID**	*Core:*	Yes
Section Name:	Chromosomal Abnormalities	*Harvest:*	Yes
DBTableName:	ChromAbnormalities		
Definition:	An arbitrary, unique value generated by the software that permanently identifies each patient demographic record in the participant's database. This field is the foreign key that links this record with the associated record in the Demographics table.		

Intent / Clarification:

Data Source: Automatic
Format: Text

Long Name:	Chromosomal Abnormality	*SeqNo:*	570
Short Name:	**ChromAb**	*Core:*	Yes
Section Name:	Chromosomal Abnormalities	*Harvest:*	Yes
DBTableName:	ChromAbnormalities		
Definition:	Indicate whether the patient has one of the following chromosomal abnormalities.		

Intent / Clarification:

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

Harvest Codes and Value Definitions:

Code	Value	Definition
5	No chromosomal abnormality identified	This patient has no chromosomal abnormality identified.

490	Known Mosaicism	
360	1p36 del	
370	1q21.1 del	
380	1q21.1 dup	
70	1q42.1	
100	2p21	
110	3p22	
400	3q dup	
150	4p16	
410	4q del	
420	5p15.2 del	
430	5p15.33 del	
170	6p12	
180	7q11	
440	7q11.23 del	
450	7q11.23 dup	
200	7q32	
210	7q34	
460	8p23.1 del	
470	8p23.1 dup	
220	8q12	
480	9q34.3 del	
10	11p15.5	
20	11q	
30	12p1.21	
40	12p12.1	
50	12q24	
320	15q11.2 del	
60	15q21.1	
330	16p11.2 del	
340	17p11.2 del	
350	17q21.31 del	
80	20p12	
90	22q11 deletion	Deletions or mutations involving the long arm of chromosome 22 (critical region 22q11.2) are associated with the DiGeorge sequence, velocardiofacial syndrome, conotruncal face anomaly syndrome, CATCH 22, and some isolated conotruncal malformations.
390	22q11 dup	
120	45X0	Turner syndrome (45XO) is a chromosomal deletion abnormality, which occurs in 1:5000 live female births. Although common in first trimester, most 45XO conceptuses are spontaneously aborted. Affected individuals are missing one X chromosome. The major features include short stature, primary amenorrhea due to ovarian dysgenesis, webbed neck, congenital lymphedema, and cubitus valgus. Cardiovascular abnormalities occur in 20-40% of cases, the most common of which is coarctation of the aorta (70%). Additional defects include bicommissural aortic valve, aortic stenosis, a spectrum of left-sided obstructive defects and/or hypoplastic defects, hypoplastic left heart syndrome; aortic dilation, dissection, and rupture.
130	47,XXY	Klinefelter, or 47XXY syndrome, is a sporadic chromosomal abnormality in which males have at least two X chromosomes and at

		least one Y chromosome. Incidence is 1:500 males or 1:1000 births. Klinefelter syndrome occurs usually in association with advanced maternal age at conception. It is the most common sex chromosome disorder and the most common cause of hypogonadism and infertility. Cardiovascular abnormalities in more than 50% of cases include mitral valve prolapse, varicose veins and deep venous thrombosis.
230	Monosomy X	
250	Trisomy 08	Trisomy 8, or Warkany syndrome, is a chromosomal abnormality, which is a frequent cause of first trimester spontaneous abortions. Complete Trisomy 8 is usually an early lethal disorder. Incidence is 1:25,000-50,000 births. Affected individuals have an extra (or third) copy of chromosome 8. Cardiovascular abnormalities include septal defects and great vessel anomalies
260	Trisomy 09	Trisomy 9, or Rethore syndrome, is a rare chromosomal abnormality, which is a frequent cause of first trimester spontaneous abortions. Incidence is 1:100,000 births. Affected individuals have an extra (or third) copy of chromosome 9. Most affected individuals die during infancy or early childhood. Cardiovascular abnormalities occur in 75% of cases and include VSD, ASD, PDA, valve defects, DORV, persistent left SVC, and endocardial fibroelastosis.
270	Trisomy 13	Patau or Bartholin-Patau syndrome, or Trisomy 13, is a chromosomal abnormality. Incidence is 1:5000-10,000 births. Sporadic cases occur usually in association with advanced maternal age at conception. Affected individuals have an extra (or third) copy of chromosome 13. More than 90% of individuals with Trisomy 13 die within their first days or weeks of life. Only 5-10% survive beyond 1 year of age. Cardiovascular abnormalities in 80% of cases include VSD, PDA, ASD; dextrocardia in more than 50% of cases; and anomalous pulmonary venous connection, overriding aorta, pulmonary stenosis, hypoplastic aorta, mitral valve atresia, aortic valve atresia, and bicuspid aortic valve in fewer than 50% of cases.
280	Trisomy 18	Edwards syndrome, or Trisomy 18, is a chromosomal abnormality. Incidence is 1:3000-5000 births. Sporadic cases of Edwards syndrome occur usually in association with advanced maternal age at conception. Affected individuals have an extra (or third) copy of chromosome 18. Approximately 50% of infants with Trisomy 18 die within the first week of life, approximately 40% die within the first month of life, only 5-10% survive beyond the first year. Cardiovascular abnormalities in more than 50% of cases include VSD, ASD and PDA; bicuspid aortic and/or pulmonary valves, nodularity of valve leaflets, pulmonic stenosis, coarctation of the aorta in 10-50% of cases; and anomalous coronary artery, TGA, TOF, dextrocardia and aberrant subclavian artery in less than 10% of cases.
290	Trisomy 21	Down syndrome, or Trisomy 21, is the most frequent chromosomal abnormality. Incidence is 1:600-1000 live births. Sporadic cases of Down syndrome occur in strong association with advanced maternal age at conception. Affected individuals have an extra (or third) copy of chromosome 21. Cardiovascular abnormalities in 40-50% of cases, in decreasing order of frequency, include AVSD, VSD, TOF and PDA. Left-sided obstructive defects, such as coarctation and aortic valve

		stenosis, are rare.
310	Other chromosomal or genetic abnormality	This patient has other chromosomal abnormality(ies) that are not on this list.

Long Name:	Genes With Identified Abnormality	*SeqNo:*	572
Short Name:	**Gene**	*Core:*	Yes
Section Name:	Chromosomal Abnormalities	*Harvest:*	Yes
DBTableName:	ChromAbnormalities		
Definition:	Indicate whether the patient has one or more genes with identified abnormalities.		

Intent / Clarification:

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

ParentLongName: Chromosomal Abnormality
ParentShortName: **ChromAb**
ParentHarvestCodes: 310
ParentValues: = "Other chromosomal or genetic abnormality"

Harvest Codes:

Code:	Value:
10	ABCC9
20	ACTC1
30	ADAMTS10
40	AK7
50	ANKRD11
60	ANKS3
70	ANKS6
80	ARID1B
90	ARMC4
100	B3GALTL
110	B9D1
120	B9D2
130	BBIP1
140	BBS1
150	BBS10
160	BBS12
170	BBS2
180	BBS4
190	BBS7
200	BBS9
210	BCOR
220	BRAF
230	C21orf59
240	C2CD3
250	C5orf42
260	CACNA1C

270	CBP
280	CC2D2A
290	CCDC103
300	CCDC114
310	CCDC151
320	CCDC39
330	CCDC40
340	CCDC65
350	CCNO
360	CDK13
370	CDKN1C
380	CEP120
390	CEP152
400	CEP290
410	CEP41
420	CHD4
430	CHD7
440	CITED2
450	COL1A1
460	COL1A2
470	COL5A1
480	CRKL
490	CSPP1
500	DGCR2
510	DHCR7
520	DLL4
530	DNAAF1 / LRRC50
540	DNAAF2
550	DNAAF3
560	DNAFF5 (or HEATR2)
570	DNAH11
580	DNAH5
590	DNAI1
600	DNAI2
610	DNAJB13
620	DNAL1
630	DOCK6
640	DYNC2H1
650	DYX1C1 (aka DNAAF4)
660	EFTUD2
670	EHTM1
680	ELN
690	EP300
700	ESC02
710	EST-1
720	EVC
730	EVC2
740	FBN1
750	FBN2
760	FGF8
770	FGFR1
780	FLNA
790	FMR1

800	FOXC1
810	FTO
820	GALNT11
830	GANAB
840	GAS8
850	GATA4
860	GATA6
870	GDF1
880	GJA1
890	GPC3
900	GRK5
910	HNRNPK
920	HOXA1
930	HRAS
940	HYDIN
950	IFT122
960	IFT140
970	IFT27
980	IFT43
990	IFT80
1000	INPP5E
1010	INTU
1020	INVS
1030	JAG1
1040	KAT6B
1050	KDM6A
1060	KIAA0556
1070	KIAA0586
1080	KIAA0753
1090	KIF7
1100	KMT2D (MLL2)
1110	KRAS
1120	LRRC6
1130	LTBP4
1140	MAP2K1
1150	MAP2K2
1160	MAPK1
1170	MCIDAS
1180	MED12
1190	MED13L
1200	MEGF8
1210	MID1
1220	MKKS
1230	MKSS (BBS6)
1240	MKS1
1250	MYH11
1260	MYH6
1270	MYH7
1280	NF1
1290	NHS
1300	NIPBL
1310	NKX2-5
1320	NKX2-6

1330 NME8 (aka TXNDC3)
1340 NODAL
1350 NOTCH1
1360 NPHP3
1370 NR2F2
1380 NSD1
1390 OFD1
1400 PDGFRA
1410 PEX1
1420 PIBF1
1430 PIH1D3
1440 PITX2
1450 PKD1
1460 PKD2
1470 PKHD1
1480 PQBP1
1490 PRKD1
1500 PTEN
1510 PTPN11
1520 RAB23
1530 RAD21
1540 RAI1
1550 RBM10
1560 RBPJ
1570 RDR2
1580 RECQL4
1590 ROR2
1600 RPGR
1610 RPGRIP1L
1620 RPL35A
1630 RPS10
1640 RPS17
1650 RPS24
1660 RPS26
1670 RSK2
1680 RSPH1
1690 RSPH3
1700 RSPH4A
1710 RSPH9
1720 SALL1
1730 SALL4
1740 SEMA3E
1750 SH3PXD2B
1760 SHH
1770 SHOC2
1780 SHROOM3
1790 SMAD2
1800 SMAD3
1810 SMAD6
1820 SMARCA4
1830 SMARCB1
1840 SMARCE1
1850 SMC1L1

1860	SMC3
1870	SMS
1880	SNAP29
1890	SOS2
1900	SPAG1
1910	STRA6
1920	TAB2
1930	TBX1
1940	TBX20
1950	TBX5
1960	TCOF1
1970	TCTEX1D2
1980	TCTN1
1990	TCTN2
2000	TCTN3
2010	TFAP2B
2020	TGFBR1 or 2
2030	TLL1
2040	TMEM107
2050	TMEM138
2060	TMEM216
2070	TMEM231
2080	TMEM67
2090	TRIM32 (BBS11)
2100	TSC1
2110	TSC2
2120	TTC25
2130	TTC8 (BBS8)
2140	TWIST
2150	WDR19
2160	ZFPM2/FOG2
2170	ZIC3
2180	ZNF423
9999	Unlisted Gene or Chromosomal Anamoly

Long Name:	Unlisted Gene or Chromosomal Anomaly - Specify	*SeqNo:*	580
Short Name:	**ChromAbOthSp**	*Core:*	Yes
Section Name:	Chromosomal Abnormalities	*Harvest:*	Yes
DBTableName:	ChromAbnormalities		
Definition:	Indicate the other chromosomal abnormalities.		

Intent / Clarification:

Data Source: User
Format: Text

ParentLongName: Genes With Identified Abnormality
ParentShortName: **Gene**

ParentHarvestCodes: 9999
ParentValues: = "Unlisted Gene or Chromosomal Anomaly"

Syndromes

Long Name: Syndromes Table Unique Record Identifier
Short Name: **SynUniqueID**
Section Name: Syndromes
DBTableName: Syndromes
Definition: Unique identifier for the record in the Syndromes table.

Intent / Clarification:

Data Source: Automatic
Format: Text

SeqNo: 590
Core: Yes
Harvest: Yes

Long Name: Syndromes Link to Demographics Table
Short Name: **PatID**
Section Name: Syndromes
DBTableName: Syndromes
Definition: An arbitrary, unique value generated by the software that permanently identifies each patient demographic record in the participant's database. This field is the foreign key that links this record with the associated record in the Demographics table.

Intent / Clarification:

Data Source: Automatic
Format: Text

SeqNo: 600
Core: Yes
Harvest: Yes

Long Name: Syndrome
Short Name: **Syndrome**
Section Name: Syndromes
DBTableName: Syndromes
Definition: Indicate whether the patient has a “Syndrome” or “Syndromic abnormality”. A “syndrome” is defined as a group of signs and symptoms that occur together, and characterize a particular abnormality [1]. [1]. Tchervenkov CI, Jacobs JP, Weinberg PM, Aiello VD, Beland MJ, Colan SD, Elliott MJ, Franklin RC, Gaynor JW, Krogmann ON, Kurosawa H, Maruszewski B, Stellin G. The

SeqNo: 610
Core: Yes
Harvest: Yes

nomenclature, definition and classification of hypoplastic left heart syndrome. Cardiology in the Young, 2006; 16(4): 339–368, August 2006.

Intent / Clarification:

Data Source: User
Format: Text (categorical values specified by STS)
Harvest Codes and Value Definitions:

Code:	Value:	Definition:
5	No syndromic abnormality identified	This patient has no syndromic abnormality identified.
680	1p36 deletion syndrome	
690	1q21.1 duplication syndrome	
710	3q duplication syndrome	
720	4q deletion syndrome	
730	7q11.23 duplication syndrome	
740	8p23.1 deletion syndrome	
660	15q11.2 deletion syndrome	
670	16p11.2 deletion syndrome	
700	22q11.2 duplication syndrome	
750	Adams-Oliver syndrome	
10	Alagille syndrome (intrahepatic biliary duct agenesis)	Alagille syndrome, or Alagille-Watson syndrome, is an autosomal dominant condition [mapped to 20p12 & 1p13-p11] of intrahepatic biliary duct agenesis or arteriohepatic dysplasia. Incidence is 1:70,000 births. The 20-year predicted life expectancy is 75% for all patients, 80% for those not requiring a liver transplant, and 60% for those requiring a liver transplant. Typical manifestations include intrahepatic cholestasis, distinctive facies, anterior chamber abnormalities of the eye, and butterfly hemiverterbrae. The most common cardiovascular abnormality is peripheral pulmonary artery stenosis. Additional defects include ASD, VSD, coarctation of the aorta and TOF.
760	Alstrom syndrome	
580	Alveolar Capillary Dysplasia syndrome	
20	Apert syndrome	Apert syndrome, also known as Apert-Crouzon disease or Vogt cephalodactyly, is an autosomal dominant condition [mapped to 10q26] of acrocephalosyndactyly. Incidence is 1:65,000-88,000 births; it occurs in strong association with advanced paternal age at conception. Apert syndrome is similar to Crouzon and Pfeiffer syndromes. Cardiovascular abnormalities include pulmonic stenosis, VSD, overriding aorta, and endocardial fibroelastosis.
770	Baller-Gerold syndrome	
780	Bardet-Biedl syndrome	
790	Beckwith-Wiedmann syndrome	
30	Brugada syndrome (Sudden unexplained nocturnal death syndrome) (SUNDS)	Brugada syndrome, also known as sudden unexplained nocturnal death syndrome (SUNDS), is an autosomal dominant condition [mapped to 3p21, 3p22.3, 12p13.3 & 10p12], occurring in 1:2000 births. Brugada syndrome is associated with the risk of sudden cardiac death. Mean age of sudden death is approximately 40 years. Symptoms include right bundle branch block and ST segment elevation on ECG, idiopathic ventricular fibrillation, and cardiac arrest. Brugada syndrome, in its

		typical form is sinus rhythm with anterior raised ST segment in V1 and V2 due to a genetic ion-channel defect involving a sodium-channel defect isolated to SCN5A gene. Brugada syndrome is a type of "Channelopathy." A ventricular tachycardia due to a genetic ion-channel defect is also known as a "Channelopathy" or "Ion channelopathy." This diagnosis is most commonly Long QT syndrome, but also includes Brugada syndrome, Jervell and Lange-Nielsen syndrome, Romano-Ward syndrome, Andersen syndrome, etc.
800	Brugada/Timothy syndrome	
810	Cantu syndrome	
40	Cardiofaciocutaneous syndrome	Cardiofaciocutaneous syndrome (CFC) is a sporadic condition [mapped to 7q34] affecting the heart, face, skin and hair. Incidence is 1:333,000-500,000 births. CFC is similar to Noonan and Costello syndromes. Cardiovascular abnormalities include pulmonary valve stenosis, ASD and hypertrophic cardiomyopathy.
50	Carpenter syndrome	Carpenter syndrome is an autosomal recessive condition [mapped to 6p11] of acrocephalopolysyndactyly, type II. Incidence is 1:1,000,000 births. Cardiovascular abnormalities in 50% of cases include ASD, VSD, pulmonic stenosis, TOF, TGA and PDA.
60	Cat-eye syndrome	The cat-eye syndrome, or Schmid-Fraccaro syndrome, is an autosomal dominant condition [mapped to 22q11], associated with coloboma of the iris. Incidence is 1:50,000-150,000 births. The classic pattern of malformations includes mild mental deficiency, hypertelorism, down-slanting palpebral fissures, iris coloboma, pre-auricular pits or tags, and anal and renal malformations. Cardiovascular abnormalities in 40% of cases include TAPVC, ASD, VSD, persistent left superior vena cava, TOF, interruption of the inferior vena cava, and tricuspid atresia.
590	Caudal Regression syndrome	
830	Char syndrome	
70	CHARGE Association	CHARGE syndrome, or Hall-Hittner syndrome, is an autosomal dominant condition [mapped to 8q12.1 & 7q21.11]; some sporadic cases have been reported. Incidence is 1:8500-10,000 births. CHARGE syndrome is a nonrandom association of congenital anomalies which may include Coloboma, Heart defects, Atresia choanae, Retarded growth and development and/or central nervous system anomalies, Genital anomalies and/or hypogonadism and Ear anomalies and/or deafness. Diagnosis is made if 4/6 major (or 3 major & 3 minor) defects are present. Heart defects are present in 75% to 80% of cases. Of those with heart defects, most have conotruncal anomalies (TOF, DORV, truncus arteriosus) and aortic arch anomalies (vascular ring, aberrant subclavian artery, IAA, coarctation of the aorta, right aortic arch, and aortic valve stenosis). Other cardiovascular abnormalities include PDA, AVSD, VSD, and ASD.
600	Chiari l Malformation	
840	Chromosome 17q12 deletion syndrome	
850	Coffin Lowry syndrome	
860	Coffin Siris syndrome	
80	Cornelia de Lange syndrome	Cornelia de Lange syndrome (CDLS), also known as de Lange or

		Brachmann-de Lange syndrome, is an autosomal dominant condition [mapped to 5p13.1, Xp11.22-11.21 & 10q25]; some X-linked and sporadic cases have been reported. Incidence is 1:10,000-30,000 births. Cardiovascular abnormalities in 25% of cases most commonly include VSD and ASD.
90	Costello syndrome	Costello syndrome is an autosomal dominant condition [mapped to 12p12.1 & 11p15.5]; some sporadic cases have been reported. Incidence is 1:1,000,000 births. Cardiovascular abnormalities include ASD, VSD, pulmonic stenosis, mitral valve prolapse, hypertrophic cardiomyopathy and arrhythmias.
870	Cranioectodermal dysplasia (Sensenbrenner syndrome)	
100	Cri-du-chat syndrome	Cri-du-chat (cat cry), or LeJeune syndrome, is a chromosome deletion syndrome [mapped to 5p15.2]. Incidence is 1:20,000-50,000 births. Cri-du-chat refers to the distinctive cry of children with this disorder, caused by abnormal larynx development. Cardiovascular abnormalities in 30% of cases most commonly include VSD and ASD. Rare defects include TOF and AVSD.
610	Dandy Walker Malformation	
110	Deletion 10p syndrome	Deletions on the short arm of chromosome 10 are associated with septal defects, particularly ASDs, and DiGeorge/velocardiofacial 2 syndrome.
120	Deletion 8p syndrome	Deletions on the short arm of chromosome 8 are associated with ASD, AVSC, conotruncal abnormalities, pulmonic valve stenosis and Tetralogy of Fallot.
130	DiGeorge syndrome (velocardiofacial syndrome) (conotruncal anomaly face syndrome) (22q11 deletion)	DiGeorge syndrome, also known as Shprintzen, Takao, velocardiofacial, or conotruncal anomaly face syndrome, is an autosomal dominant condition [mapped to 22q11.2]. Incidence is 1:4000 births. Cardiovascular anomalies are seen in association with hypoplasia or aplasia of the thymus and parathyroid gland, which are derivatives of pharyngeal pouches III and IV, and which can result in abnormalities of the immune system and calcium metabolism respectively. Cardiovascular abnormalities include conotruncal or outflow tract defects of the heart, such as tetralogy of Fallot, truncus arteriosus, and interrupted aortic arch, particularly type B IAA. Additional defects include VSD, right aortic arch, aberrant right subclavian artery, and PDA.
880	Distinct Disorder	
140	Down syndrome (Trisomy 21)	Down syndrome, or Trisomy 21, is the most frequent chromosomal abnormality. Incidence is 1:600-1000 live births. Sporadic cases of Down syndrome occur in strong association with advanced maternal age at conception. Affected individuals have an extra (or third) copy of chromosome 21. Cardiovascular abnormalities in 40-50% of cases, in decreasing order of frequency, include AVSD, VSD, TOF and PDA. Left-sided obstructive defects, such as coarctation and aortic valve stenosis, are rare.
890	Duane Radial Ray (Okihiro) syndrome	
620	Duchenne Muscular Dystrophy	
150	Edwards syndrome (Trisomy 18)	Edwards syndrome, or Trisomy 18, is a chromosomal abnormality. Incidence is 1:3000-5000 births. Sporadic cases of Edwards syndrome

		occur usually in association with advanced maternal age at conception. Affected individuals have an extra (or third) copy of chromosome 18. Approximately 50% of infants with Trisomy 18 die within the first week of life, approximately 40% die within the first month of life, only 5-10% survive beyond the first year. Cardiovascular abnormalities in more than 50% of cases include VSD, ASD and PDA; bicuspid aortic and/or pulmonary valves, nodularity of valve leaflets, pulmonic stenosis, coarctation of the aorta in 10-50% of cases; and anomalous coronary artery, TGA, TOF, dextrocardia and aberrant subclavian artery in less than 10% of cases.
570	Ehlers-Danlos Syndrome	Ehlers-Danlos syndrome is a group of inherited disorders marked by extremely loose joints, hyperelastic skin that bruises easily, and easily damaged blood vessels. A variety of gene mutations involve collagen of the skin, bone, blood vessels, and internal organs. The abnormal collagen leads to the symptom which can include rupture of internal organs or abnormal heart valves.
160	Ellis-van Creveld syndrome	Ellis-van Creveld syndrome, or chondroectodermal dysplasia, is an autosomal recessive condition [mapped to 4p16] of skeletal dysplasia. Incidence is 1:60,000-200,000 births. Major features include short stature of prenatal onset (short limbs), hypoplastic nails and dental anomalies, postaxial polydactyly, narrow thorax, and cardiac defects. Cardiovascular abnormalities in more than 50% of cases most commonly include ASD or common atrium. Additional defects include PDA, persistent left superior vena cava, hypoplastic left heart defects, coarctation of the aorta, TAPVC, and TGA.
900	Familial atrial septal defects	
910	Familial CHD	
920	Familial non-syndromic CHD	
165	Fetal alcohol syndrome (FAS)	Indicate whether the patient has a history of Fetal alcohol syndrome (FAS). Fetal alcohol syndrome (FAS) is a condition that results from prenatal alcohol exposure. FAS is a group of problems that can include mental retardation, birth defects, abnormal facial features, growth problems, problems with the central nervous system, trouble remembering and/or learning, vision or hearing problems, and behavior problems. Mothers who consume large quantities of alcohol during pregnancy may have babies who are born with Fetal Alcohol Syndrome (or FAS). A diagnosis of FAS is based on three factors: 1) prenatal and postnatal growth retardation; 2) central nervous system abnormalities, and, 3) abnormalities of the face. Many of these children display significant disabilities, learning disorders, and emotional problems as they mature.
166	Fetal drug exposure	Indicate whether the patient has a history of Fetal drug exposure. Fetal drug exposure can lead to numerous problems including low birth weight, prematurity, small for Gestational Age (SGA), failure to Thrive (FTT), neurobehavioral symptoms, infectious diseases, and Sudden Infant Death Syndrome (SIDS).
380	Fetal rubella syndrome (Congenital rubella syndrome)	Indicate whether the patient has a history of maternal rubella virus infection during first trimester of pregnancy. Fetal rubella syndrome is associated with PDA, peripheral pulmonary stenosis, fibromuscular and intimal proliferation of medium and large arteries, VSD and ASD.
930	Fragile X	

170	Goldenhar syndrome	Goldenhar syndrome, also known as hemifacial microsomia, oculoauriculovertebral dysplasia or spectrum, and facioauriculovertebral sequence, is an autosomal dominant condition [mapped to 14q32]. Incidence is 1:3000-5000 births. Cardiovascular abnormalities include VSD, PDA, TOF and coarctation.
190	Heterotaxy syndrome, Asplenia syndrome	"Asplenia syndrome" can be defined as a subset of heterotaxy with components of bilateral right-sidedness, usually associated with absence of the spleen.
200	Heterotaxy syndrome, Polysplenia syndrome	"Polysplenia syndrome" can be defined as a subset of heterotaxy with components of bilateral left-sidedness, usually associated with multiple spleens.
180	Heterotaxy syndrome, Unknown if asplenia or polysplenia	Heterotaxy is synonymous with 'visceral heterotaxy' and 'heterotaxy syndrome'. Heterotaxy is defined as an abnormality where the internal thoraco-abdominal organs demonstrate abnormal arrangement across the left-right axis of the body. By convention, heterotaxy does not include patients with either the expected usual or normal arrangement of the internal organs along the left-right axis, also known as 'situs solitus', nor patients with complete mirror-imaged arrangement of the internal organs along the left-right axis also known as 'situs inversus'.
210	Holt-Oram syndrome	Holt-Oram, or heart hand, syndrome is an autosomal dominant condition [mapped to 12q24.1]. Incidence is 1:100,000 births. Holt-Oram syndrome was first described in 1960 by Holt and Oram who noted the association of radial anomalies with atrial septal defects. Cardiovascular abnormalities in 75% of cases most commonly include ASD. Additional defects include first degree AV block, bradycardia, fibrillation, AVSD, VSD, HLHS and PDA.
220	Jacobsen syndrome	Jacobsen syndrome is a chromosome deletion syndrome [mapped to 11q23]. Incidence is 1:100,000 births. Associated cardiovascular abnormalities include VSD and ASD.
940	Joubert syndrome	
230	Kabuki syndrome	Kabuki, or Niikawa-Kuroki, syndrome is an autosomal dominant condition. Incidence is 1:32,000 births. Affected individuals have a facial appearance similar to Japanese Kabuki theatre actors. Cardiovascular abnormalities in 50% of cases include ASD, VSD, coarctation of the aorta, bicuspid aortic valve, mitral valve prolapse, TOF, single ventricle with common atrium, DORV, TGA, and pulmonic, aortic and mitral valve stenoses.
240	Kartagener syndrome (Siewert syndrome) (Primary ciliary dyskinesia)	Kartagener syndrome, also known as Siewert syndrome or primary ciliary dyskinesia, is an autosomal recessive condition [mapped to 9p21-p13]. Incidence is 1:30,000 births. Features include situs inversus and asplenia. Cardiovascular abnormalities include dextrocardia.
950	Kleefstra syndrome	
250	Klinefelter syndrome (XXY Syndrome)	Klinefelter, or 47XXY syndrome, is a sporadic chromosomal abnormality in which males have at least two X chromosomes and at least one Y chromosome. Incidence is 1:500 males or 1:1000 births. Klinefelter syndrome occurs usually in association with advanced maternal age at conception. It is the most common sex chromosome disorder and the most common cause of hypogonadism and infertility. Cardiovascular abnormalities in more than 50% of cases include mitral valve prolapse, varicose veins and deep venous thrombosis.

960	Koolen-De Vries syndrome	
260	LEOPARD syndrome	LEOPARD is an acronym for multiple Lentigines, Electrocardiographic conduction abnormalities, Ocular hypertelorism, Pulmonic stenosis, Abnormal genitalia, Retardation of growth, and sensorineural Deafness. LEOPARD syndrome is an autosomal dominant condition [mapped to 12q24.1 & 3p25]. Cardiovascular abnormalities include pulmonic stenosis in 40% of cases, and hypertrophic cardiomyopathy in 20% of cases. Additional defects include subaortic stenosis, complete heart block, bundle branch block, prolonged P-R and QRS, and abnormal P waves.
270	Loeys-Dietz syndrome	Loeys-Dietz syndrome is an autosomal dominant condition [mapped to 3p22 & 9q22]. Cardiovascular abnormalities include aortic and arterial aneurysms/dissections with tortuosity of the arteries, PDA, ASD, bicuspid aortic and pulmonic valves, and mitral valve prolapse.
290	Marfan syndrome	Marfan syndrome is an autosomal dominant condition [mapped to 5q21.1]. Incidence is 1:5000 births. Marfan syndrome is the most common connective tissue disorder, and is associated with the risk of sudden cardiac death. Cardiovascular abnormalities include aortic root dilation, aortic dissection and rupture, aortic regurgitation, ascending aortic aneurysm, mitral valve prolapse, mitral regurgitation, tricuspid valve prolapse, premature calcification of the mitral annulus, pulmonary artery dilatation and CHF.
300	Marfan-like syndrome	Marfan-like syndrome is a connective tissue disorder, resembling Marfan syndrome.
970	McKusick-Kaufman syndrome	
980	Meckel-Gruber syndrome	
990	Microphthalmia syndromic 9	
1000	Mowat Wilson syndrome	
310	Mucopolysaccharidosis type IH (Hurler syndrome)	Hurler syndrome, also known as mucopolysaccharidosis type IH (MPS IH), is an autosomal recessive condition [mapped to 4p16.3]. Incidence is 1:100,000 births. MPS is a lysosomal storage disease. Affected individuals appear normal at birth; subtle changes may be evident during the first 6 months. Survival beyond 10 years of age is unusual. Cardiovascular abnormalities include valve anomalies, coronary artery narrowing, and mitral and atrial regurgitation.
320	Mucopolysaccharidosis type IH/S (Hurler-Scheie syndrome)	Hurler-Scheie syndrome, also known as mucopolysaccharidosis type IH/S (MPS IH/S), is an autosomal recessive disorder [mapped to 4p16.3]. Incidence is 1:500,000 births. MPS is a lysosomal storage disease. Onset of symptoms occurs between ages 3 and 8 years. Survival to adulthood is typical. Cardiovascular abnormalities include mitral valve anomalies.
330	Mucopolysaccharidosis type II (Hunter syndrome)	Hunter syndrome, also known as mucopolysaccharidosis type II (MPS 2), is an X-linked recessive disorder [mapped to Xq28]. Incidence is 1:100,000-170,000 births. MPS is a lysosomal storage disease. Individuals with Hunter syndrome appear normal at birth. Symptoms emerge between ages 2 and 4. Life expectancy is 10-20 years. Cardiovascular abnormalities include valve anomalies, ischemic heart disease, ventricular hypertrophy and CHF.
340	Mucopolysaccharidosis type IS (Scheie syndrome)	Scheie syndrome, also known as mucopolysaccharidosis type IS (MPS IS), is an autosomal recessive disorder [mapped to 4p16.3], which occurs in 1:500,000 births. Scheie syndrome is a lysosomal storage disease. Survival to a late age is typical. Cardiovascular abnormalities

		include aortic regurgitation, aortic and mitral valve abnormalities.
1010	Nance Horan syndrome	
1020	Nephronophthisis	
1030	Neurofibromatosis	
1040	Non-syndromic CHD	
350	Noonan syndrome	Noonan syndrome is an autosomal dominant condition [mapped to 12q24.1]. Incidence is 1:1000-2500 births. Major features include short stature, seen in about half, mental retardation (usually mild), characteristic facial features, a shield chest deformity, cubitus valgus, and a short webbed neck. Cardiovascular abnormalities occur in at least 50% of cases and include pulmonary valve stenosis (75%) secondary to a dysplastic pulmonary valve with thickened valve leaflets, ASD (30%) usually associated with pulmonary stenosis, PDA (10%), VSD (10%), and hypertrophic cardiomyopathy (10-20%) that can involve both ventricles. Rare lesions include TOF, coarctation of the aorta, subaortic stenosis, and Ebstein malformation. Hypertrophic cardiomyopathy is observed in 10% to 20% and can involve both ventricles.
1050	Oculofaciocardiodental	
1060	Oral-facial-digital syndromes (types I-XVI and unclassified)	
360	Patau syndrome (Trisomy 13)	Patau or Bartholin-Patau syndrome, or Trisomy 13, is a chromosomal abnormality. Incidence is 1:5000- 10,000 births. Sporadic cases occur usually in association with advanced maternal age at conception. Affected individuals have an extra (or third) copy of chromosome 13. More than 90% of individuals with Trisomy 13 die within their first days or weeks of life. Only 5-10% survive beyond 1 year of age. Cardiovascular abnormalities in 80% of cases include VSD, PDA, ASD; dextrocardia in more than 50% of cases; and anomalous pulmonary venous connection, overriding aorta, pulmonary stenosis, hypoplastic aorta, mitral valve atresia, aortic valve atresia, and bicuspid aortic valve in fewer than 50% of cases.
1070	Peter's Plus syndrome	
540	Pierre Robin syndrome	Pierre Robin Syndrome is characterized by an unusually small mandible (micrognathia), posterior displacement or retraction of the tongue (glossoptosis), and upper airway obstruction. Incomplete closure of the roof of the mouth (cleft palate) is present in the majority of patients, and is commonly U-shaped.
1080	Polycystic Kidney Disease	
1090	Primary ciliary dyskinesia (PCD)	
530	Prune Belly Syndrome	Prune belly syndrome, also known as Eagle-Barrett syndrome, is characterized by three main features: Anterior abdominal wall musculature ("stomach muscles") deficient or absent, urinary tract anomalies (such as a very large bladder) and bilateral cryptorchidism (two undescended testicles.) The incidence of prune belly syndrome is about 1 in 40,000 births; 95% of cases occur in males. It is thought that prune belly syndrome is a multisystem disease complex that derives from a primary defect in mesodermal development at about 8 weeks' gestation. The major prognostic factor is the degree of dilation of the

		urinary tract; 20% of patients are stillborn, 30% die of renal failure or urosepsis within the first two years of life, and the remaining 50% have varying degrees ofurinary pathology.
370	Rethore syndrome (Trisomy 9)	Trisomy 9, or Rethore syndrome, is a rare chromosomal abnormality, which is a frequent cause of first trimester spontaneous abortions. Incidence is 1:100,000 births. Affected individuals have an extra (or third) copy of chromosome 9. Most affected individuals die during infancy or early childhood. Cardiovascular abnormalities occur in 75% of cases and include VSD, ASD, PDA, valve defects, DORV, persistent left SVC, and endocardial fibroelastosis.
1100	Roberts syndrome	
1110	Robinow syndrome	
390	Rubinstein-Taybi syndrome	Rubinstein-Taybi or Rubinstein syndrome is an autosomal dominant condition [mapped to 16p13.3 & 22q13]. Incidence is 1:100,000-125,000 births. Cardiovascular abnormalities occur in 30% of cases and include ASD, VSD and PDA.
1120	Saethre Chotzen syndrome	
1130	Short Rib Polydactyl Type I	
1140	Short rib thoracic dysplasias including Jeune chondrodysplasia, Saldino Mainzer	
550	Sickle cell disease	Sickle-cell disease (SCD), or sickle-cell anemia (SCA) is an autosomal recessive genetic blood disorder with overdominance, characterized by red blood cells that assume an abnormal, rigid, sickle shape. Sickling decreases the cells' flexibility and results in a risk of various complications. The sickling occurs because of a mutation in the hemoglobin gene. Sickle-cell disease occurs more commonly in people (or their descendants) from parts of tropical and sub-tropical regions where malaria is or was common.
560	Sickle cell trait	Sickle cell trait describes a condition in which a person has one abnormal allele of the hemoglobin beta gene (is heterozygous), but does not display the severe symptoms of sickle cell disease that occur in a person who has two copies of that allele (is homozygous). Those who are heterozygous for the sickle cell allele produce both normal and abnormal hemoglobin (the two alleles are co-dominant). Sickle cell disease is a blood disorder in which the body produces an abnormal type of the oxygen-carrying substance hemoglobin in the red blood cells. Sickling and sickle cell disease also confer some resistance to malaria parasitization of red blood cells, so that individuals with sickle-cell trait (heterozygotes) have a selective advantage in some environments.
1150	Sifrim-Hitz-Weiss syndrome (SIHWES)	
1160	Simpson-Golabi-Behemel syndrome	
410	Situs inversus	Situs inversus is defined as an abnormality where the internal thoraco-abdominal organs demonstrate mirror-imaged atrial

		arrangement across the left-right axis of the body.
1170	Smith Magenis syndrome	
420	Smith-Lemli-Opitz syndrome	Smith-Lemli-Opitz syndrome is an autosomal recessive condition mapped to 11q12-q13]. Incidence is 1:20,000-40,000 births. Cardiovascular abnormalities include VSD, ASD, coarctation of the aorta, and PDA.
1180	Sotos syndrome	
630	Spinal Muscular Atrophy, Type II	
1190	Sporadic and familial CHD	
1200	Syndromic CHD	
1210	TAR Syndrome	
640	Thalassemia - Major	
650	Thalassemia – Minor	
1220	Trisomy 13	
1230	Trisomy 18	
1250	Trisomy 21	
430	Turner syndrome (45XO)	Turner syndrome (45XO) is a chromosomal deletion abnormality, which occurs in 1:5000 live female births. Although common in first trimester, most 45XO conceptuses are spontaneously aborted. Affected individuals are missing one X chromosome. The major features include short stature, primary amenorrhea due to ovarian dysgenesis, webbed neck, congenital lymphedema, and cubitus valgus. Cardiovascular abnormalities occur in 20-40% of cases, the most common of which is coarctation of the aorta (70%). Additional defects include bicommissural aortic valve, aortic stenosis, a spectrum of left-sided obstructive defects and/or hypoplastic defects, hypoplastic left heart syndrome; aortic dilation, dissection, and rupture.
440	VACTERL syndrome (VACTER/VATER/VATER R syndrome)	VACTERL syndrome is a nonrandom association of defects, including Vertebral anomalies, Anal atresia, Cardiovascular anomalies, Tracheoesophageal fistula, Esophageal atresia, Renal and/or Radial anomalies, and Limb anomalies. Diagnosis is made if 3/7 defects are present. Incidence is 1:6000 births. Cardiovascular malformations include VSD, TOF, TGA and PDA.
450	VACTERL-H syndrome (VATER association with hydrocephalus) (Briard-Evans syndrome)	VACTERL-H association is also known as VATER association with hydrocephalus, Briard-Evans syndrome, David-O'Callaghan syndrome (autosomal recessive type), and Hunter-MacMurray syndrome (X-linked type) [mapped to 10q23.31 & Xp22.31]. VACTERL-H is an autosomal recessive condition; some X-linked cases have been reported. VACTERL- H is a nonrandom association of defects, including Vertebral anomalies, Anal atresia, Cardiac malformations, TracheoEsophageal fistula, Renal anomalies, Limb anomalies and Hydrocephalus. Diagnosis is made if 3/7 defects are present with hydrocephalus. Cardiovascular abnormalities include VSD, TOF, TGA and PDA.
520	von Willebrand disease (vWD)	Von Willebrand disease (vWD) is the most common hereditary coagulation abnormality described in humans, although it can also be acquired as a result of other medical conditions. It arises from a qualitative or quantitative deficiency of von Willebrand factor (vWF), a

		multimeric protein that is required for platelet adhesion. There are three forms of vWD: inherited, acquired and pseudo or platelet type. There are three types of hereditary vWD: vWD Type I, vWD Type II and vWD III. Within the three inherited types of vWD there are various subtypes. Platelet type vWD is also an inherited condition. vWD Type I is the most common type of the disorder and those that have it are typically asymptomatic or may experience mild symptoms such as nosebleeds although there may be severe symptoms in some cases. There are various factors that affect the presentation and severity of symptoms of vWD such as blood type.
460	Warkany syndrome (Trisomy 8)	Trisomy 8, or Warkany syndrome, is a chromosomal abnormality, which is a frequent cause of first trimester spontaneous abortions. Complete Trisomy 8 is usually an early lethal disorder. Incidence is 1:25,000-50,000 births. Affected individuals have an extra (or third) copy of chromosome 8. Cardiovascular abnormalities include septal defects and great vessel anomalies.
470	Williams syndrome (Williams-Beuren syndrome)	Williams syndrome, or Williams-Beuren syndrome, is an autosomal dominant condition [mapped to 7q11.23]. Incidence is 1:7500 births. Williams syndrome was initially described by Williams and colleagues in four unrelated children with mental retardation, an unusual facial appearance, and supravalvar stenosis. Cardiovascular abnormalities occur in at least 50% of cases and include supravalvar aortic stenosis, bicuspid aortic valve, mitral valve prolapse, mitral regurgitation, coronary artery stenosis, pulmonary valve stenosis, ASD, VSD and peripheral pulmonary artery stenosis. Supravalvar aortic stenosis is the most frequent single defect, but any of the systemic or pulmonary arteries can be affected.
490	Wolf-Hirschhorn syndrome	Wolf-Hirschhorn syndrome is a chromosome deletion syndrome [mapped to 4p16.3]. Incidence is 1:96,000 births. Affected individuals have a 35% risk of mortality prior to age 2. Cardiovascular abnormalities include ASD and VSD.
1260	X-linked heterotaxy	
510	Other syndromic abnormality	This patient has other syndromic abnormality(ies) that are not on this list

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Long Name:	Syndrome - Other - Specify	*SeqNo:*	620
Short Name:	**SyndromeOthSp**	*Core:*	Yes
Section Name:	Syndromes	*Harvest:*	Yes
DBTableName:	Syndromes		
Definition:	Indicate the other “Syndrome” or “Syndromic abnormality”.		

Intent / Clarification:

Data Source:	User
Format:	Text

ParentLongName:	Syndrome
ParentShortName:	**Syndrome**
ParentHarvestCodes:	510

ParentValues: = "Other syndromic abnormality"

Hospitalization

Long Name: Hospital Name
Short Name: **HospName**
Section Name: Hospitalization
DBTableName: Operations
Definition: Indicate the full name of the facility where the procedure was performed. Values should be full, official hospital names with no abbreviations or variations in spelling for a single hospital. Values should also be in mixed-case.

SeqNo: 630
Core: Yes
Harvest: Yes

Intent / Clarification:

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

Long Name: Hospital Zip Code
Short Name: **HospZIP**
Section Name: Hospitalization
DBTableName: Operations
Definition: Indicate the ZIP Code of the hospital. Outside the USA, these data may be known by other names such as Postal Code. This field should be collected in compliance with state/local privacy laws.

SeqNo: 640
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: Lookup
Format: Text

Long Name: Hospital State
Short Name: **HospStat**
Section Name: Hospitalization
DBTableName: Operations
Definition: Indicate the region of the country (i.e., state or province) in which the hospital is located.

SeqNo: 650
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: Lookup
Format: Text

Long Name: Hospital National Provider Identifier
Short Name: **HospNPI**
Section Name: Hospitalization
DBTableName: Operations
Definition: Indicate the hospital's National Provider Identifier (NPI). This number, assigned by the Center for Medicare and Medicaid Services (CMS), is used to uniquely identify facilities for Medicare billing purposes.

SeqNo: 660
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: Lookup
Format: Text

Long Name: Primary Payor
Short Name: **PayorPrim**
Section Name: Hospitalization
DBTableName: Operations
Definition: Indicate the primary insurance payor for this admission.

SeqNo: 771
Core: Yes
Harvest: Yes

Intent / Clarification:

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

Harvest Codes:

Code:	Value:
1	None / self
2	Medicare
3	Medicaid
4	Military Health
5	Indian Health Service
6	Correctional Facility
7	State Specific Plan
8	Other Government Insurance
9	Commercial Health Insurance
10	Health Maintenance Organization
11	Non-U.S. Plan
13	Charitable Care/Foundation Funding (internal)

14 Charitable Care/Foundation Funding (external)

Long Name:	Primary Payor Medicare Fee For Service	*SeqNo:*	772
Short Name:	**PrimMCareFFS**	*Core:*	Yes
Section Name:	Hospitalization	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the patient is covered by Medicare Fee For Service (Part B).		

Intent / Clarification:

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

ParentLongName: Primary Payor
ParentShortName: **PayorPrim**
ParentHarvestCodes: 2
ParentValues: = "Medicare"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Secondary (Supplemental) Payor	*SeqNo:*	773
Short Name:	**PayorSecond**	*Core:*	Yes
Section Name:	Hospitalization	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate which if any secondary insurance payor was used for this admission.		

Intent / Clarification:

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

ParentLongName: Primary Payor
ParentShortName: **PayorPrim**
ParentHarvestCodes: <>1 And Is Not Missing
ParentValues: Is Not "None / self" And Is Not Missing

Harvest Codes:

Code:	Value:
1	None / self
2	Medicare
3	Medicaid
4	Military Health
5	Indian Health Service
6	Correctional Facility
7	State Specific Plan
8	Other Government Insurance

Long Name: Secondary Payor Medicare Fee For Service
SeqNo: 774
Short Name: **SecondMCareFFS**
Core: Yes
Section Name: Hospitalization
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether the patient is covered by Medicare Fee For Service (Part B).

Intent / Clarification:

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

ParentLongName: Secondary (Supplemental) Payor
ParentShortName: **PayorSecond**
ParentHarvestCodes: 2
ParentValues: = "Medicare"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Date of Admission
SeqNo: 780
Short Name: **AdmitDt**
Core: Yes
Section Name: Hospitalization
Harvest: Yes
DBTableName: Operations
Definition: Indicate the date the patient was admitted to the hospital. For those patients who originally enter the hospital in an out-patient capacity (i.e., catheterization), but then are not discharged, the admit date is the date of the patients entry into the hospital.

Intent / Clarification: This is the date of admission to your facility, not necessarily the start of the patient's "episode of care".

Data Source: User
Format: Date - mm/dd/yyyy

Long Name: Location From Which Patient Admitted *SeqNo:* 781
Short Name: **AdmitFromLoc** *Core:* Yes
Section Name: Hospitalization *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the location from which the patient was admitted.

Intent / Clarification:

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

Harvest Codes:

Code:	Value:
1	Home
2	Other acute care center
3	Other chronic care center
4	Born at operative center

April 2019: If a patient presents at an outside hospital but is sent to our hospital, should this be admit from "home" or admit from "other acute care facility". **If the patient was admitted at the acute care facility, the answer is other acute care facility. If the patient was seen in a clinic or emergency department at the other hospital and then transferred to your facility, the answer is home.**

Long Name: Date of Surgery *SeqNo:* 790
Short Name: **SurgDt** *Core:* Yes
Section Name: Hospitalization *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the date of surgery which equals the date the patient enters the OR or equivalent.

Intent / Clarification:

Data Source: User
Format: Date - mm/dd/yyyy

Long Name: Height in Centimeters *SeqNo:* 800
Short Name: **HeightCm** *Core:* *Yes*
Section Name: Hospitalization *Harvest:* *Yes*

DBTableName: Operations
Definition: Indicate the height of the patient in centimeters at the time of surgery.
Low Value: 15.0
High Value: 250.0

Intent / Clarification:

Data Source: User
Format: Real

Long Name: Weight in Kilograms
Short Name: **WeightKg**
Section Name: Hospitalization
DBTableName: Operations
Definition: Indicate the weight of the patient in kilograms at the time of surgery.
Low Value: 0.001
High Value: 200.000

SeqNo: 810
Core: *Yes*
Harvest: *Yes*

Intent / Clarification:

Data Source: User
Format: Real, at least 3 decimal places

Long Name: Patient Age In Days
Short Name: **AgeDays**
Section Name: Hospitalization
DBTableName: Operations
Definition: Calculate the patient's age in days at the time of the surgery procedure. The patient's age will be calculated by the software from the date of birth and the date of surgery.
Low Value: 0
High Value: 40150

SeqNo: 820
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User or Automatic
Format: Integer

Pre-Operative Factors

Long Name:	Preoperative Factor Table Unique Record Identifier	*SeqNo:*	830
Short Name:	**PoFUniqueID**	*Core:*	Yes
Section Name:	Preoperative Factors	*Harvest:*	Yes
DBTableName:	PreopFactors		
Definition:	Unique identifier for the record in the Preoperative Factors table.		
Intent / Clarification:			
Data Source:	Automatic		
Format:	Text		

Long Name:	Preoperative Factor Link to Operations Table	*SeqNo:*	840
Short Name:	**OperationID**	*Core:*	Yes
Section Name:	Preoperative Factors	*Harvest:*	Yes
DBTableName:	PreopFactors		
Definition:	An arbitrary, unique value generated by the software that permanently identifies each operation record in the participant's database. This field is the foreign key that links the Preoperative Factor record with the associated record in the Operations table.		
Intent / Clarification:			
Data Source:	Automatic		
Format:	Text		

Long Name:	Preoperative Factor	*SeqNo:*	850
Short Name:	**PreopFactor**	*Core:*	Yes
Section Name:	PreopFactor	*Harvest:*	Yes
DBTableName:	PreopFactors		
Definition:	Indicate the factors that are present preoperatively that may impact the patient's outcome.		
Intent / Clarification:	Pay attention to defined time frames. Each Preoperative Factor has its own defined time frame for inclusion.		
Data Source:	User		
Format:	Text (categorical values specified by STS)		

Harvest Codes and Value Definitions:

Code:	Value:	Definition:
10	No preoperative factors identified	This patient has no preoperative factors identified.
200	Cardio-pulmonary resuscitation	Chest compression with medications within 48 hours prior to surgery. Select this factor if chest compression took place within the 48 hours prior to OR Entry Date and Time, or at the time of OR Entry Date and Time.
210	Preoperative complete AV block	Arrhythmia-Atrioventricular conduction disorder, AV block, Third degree ROOT Definition. Third degree AV block is defined as the absence of AV node conduction. This factor should be selected if it developed / was present during this hospitalization before OR Entry Date and Time and was present at the time of OR Entry Date and Time
220	Preoperative/Preprocedural mechanical circulatory support (IABP, VAD, ECMO, or CPS)	Code this factor if the patient is supported with mechanical support, of any type (IABP, VAD, ECMO, or CPS), for resuscitation/CPR or support, at the time of OR Entry Date and Time.
230	Shock, Persistent at time of surgery	Shock ROOT Definition = Shock is defined as "a state of inadequate tissue perfusion". A modern definition according to Simeone states that shock is a "clinical condition characterized by signs and symptoms which arise when the cardiac output is insufficient to fill the arterial tree with blood under sufficient pressure to provide organs and tissues with adequate blood flow." A historic definition according to Blalock in 1940 is that "Shock is a peripheral circulatory failure, resulting from a discrepancy in the size of the vascular bed and the volume of the intravascular fluid". Code this factor if the patient had a metabolic acidosis with pH < 7.2 and/or Lactate > 4 mmol /liter at the time of OR Entry Date and Time and /or on one or more inotropes at doses greater than: Dopamine/Dobutamine > 10 mcg/kg/min; Epinephrine/norepinephrine > 0.1 mcg/kg/min; Vasopressin > 0.5 milliunits/kg/min
240	Shock, Resolved at time of surgery	Shock ROOT Definition = Shock is defined as "a state of inadequate tissue perfusion". A modern definition according to Simeone states that shock is a "clinical condition characterized by signs and symptoms which arise when the cardiac output is insufficient to fill the arterial tree with blood under sufficient pressure to provide organs and tissues with adequate blood flow." A historic definition according to Blalock in 1940 is that "Shock is a peripheral circulatory failure, resulting from a discrepancy in the size of the vascular bed and the volume of the intravascular fluid". Code this factor if the patient had a metabolic acidosis with pH < 7.2 and/or Lactate > 4 mmol /liter at any time after the date and time of admission to the hospital but not at the time of OR Entry Date and Time. This factor should be coded if shock was present at any time after the date and time of admission to the hospital but not at the time of OR Entry Date and Time, including situations where shock was present after admission to the hospital where this operation was performed, and situations where shock was present while the patient was hospitalized at another “transferring facility” that subsequently transferred the patient who ultimately arrived at this hospital in this same hospitalization and /or on one

		or more inotropes at doses greater than: Dopamine/Dobutamine > 10 mcg/kg/min; Epinephrine/norepinephrine > 0.1 mcg/kg/min; Vasopressin > 0.5 milliunits/kg/min Clarify: we should code the shock present at transferring facility even if shock not present at this facility
250	Diabetes mellitus, Insulin dependent	Code this factor if the patient has evidence of insulin dependent diabetes mellitus at the time OR Entry Date and Time as manifested by the fact that the patient has the diagnosis of diabetes mellitus that is controlled with insulin.
260	Diabetes mellitus, Non-insulin dependent	Code this factor if the patient has evidence of non-insulin dependent diabetes mellitus at the time OR Entry Date and Time as manifested by the fact that the patient has the diagnosis of diabetes mellitus that is controlled with dietary modification with or without oral medications (oral anti-hyperglycemic agents).
270	Hypothyroidism	Hypothyroidism refers to decreased levels of triiodothyronine (T3) and thyroxine (T4), and reverse triiodothyronine (reverse T3), with high levels of thyroid-stimulating hormone (TSH). Symptoms of hypothyroidism include bradycardia, pericardial effusions, hypertension and a narrowed pulse pressure and myxedema. Studies have also shown decreases in cardiac output and cardiac contractility, decreased diastolic relaxation and diastolic filling. In those with congestive heart failure (CHF), decreased levels of T3 have been shown to be proportional to New York Heart Association class, poor outcomes, mortality, poor hemodynamics, and hyponatremia. This factor may be coded (1) if the TSH > 20 mU / liter, or (2) if the patient has pituitary failure with hypothyroidism, or (3) if the patient is receiving medication to treat hypothyroidism at the time of OR Entry Date and Time.
280	Currently taking steroids as treatment for adrenal insufficiency	Code this factor if the patient is taking steroids (as treatment for adrenal insufficiency) at the time of OR Entry Date and Time. Inhaled steroids should not be included as they are generally taken for reactive airway disease and are not the equivalent to systemic steroid ingestion. The intent of the field was probably related to factors such as: 1) potential increased infection risk, 2) potential impact on healing, and 3) potential for adrenal suppression (and need for “stress” steroid coverage). Clarify: Do not code if the only steroids that the patient received was a one time stress dose on call prior to the OR.
290	Currently taking steroids for any reason other than treatment of adrenal insufficiency	Code this factor if the patient is taking steroids (for any reason other than treatment of adrenal insufficiency) at the time of OR Entry Date and Time. Inhaled steroids should not be included as they are generally taken for reactive airway disease and are not the equivalent to systemic steroid ingestion. Clarify: Do not code if the only steroids that the patient received was a one time stress dose on call prior to the OR.
295	Colostomy present	Code this factor if the patient has a colostomy (involving the large intestine) present at the time of OR Entry Date and Time.
300	Enterostomy of small	Code this factor if the patient has an enterostomy (involving

	intestine present	thesmall intestine) present at the time of OR Entry Date and Time.
305	Esophagostomy present	Code this factor if the patient has an esophagostomy present at the time of OR Entry Date and Time.
307	Gastrostomy present	Code this factor if the patient has a gastrostomy present at the time of OR Entry Date and Time.
310	Hepatic dysfunction	Hepatic dysfunction is defined as dysfunction of the liver that results in hypoalbuminemia (<2 grams/dL), coagulopathy (PT > 1.5 x upper limits of normal), and hyperbilirubinemia (> 3.0 x upper limits of normal). Code this factor if the patient develops 2 out of these 3 laboratory abnormalities within 24 hours of the time of OR entry Date and time.
320	Necrotizing entero-colitis, Treated medically	Necrotizing enterocolitis (NEC) ROOT Definition = Necrotizing enterocolitis is defined as an acute reduction in the supply of oxygenated blood to the small intestine or large intestine, typically resulting in acidosis, abdominal distention, pneumatosis, and/or intestinal perforation, that prompts initiation of antibiotics or exploratory laparotomy. Select this factor if NEC is present during the same hospitalization as this operation (but prior to this operation) and was managed without surgery to treat the NEC. Code this factor if this occurred at any time during the same hospitalization but prior to surgery, do not code if NEC diagnosed at prior hospitalization or if it occurred at transferring hospital. Do not code if treatment was completed at an outside or transferring facility.
330	Necrotizing entero-colitis, Treated surgically	Necrotizing enterocolitis (NEC) ROOT Definition = Necrotizing enterocolitis is defined as an acute reduction in the supply of oxygenated blood to the small intestine or large intestine, typically resulting in acidosis, abdominal distention, pneumatosis, and/or intestinal perforation, that prompts initiation of antibiotics, bowel rest, or exploratory laparotomy. Select this factor if NEC is present during the same hospitalization (but prior to this operation) as this operation and was managed with surgery to treat the NEC. Code this factor if this occurred at any time during the same hospitalization but prior to surgery, do not code if NEC diagnosed at prior hospitalization or if it occurred at transferring hospital. Do not coded if treatment was completed at an outside or transferring facility.
340	Coagulation disorder, Hypercoagulable state	Hypercoagulable state is characterized by elevation of prothrombotic factors that increase risk of thrombosis (clotting) in blood vessels. Laboratory findings may include Anti thrombin III deficiency, primary (hereditary) thrombophilia, Protein C deficiency, Protein S deficiency, factor V Leiden mutation, or prothrombin gene mutation. If a TEG is performed, the R and K times are decreased and the MA and Angle (alpha) are increased. Code this factor if the patient has evidence of a hypercoagulable state at the time OR Entry Date and Time.
350	Coagulation disorder, Hypocoagulable state not secondary to medication(intrinsic hypocoagulable state)	Code this factor if the patient has evidence of a coagulopathy at the time OR Entry Date and Time or within 24 hours as manifest by one or more of the following: PT/PTT above normal, Thrombocytopenia <100,000 or Fibrinogen split products positive (>10%), TEG findings of prolonged R and K times and decreased MA and Angle (alpha) and the coagulopathy is NOT secondary to

		medications such as Heparin or Warfarin or aspirin.
360	Coagulation disorder, Hypocoagulable state secondary to medication	Code this factor if the patient has evidence of a coagulopathy at the time OR Entry Date and Time or within 24 hours as manifest by one or more of the following: PT/PTT above normal, Thrombocytopenia <100,000 or Fibrinogen split products positive (>10%), TEG findings of prolonged R and K times and decreased MA and Angle (alpha), and the coagulopathy is secondary to medications such as Heparin or Warfarin or aspirin.
590	Dyslipidemia	Current or previous diagnosis of dyslipidemia according to National Cholesterol Education Program criteria, defined as any of the following: - Total cholesterol greater than or equal to 200 mg/dL (5.18 mmol/L) - LDL greater than or equal to 130 mg/dL (3.37 mmol/L) - HDL less than or equal to 40 mg/dL (1.04 mmol/L) in males and less than or equal to 50 mg/dL (1.30 mmol/L) in females Code this factor if the patient meets one of the above criteria at time of hospitalization for surgery.
370	Endocarditis	This factor should be coded if endocarditis present at any time after the date and time of admission to the hospital and prior to OR Entry Date and Time, including situations where endocarditis was present after admission to the hospital where this operation was performed, and situations where endocarditis was present while the patient was hospitalized at another "transferring facility" that subsequently transferred the patient who ultimately arrived at this hospital in this same hospitalization. Code this factor if endocarditis is diagnosed prior to OR Entry Date and Time, using the Duke Criteria for the Diagnosis of Infective Endocarditis (IE): The definitive diagnosis of infective endocarditis requires one of the following four situations: 1) Histologic and/or microbiologic evidence of infection at surgery or autopsy such as positive valve culture or histology; 2) Two major criteria; 3) One major criterion and three minor criteria; 4) Five minor criteria. The two major criteria are: 1) Blood cultures positive for IE 2) Evidence of endocardial involvement. Blood cultures positive for IE requires: 1) Typical microorganism consistent with IE isolated from 2 separate blood cultures, as noted in number two below (viridans streptococci, Streptococcus bovis, Staphylococcus aureus, or HACEK group [HACEK, Haemophilus species {H. aprophilus and H. paraaphrophilus}, Actinobacillus actinoinycetemcomitans, Cardiobacterium hominis, Eikenella corrodens, and Kingella kingae.]) or (Community-acquired enterococci in the absence of a primary focus); 2) Microorganisms consistent with IE isolated from persistently positive blood cultures defined as: (At least 2 positive cultures of blood samples obtained > 12 hours apart) or (All of 3 or a majority of 4 or more separate cultures of blood, the first and the last sample obtained > 1 hr apart); 3) Single blood culture positive for Coxiella burnetii or an antiphase I IgG antibody titer of >1 :800. Evidence of endocardial involvement requires 1) Positive results of echocardiography for IE defined as: (Oscillating intracardiac mass on the valve or supporting structures in the path

		of regurgitant jets or on implanted material in the absence of an alternative anatomic explanation) or (Abscess) or (New partial dehiscence of a valvar prosthesis) or 2) New valvar regurgitation (worsening or changing or preexisting murmur not sufficient). The six minor criteria are: 1) Predisposing heart disease or injection drug use (IVDA); 2) Temperature of > 38C; 3) Vascular phenomenon (major arterial emboli, septic pulmonary infarcts, mycotic aneurysm, intracranial or conjunctival hemorrhage, Janeway's lesions); 4) Immunologic phenomenon (glomerulonephritis, Osler's nodes, Roth's spots, rheumatoid factor); 5) Microbiologic evidence (a positive blood culture that does not meet a major criterion as noted above) or serologic evidence of active infection with an organism consistent with IE; 6) Echocardiographic findings that are consistent with IE but do not meet a major criterion as noted above. References: 1) Dhawan VK Infectious Endocarditis in Elderly Patients. Clin. Infect. Dis. 2002;34:806-812. 2) Durack DT, Lukes AS, Bright DK. New criteria for diagnosis of infective endocarditis: utilization of specific echocardiographic findings. Duke Endocarditis Service. Am. J. Med. 1994;96:200-209. 3) Li IS, Sexton DJ, Mick N, et al. Proposed modifications to the Duke criteria for the diagnosis of infective endocarditis. Clin. Infect. Dis. 2000;30:633-638. 4) http://gold.aecom.yu.edu/id/almanac/dukeendocarditis.htm, accessed July 5, 2006.
380	Sepsis	Sepsis ROOT Definition = Sepsis is defined as "evidence of serious infection accompanied by a deleterious systemic response". Sepsis may be diagnosed by the presence of a Systemic Inflammatory Response Syndrome (SIRS) resulting from suspected or proven infection. A systemic inflammatory response syndrome (SIRS) is present when at least two of the following criteria are present: hypo- or hyperthermia (>38.5 or <36.0), tachycardia or bradycardia, tachypnea, leukocytosis or leukopenia, and thrombocytopenia. Code this factor if the patient has signs of sepsis within 48 hours of OR Entry Date and Time. PC4 definition: Temperature instability and abnormal WBC (leukopenia or leukocytosis) and hemodynamic instability requiring at least one of the following: (1) volume > 40 cc/kg; (2) new or increased inotropic support; or (3) new or increased mechanical ventilation support.
390	Sepsis with positive blood culture	Code this factor if the patient has a positive blood culture within 48 hours of OR Entry Date and Time, combined with the diagnosis of sepsis. Sepsis ROOT Definition = Sepsis is defined as "evidence of serious infection accompanied by a deleterious systemic response". Sepsis may be diagnosed by the presence of a Systemic Inflammatory Response Syndrome (SIRS) resulting from suspected or proven infection. A systemic inflammatory response syndrome (SIRS) is present when at least two of the following criteria are present: hypo- or hyperthermia (>38.5 or <36.0), tachycardia or bradycardia, tachypnea, leukocytosis or leukopenia, and thrombocytopenia. Code this factor if the patient has signs of sepsis and a positive blood culture within 48 hours of OR Entry

		Date and Time.
400	Preoperative neurological deficit	Code this factor if the patient has any deficit of neurologic function identified by the care team (during the hospitalization of this operation prior to the time of OR Entry Date and Time). Define further – Do include central or systemic neurologic deficits including muscular dystrophy, cerebral palsy, neurologic deficits manifesting from a previous stroke. Do not include vocal cord paralysis or diaphragm paralysis. Do not include ADHD, ADD, autism, or developmental delays. Do include sensorineural hearing loss, but not conductive hearing loss. These should be not what is included/covered by the NCAA, syndromes, or chromosomal abnormalities.
410	Seizure during lifetime	Seizure ROOT Definition = A seizure is defined as the clinical and/or electroencephalographic recognition of epileptiform activity. Select this preoperative factor for any prior seizure during the lifetime of the patient.
420	Seizure within 48 hours prior to surgery	Seizure ROOT Definition = A seizure is defined as the clinical and/or electroencephalographic recognition of epileptiform activity. Select this preoperative factor for any prior seizure during the 48 hours prior to surgery.
430	Stroke, CVA, or Intracranial hemorrhage > Grade 2 during lifetime	Indicate whether the patient had a stroke, CVA, or intracranial hemorrhage > Grade 2 at any time during the patient's lifetime. Stroke ROOT Definition = A stroke is any confirmed neurological deficit of abrupt onset caused by a disturbance in blood flow to the brain, when the neurologic deficit does not resolve within 24 hours. An IVH (Intraventricular hemorrhage) is diagnosed by the existence of a neurologic imaging study indicating a new or previously unsuspected collection of intraventricular hemorrhage that may extend to include an intraparenchymal component. A Grade 1 IVH requires the existence of a neurologic imaging study indicating a new or previously unsuspected collection of intraventricular hemorrhage with a limited germinal matrix involvement. A Grade 2 IVH requires the existence of a neurologic imaging study indicating a new or previously unsuspected collection of intraventricular hemorrhage that involves an area of up to, but not more than 50% of the ventricular cross-sectional area in sagittal view. A Grade 3 IVH requires the existence of a neurologic imaging study indicating a new or previously unsuspected collection of intraventricular hemorrhage that involves at least 50% of the ventricular cross-sectional area in sagittal view but not an intraparenchymal component. A Grade 4 IVH requires the existence of a neurologic imaging study indicating a new or previously unsuspected collection of intraventricular hemorrhage that includes an intraparenchymal component extending beyond the germinal matrix.
440	Stroke, CVA, or Intracranial hemorrhage > Grade 2 within 48 hours prior to surgery	Indicate whether the patient had a stroke, CVA, or intracranial hemorrhage > Grade 2 occurring within the 48 hours prior to surgery. Stroke ROOT Definition = A stroke is any confirmed neurological deficit of abrupt onset caused by a disturbance in blood flow to the brain, when the neurologic deficit does not resolve within 24 hours. An IVH (Intraventricular hemorrhage) is diagnosed by the existence of a neurologic imaging study

		indicating a new or previously unsuspected collection of intraventricular hemorrhage that may extend to include an intraparenchymal component. A Grade 1 IVH requires the existence of a neurologic imaging study indicating a new or previously unsuspected collection of intraventricular hemorrhage with a limited germinal matrix involvement. A Grade 2 IVH requires the existence of a neurologic imaging study indicating a new or previously unsuspected collection of intraventricular hemorrhage that involves an area of up to, but not more than 50% of the ventricular cross-sectional area in sagittal view. A Grade 3 IVH requires the existence of a neurologic imaging study indicating a new or previously unsuspected collection of intraventricular hemorrhage that involves at least 50% of the ventricular cross-sectional area in sagittal view but not an intraparenchymal component. A Grade 4 IVH requires the existence of a neurologic imaging study indicating a new or previously unsuspected collection of intraventricular hemorrhage that includes an intraparenchymal component extending beyond the germinal matrix.
450	Renal dysfunction	Renal dysfunction is defined as the oliguria with sustained urine output < 0.5 cc/kg/hr for 24 hours and/or a rise in creatinine > 1.5 times upper limits of normal for age, without needing dialysis (including peritoneal dialysis and/or hemodialysis) or hemofiltration present at the Date and Time of OR Entry or within 24 hours of Date and Time of OR Entry.
460	Renal failure requiring dialysis	Renal failure is defined as oliguria with sustained urine output < 0.5 cc/kg/hr for 24 hours and/or a rise in creatinine > 1.5 times upper limits of normal for age, with need for dialysis (including peritoneal dialysis and/or hemodialysis) or hemofiltration present at the Date and Time of OR Entry or within 24 hours of Date and Time of OR Entry.
470	Mechanical ventilation to treat cardiorespiratory failure	This patient was supported with mechanical ventilation to treat cardiorespiratory failure during the hospitalization of this operation and prior to OR Entry Date and Time. Pre-operative non-invasive ventilation should NOT be coded as pre-operative mechanical ventilation. The intent of the field is to capture patients on support with a mechanical ventilator for cardiorespiratory failure via intubation or tracheostomy. Hi-flow gases, VapoTherm, and other “non-invasive” forms of respiratory support (up to and including BiPap without an endotracheal tube) would not meet this definition.
600	Non-Invasive respiratory support to treat cardiorespiratory failure	The timeframe of anytime during the hospitalization should be applied. Non-Invasive respiratory support should be administered through a ventilator support machine (i.e. CPAP, BiPAP) without the presence of an endotracheal tube or tracheostomy tube. This does not include high flow nasal cannula.
480	Respiratory Syncytial Virus	Code this factor if the patient is diagnosed with Respiratory Syncytial Virus (RSV) during the hospitalization of this operation within 4 weeks prior to the time of OR Entry Date and time and was present at the time of OR Entry Date and Time. Do not include if RSV diagnosed at outside hospital or transferring hospital unless diagnosis reconfirmed.

490	Single lung	Code this factor if the patient has only one lung present at the time of OR Entry Date and Time
500	Tracheostomy present	Code this factor if the patient has a tracheostomy present at the time of OR Entry Date and Time.
510	Asthma	Asthma is the common chronic inflammatory disease of the airways characterized by variable and recurring symptoms, reversible airflow obstruction, and bronchospasm. Symptoms include wheezing, coughing, chest tightness, and shortness of breath. Asthma is clinically classified according to the frequency of symptoms, forced expiratory volume in 1 second (FEV1), and peak expiratory flow rate. Asthma may also be classified as atopic (extrinsic) or non-atopic (intrinsic). It is thought to be caused by a combination of genetic and environmental factors. Treatment of acute symptoms is usually with an inhaled short-acting beta-2 agonist (such as salbutamol). Symptoms can be prevented by avoiding triggers, such as allergens and irritants, and by inhaled corticosteroids. Code this factor if the clinician documents the patient has a diagnosis of asthma or reactive airway disease.
520	Bronchopulmonary dysplasia (BPD)	Bronchopulmonary dysplasia (BPD) is a chronic lung disorder that is most common among children who were born prematurely, with low birth weights and who received prolonged mechanical ventilation to treat respiratory distress syndrome. BPD is characterized by inflammation and scarring in the lungs. The high pressures of oxygen delivery result in necrotizing bronchiolitis and alveolar septal injury, further compromising oxygenation of blood. Today, with the advent of surfactant therapy and high frequency nasal ventilation and oxygen supplementation, infants with BPD experience much milder injury without necrotizing bronchiolitis or alveolar septal fibrosis. It develops most commonly in the first 4 weeks after birth. Code this factor if the clinician documents the diagnosis of BPD.
530	ICD (AICD) ([automatic] implantable cardioverter defibrillator) present	An implantable cardioverter-defibrillator (ICD) is a small battery-powered electrical impulse generator that is implanted in patients who are at risk of sudden cardiac death due to ventricular fibrillation and ventricular tachycardia. The device is programmed to detect cardiac arrhythmia and correct it by delivering a jolt of electricity. In current models, the ability to convert tachyarrhythmias has been extended to include both atrial and ventricular arrhythmias. There also exists the ability to perform biventricular pacing for asystole or bradycardia. Code this factor if an AICD or life vest is present at the time and date of OR entry.
540	Pacemaker present	A pacemaker is a medical device that uses electrical impulses, delivered by electrodes contacting the heart muscles, to regulate the beating of the heart. The purpose of a pacemaker is to maintain an adequate heart rate, either because the heart's native pacemaker is not fast enough, or there is a block in the heart's electrical conduction system. Pacemakers are externally programmable and allow the physician to select the optimum pacing modes for individual patients. Some have multiple electrodes stimulating differing positions within the heart to improve synchronization of the upper (atria) and lower (ventricles) chambers of the heart. Code this factor if the patient is actively

		being paced with a temporary or permanent pacemaker. Do not include if the patient has pacing wires but is not actively being paced.
570	Tobacco use	Code this factor if there is current or previous patient use of any tobacco product, including cigarettes, cigars, pipes, and chewing tobacco. Do not include maternal smoking or secondhand exposure to tobacco products. Do not include other products including marijuana use.
580	Family History of Coronary artery disease	Code this factor if the patient has/had any direct blood relatives (only include if parents, siblings, children) who have had any of the following diagnosed at age less than 55 years for male relatives or less than 65 years for female relatives: - Coronary artery disease (i.e., angina, previous CABG or PCI) - Myocardial Infarction (MI)
590	Dyslipidemia	Current or previous diagnosis of dyslipidemia according to National Cholesterol Education Program criteria, defined as any of the following: - Total cholesterol greater than or equal to 200 mg/dL (5.18 mmol/L) - LDL greater than or equal to 130 mg/dL (3.37 mmol/L) - HDL less than or equal to 40 mg/dL (1.04 mmol/L) in males and less than or equal to 50 mg/dL (1.30 mmol/L) in females Code this factor if the patient meets <u>one of the above criteria</u> at time of hospitalization for surgery
777	Other preoperative factors	This patient has other preoperative factor(s) that are not on this list.

<u>February 2019</u>: Should invasive mechanical ventilation be coded as a preoperative factor for a patient on their sternal closure operation who was NOT intubated prior to their index surgery, but was intubated for their sternal closure because of their index operation? **Select all applicable preoperative factors prior to the sternal closure, including mechanical ventilation for respiratory failure. Please note that only the preoperative factors for the index operation will be analyzed.**

<u>February 2019:</u> Please define 'hospitalization'. Is this synonymous with 'episode of care'? Does the start of the hospitalization include time spent at an OSH leading up to the admission to the surgical center? Does it also include time after hospital discharge until they qualify for having a 'database discharge date' (i.e. if they are discharged to another facility)? **Hospitalization is the date of hospital admission to the date of hospital discharge at the hospital where the surgery was performed. Episode of care is defined by the date of hospital admission to the date of database discharge at the hospital where the surgery was performed. Please refer to your data analysis report for more detailed information. Some preoperative factors may be coded if they occurred at an outside hospital but the dates of admission/discharge do not change – just code the preoperative factors that allow for this.**

<u>February 2019:</u> For Coagulation disorder, Hypocoagulable state not secondary to medication (intrinsic hypocoagulable state), I don't understand the parts that were added to the definition with v3.41 "TEG findings of prolonged R and K times and decreased MA and Angle (alpha)". I have a neonate with congenital syphilis with a platelet count 107,000 at entry to OR . But my team feels it should count as a factor. Their reasons: (1) thrombocytopenia diagnosis from hematology given (2) platelets were transfused which is why the level was over 100 (3) platelets on peripheral smear were large cell meaning they do not function normally. Should we assign it as a pre-op factor? **Include preoperative factor Coagulation disorder, Hypocoagulable state not secondary to medication if the thrombocytopenia (<100,000) occurred within 24 hours prior to going to the OR.**

<u>April 2019:</u> If a patient has a long-term (e.g. >1 month) NG tube, should we mark gastrostomy present as a preop risk factor? One of my surgeons feels like it should be since at our institution, we like to wait quite

some time before doing a gastrostomy. **No, a nasogastric tube is not a gastrostomy tube. Only select this field if a gastrostomy tube is present.**

April 2019: Preop Factor: Transferred from another hospital after undergoing cardiac surgical operation at that hospital during this episode of care. Question: In reference to "cardiac surgical operation", does this include only CPB and no CPB cases done at that hospital or can it include CPB, no CPB, ECMO, thoracic, VAD etc. I have a patient that was cannulated for ECMO at an OSH. This patient was transferred to our facility, where days later he was decannulated from ECMO. Would he qualify for the preop factor listed; Transferred from another hospital after undergoing cardiac surgical operation at that hospital during this episode of care. **Cardiac surgical operation includes CPB or No CPB Cardiovascular operations only. Only code the preoperative factor Cardiac Surgical Operation if the patient underwent a CPB or No CPB Cardiovascular operation at the previous hospital. In this scenario, do not code this factor.**

May 2019: The definition for hepatic dysfunction gives only one test result to determine coagulopathy (PT > 1.5 x upper limits of normal), but the definition for coagulation disorder, hypocoagulable state gives a couple test results to determine coagulopathy (PT/PTT above normal, Thrombocytopenia <100,000 or Fibrinogen split products positive (>10%), TEG findings of prolonged R and K times and decreased MA and Angle (alpha)). If a patient has hypoalbuminemia and thrombocytopenia <100,000 (PT level was increased but doesn't meet 1.5x limit) can I code him as having hepatic dysfunction, or is the increased PT level the only way to determine a coagulopathy in this specific situation? **No, this scenario does not represent hepatic dysfunction as the thrombocytopenia is not caused by hepatic dysfunction.**

July 2019: Do preop factors count for subsequent surgeries in risk stratification calculations, or are the preop factors only accounted for on the index operation? For example, is it important to enter preop factors for cases such as sternal closures where there is no STAT category associated with it? **Preop factors are only analyzed for the index case. We recommend completing the prep factors for local use for subsequent operations**.

Long Name:	PreOpFactor Other - Specify	*SeqNo:*	851
Short Name:	**PreOpFactorSpecify**	*Core:*	Yes
Section Name:	Preoperative Factors	*Harvest:*	Yes
DBTableName:	PreopFactor		
Definition:	Indicate any other factors that are present pre-operatively that may impact the patient's outcome.		
Intent / Clarification:			
Data Source:	User		
Format:	Text		
ParentLongName:	Preoperative Factor		
ParentShortName:	**PreopFactor**		
ParentHarvestCodes:	777		
ParentValues:	= "Other preoperative factors"		

Diagnosis

Long Name:	Diagnosis Table Unique Record Identifier	*SeqNo:*	870
Short Name:	**DiagUniqueID**	*Core:*	Yes
Section Name:	Diagnosis	*Harvest:*	Yes
DBTableName:	Diagnosis		
Definition:	Unique identifier for the record in the Diagnosis table.		

Intent / Clarification:

Data Source: Automatic
Format: Text

Long Name:	Diagnosis Link to Operations Table	*SeqNo:*	880
Short Name:	**OperationID**	*Core:*	Yes
Section Name:	Diagnosis	*Harvest:*	Yes
DBTableName:	Diagnosis		
Definition:	An arbitrary, unique value generated by the software that permanently identifies each operation record in the participant's database. This field is the foreign key that links the Diagnosis record with the associated record in the Operations table.		

Intent / Clarification:

Data Source: Automatic
Format: Text

Long Name:	Diagnoses	*SeqNo:*	890
Short Name:	**Diagnosis**	*Core:*	Yes
Section Name:	Diagnosis	*Harvest:*	Yes
DBTableName:	Diagnosis		
Definition:	Indicate all diagnoses noted at the time of the surgical procedure or documented by preoperative studies. This entry may duplicate the Fundamental Diagnosis.		

Intent / Clarification:

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

Harvest Codes and Value Definitions:

Code:	Value:	Definition:
10	PFO	A small interatrial communication (or potential communication) confined to the region of the oval fossa (fossa ovalis) characterized by no deficiency of the primary atrial septum (septum primum) and a normal limbus with no deficiency of the septum secundum (superior interatrial fold).

20	ASD, Secundum	A congenital cardiac malformation in which there is an interatrial communication confined to the region of the oval fossa (fossa ovalis), most commonly due to a deficiency of the primary atrial septum (septum primum) but deficiency of the septum secundum (superior interatrial fold) may also contribute.
30	ASD, Sinus venosus	A congenital cardiac malformation in which there is a caval vein (vena cava) and/or pulmonary vein (or veins) that overrides the atrial septum or the septum secundum (superior interatrial fold) producing an interatrial or anomalous venoatrial communication. Although the term sinus venosus atrial septal defect is commonly used, the lesion is more properly termed a sinus venosus communication because, while it functions as an interatrial communication, this lesion is not a defect of the atrial septum.
40	ASD, Coronary sinus	A congenital cardiac malformation in which there is a deficiency of the walls separating the left atrium from the coronary sinus allowing interatrial communication through the coronary sinus ostium.
50	ASD, Common atrium (single atrium)	Complete absence of the interatrial septum."Single atrium" is applied to defects with no associated malformation of the atrioventricular valves."Common atrium" is applied to defects with associated malformation of the atrioventricular valves.
2150	ASD, Postoperative interatrial communication	A surgically created communication between the atria.
71	VSD, Type 1 (Subarterial) (Supracristal) (Conal septal defect) (Infundibular)	A VSD that lies beneath the semilunar valve(s) in the conal or outlet septum.
73	VSD, Type 2(Perimembranous) (Paramembranous) (Conoventricular)	A VSD that is confluent with and involves the membranous septum and is bordered by an atrioventricular valve, not including type 3 VSDs.
75	VSD, Type 3 (Inlet) (AV canal type)	A VSD that involves the inlet of the right ventricular septum immediately inferior to the AV valve apparatus.
77	VSD, Type 4 (Muscular)	A VSD completely surrounded by muscle.
79	VSD, Type: Gerbode type(LV-RA communication)	A rare form of VSD in which the defect is at the membranous septum; the communication is between the left ventricle and right atrium.
80	VSD, Multiple	More than one VSD exists. Each individual VSD may be coded separately to specify the individual VSD types.
100	AVC (AVSD), Complete(CAVSD)	Indicate if the patient has the diagnosis of “AVC (AVSD), Complete (CAVSD).” An “AVC (AVSD), Complete (CAVSD)” is a “complete atrioventricular canal” or a “complete atrioventricular septal defect” and occurs in a heart with the phenotypic feature of a common atrioventricular junction. An “AVC (AVSD), Complete (CAVSD)” is defined as an AVC with a common AV valve and both a defect in the atrial septum just above the AV valve (ostium primum ASD [a usually crescent-shaped ASD in the inferior (posterior) portion of the atrial septum just above the AV valve]) and a defect in the ventricular septum just below the AV valve. The AV valve is one valve that bridges both the right and left sides of the heart. Balanced AVC is an AVC with two essentially appropriately sized ventricles. Unbalanced AVC is an AVC defect with two ventricles in which one ventricle is inappropriately small. Such a patient may be thought to be a candidate for biventricular repair, or, alternatively, may be managed as

		having a functionally univentricular heart. AVC lesions with unbalanced ventricles so severe as to preclude biventricular repair should be classified as single ventricles. Rastelli type A: The common superior (anterior) bridging leaflet is effectively split in two at the septum. The left superior (anterior) leaflet is entirely over the left ventricle and the right superior (anterior) leaflet is similarly entirely over the right ventricle. The division of the common superior (anterior) bridging leaflet into left and right components is caused by extensive attachment of the superior (anterior) bridging leaflet tothe crest of the ventricular septum by chordae tendineae. Rastelli type B: Rare, involves anomalous papillary muscle attachment from the right side of the ventricular septum to the left side of the common superior (anterior) bridging leaflet. Rastelli type C: Marked bridging of the ventricular septum by the superior (anterior) bridging leaflet, which floats freely (often termed a "free-floater") over the ventricular septum without chordal attachment to the crest of the ventricular septum.
110	AVC (AVSD), Intermediate(transitional)	An AVC with two distinct left and right AV valve orifices but also with both an ASD just above and a VSD just below the AV valves. While these AV valves in the intermediate form do form two separate orifices they remain abnormal valves. The VSD is often restrictive.
120	AVC (AVSD), Partial (incomplete) (PAVSD) (ASD, primum)	An AVC with an ostium primum ASD (a usually crescent-shaped ASD in the inferior (posterior) portion of the atrial septum just above the AV valve) and varying degrees of malformation of the left AV valve leading to varying degrees of left AV valve regurgitation. No VSD is present.
140	AP window (aortopulmonary window)	Indicate if the patient has the diagnosis of “AP window (aortopulmonary window).” An “AP window (aortopulmonary window)” is defined as a defect with side-to-side continuity of the lumens of the aorta and pulmonary arterial tree, which is distinguished from common arterial trunk (truncus arteriosus) by the presence of two arterial valves or their atretic remnants. (In other words, an aortopulmonary window is a communication between the main pulmonary artery and ascending aorta in the presence of two separate semilunar [pulmonary and aortic] valves. The presence of two separate semilunar valves distinguishes AP window from truncus arteriosus. Type 1 proximal defect: AP window located just above the sinus of Valsalva, a few millimeters above the semilunar valves, with a superior rim but little inferior rim separating the AP window from the semilunar valves. Type 2 distal defect: AP window located in the uppermost portion of the ascending aorta, with a well-formed inferior rim but little superior rim. Type 3 total defect: AP window involving the majority of the ascending aorta, with little superior and inferior rims. The intermediate type of AP window is similar to the total defect but with adequate superior and inferior rims. In the event of AP window occurring in association with interrupted aortic arch, code “Interrupted aortic arch + AP window (aortopulmonary window)”, and then use additional (secondary) diagnostic codes to describe the interrupted aortic arch and AP window separately to provide further documentation about the individual interrupted arch and AP window types.)
150	Pulmonary artery origin from ascending aorta (hemitruncus)	One pulmonary artery arises from the ascending aorta and the other pulmonary artery arises from the right ventricle. DOES NOT include origin of the right or left pulmonary artery from the innominate artery or the aortic arch via a patent ductus arteriosus or collateral artery.

160	Truncus arteriosus	Indicate if the patient has the diagnosis of "Truncus arteriosus." A truncus arteriosus is also known as a common arterial trunk and is defined as a heart in which a single arterial trunk arises from the heart, giving origin to the coronary arteries, the pulmonary arteries, and the systemic arterial circulation. In the majority of instances there is a ventricular septal defect and a single semilunar valve which may contain two, three, four, or more leaflets and is occasionally dysplastic. Often, the infundibular septum is virtually absent superiorly. In most instances the truncal valve overrides the true interventricular septum (and thus both ventricles), but very rarely the truncal valve may override the right ventricle entirely. In such instances, there may be no ventricular septal defect or a very small ventricular septal defect, in which case the left ventricle and mitral valve may be extremely hypoplastic.
170	Truncal valve insufficiency	Functional abnormality - insufficiency - of the truncal valve. May be further subdivided into grade of insufficiency (I, II, III, IV or mild, moderate, severe).
2470	Truncal valve stenosis	
2010	Truncus arteriosus + Interrupted aortic arch	Indicate if the patient has the diagnosis of "Truncus arteriosus + Interrupted aortic arch." {A truncus arteriosus is also known as a common arterial trunk and is defined as a heart in which a single arterial trunk arises from the heart, giving origin to the coronary arteries, the pulmonary arteries, and the systemic arterial circulation. In the majority of instances there is a ventricular septal defect and a single semilunar valve which may contain two, three, four, or more leaflets and is occasionally dysplastic. The infundibular septum is virtually absent superiorly. In most instances the truncal valve overrides the true interventricular septum (and thus both ventricles), but very rarely the truncal valve may override the right ventricle entirely. If in such case there is no ventricular septal defect, then the left ventricle and mitral valve may be extremely hypoplastic.} {Interrupted aortic arch is defined as the loss of luminal continuity between the ascending and descending aorta. In most cases blood flow to the descending thoracic aorta is through a PDA, and there is a large VSD. Arch interruption is further defined by site of interruption. In type A, interruption is distal to the left subclavian artery; in type B interruption is between the left carotid and left subclavian arteries; and in type C interruption occurs between the innominate and left carotid arteries.}
180	Partial anomalous pulmonary venous connection (PAPVC)	Some, but not all of the pulmonary veins connect to the right atrium or to one or more of its venous tributaries. This definition excludes sinus venosus defects with normally connected but abnormally draining pulmonary veins (the pulmonary veins may drain abnormally into the right atrium via the atrial septal defect).
190	Partial anomalous pulmonary venous connection (PAPVC), scimitar	The right pulmonary vein(s) connect anomalously to the inferior vena cava or to the right atrium at the insertion of the inferior vena cava. The descending vertical vein resembles a scimitar (Turkish sword) on frontal chest x-ray. Frequently associated with: hypoplasia of the right lung with bronchial anomalies; dextroposition and/or dextrorotation of the heart; hypoplasia of the right pulmonary artery; and anomalous subdiaphragmatic systemic arterial supply to the lower lobe of the right lung directly from the aorta or its main branches.
200	Total anomalous pulmonary venous	All of the pulmonary veins connect anomalously with the right atrium or to one or more of its venous tributaries. None of the pulmonary veins

	connection (TAPVC), Type 1 (supracardiac)	connect normally to the left atrium. In Type 1 (supracardiac) TAPVC, the anomalous connection is at the supracardiac level and can be obstructed or nonobstructed.
210	Total anomalous pulmonary venous connection (TAPVC), Type 2 (cardiac)	All of the pulmonary veins connect anomalously with the right atrium or to one or more of its venous tributaries. None of the pulmonary veins connect normally to the left atrium. In Type 2 (cardiac) TAPVC, the anomalous connection is to the heart, either to the right atrium directly or to the coronary sinus. Most patients with type 2 TAPVC are nonobstructed.
220	Total anomalous pulmonary venous connection (TAPVC), Type 3 (infracardiac)	All of the pulmonary veins connect anomalously with the right atrium or to one or more of its venous tributaries. None of the pulmonary veins connect normally to the left atrium. In Type 3 (infracardiac) TAPVC, the anomalous connection is at the infracardiac level (below the diaphragm), with the pulmonary venous return entering the right atrium ultimately via the inferior vena cava. In the vast majority of patients infracardiac TAPVC is obstructed.
230	Total anomalous pulmonary venous connection (TAPVC), Type 4 (mixed)	All of the pulmonary veins connect anomalously with the right atrium or to one or more of its venous tributaries. None of the pulmonary veins connect normally to the left atrium. In Type 4 (mixed) TAPVC, the anomalous connection is at two or more of the above levels (supracardiac, cardiac, infracardiac) and can be obstructed or nonobstructed.
250	Cor triatriatum	In the classic form of cor triatriatum a membrane divides the left atrium (LA) into a posterior accessory chamber that receives the pulmonary veins and an anterior chamber (LA) that communicates with the mitral valve. In differentiating cor triatriatum from supravalvar mitral ring, in cor triatriatum the posterior compartment contains the pulmonary veins while the anterior contains the left atrial appendage and the mitral valve orifice; in supravalvar mitral ring, the anterior compartment contains only the mitral valve orifice. Cor triatriatum dexter (prominent venous valve producing obstruction of the IVC and tricuspid valve) is to be coded as a systemic venous obstruction, not as a form of cor triatriatum.
260	Pulmonary venous stenosis	Any pathologic narrowing of one or more pulmonary veins. Can be further subdivided by etiology (congenital, acquired-postoperative, acquired-non postoperative) and extent of stenosis (diffusely hypoplastic, long segment focal/tubular stenosis, discrete stenosis).
2480	Pulmonary venous stenosis, Acquired	
2490	Pulmonary venous stenosis, Spontaneous	
270	Systemic venous anomaly	Anomalies of the systemic venous system (superior vena cava (SVC), inferior vena cava (IVC), brachiocephalic veins (often the innominate vein), azygos vein, coronary sinus, levo-atrial cardinal vein) arising from one or more anomalies of origin, duplication, course, or connection. Examples include abnormal or absent right SVC with LSVC, bilateral SVC, interrupted right or left IVC, azygos continuation of IVC, and anomalies of hepatic drainage. Bilateral SVC may have, among other configurations: 1) RSVC draining to the RA and the LSVC to the LA with completely unroofed coronary sinus, 2) RSVC draining to the RA and LSVC to the coronary sinus which drains (normally) into the RA, or 3) RSVC to the coronary sinus which drains (abnormally) into the LA and LSVC to LA. Anomalies of the inferior vena caval system include, among others: 1) left IVC to LA, 2)

		biatrial drainage, or 3) interrupted IVC (left or right) with azygos continuation to an LSVC or RSVC.
280	Systemic venous obstruction	Obstruction of the systemic venous system (superior vena cava (SVC), inferior vena cava (IVC), brachiocephalic veins (often the innominate vein), azygos vein, coronary sinus, levo-atrial cardinal vein) arising from congenital or acquired stenosis or occlusion. Cor triatriatum dexter (prominent venous valve producing obstruction of the IVC and tricuspid valve) is to be coded as a systemic venous obstruction, not as a form of cor triatriatum.
290	TOF	Indicate if the patient has the diagnosis of “TOF”. Only use this diagnosis if it is NOT known if the patient has one of the following four more specific diagnoses: (1). “TOF, Pulmonary stenosis”, (2). “TOF, AVC (AVSD)”, (3). “TOF, Absent pulmonary valve”, (4). “Pulmonary atresia, VSD (Including TOF, PA)”, or (5). “Pulmonary atresia, VSD-MAPCA (pseudotruncus)”. {“TOF” is “Tetralogy of Fallot” and is defined as a group of malformations with biventricular atrioventricular alignments or connections characterized by anterosuperior deviation of the conal or outlet septum or its fibrous remnant, narrowing or atresia of the pulmonary outflow, a ventricular septal defect of the malalignment type, and biventricular origin of the aorta. Hearts with tetralogy of Fallot will always have a ventricular septal defect, narrowing or atresia of the pulmonary outflow, and aortic override; hearts with tetralogy of Fallot will most often have right ventricular hypertrophy.} (An additional, often muscular [Type 4] VSD may be seen with TOF and should be coded separately as a secondary diagnosis as “VSD, Type 4 (Muscular)”. Pulmonary arteries may be diminutive or there may be an absent left or right pulmonary artery; additional coding for pulmonary artery and/or branch pulmonary artery stenoses may be found under RVOT obstruction. Abnormal coronary artery distribution may also be associated with tetralogy of Fallot and may be coded separately under coronary artery anomalies. The presence of associated anomalies such as additional VSD, atrial septal defect, right aortic arch, left superior vena cava, and coronary artery anomalies must be subspecified as an additional or secondary diagnosis under the primary TOF diagnosis. TOF with absent pulmonary valve or TOF with associated complete atrioventricular canal are NOT to be secondary diagnoses under TOF - they are separate entities and should be coded as such. Controversy surrounds the differentiation between TOF and double outlet right ventricle [DORV]; in the nomenclature used here, DORV is defined as a type of ventriculoarterial connection in which both great vessels arise predominantly from the right ventricle. TOF with pulmonary atresia is to be coded under "Pulmonary atresia-VSD.")
2140	TOF, Pulmonary stenosis	Indicate if the patient has the diagnosis of “TOF, Pulmonary stenosis”. Use this diagnosis if the patient has tetralogy of Fallot and pulmonary stenosis. Do not use this diagnosis if the patient has tetralogy of Fallot and pulmonary atresia. Do not use this diagnosis if the patient has tetralogy of Fallot and absent pulmonary valve. Do not use this diagnosis if the patient has tetralogy of Fallot and atrioventricular canal. {Tetralogy of Fallot is defined as a group of malformations withbiventricular atrioventricular alignments or connections characterized by anterosuperior deviation of the conal or outlet septum or its fibrous remnant, narrowing or atresia of the pulmonary outflow, a ventricular septal defect of the malalignment type, and biventricular origin of the aorta. Hearts with tetralogy of Fallot

		will always have a ventricular septal defect, narrowing or atresia of the pulmonary outflow, and aortic override; hearts with tetralogy of Fallot will most often have right ventricular hypertrophy. (An additional, often muscular [Type 4] VSD may be seen with TOF and should be codedseparately as a secondary diagnosis as “VSD, Type 4 (Muscular)”. Pulmonary arteries may be diminutive or there may be an absent left or right pulmonary artery; additional coding for pulmonary artery and/or branch pulmonary artery stenoses may be found under RVOT obstruction. Abnormal coronary artery distribution may also be associated with tetralogy of Fallot and may be coded separately under coronary artery anomalies. The presence of associated anomalies such as additional VSD, atrial septal defect, right aortic arch, left superior vena cava, and coronary artery anomalies must be subspecified as an additional or secondary diagnosis under the primary TOF diagnosis. TOF with absent pulmonary valve or TOF with associated complete atrioventricular canal are NOT to be secondary diagnoses under TOF - they are separate entities and should be coded as such. Controversy surrounds the differentiation between TOF and double outlet right ventricle [DORV]; in the nomenclature used here, DORV is defined as a type of ventriculoarterial connection in which both great vessels arise predominantly from the right ventricle. TOF with pulmonary atresia is to be coded under "Pulmonary atresia-VSD.")}
300	TOF, AVC (AVSD)	TOF with complete common atrioventricular canal defect is a rare variant of common atrioventricular canal defect with the associated conotruncal abnormality of TOF. The anatomy of the endocardial cushion defect is that of Rastelli type C in almost all cases.
310	TOF, Absent pulmonary valve	Indicate if the patient has the diagnosis of “TOF, Absent pulmonary valve.” “TOF, Absent pulmonary valve” is “Tetralogy of Fallot with Absent pulmonary valve” and is defined as a malformation with all of the morphologic characteristics of tetralogy of Fallot (anterosuperior deviation of the conal or outlet septum or its fibrous remnant, narrowing of the pulmonary outflow, a ventricular septal defect of the malalignment type, and biventricular origin of the aorta), in which the ventriculo-arterial junction of the right ventricle with the main pulmonary artery features an atypical valve with rudimentary cusps that lack the anatomical semi-lunar features of normal valve cusps and which functionally do not achieve central coaptation. The physiologic consequence is usually a combination of variable degrees of both stenosis and regurgitation of the pulmonary valve. A developmental accompaniment of this anatomy and physiology is dilatation of the main pulmonary artery and central right and left pulmonary arteries, which when extreme, is associated with abnormal arborization of lobar and segmental pulmonary artery branches and with compression of the trachea and mainstem bronchi. One theory holds that absence of the arterial duct or ductal ligament (which is a nearly constant finding in cases of tetralogy of Fallot with absent pulmonary valve) in combination with pulmonary `valve stenosis and regurgitation, comprise the physiologic conditions which predispose to central pulmonary artery dilatation during fetal development. (Tetralogy of Fallot with Absent Pulmonary Valve Syndrome is a term frequently used to describe the clinical presentation when it features both circulatory alterations and respiratory distress secondary to airway compression.
320	Pulmonary atresia	Pulmonary atresia defects which do not readily fall into pulmonary atresia-intact ventricular septum or pulmonary atresia-VSD (with or

		without MAPCAs) categories. These may include complex lesions in which pulmonary atresia is a secondary diagnosis, for example, complex single ventricle malformations with associated pulmonary atresia.
330	Pulmonary atresia, IVS	Pulmonary atresia (PA) and intact ventricular septum (IVS) is a duct-dependent congenital malformation that forms a spectrum of lesions including atresia of the pulmonary valve, a varying degree of right ventricle and tricuspid valve hypoplasia, and anomalies of the coronary circulation. An RV dependent coronary artery circulation is present when coronary artery fistulas (coronary sinusoids) are associated with a proximal coronary artery stenosis. Associated Ebstein's anomaly of the tricuspid valve can be present; the tricuspid diameter is enlarged and the prognosis is poor.
340	Pulmonary atresia, VSD(Including TOF, PA)	Pulmonary atresia (PA) and ventricular septal defect (VSD) is a heterogeneous group of congenital cardiac malformations in which there is lack of luminal continuity and absence of blood flow from either ventricle (in cases with ventriculo-arterial discordance) and the pulmonary artery, in a biventricular heart that has an opening or a hole in the interventricular septum (VSD). The malformation forms a spectrum of lesions including tetralogy of Fallot with pulmonary atresia. Tetralogy of Fallot with PA is a specific type of PA-VSD where the intracardiac malformation is more accurately defined (extreme under development of the RV infundibulum with marked anterior and leftward displacement of the infundibular septum often fused with the anterior wall of the RV resulting in complete obstruction of blood flow into the pulmonary artery and associated with a large outlet, subaortic ventricular septal defect). In the vast majority of cases of PA-VSD the intracardiac anatomy is that of TOF. The pulmonary circulation in PA-VSD is variable in terms of origin of blood flow, presence or absence of native pulmonary arteries, presence or absence of major aortopulmonary collateral arteries (MAPCA(s)), and distal distribution (pulmonary parenchymal segment arborization) abnormalities. Native pulmonary arteries may be present or absent. If MAPCAs are present this code should not be used; instead, Pulmonary atresia, VSD-MAPCA (pseudotruncus) should be used.
350	Pulmonary atresia, VSD-MAPCA	MAPCA(s) are large and distinct arteries, highly variable in number, that usually arise from the descending thoracic aorta, but uncommonly may originate from the aortic arch or the subclavian, carotid or even the coronary arteries. MAPCA(s) may be associated with present or absent native pulmonary arteries. If present, the native pulmonary arteries may be hypoplastic, and either confluent or nonconfluent. Systemic pulmonary collateral arteries have been categorized into 3 types based on their site of origin and the way they connect to the pulmonary circulation: direct aortopulmonary collaterals, indirect aortopulmonary collaterals, and true bronchial arteries. Only the first two should be considered MAPCA(s). If MAPCA(s) are associated with PA-VSD or TOF, PA this code should be used.
360	MAPCA(s) (major aortopulmonary collateral[s]) (without PA-VSD)	Rarely MAPCA(s) may occur in patents who do not have PA-VSD, but have severe pulmonary stenosis. The intracardiac anatomy in patients who have MAPCA(s) without PA should be specifically coded in each case as well.
370	Ebstein's anomaly	Indicate if the patient has the diagnosis of “Ebstein's anomaly”. Ebstein's anomaly is a malformation of the tricuspid valve and right ventricle that is characterized by a spectrum of several features: (1) incomplete

		delamination of tricuspid valve leaflets from the myocardium of the right ventricle; (2) downward (apical) displacement of the functional annulus; (3) dilation of the "atrialized" portion of the right ventricle with variable degrees of hypertrophy and thinning of the wall; (4) redundancy, fenestrations, and tethering of the anterior leaflets; and (5) dilation of the right atrioventricular junction (the true tricuspid annulus). These anatomical and functional abnormalities cause tricuspid regurgitation (and rarely tricuspid stenosis) that results in right atrial and right ventricular dilatation and atrial and ventricular arrhythmias. With increasing degrees of anatomic severity of malformation, the fibrous transformation of leaflets from their muscular precursors remains incomplete, with the septal leaflet being most severely involved, the posterior leaflet less severely involved, and the anterior leaflet usually the least severely involved. Associated cardiac anomalies include an interatrial communication, the presence of accessory conduction pathways often associated with Wolff-Parkinson-White syndrome, and dilation of the right atrium and right ventricle in patients with severe Ebstein's anomaly. (Varying degrees of right ventricular outflow tract obstruction may be present, including pulmonary atresia in some cases. Such cases of Ebstein's anomaly with pulmonary atresia should be coded witha Primary Diagnosis of “Ebstein’s anomaly”, and a Secondary Diagnosis of “Pulmonary atresia”.) (Some patients with atrioventricular discordance and ventriculoarterial discordance in situs solitus [congenitally corrected transposition] have an Ebstein-like deformity of the left-sided morphologically tricuspid valve. The nature of the displacement of the septal and posterior leaflets is similar to that in right-sided Ebstein's anomaly in patients with atrioventricular concordance and ventriculoarterial concordance in situs solitus. These patients with “Congenitally corrected TGA” and an Ebstein-like deformity of the left-sided morphologically tricuspid valve should be coded with a Primary Diagnosis of “Congenitally corrected TGA”, and a Secondary Diagnosis of “Ebstein's anomaly”.)
380	Tricuspid regurgitation, non- Ebstein's related	Non-Ebstein's tricuspid regurgitation may be due to congenital factors (primary annular dilation, prolapse, leaflet underdevelopment, absent papillary muscle/chordae) or acquired (post cardiac surgery or secondary to rheumatic fever, endocarditis, trauma, tumor, cardiomyopathy, iatrogenic or other causes).
390	Tricuspid stenosis	Tricuspid stenosis may be due to congenital factors (valvar hypoplasia, abnormal subvalvar apparatus, double-orifice valve, parachute deformity) or acquired (post cardiac surgery or secondary to carcinoid, rheumatic fever, tumor, systemic disease, iatrogenic, or other causes).
400	Tricuspid regurgitation and tricuspid stenosis	Tricuspid regurgitation present with tricuspid stenosis may be due to congenital factors or acquired.
410	Tricuspid valve, Other	Tricuspid valve pathology not otherwise specified in diagnosis definitions 370, 380, 390 and 400.
420	Pulmonary stenosis, Valvar	Pulmonary stenosis, Valvar ranges from critical neonatal pulmonic valve stenosis with hypoplasia of the right ventricle to valvar pulmonary stenosis in the infant, child, or adult, usually better tolerated but potentially associated with infundibular stenosis. Pulmonary branch hypoplasia can be associated. Only 10% of neonates with Pulmonary stenosis, Valvar with intact ventricular septum have RV-to-coronary artery fistula(s). An RV dependent coronary artery circulation is present when

		coronary artery fistulas (coronary sinusoids) are associated with a proximal coronary artery stenosis; this occurs in only 2% of neonates with Pulmonary stenosis, Valvar with IVS.
430	Pulmonary artery stenosis (hypoplasia), Main (trunk)	Indicate if the patient has the diagnosis of "Pulmonary artery stenosis (hypoplasia), Main (trunk)." "Pulmonary artery stenosis (hypoplasia), Main (trunk)" is defined as a congenital or acquired anomaly with pulmonary trunk (main pulmonary artery) narrowing or hypoplasia. The stenosis or hypoplasia may be isolated or associated with other cardiac lesions. Since the narrowing is distal to the pulmonic valve, it may also be known as supravalvar pulmonary stenosis.
440	Pulmonary artery stenosis, Branch, Central (within the hilar bifurcation)	Indicate if the patient has the diagnosis of "Pulmonary artery stenosis, Branch, Central (within the hilar bifurcation)." "Pulmonary artery stenosis, Branch, Central (within the hilar bifurcation)" is defined as a congenital or acquired anomaly with central pulmonary artery branch (within the hilar bifurcation involving the right or left pulmonary artery, or both) narrowing or hypoplasia. The stenosis or hypoplasia may be isolated or associated with other cardiac lesions. Coarctation of the pulmonary artery is related to abnormal extension of the ductus arteriosus into a pulmonary branch, more frequently the left branch.
450	Pulmonary artery stenosis, Branch, Peripheral (at or beyond the hilar bifurcation)	Indicate if the patient has the diagnosis of "Pulmonary artery stenosis, Branch, Peripheral (at or beyond the hilar bifurcation)." "Pulmonary artery stenosis, Branch, Peripheral (at or beyond the hilar bifurcation)" is defined as a congenital or acquired anomaly with peripheral pulmonary artery narrowing or hypoplasia (at or beyond the hilar bifurcation). The stenosis or hypoplasia may be isolated or associated with other cardiac lesions.
470	Pulmonary artery, Discontinuous	Indicate if the patient has the diagnosis of "Pulmonary artery, Discontinuous." Pulmonary artery, Discontinuous" is defined as a congenital or acquired anomaly with discontinuity between the branch pulmonary arteries or between a branch pulmonary artery and the main pulmonary artery trunk.
490	Pulmonary stenosis, Subvalvar	Subvalvar (infundibular) pulmonary stenosis is a narrowing of the outflow tract of the right ventricle below the pulmonic valve. It may be due to a localized fibrous diaphragm just below the valve, an obstructing muscle bundle or to a long narrow fibromuscular channel.
500	DCRV	The double chambered right ventricle is characterized by a low infundibular (subvalvar) stenosis rather than the rare isolated infundibular stenosis that develops more superiorly in the infundibulum, and is often associated with one or several closing VSDs. In some cases, the VSD is already closed. The stenosis creates two chambers in the RV, one inferior including the inlet and trabecular portions of the RV and one superior including the infundibulum.
510	Pulmonary valve, Other	Other anomalies of the pulmonary valve may be listed here including but not restricted to absent pulmonary valve.
530	Pulmonary insufficiency	Pulmonary valve insufficiency or regurgitation may be due to congenital factors (primary annular dilation, prolapse, leaflet underdevelopment, etc.) or acquired (for example, post cardiac surgery for repair of tetralogy of Fallot, etc.).
540	Pulmonary insufficiency and pulmonary stenosis	Pulmonary valve insufficiency and pulmonary stenosis beyond the neonatal period, in infancy and childhood, may be secondary to leaflet tissue that has become thickened and myxomatous. Retraction of the commissure attachment frequently creates an associated supravalvar

		stenosis.
2130	Shunt failure	Indicate if the patient has the diagnosis of “Shunt failure.” This diagnostic subgroup includes failure of any of a variety of shunts (“Shunt, Systemic to pulmonary, Modified Blalock-Taussig Shunt (MBTS)”, “Shunt, Systemic to pulmonary, Central (from aorta or to main pulmonary artery)”, “Shunt, Systemic to pulmonary, Other”, and “Sano Shunt”), secondary to any of the following etiologies: shunt thrombosis, shunt occlusion, shunt stenosis, shunt obstruction, and shunt outgrowth. This diagnosis (“Shunt failure”) would be the primary diagnosis in a patient with, for example, “Hypoplastic left heart syndrome (HLHS)” who underwent a “Norwood procedure” with a “Modified Blalock-Taussig Shunt” and now requires reoperation for thrombosis of the “Modified Blalock-Taussig Shunt.” The underlying or fundamental diagnosis in this patient is “Hypoplastic left heart syndrome (HLHS)”, but the primary diagnosis for the operation to be performed to treat the thrombosis of the “Modified Blalock-Taussig Shunt” would be “Shunt failure.” Please note that the choice “2130 Shunt failure” does not include “520 Conduit failure.”
520	Conduit failure	Indicate if the patient has the diagnosis of “Conduit failure.” This diagnostic subgroup includes failure of any of a variety of conduits (ventricular [right or left]-to-PA conduits, as well as a variety of other types of conduits [ventricular {right or left}-to-aorta, RA-to-RV, etc.]), secondary to any of the following etiologies: conduit outgrowth, obstruction, stenosis, insufficiency, or insufficiency and stenosis. This diagnosis (“Conduit failure”) would be the primary diagnosis in a patient with, for example, “Truncus arteriosus” repaired in infancy who years later is hospitalized because of conduit stenosis/ insufficiency. The underlying or fundamental diagnosis in this patient is “Truncus arteriosus”, but the primary diagnosis for the operation to be performed during the hospitalization (in this case, “Conduit reoperation”) would be “Conduit failure.” Please note that the choice “520 Conduit failure” does not include “2130 Shunt failure.”
550	Aortic stenosis, Subvalvar	Subaortic obstruction can be caused by different lesions: subaortic membrane or tunnel, accessory mitral valve tissue, abnormal insertion of the mitral anterior leaflet to the ventricular septum, deviation of the outlet septum (seen in coarctation of the aorta and interrupted aortic arch), or a restrictive bulboventricular foramen in single ventricle complexes. The Shone complex consists of subvalvar aortic stenosis in association with supravalvar mitral ring, parachute mitral valve, and coarctation of aorta. Subvalvar aortic stenosis may be categorized into two types: localized subvalvar aortic stenosis, which consists of a fibrous or fibromuscular ridge, and diffuse tunnel subvalvar aortic stenosis, in which circumferential narrowing commences at the annular level and extends downward for 1-3 cm. Idiopathic hypertrophic subaortic stenosis (IHSS) is also known as hypertrophic obstructive cardiomyopathy (HOCM), and is characterized by a primary hypertrophy of the myocardium. The obstructive forms involve different degrees of dynamic subvalvar aortic obstruction from a thickened ventricular wall and anterior motion of the mitral valve. Definitive nomenclature and therapeutic options for IHSS are listed under cardiomyopathy.
2500	Aortic stenosis, Subvalvar, Discrete	
2510	Aortic stenosis,	

	Subvalvar, IHSS	
2520	Aortic stenosis, Subvalvar, Tunnel-like	
560	Aortic stenosis, Valvar	Valvar aortic stenosis may be congenital or acquired. In its congenital form there are two types: critical (infantile), seen in the newborn in whom systemic perfusion depends on a patent ductus arteriosus, and noncritical, seen in infancy or later. Acquired valvar stenosis may be seen after as a result of rheumatic valvar disease, or from stenotic changes of an aortic valve prosthesis. Congenital valvar stenosis may result: (1) from complete fusion of commissures (acommissural) that results in a dome-shaped valve with a pinpoint opening (seen most commonly in infants with critical aortic valve stenosis); (2) from a unicommissural valve with one defined commissure and eccentric orifice (often with two raphes radiating from the ostium indicating underdeveloped commissures of a tricuspid aortic valve); (3) from a bicuspid aortic valve, with leaflets that can be equal in size or discrepant, and in left-right or anterior-posterior position; and finally (4) from a dysplastic tricuspid valve, which may have a gelatinous appearance with thick rarely equal in size leaflets, often obscuring the commissures. The dysplastic, tricuspid or bicuspid form of aortic valve deformity may not be initially obstructive but may become stenotic later in life due to leaflet thickening and calcification.
570	Aortic stenosis, Supravalvar	Congenital supravalvar aortic stenosis is described as three forms: an hourglass deformity, a fibrous membrane, and a diffuse narrowing of the ascending aorta. The disease can be inherited as an autosomal dominant trait or part of Williams-Beuren syndrome in association with mental retardation, elfin facies, failure to thrive, and occasionally infantile hypercalcemia. Supravalvar aortic stenosis may involve the coronary artery ostia, and the aortic leaflets may be tethered. The coronary arteries can become tortuous and dilated due to elevated pressures and early atherosclerosis may ensue. Supravalvar aortic stenosis may also be acquired: (1) after a neoaortic reconstruction such as arterial switch, Ross operation, or Norwood procedure; (2) at a suture line from a previous aortotomy or cannulation; and (3) from a narrowed conduit.
590	Aortic valve atresia	Aortic valve atresia will most often be coded under the Hypoplastic left heart syndrome/complex diagnostic codes since it most often occurs as part of a spectrum of cardiac malformations. However, there is a small subset of patients with aortic valve atresia who have a well-developed left ventricle and mitral valve and a large VSD nonrestrictive or restrictive). The diagnostic code "Aortic valve atresia" enables users to report those patients with aortic valve atresia and a well-developed systemic ventricle without recourse to either a hypoplastic left heart syndrome/complex diagnosis or a single ventricle diagnosis.
600	Aortic insufficiency	Congenital aortic regurgitation/insufficiency is rare as an isolated entity. There are rare reports of congenital malformation of the aortic valve that result in aortic insufficiency shortly after birth from an absent or underdeveloped aortic valve cusp. Aortic insufficiency is more commonly seen with other associated cardiac anomalies: (1) in stenotic aortic valves (commonly stenotic congenital bicuspid aortic valves) with some degree of aortic regurgitation due to aortic leaflet abnormality; (2) in association with a VSD (especially in supracristal or conal type I VSD, more commonly seen in Asian populations); (3) secondary to aortic-left ventricular tunnel; (4) secondary to tethering or retraction of aortic valve leaflets in cases of

		supravalvar aortic stenosis that may involve the aortic valve; and similarly (5) secondary to encroachment on an aortic cusp by a subaortic membrane; or (6) turbulence caused by a stenotic jet can create progressive aortic regurgitation. Aortic insufficiency may also result from: (1) post-procedure such as closed or open valvotomy or aortic valve repair, VSD closure, balloon valvotomy, or diagnostic catheterization; (2) in the neo-aorta post arterial switch, pulmonary autograft (Ross) procedure, homograft placement, Norwood procedure, or Damus-Kaye-Stansel procedure; (3) as a result of endocarditis secondary to perforated or prolapsed leaflets or annular dehiscence; (4) secondary to annulo-aortic ectasia with prolapsed or noncoapting leaflets; (5) secondary to trauma, blunt or penetrating; or (6) as a result of aortitis, bacterial, viral or autoimmune. Aortic regurgitation secondary to prosthetic failure should be coded first as either conduit failure or prosthetic valve failure, as applicable, and secondarily as aortic regurgitation secondary to prosthetic failure (perivalvar or due to structural failure). The underlying fundamental diagnosis that led to the initial conduit or valve prosthesis placement should also be described.
610	Aortic insufficiency and aortic stenosis	Aortic insufficiency is often seen in association with stenotic aortic valve, commonly the stenotic congenital bicuspid aortic valve. The degree of aortic regurgitation is due to the severity of the aortic leaflet abnormality.
620	Aortic valve, Other	This diagnostic subgroup may be used to delineate aortic valve cusp number (unicuspid, bicuspid, tricuspid, more than three cusps), commissural fusion (normal, partially fused, completely fused), and valve leaflet (normal, thickened, dysplastic, calcified, gelatinous), annulus (normal, hypoplastic, calcified), or sinus description (normal, dilated). Note that any extensive descriptors chosen within those made available by a vendor will be converted, at harvest, to Aortic valve, Other.
630	Sinus of Valsalva aneurysm	The sinus of Valsalva is defined as that portion of the aortic root between the aortic root annulus and the sinotubular ridge. A congenital sinus of Valsalva aneurysm is a dilation usually of a single sinus of Valsalva. These most commonly originate from the right sinus (65%-85%), less commonly from the noncoronary sinus (10%-30%), and rarely from the left sinus (<5%). A true sinus of Valsalva aneurysm presents above the aortic annulus. The hierarchical coding system distinguishes between congenital versus acquired, ruptured versus nonruptured, sinus of origin, and chamber/site of penetration (right atrium, right ventricle, left atrium, left ventricle, pulmonary artery, pericardium). A nonruptured congenital sinus of Valsalva aneurysm may vary from a mild dilation of a single aortic sinus to an extensive windsock deformity. Rupture of a congenital sinus of Valsalva aneurysm into an adjacent chamber occurs most commonly between the ages of 15-30 years. Rupture may occur spontaneously, after trauma, after strenuous physical exertion, or from acute bacterial endocarditis. Congenital etiology is supported by the frequent association of sinus of Valsalva aneurysms with VSDs. Other disease processes are also associated with sinus of Valsalva aneurysm and include: syphilis, endocarditis, cystic medial necrosis, atherosclerosis, and trauma. Acquired sinus of Valsalva aneurysms more frequently involve multiple sinuses of Valsalva; when present in multiple form they are more appropriately classified as aneurysms of the aortic root.
640	LV to aorta tunnel	The aortico-left ventricular tunnel (LV-to-aorta tunnel) is an abnormal paravalvular (alongside or in the vicinity of a valve) communication

		between the aorta and left ventricle, commonly divided into 4 types: (1) type I, a simple tunnel with a slit-like opening at the aortic end and no aortic valve distortion; (2) type II, a large extracardiac aortic wall aneurysm of the tunnel with an oval opening at the aortic end, with or without ventricular distortion; (3) type III, intracardiac aneurysm of the septal portion of the tunnel, with or without right ventricular outflow obstruction; and (4) type IV, a combination of types II and III. Further differentiation within these types may be notation of right coronary artery arising from the wall of the tunnel. If a LV-to-aorta tunnel communicates with the right ventricle, many feel that the defect is really a ruptured sinus of Valsalva aneurysm.
650	Mitral stenosis, Supravalvar mitral ring	Supravalvar mitral ring is formed by a circumferential ridge of tissue that is attached to the anterior mitral valve leaflet (also known as the aortic leaflet) slightly below its insertion on the annulus and to the atrium slightly above the attachment of the posterior mitral valve leaflet (also known as the mural leaflet). Depending on the diameter of the ring orifice, varying degrees of obstruction exist. The underlying valve is usually abnormal and frequently stenotic or hypoplastic. Supravalvar mitral ring is commonly associated with other stenotic lesions such as parachute or hammock valve (subvalvar stenosis), papillary muscle fusion (subvalvar stenosis), and double orifice mitral valve (valvar stenosis). Differentiation from cor triatriatum focuses on the compartments created by the supravalvar ring. In cor triatriatum the posterior compartment contains the pulmonary veins; the anterior contains the left atrial appendage and the mitral valve orifice. In supravalvar mitral ring, the posterior compartment contains the pulmonary veins and the left atrial appendage; the anterior compartment contains only the mitral valve orifice. When coding multiple mitral valvar lesions the predominant defect causing the functional effect (regurgitation, stenosis, or regurgitation and stenosis) should be listed as the primary defect.
660	Mitral stenosis, Valvar	Valvar mitral stenosis may arise from congenital (annular and / or leaflet) or acquired causes, both surgical (after mitral valve repair or replacement or other cardiac surgery) and non-surgical (post rheumatic heart disease, infective endocarditis, ischemia, myxomatous degeneration, trauma, or cardiomyopathy). Mitral valve annular hypoplasia is distinguished from severe mitral valve hypoplasia and mitral valve atresia, which are typically components of hypoplastic left heart syndrome. When coding multiple mitral valvar lesions the predominant defect causing the functional effect (regurgitation, stenosis, or regurgitation and stenosis) should be listed as the primary defect.
670	Mitral stenosis, Subvalvar	Congenital subvalvar mitral stenosis may be due to obstructive pathology of either the chordae tendineae and / or papillary muscles which support the valve leaflets. When coding multiple mitral valvar lesions the predominant defect causing the functional effect (regurgitation, stenosis, or regurgitation and stenosis) should be listed as the primary defect.
680	Mitral stenosis, Subvalvar, Parachute	In parachute mitral valve, all chordae are attached to a single papillary muscle originating from the posterior ventricular wall. When the interchordal spaces are partially obliterated valvar stenosis results. This defect also causes valvar insufficiency, most commonly due to a cleft leaflet, a poorly developed anterior leaflet, short chordae, or annular dilatation. This lesion is also part of Shone's anomaly, which consists of the parachute mitral valve, supravalvar mitral ring, subaortic stenosis, and

		coarctation of the aorta. When coding multiple mitral valvar lesions the predominant defect causing the functional effect (regurgitation, stenosis, or regurgitation and stenosis) should be listed as the primary defect.
695	Mitral stenosis	Stenotic lesions of the mitral valve not otherwise specified in the diagnosis definitions 650, 660, 670, and 680.
700	Mitral regurgitation and mitral stenosis	Mitral regurgitation and mitral stenosis may arise from congenital or acquired causes or after cardiac surgery. Additional details to aid in coding specific components of the diagnosis are available in the individual mitral stenosis or mitral regurgitation field definitions. When coding multiple mitral valve lesions the predominant defect causing the functional effect (regurgitation, stenosis, or regurgitation and stenosis) should be listed as the primary defect.
710	Mitral regurgitation	Mitral regurgitation may arise from congenital (at the annular, leaflet or subvalvar level) or acquired causes both surgical (after mitral valve repair or replacement, subaortic stenosis repair, atrioventricular canal repair, cardiac transplantation, or other cardiac surgery) and non-surgical (post rheumatic heart disease, infective endocarditis, ischemia (with chordal rupture or papillary muscle infarct), myxomatous degeneration including Barlow's syndrome, trauma, or cardiomyopathy). Congenital lesions at the annular level include annular dilatation or deformation (usually deformation is consequent to associated lesions). At the valve leaflet level, mitral regurgitation may be due to a cleft, hypoplasia or agenesis of leaflet(s), excessive leaflet tissue, or a double orifice valve. At the subvalvar level, mitral regurgitation may be secondary to chordae tendineae anomalies (agenesis, rupture, elongation, or shortening as in funnel valve), or to papillary muscle anomalies (hypoplasia or agenesis, shortening, elongation, single-parachute, or multiple-hammock valve). When coding multiple mitral valvar lesions the predominant defect causing the functional effect (regurgitation, stenosis, or regurgitation and stenosis) should be listed as the primary defect.
720	Mitral valve, Other	Mitral valve pathology not otherwise coded in diagnosis definitions 650 through 710.
730	Hypoplastic left heart syndrome (HLHS)	Hypoplastic left heart syndrome (HLHS) is a spectrum of cardiac malformations characterized by a severe underdevelopment of the left heart-aorta complex, consisting of aortic and/or mitral valve atresia, stenosis, or hypoplasia with marked hypoplasia or absence of the left ventricle, and hypoplasia of the ascending aorta and of the aortic arch with coarctation of the aorta. Hypoplastic left heart complex is a subset of patients at the favorable end of the spectrum of HLHS characterized by hypoplasia of the structures of the left heart-aorta complex, consisting of aortic and mitral valve hypoplasia without valve stenosis or atresia, hypoplasia of the left ventricle, hypoplasia of the left ventricular outflow tract, hypoplasia of the ascending aorta and of the aortic arch, with or without coarctation of the aorta.
2080	Shone’s syndrome	Shone’s syndrome is a syndrome of multilevel hypoplasia and obstruction of left sided cardiovascular structures including more than one of the following lesions: (1) supravalvar ring of the left atrium, (2) a parachute deformity of the mitral valve, (3) subaortic stenosis, and (4) aortic coarctation. The syndrome is based on the original report from Shone [1] that was based on analysis of 8 autopsied cases and described the tendency of these four obstructive, or potentially obstructive, conditions

		to coexist. Only 2 of the 8 cases exhibited all four conditions, with the other cases exhibiting only two or three of the anomalies [2]. [1] Shone JD, Sellers RD, Anderson RG, Adams P, Lillehei CW, Edwards JE. The developmental complex of “parachute mitral valve”, supravalvar ring of left atrium, subaortic stenosis, and coarctation of the aorta. Am J Cardiol 1963; 11: 714–725. [2]. Tchervenkov CI, Jacobs JP, Weinberg PM, Aiello VD, Beland MJ, Colan SD, Elliott MJ, Franklin RC, Gaynor JW, Krogmann ON, Kurosawa H, Maruszewski B, Stellin G. The nomenclature, definition and classification of hypoplastic left heart syndrome. Cardiology in the Young, 2006; 16(4): 339–368, August 2006.Please note that the term “2080 Shone’s syndrome” may be the “Fundamental Diagnosis” of a patient; however, the term “2080 Shone’s syndrome” may not be the “Primary Diagnosis” of an operation. The term “2080 Shone’s syndrome” may be a “Secondary Diagnosis” of an operation.
740	Cardiomyopathy (including dilated, restrictive, and hypertrophic)	Cardiomyopathy is a term applied to a wide spectrum of cardiac diseases in which the predominant feature is poor myocardial function in the absence of any anatomic abnormalities. Cardiomyopathies can be divided into three relatively easily distinguishable entities: (1) dilated, characterized by ventricular dilatation and systolic dysfunction; (2) hypertrophic, characterized by physiologically inappropriate hypertrophy of the left ventricle; and (3) restrictive, characterized by diastolic dysfunction, with a presentation often identical to constrictive pericarditis. Also included in this diagnostic category are patients with a cardiomyopathy or syndrome confined to the right ventricle, for example: (1) arrhythmogenic right ventricular dysplasia; (2) Uhl's syndrome (hypoplasia of right ventricular myocardium, parchment heart); or (3) spongiform cardiomyopathy.
750	Cardiomyopathy, End-stage congenital heart disease	Myocardial abnormality in which there is systolic and/or diastolic dysfunction in the presence of structural congenital heart disease without any (or any further) surgically correctable lesions.
760	Pericardial effusion	Inflammatory stimulation of the pericardium that results in the accumulation of appreciable amounts of pericardial fluid (also known as effusive pericarditis). The effusion may be idiopathic or acquired (e.g., postoperative, infectious, uremic, neoplastic, traumatic, drug-induced).
770	Pericarditis	Inflammatory process of the pericardium that leads to either (1) effusive pericarditis with accumulation of appreciable amounts of pericardial fluid or (2) constrictive pericarditis that leads to pericardial thickening and compression of the cardiac chambers, ultimately with an associated significant reduction in cardiac function. Etiologies are varied and include idiopathic or acquired (e.g., postoperative, infectious, uremic, neoplastic, traumatic, drug-induced) pericarditis.
780	Pericardial disease, Other	A structural or functional abnormality of the visceral or parietal pericardium that may, or may not, have a significant impact on cardiac function. Included are absence or partial defects of the pericardium.
790	Single ventricle, DILV	A congenital cardiac malformation in which both atria connect to a single, morphologically left ventricle. The version of the IPCCC derived from the International Congenital Heart Surgery Nomenclature and Database Project of the EACTS and STS uses the term "single ventricle" as synonymous for the "functionally univentricular heart.” The term "functionally univentricular heart" describes a spectrum of congenital cardiovascular malformations in which the ventricular mass may not

		readily lend itself to partitioning that commits one ventricular pump to the systemic circulation, and another to the pulmonary circulation. A heart may be functionally univentricular because of its anatomy or because of the lack of feasibility or lack of advisability of surgically partitioning the ventricular mass. Common lesions in this category typically include double inlet right ventricle (DIRV), double inlet left ventricle (DILV), tricuspid atresia, mitral atresia, and hypoplastic left heart syndrome. Other lesions which sometimes may be considered to be a functionally univentricular heart include complex forms of atrioventricular septal defect, double outlet right ventricle, congenitally corrected transposition, pulmonary atresia with intact ventricular septum, and other cardiovascular malformations. Specific diagnostic codes should be used whenever possible, and not the term "functionally univentricular heart." Reference: Jacobs JP, Franklin RCG, Jacobs ML, Colan SD, Tchervenkov CI, Maruszewski B, Gaynor JW, Spray TL, Stellin G, Aiello VD, Béland MJ, Krogmann ON, Kurosawa H, Weinberg PM, Elliott MJ, Mavroudis C, Anderson R. Classification of the Functionally Univentricular Heart: Unity from mapped codes. In 2006 Supplement to Cardiology in the Young: Controversies and challenges in the Management of the Functionally Univentricular Heart, Jacobs JP, Wernovsky G, Gaynor JW, and Anderson RH (editors). Cardiology in the Young, Volume 16, Supplement 1: 9 - 21, February 2006.
800	Single ventricle, DIRV	A congenital cardiac malformation in which both atria connect to a single, morphologically right ventricle. The version of the IPCCC derived from the International Congenital Heart Surgery Nomenclature and Database Project of the EACTS and STS uses the term "single ventricle" as synonymous for the "functionally univentricular heart." The term "functionally univentricular heart" describes a spectrum of congenital cardiovascular malformations in which the ventricular mass may not readily lend itself to partitioning that commits one ventricular pump to the systemic circulation, and another to the pulmonary circulation. A heart may be functionally univentricular because of its anatomy or because of the lack of feasibility or lack of advisability of surgically partitioning the ventricular mass. Common lesions in this category typically include double inlet right ventricle (DIRV), double inlet left ventricle (DILV), tricuspid atresia, mitral atresia, and hypoplastic left heart syndrome. Other lesions which sometimes may be considered to be a functionally univentricular heart include complex forms of atrioventricular septal defect, double outlet right ventricle, congenitally corrected transposition, pulmonary atresia with intact ventricular septum, and other cardiovascular alformations. Specific diagnostic codes should be used whenever possible, and not the term "functionally univentricular heart." Reference: Jacobs JP, Franklin RCG, Jacobs ML, Colan SD, Tchervenkov CI, Maruszewski B, Gaynor JW, Spray TL, Stellin G, Aiello VD, Béland MJ, Krogmann ON, Kurosawa H, Weinberg PM, Elliott MJ, Mavroudis C, Anderson R. Classification of the Functionally Univentricular Heart: Unity from mapped codes. In 2006 Supplement to Cardiology in the Young: Controversies and Challenges in the Management of the Functionally Univentricular Heart, Jacobs JP, Wernovsky G, Gaynor JW, and Anderson RH (editors). Cardiology in the Young, Volume 16, Supplement 1: 9 - 21, February 2006.
810	Single ventricle, Mitral	A congenital cardiac malformation in which there is no orifice of mitral

	atresia	valve. The version of the IPCCC derived from the International Congenital Heart Surgery Nomenclature and Database Project of the EACTS and STS uses the term "single ventricle" as synonymous for the "functionally univentricular heart.” The term "functionally univentricular heart" describes a spectrum of congenital cardiovascular malformations in which the ventricular mass may not readily lend itself to partitioning that commits one ventricular pump to the systemic circulation, and another to the pulmonary circulation. A heart may be functionally univentricular because of its anatomy or because of the lack of feasibility or lack of advisability of surgically partitioning the ventricular mass. Common lesions in this category typically include double inlet right ventricle (DIRV), double inlet left ventricle (DILV), tricuspid atresia, mitral atresia, and hypoplastic left heart syndrome. Other lesions which sometimes may be considered to be a functionally univentricular heart include complex forms of atrioventricular septal defect, double outlet right ventricle, congenitally corrected transposition, pulmonary atresia with intact ventricular septum, and other cardiovascular malformations. Specific diagnostic codes should be used whenever possible, and not the term "functionally univentricular heart.” Reference: Jacobs JP, Franklin RCG, Jacobs ML, Colan SD, Tchervenkov CI, Maruszewski B, Gaynor JW, Spray TL, Stellin G, Aiello VD, Béland MJ, Krogmann ON, Kurosawa H, Weinberg PM, Elliott MJ, Mavroudis C, Anderson R. Classification of the Functionally Univentricular Heart: Unity from mapped codes. In 2006 Supplement to Cardiology in the Young: Controversies and Challenges in the Management of the Functionally Univentricular Heart, Jacobs JP, Wernovsky G, Gaynor JW, and Anderson RH (editors). Cardiology in the Young, Volume 16, Supplement 1: 9 - 21, February 2006.
820	Single ventricle, Tricuspid atresia	A congenital cardiac malformation in which there is no orifice of tricuspid valve. The version of the IPCCC derived from the International Congenital Heart Surgery Nomenclature and Database Project of the EACTS and STS uses the term "single ventricle" as synonymous for the "functionally univentricular heart.” The term "functionally univentricular heart" describes a spectrum of congenital cardiovascular malformations in which the ventricular mass may not readily lend itself to partitioning that commits one ventricular pump to the systemic circulation, and another to the pulmonary circulation. A heart may be functionally univentricular because of its anatomy or because of the lack of feasibility or lack of advisability of surgically partitioning the ventricular mass. Common lesions in this category typically include double inlet right ventricle (DIRV), double inlet left ventricle (DILV), tricuspid atresia, mitral atresia, and hypoplastic left heart syndrome. Other lesions which sometimes may be considered to be a functionally univentricular heart include complex forms of atrioventricular septal defect, double outlet right ventricle, congenitally corrected transposition, pulmonary atresia with intact ventricular septum, and other cardiovascular malformations. Specific diagnostic codes should be used whenever possible, and not the term "functionally univentricular heart.” Reference: Jacobs JP, Franklin RCG, Jacobs ML, Colan SD, Tchervenkov CI, Maruszewski B, Gaynor JW, Spray TL, Stellin G, Aiello VD, Béland MJ, Krogmann ON, Kurosawa H, Weinberg PM, Elliott MJ, Mavroudis C, Anderson R. Classification of the Functionally Univentricular Heart: Unity from mapped codes. In 2006 Supplement to Cardiology in the Young: Controversies and Challenges in the Management of the

		Functionally Univentricular Heart, Jacobs JP, Wernovsky G, Gaynor JW, and Anderson RH (editors). Cardiology in the Young, Volume 16, Supplement 1: 9 - 21, February 2006.
830	Single ventricle, Unbalanced AV canal	Single ventricle anomalies with a common atrioventricular (AV) valve and only one completely well-developed ventricle. If the common AV valve opens predominantly into the morphologic left ventricle, the defect is termed a left ventricular (LV)–type or LV-dominant AV septal defect. If the common AV valve opens predominantly into the morphologic right ventricle, the defect is termed a right ventricular (RV)–type or RV-dominant AV septal defect. The version of the IPCCC derived from the International Congenital Heart Surgery Nomenclature and Database Project of the EACTS and STS uses the term "single ventricle" as synonymous for the "functionally univentricular heart.” The term "functionally univentricular heart" describes a spectrum of congenital cardiovascular malformations in which the ventricular mass may not readily lend itself to partitioning that commits one ventricular pump to the systemic circulation, and another to the pulmonary circulation. A heart may be functionally univentricular because of its anatomy or because of the lack of feasibility or lack of advisability of surgically partitioning the ventricular mass. Common lesions in this category typically include double inlet right ventricle (DIRV), double inlet left ventricle (DILV), tricuspid atresia, mitral atresia, and hypoplastic left heart syndrome. Other lesions which sometimes may be considered to be a functionally univentricular heart include complex forms of atrioventricular septal defect, double outlet right ventricle, congenitally corrected transposition, pulmonary atresia with intact ventricular septum, and other cardiovascular malformations. Specific diagnostic codes should be used whenever possible, and not the term "functionally univentricular heart.”
840	Single ventricle, Heterotaxia syndrome	"Heterotaxia syndrome" is synonymous with "heterotaxy", "visceral heterotaxy", and "heterotaxy syndrome.” Heterotaxy is defined as an abnormality where the internal thoraco-abdominal organs demonstrate abnormal arrangement across the left-right axis of the body. By convention, heterotaxy does not include patients with either the expected usual or normal arrangement of the internal organs along the left-right axis, also known as ‘situs solitus’, nor patients with complete mirror-imaged arrangement of the internal organs along the left-right axis also known as ‘situs inversus’.The version of the IPCCC derived from the International Congenital Heart Surgery Nomenclature and Database Project of the EACTS and STS uses the term "single ventricle" as synonymous for the "functionally univentricular heart.” The term "functionally univentricular heart" describes a spectrum of congenital cardiovascular malformations in which the ventricular mass may not readily lend itself to partitioning that commits one ventricular pump to the systemic circulation, and another to the pulmonary circulation. A heart may be functionally univentricular because of its anatomy or because of the lack of feasibility or lack of advisability of surgically partitioning the ventricular mass. Common lesions in this category typically include double inlet right ventricle (DIRV), double inlet left ventricle (DILV), tricuspid atresia, mitral atresia, and hypoplastic left heart syndrome. Other lesions which sometimes may be considered to be a functionally univentricular heart include complex forms of atrioventricular septal defect, double outlet right ventricle, congenitally corrected

		transposition, pulmonary atresia with intact ventricular septum, and other cardiovascular malformations. Specific diagnostic codes should be used whenever possible, and not the term "functionally univentricular heart." Reference: Jacobs JP, Franklin RCG, Jacobs ML, Colan SD, Tchervenkov CI, Maruszewski B, Gaynor JW, Spray TL, Stellin G, Aiello VD, Béland MJ, Krogmann ON, Kurosawa H, Weinberg PM, Elliott MJ, Mavroudis C, Anderson R. Classification of the Functionally Univentricular Heart: Unity from mapped codes. In 2006 Supplement to Cardiology in the Young: Controversies and Challenges in the Management of the Functionally Univentricular Heart, Jacobs JP, Wernovsky G, Gaynor JW, and Anderson RH (editors). Cardiology in the Young, Volume 16, Supplement 1: 9 - 21, February 2006.
850	Single ventricle, Other	If the single ventricle is of primitive or indeterminate type, other is chosen in coding. It is recognized that a considerable variety of other structural cardiac malformations (e.g., biventricular hearts with straddling atrioventricular valves, pulmonary atresia with intact ventricular septum, some complex forms of double outlet right ventricle) may at times be best managed in a fashion similar to that which is used to treat univentricular hearts. They are not to be coded in this section of the nomenclature, but according to the underlying lesions. The version of the IPCCC derived from the International Congenital Heart Surgery Nomenclature and Database Project of the EACTS and STS uses the term "single ventricle" as synonymous for the "functionally univentricular heart." The term "functionally univentricular heart" describes a spectrum of congenital cardiovascular malformations in which the ventricular mass may not readily lend itself to partitioning that commits one ventricular pump to the systemic circulation, and another to the pulmonary circulation. A heart may be functionally univentricular because of its anatomy or because of the lack of feasibility or lack of advisability of surgically partitioning the ventricular mass. Common lesions in this category typically include double inlet right ventricle (DIRV), double inlet left ventricle (DILV), tricuspid atresia, mitral atresia, and hypoplastic left heart syndrome. Other lesions which sometimes may be considered to be a functionally univentricular heart include complex forms of atrioventricular septal defect, double outlet right ventricle, congenitally corrected transposition, pulmonary atresia with intact ventricular septum, and other cardiovascular malformations. Specific diagnostic codes should be used whenever possible, and not the term "functionally univentricular heart." Reference: Jacobs JP, Franklin RCG, Jacobs ML, Colan SD, Tchervenkov CI, Maruszewski B, Gaynor JW, Spray TL, Stellin G, Aiello VD, Béland MJ, Krogmann ON, Kurosawa H, Weinberg PM, Elliott MJ, Mavroudis C, Anderson R. Classification of the Functionally Univentricular Heart: Unity from mapped codes. In 2006 Supplement to Cardiology in the Young: Controversies and Challenges in the Management of the Functionally Univentricular Heart, Jacobs JP, Wernovsky G, Gaynor JW, and Anderson RH (editors). Cardiology in the Young, Volume 16, Supplement 1: 9 - 21, February 2006.
851	Single Ventricle + Total anomalous pulmonary venous connection (TAPVC)	Indicate if the patient has the diagnosis of "Single Ventricle + Total anomalous pulmonary venous connection (TAPVC)." In the event of Single Ventricle occurring in association with Total anomalous pulmonary venous connection (TAPVC), code "Single Ventricle + Total anomalous pulmonary venous connection (TAPVC)", and then use additional (secondary)

		diagnostic codes to describe the Single Ventricle and the Total anomalous pulmonary venous connection (TAPVC) separately to provide further documentation about the Single ventricle and Total anomalous pulmonary venous connection (TAPVC) types. {"Total anomalous pulmonary venous connection (TAPVC)" is defined as a heart where all of the pulmonary veins connect anomalously with the right atrium or to one or more of its venous tributaries. None of the pulmonary veins connect normally to the left atrium.} The version of the IPCCC derived from the International Congenital Heart Surgery Nomenclature and Database Project of the EACTS and STS uses the term "single ventricle" as synonymous for the "functionally univentricular heart." The term "functionally univentricular heart" describes a spectrum of congenital cardiovascular malformations in which the ventricular mass may not readily lend itself to partitioning that commits one ventricular pump to the systemic circulation, and another to the pulmonary circulation. A heart may be functionally univentricular because of its anatomy or because of the lack of feasibility or lack of advisability of surgically partitioning the ventricular mass. Common lesions in this category typically include double inlet right ventricle (DIRV), double inlet left ventricle (DILV), tricuspid atresia, mitral atresia, and hypoplastic left heart syndrome. Other lesions which sometimes may be considered to be a functionally univentricular heart include complex forms of atrioventricular septal defect, double outlet right ventricle, congenitally corrected transposition, pulmonary atresia with intact ventricular septum, and other cardiovascular malformations. Specific diagnostic codes should be used whenever possible, and not the term "functionally univentricular heart." Reference: Jacobs JP, Franklin RCG, Jacobs ML, Colan SD, Tchervenkov CI, Maruszewski B, Gaynor JW, Spray TL, Stellin G, Aiello VD, Béland MJ, Krogmann ON, Kurosawa H, Weinberg PM, Elliott MJ, Mavroudis C, Anderson R. Classification of the Functionally Univentricular Heart: Unity from mapped codes. In 2006 Supplement to Cardiology in the Young: Controversies and Challenges in the Management of the Functionally Univentricular Heart, Jacobs JP, Wernovsky G, Gaynor JW, and Anderson RH (editors). Cardiology in the Young, Volume 16, Supplement 1: 9 - 21, February 2006.
870	Congenitally corrected TGA	Indicate if the patient has the diagnosis of "Congenitally corrected TGA." Congenitally corrected transposition is synonymous with the terms 'corrected transposition' and 'discordant atrioventricular connections with discordant ventriculo-arterial connections', and is defined as a spectrum of cardiac malformations where the atrial chambers are joined to morphologically inappropriate ventricles, and the ventricles then support morphologically inappropriate arterial trunks [1]. [1] Jacobs JP, Franklin RCG, Wilkinson JL, Cochrane AD, Karl TR, Aiello VD, Béland MJ, Colan SD, Elliott, MJ, Gaynor JW, Krogmann ON, Kurosawa H, Maruszewski B, Stellin G, Tchervenkov CI, Weinberg PM. The nomenclature, definition and classification of discordant atrioventricular connections. In 2006 Supplement to Cardiology in the Young: Controversies and Challenges of the Atrioventricular Junctions and Other Challenges Facing Paediatric Cardiovascular Practitioners and their Patients, Jacobs JP, Wernovsky G, Gaynor JW, and Anderson RH (editors). Cardiology in the Young, Volume 16 (Supplement 3): 72-84, September 2006.
872	Congenitally corrected TGA, IVS	Indicate if the patient has the diagnosis of "Congenitally corrected TGA, IVS." "Congenitally corrected TGA, IVS" is "Congenitally corrected

		transposition with an intact ventricular septum", in other words, "Congenitally corrected transposition with no VSD." (Congenitally corrected transposition is synonymous with the terms 'corrected transposition' and 'discordant atrioventricular connections with discordant ventriculo-arterial connections', and is defined as a spectrum of cardiac malformations where the atrial chambers are joined to morphologically inappropriate ventricles, and the ventricles then support morphologically inappropriate arterial trunks [1]. [1] Jacobs JP, Franklin RCG, Wilkinson JL, Cochrane AD, Karl TR, Aiello VD, Béland MJ, Colan SD, Elliott, MJ, Gaynor JW, Krogmann ON, Kurosawa H, Maruszewski B, Stellin G, Tchervenkov CI, Weinberg PM. The nomenclature, definition and classification of discordant atrioventricular connections. In 2006 Supplement to Cardiology in the Young: Controversies and Challenges of the Atrioventricular Junctions and Other Challenges Facing Paediatric Cardiovascular Practitioners and their Patients, Jacobs JP, Wernovsky G, Gaynor JW, and Anderson RH (editors). Cardiology in the Young, Volume 16 (Supplement 3): 72-84, September 2006.)
874	Congenitally corrected TGA, IVS-LVOTO	Indicate if the patient has the diagnosis of "Congenitally corrected TGA, IVS-LVOTO." "Congenitally corrected TGA, IVS-LVOTO" is Congenitally corrected transposition with an intact ventricular septum and left ventricular outflow tract obstruction", in other words, "Congenitally corrected transposition with left ventricular outflow tract obstruction and no VSD." (Congenitally corrected transposition is synonymous with the terms 'corrected transposition' and 'discordant atrioventricular connections with discordant ventriculo-arterial connections', and is defined as a spectrum of cardiac malformations where the atrial chambers are joined to morphologically inappropriate ventricles, and the ventricles then support morphologically inappropriate arterial trunks [1]. [1] Jacobs JP, Franklin RCG, Wilkinson JL, Cochrane AD, Karl TR, Aiello VD, Béland MJ, Colan SD, Elliott, MJ, Gaynor JW, Krogmann ON, Kurosawa H, Maruszewski B, Stellin G, Tchervenkov CI, Weinberg PM. The nomenclature, definition and classification of discordant atrioventricular connections. In 2006 Supplement to Cardiology in the Young: Controversies and Challenges of the Atrioventricular Junctions and Other Challenges Facing Paediatric Cardiovascular Practitioners and their Patients, Jacobs JP, Wernovsky G, Gaynor JW, and Anderson RH (editors). Cardiology in the Young, Volume 16 (Supplement 3): 72-84, September 2006.)
876	Congenitally corrected TGA, VSD	Indicate if the patient has the diagnosis of "Congenitally corrected TGA, VSD." "Congenitally corrected TGA, VSD" is "Congenitally corrected transposition with a VSD." (Congenitally corrected transposition is synonymous with the terms 'corrected transposition' and 'discordant atrioventricular connections with discordant ventriculo-arterial connections', and is defined as a spectrum of cardiac malformations where the atrial chambers are joined to morphologically inappropriate ventricles, and the ventricles then support morphologically inappropriate arterial trunks [1]. [1] Jacobs JP, Franklin RCG, Wilkinson JL, Cochrane AD, Karl TR, Aiello VD, Béland MJ, Colan SD, Elliott, MJ, Gaynor JW, Krogmann ON, Kurosawa H, Maruszewski B, Stellin G, Tchervenkov CI, Weinberg PM. The nomenclature, definition and classification of discordant atrioventricular connections. In 2006 Supplementto Cardiology in the Young: Controversies and Challenges of the Atrioventricular Junctions and Other Challenges Facing Paediatric Cardiovascular Practitioners and their

		Patients, Jacobs JP, Wernovsky G, Gaynor JW, and Anderson RH (editors). Cardiology in the Young, Volume 16 (Supplement 3): 72-84, September 2006.)
878	Congenitally corrected TGA, VSD-LVOTO	Indicate if the patient has the diagnosis of "Congenitally corrected TGA, VSD-LVOTO." "Congenitally corrected TGA, VSD-LVOTO" is "Congenitally corrected transposition with a VSD and left ventricular outflow tract obstruction." (Congenitally corrected transposition is synonymous with the terms 'corrected transposition' and 'discordant atrioventricular connections with discordant ventriculo-arterial connections', and is defined as a spectrum of cardiac malformations where the atrial chambers are joined to morphologically inappropriate ventricles, and the ventricles then support morphologically inappropriate arterial trunks [1]. [1] Jacobs JP, Franklin RCG, Wilkinson JL, Cochrane AD, Karl TR, Aiello VD, Béland MJ, Colan SD, Elliott, MJ, Gaynor JW, Krogmann ON, Kurosawa H, Maruszewski B, Stellin G, Tchervenkov CI, Weinberg PM. The nomenclature, definition and classification of discordant atrioventricular connections. In 2006 Supplementto Cardiology in the Young: Controversies and Challenges of the Atrioventricular Junctions and Other Challenges Facing Paediatric Cardiovascular Practitioners and their Patients, Jacobs JP, Wernovsky G, Gaynor JW, and Anderson RH (editors). Cardiology in the Young, Volume 16 (Supplement 3): 72-84, September 2006.)
880	TGA, IVS	A malformation of the heart in which there is atrioventricular concordance and ventriculoarterial discordance with an intact ventricular septum. There may be d, l, or ambiguous transposition (segmental diagnoses include S, D, D, S, D, L, S, D, A). Also to be included in this diagnostic grouping are those defects with situs inversus, L-loop ventricles and either d or l transposition (segmental diagnosis of I,L,L and I,L,D) and occasionally those defects with ambiguous situs of the atria which behave as physiologically uncorrected transposition and are treated with arterial switch (segmental diagnoses include A,L,L and A,D,D).88
890	TGA, IVS-LVOTO	A malformation of the heart in which there is atrioventricular concordance and ventriculoarterial discordance with an intact ventricular septum and associated left ventricular obstruction. There may be d, l, or ambiguous transposition (segmental diagnoses include S, D, D, S, D, L, S, D, A). Also to be included in this diagnostic grouping are those defects with situs inversus, L-loop ventricles and either d or l transposition (segmental diagnosis of I,L, L and I,L,D) and occasionally those defects with ambiguous situs of the atria which behave as physiologically uncorrected transposition and are treated with arterial switch (segmental diagnoses include A,L,L and A,D,D).
900	TGA, VSD	A malformation of the heart in which there is atrioventricular concordance and ventriculoarterial discordance with one or more ventricular septal defects. There may be d, l, or ambiguous transposition (segmental diagnoses include S, D, D, S, D, L, S, D, A). Also to be included in this diagnostic grouping are those defects with situs inversus, L-loop ventricles and either d or l transposition (segmental diagnosis of I,L, L and I,L,D) and occasionally those defects with ambiguous situs of the atria which behave as physiologically uncorrected transposition and are treated with arterial switch (segmental diagnoses include A,L,L and A,D,D).
910	TGA, VSD-LVOTO	A malformation of the heart in which there is atrioventricular concordance and ventriculoarterial discordance with one or more ventricular septal defects and left ventricular outflow tract obstruction. There may be d, l, or

		ambiguous transposition (segmental diagnoses include S, D, D, S, D, L, S, D, A). Also to be included in this diagnostic grouping are those defects with situs inversus, L-loop ventricles and either d or l transposition (segmental diagnosis of I, L, L and I, L, D) and occasionally those defects with ambiguous situs of the atria which behave as physiologically uncorrected transposition and are treated with arterial switch (segmental diagnoses include A, L, L and A, D, D).
930	DORV, VSD type	Double outlet right ventricle is a type of ventriculoarterial connection in which both great vessels arise entirely or predominantly from the right ventricle. In double outlet right ventricle, VSD type, there is an associated subaortic or doubly-committed VSD and no pulmonary outflow tract obstruction. Subaortic VSD's are located beneath the aortic valve. Doubly-committed VSD's lie beneath the leaflets of the aortic and pulmonary valves (juxtaarterial). In the nomenclature developed for DORV, there must be usual atrial arrangements and concordant atrioventricular connections, and normal or near-normal sized ventricles. Discordant atrioventricular connection with DORV is to be coded under congenitally corrected TGA. DORV associated with univentricular atrioventricular connections, atrioventricular valve atresia, or atrial isomerism is to be coded under the appropriate single ventricle listing.
940	DORV, TOF type	Double outlet right ventricle is a type of ventriculoarterial connection in which both great vessels arise entirely or predominantly from the right ventricle. In double outlet right ventricle, TOF type, there is an associated subaortic or doubly-committed VSD and pulmonary outflow tract obstruction. Subaortic VSD's are located beneath the aortic valve. Doubly-committed VSD's lie beneath the leaflets of the aortic and pulmonary valves (juxtaarterial). DORV can occur in association with pulmonary atresia, keeping in mind in coding that in the nomenclature developed for DORV, there must be usual atrial arrangements and concordant atrioventricular connections, and normal or near-normal sized ventricles (in this situation DORV is coded as a primary diagnosis). Discordant atrioventricular connection with DORV is to be coded under congenitally corrected TGA. DORV associated with univentricular atrioventricular connections, atrioventricular valve atresia, or atrial isomerism is to be coded under the appropriate Single ventricle listing.
950	DORV, TGA type	Double outlet right ventricle is a type of ventriculoarterial connection in which both great vessels arise entirely or predominantly from the right ventricle. In double outlet right ventricle, TGA type, there is an associated subpulmonary VSD. Most frequently, there is no pulmonary outflow tract obstruction (Taussig-Bing heart). The aorta is usually to the right and slightly anterior to or side-by-side with the pulmonary artery. Associated aortic outflow tract stenosis (subaortic, aortic arch obstruction) is commonly associated with the Taussig-Bing heart and if present should be coded as a secondary diagnosis. Rarely, there is associated pulmonary outflow tract obstruction. In the nomenclature developed for DORV, there must be usual atrial arrangements and concordant atrioventricular connections, and normal or near-normal sized ventricles. Discordant atrioventricular connection with DORV is to be coded under congenitally corrected TGA. DORV associated with univentricular atrioventricular connections, atrioventricular valve atresia, or atrial isomerism is to be coded under the appropriate single ventricle listing.
960	DORV, Remote VSD	Double outlet right ventricle is a type of ventriculoarterial connection in

	(uncommitted VSD)	which both great vessels arise entirely or predominantly from the right ventricle. In double outlet right ventricle, Remote VSD type, there is a remote or noncommitted VSD. The VSD is far removed from both the aortic and pulmonary valves, usually within the inlet septum. Many of these VSD's are in hearts with DORV and common atrioventricular canal/septal defect. In the nomenclature developed for DORV, there must be usual atrial arrangements and concordant atrioventricular connections, and normal or near-normal sized ventricles. Discordant atrioventricular connection with DORV is to be coded under congenitally corrected TGA. DORV associated with univentricular atrioventricular connections, atrioventricular valve atresia, or atrial isomerism is to be coded under the appropriate single ventricle listing.
2030	DORV + AVSD (AV Canal)	Indicate if the patient has the diagnosis of “DORV + AVSD (AV Canal).” In the event of DORV occurring in association with AVSD (AV Canal), code “DORV + AVSD (AV Canal)”, and then use additional (secondary) diagnostic codes to describe the DORV and the AVSD (AV Canal) separately to provide further documentation about the DORV and AVSD (AV Canal) types. {“DORV” is “Double outlet right ventricle” and is defined as a type of ventriculoarterial connection in which both great vessels arise entirely or predominantly from the right ventricle.} In this case, the DORV exists in combination with an atrioventricular septal defect and common atrioventricular junction guarded by a common atrioventricular valve.
975	DORV, IVS	Double outlet right ventricle is a type of ventriculoarterial connection in which both great vessels arise entirely or predominantly from the right ventricle. In the rare case of double outlet right ventricle with IVS the ventricular septum is intact. In the nomenclature developed for DORV, there must be usual atrial arrangements and concordant atrioventricular connections, and normal or near-normal sized ventricles. Discordant atrioventricular connections with DORV are to be coded under congenitally corrected TGA. DORV associated with univentricular atrioventricular connections, atrioventricular valve atresia, or atrial isomerism is to be coded under the appropriate single ventricle listing.
980	DOLV	Double outlet left ventricle is a type of ventriculoarterial connection in which both great vessels arise entirely or predominantly from the left ventricle. In the nomenclature developed for DOLV, there must be usual atrial arrangements and concordant atrioventricular connections, and normal or near-normal sized ventricles. Discordant atrioventricular connection with DOLV is to be coded under congenitally corrected TGA. DOLV associated with univentricular atrioventricular connections, atrioventricular valve atresia, or atrial isomerism is to be coded under the appropriate single ventricle listing.
990	Coarctation of aorta	Indicate if the patient has the diagnosis of “Coarctation of aorta.” A “Coarctation of the aorta” generally indicates a narrowing of the descending thoracic aorta just distal to the left subclavian artery. However, the term may also be accurately used to refer to a region of narrowing anywhere in the thoracic or abdominal aorta.
1000	Aortic arch hypoplasia	Hypoplasia of the aortic arch is hypoplasia of the proximal or distal transverse arch or the aortic isthmus. The isthmus (arch between the left subclavian and insertion of the patent ductus arteriosus / ligamentum arteriosum) is hypoplastic if its diameter is less than 40% of the diameter of the ascending aorta.The proximal transverse arch (arch between the innominate and left carotid arteries) and distal transverse arch (arch

		between the left carotid and left subclavian arteries) are hypoplastic if their diameters are less than 60% and 50%, respectively, of the diameter of the ascending aorta.
92	VSD + Aortic arch hypoplasia	A ventricular septal defect, any type, associated with hypoplasia of the aortic arch. (See diagnosis definition 1000 for a definition of hypoplasia of the aortic arch.)
94	VSD + Coarctation of aorta	Indicate if the patient has the diagnosis of “VSD + Coarctation of aorta.” In the event of a VSD occurring in association with Coarctation of aorta, code “VSD + Coarctation of aorta”, and then use additional (secondary) diagnostic codes to describe the VSD and the Coarctation of aorta separately to provide further documentation about the individual VSD and Coarctation of aorta types. {A "VSD" is a "Ventricular Septal Defect" and is also known as an "Interventricular communication.” A VSD is defined as "a hole between the ventricular chambers or their remnants.” (The VSD is defined on the basis of its margins as seen from the aspect of the morphologically right ventricle. In the setting of double outlet right ventricle, the defect provides the outflow from the morphologically left ventricle. In univentricular atrioventricular connections with functionally single left ventricle with an outflow chamber, the communication is referred to by some as a bulboventricular foramen.)} {A “Coarctation of the aorta” generally indicates a narrowing of the descending thoracic aorta just distal to the left subclavian artery. However, the term may also be accurately used to refer to a region of narrowing anywhere in the thoracic or abdominal aorta.}
1010	Coronary artery anomaly, Anomalous aortic origin of coronary artery (AAOCA)	Anomalous aortic origins of the coronary arteries include a spectrum of anatomic variations of the normal coronary artery origins. Coronary artery anomalies of aortic origin to be coded under this diagnostic field include: anomalies of take-off (high take-off), origin (sinus), branching, and number. An anomalous course of the coronary artery vessels is also significant, particularly those coronary arteries that arise or course between the great vessels.
1020	Coronary artery anomaly, Anomalous pulmonary origin (includes ALCAPA)	In patients with anomalous pulmonary origin of the coronary artery, the coronary artery (most commonly the left coronary artery) arises from the pulmonary artery rather than from the aorta. Rarely, the right coronary artery, the circumflex, or both coronary arteries may arise from the pulmonary artery.
1030	Coronary artery anomaly, Fistula	The most common of coronary artery anomalies, a coronary arteriovenous fistula is a communication between a coronary artery and either a chamber of the heart (coronary-cameral fistula) or any segment of the systemic or pulmonary circulation (coronary arteriovenous fistula). They may be congenital or acquired (traumatic, infectious, iatrogenic) in origin, and are mostly commonly seen singly, but occasionally multiple fistulas are present. Nomenclature schemes have been developed that further categorize the fistulas by vessel of origin and chamber of termination, and one angiographic classification scheme by Sakakibara has surgical implications. Coronary artery fistulas can be associated with other congenital heart anomalies such as tetralogy of Fallot, atrial septal defect, ventricular septal defect, and pulmonary atresia with intact ventricular septum, among others. The major cardiac defect should be listed as the primary diagnosis and the coronary artery fistula should be as an additional secondary diagnoses.

1040	Coronary artery anomaly, Aneurysm	Coronary artery aneurysms are defined as dilations of a coronary vessel 1.5 times the adjacent normal coronaries. There are two forms, saccular and fusiform (most common), and both may be single or multiple. These aneurysms may be congenital or acquired (atherosclerotic, Kawasaki, systemic diseases other than Kawasaki, iatrogenic, infectious, or traumatic) in origin.
2420	Coronary artery anomaly, Ostial Atresia	
1050	Coronary artery anomaly, Other	Coronary artery anomalies which may fall within this category include coronary artery bridging and coronary artery stenosis, as well as secondary coronary artery variations seen in congenital heart defects such as tetralogy of Fallot, transposition of the great arteries, and truncus arteriosus (with the exception of variations that can be addressed by a more specific coronary artery anomaly code).
1070	Interrupted aortic arch	Indicate if the patient has the diagnosis of “Interrupted aortic arch.” Interrupted aortic arch is defined as the loss of luminal continuity between the ascending and descending aorta. In most cases blood flow to the descending thoracic aorta is through a PDA, and there is a large VSD. Arch interruption is further defined by site of interruption. In type A, interruption is distal to the left subclavian artery; in type B interruption is between the left carotid and left subclavian arteries; and in type C interruption occurs between the innominate and left carotid arteries.
2020	Interrupted aortic arch + VSD	Indicate if the patient has the diagnosis of “Interrupted aortic arch + VSD.” In the event of interrupted aortic arch occurring in association with VSD, code “Interrupted aortic arch + VSD”, and then use additional (secondary) diagnostic codes to describe the interrupted aortic arch and the VSD separately to provide further documentation about the individual interrupted aortic arch and VSD types. {Interrupted aortic arch is defined as the loss of luminal continuity between the ascending and descending aorta. In most cases blood flow to the descending thoracic aorta is through a PDA, and there is a large VSD. Arch interruption is further defined by site of interruption. In type A, interruption is distal to the left subclavian artery; in type B interruption is between the left carotid and left subclavian arteries; and in type C interruption occurs between the innominate and left carotid arteries.} {A "VSD" is a "Ventricular Septal Defect" and is also known as an "Interventricular communication.” A VSD is defined as "a hole between the ventricular chambers or their remnants.” (The VSD is defined on the basis of its margins as seen from the aspect of the morphologically right ventricle. In the setting of double outlet right ventricle, the defect provides the outflow from the morphologically left ventricle. In univentricular atrioventricular connections with functionally single left ventricle with an outflow chamber, the communication is referred to by some as a bulboventricular foramen.)}
2000	Interrupted aortic arch + AP window (aortopulmonary window)	Indicate if the patient has the diagnosis of “Interrupted aortic arch + AP window (aortopulmonary window)”. In the event of interrupted aortic arch occurring in association with AP window, code “Interrupted aortic arch + AP window (aortopulmonary window)”, and then use additional (secondary) diagnostic codes to describe the interrupted aortic arch and the AP window separately to provide further documentation about the individual interrupted aortic arch and AP window types. {Interrupted aortic arch is defined as the loss of luminal continuity between the ascending and descending aorta. In most cases blood flow to the

		descending thoracic aorta is through a PDA, and there is a large VSD. Arch interruption is further defined by site of interruption. In type A, interruption is distal to the left subclavian artery; in type B interruption is between the left carotid and left subclavian arteries; and in type C interruption occurs between the innominate and left carotid arteries.} {An "AP window (aortopulmonary window)" is defined as a defect with side-to-side continuity of the lumens of the aorta and pulmonary arterial tree, which is distinguished from common arterial trunk (truncus arteriosus) by the presence of two arterial valves or their atretic remnants. (In other words, an aortopulmonary window is a communication between the main pulmonary artery and ascending aorta in the presence of two separate semilunar [pulmonary and aortic] valves. The presence of two separate semilunar valves distinguishes AP window from truncus arteriosus. Type 1 proximal defect: AP window located just above the sinus of Valsalva, a few millimeters above the semilunar valves, with a superior rim but little inferior rim separating the AP window from the semilunar valves. Type 2 distal defect: AP window located in the uppermost portion of the ascending aorta, with a well-formed inferior rim but little superior rim. Type 3 total defect: AP window involving the majority of the ascending aorta, with little superior and inferior rims. The intermediate type of AP window is similar to the total defect but with adequate superior and inferior rims. In the event of AP window occurring in association with interrupted aortic arch, code "Interrupted aortic arch + AP window (aortopulmonary window)", and then use additional (secondary) diagnostic codes to describe the interrupted aortic arch and AP window separately to provide further documentation about the individual interrupted arch and AP window types.)}
1080	Patent ductus arteriosus	Indicate if the patient has the diagnosis of "Patent ductus arteriosus." The ductus arteriosus (arterial duct) is an essential feature of fetal circulation, connecting the main pulmonary trunk with the descending aorta, distal to the origin of the left subclavian artery. In most patients it is on the left side. If a right aortic arch is present, it may be on the right or the left; very rarely it is bilateral. When luminal patency of the duct persists post-natally, it is referred to as patent ductus arteriosus (patent arterial duct). The length and diameter may vary considerably from case to case. The media of the ductus consists mainly of smooth muscle that is arranged spirally, and the intima is much thicker than that of the aorta. (A patent ductus arteriosus is a vascular arterial connection between the thoracic aorta and the pulmonary artery. Most commonly a PDA has its origin from the descending thoracic aorta, just distal and opposite the origin of the left subclavian artery. The insertion of the ductus is most commonly into the very proximal left pulmonary artery at its junction with the main pulmonary artery. Origination and insertion sites can be variable, however.)
1090	Vascular ring	The term vascular ring refers to a group of congenital vascular anomalies that encircle and compress the esophagus and trachea. The compression may be from a complete anatomic ring (double aortic arch or right aortic arch with a left ligamentum) or from a compressive effect of an aberrant vessel (innominate artery compression syndrome).
1100	Pulmonary artery sling	In pulmonary artery sling, the left pulmonary artery originates from the right pulmonary artery and courses posteriorly between the trachea and esophagus in its route to the left lung hilum, causing a sling-like compression of the trachea.

1110	Aortic aneurysm (including pseudoaneurysm)	An aneurysm of the aorta is defined as a localized dilation or enlargement of the aorta at any site along its length (from aortic annulus to aortoiliac bifurcation). A true aortic aneurysm involves all layers of the aortic wall. A false aortic aneurysm (pseudoaneurysm) is defined as a dilated segment of the aorta not containing all layers of the aortic wall and may include postoperative or post-procedure false aneurysms at anastomotic sites, traumatic aortic injuries or transections, and infectious processes leading to a contained rupture.
1120	Aortic dissection	Aortic dissection is a separation of the layers of the aortic wall. Extension of the plane of the dissection may progress to free rupture into the pericardium, mediastinum, or pleural space if not contained by the outer layers of the media and adventitia. Dissections may be classified as acute or chronic (if they have been present for more than 14 days).
1130	Lung disease, Benign	Lung disease arising from any etiology (congenital or acquired) which does not result in death or lung or heart-lung transplant; examples might be non-life threatening asthma or emphysema, benign cysts.
1140	Lung disease, Malignant	Lung disease arising from any etiology (congenital or acquired, including pulmonary parenchymal disease, pulmonary vascular disease, congenital heart disease, neoplasm, etc.) which may result in death or lung or heart-lung transplant.
1160	Tracheal stenosis	Tracheal stenosis is a reduction in the anatomic luminal diameter of the trachea by more than 50% of the remaining trachea. This stenosis may be congenital or acquired (as in post-intubation or traumatic tracheal stenosis).
2430	Tracheomalacia	
1170	Airway disease, Other	Included in this diagnostic category would be airway pathology not included under the definition of tracheal stenosis such as tracheomalacia, bronchotracheomalacia, tracheal right upper lobe, bronchomalacia, subglottic stenosis, bronchial stenosis, etc.
1430	Pleural disease, Benign	Benign diseases of the mediastinal or visceral pleura.
1440	Pleural disease, Malignant	Malignant diseases of the mediastinal or visceral pleura.
1450	Pneumothorax	A collection of air or gas in the pleural space.
1460	Pleural effusion	Abnormal accumulation of fluid in the pleural space.
1470	Chylothorax	The presence of lymphatic fluid in the pleural space secondary to a leak from the thoracic duct or its branches. Chylothorax is a specific type of pleural effusion.
1480	Empyema	A collection of purulent material in the pleural space, usually secondary to an infection.
1490	Esophageal disease, Benign	Any benign disease of the esophagus.
1500	Esophageal disease, Malignant	Any malignant disease of the esophagus.
1505	Mediastinal disease	Any disease of the mediastinum awaiting final benign/malignant pathology determination.
1510	Mediastinal disease, Benign	Any benign disease of the mediastinum.
1520	Mediastinal disease, Malignant	Any malignant disease of the mediastinum.
1540	Diaphragm paralysis	Paralysis of diaphragm, unilateral or bilateral.
1550	Diaphragm disease, Other	Any disease of the diaphragm other than paralysis.
2160	Rib tumor, Benign	Non-cancerous tumor of rib(s) (e.g., fibrous dysplasia).

2170	Rib tumor, Malignant	Cancerous tumor of rib(s)- primary (e.g., osteosarcoma, chondrosarcoma).
2180	Rib tumor, Metastatic	Cancerous tumor metastasized to rib(s) from a different primary location.
2190	Sternal tumor, Benign	Non-cancerous tumor of sternum (e.g., fibrous dysplasia).
2200	Sternal tumor, Malignant	Cancerous tumor of sternum - primary (e.g., osteosarcoma, chondrosarcoma).
2210	Sternal tumor, Metastatic	Cancerous tumor metastasized to sternum from a different primary location.
2220	Pectus carinatum	Pectus carinatum represents a spectrum of protrusion abnormalities of the anterior chest wall. Severe deformity may result in dyspnea and decreased endurance. Some patients develop rigidity of the chest wall with decreased lung compliance, progressive emphysema, and increased frequency of respiratory tract infections.
2230	Pectus excavatum	Pectus excavatum is a congenital chest wall deformity in which several ribs and the sternum grow abnormally, producing a concave, or caved-in, appearance in the anterior chest wall. Pectus excavatum is the most common type of congenital chest wall abnormality. It occurs in an estimated 1 in 300-400 births, with male predominance (male-to-female ratio of 3:1). The condition is typically noticed at birth, and more than 90% of cases are diagnosed within the first year of life. Worsening of the chest's appearance and the onset of respiratory symptoms are usually reported during rapid bone growth in the early teenage years.
2240	Thoracic outlet syndrome	Thoracic outlet syndrome (TOS) is caused by compression at the superior thoracic outlet wherein excess pressure is placed on a neurovascular bundle passing between the anterior scalene and middle scalene muscles. It can affect the brachial plexus (nerves that pass into the arm from the neck), the subclavian artery, and - rarely - the vein, which does not normally pass through the scalene hiatus. TOS may occur due to a positional cause - for example, by abnormal compression from the clavicle (collarbone) and shoulder girdle on arm movement. There are also several static forms, caused by abnormalities, enlargement, or spasm of the various muscles surrounding the arteries, veins, and/or brachial plexus, a fixation of a first rib, or a cervical rib. The most common causes of thoracic outlet syndrome include physical trauma from a car accident, repetitive injuries from a job such as frequent non-ergonomic use of a keyboard, sports-related activities, anatomical defects such as having an extra rib, and pregnancy.
1180	Arrhythmia	Any cardiac rhythm other than normal sinus rhythm.
2440	Arrhythmia, Atrial, Atrial fibrillation	
2450	Arrhythmia, Atrial, Atrial flutter	
2460	Arrhythmia, Atrial, Other	
2050	Arrhythmia, Junctional	Indicate if the patient has the diagnosis of ''Arrhythmia, Junctional''. "Arrhythmias arising from the atrioventricular junction; may be bradycardia, tachycardia, premature beats, or escape rhythm [1]. [1]. Jacobs JP. (Editor). 2008 Supplement to Cardiology in the Young: Databases and The Assessment of Complications associated with The Treatment of Patients with Congenital Cardiac Disease, Prepared by: The Multi-Societal Database Committee for Pediatric and Congenital Heart Disease, Cardiology in the Young, Volume 18, Supplement S2, pages 1 – 530, December 9, 2008, page 379.

2060	Arrhythmia, Ventricular	Indicate if the patient has the diagnosis of ‘‘Arrhythmia, Ventricular’’. “Arrhythmia, Ventricular’’ ROOT Definition = Abnormal rhythm originating from the ventricles [1]. [1]. Jacobs JP. (Editor). 2008 Supplement to Cardiology in the Young: Databases and The Assessment of Complications associated with The Treatment of Patients with Congenital Cardiac Disease, Prepared by: The Multi-Societal Database Committee for Pediatric and Congenital Heart Disease, Cardiology in the Young, Volume 18, Supplement S2, pages 1 –530, December 9, 2008, page 393.
1185	Arrhythmia, Heart block	Atrioventricular block may be congenital or acquired, and may be of varying degree (first, second, or third degree).
1190	Arrhythmia, Heart block, Acquired	Atrioventricular block, when acquired, may be post-surgical, or secondary to myocarditis or other etiologies; the block may be first, second or third degree.
1200	Arrhythmia, Heart block, Congenital	Atrioventricular block, when congenital, may be first, second or third degree block.
1220	Arrhythmia, Pacemaker, Indication for replacement	Indications for pacemaker replacement may include end of generator life, malfunction, or infection.
2530	Short QT Syndrome	
2540	Long QT Syndrome (Ward Romano Syndrome)	
2550	Wolff-Parkinson-White syndrome (WPW syndrome)	
1230	Atrial Isomerism, Left	In isomerism, both appendages are of like morphology or structure; in left atrial isomerism both the right atrium and left atrium appear to be a left atrium structurally.
1240	Atrial Isomerism, Right	In isomerism, both appendages are of like morphology or structure; in right atrial isomerism both the right atrium and left atrium appear to be a right atrium structurally.
2090	Dextrocardia	Indicate if the patient has the diagnosis of ‘‘Dextrocardia’’. Dextrocardia’’ is most usually considered synonymous with a right-sided ventricular mass, whilst ‘‘dextroversion’’ is frequently defined as a configuration where the ventricular apex points to the right. In a patient with the usual atrial arrangement, or situs solitus, dextroversion, therefore, implies a turning to the right of the heart [1]. [1]. Jacobs JP, Anderson RH, Weinberg P, Walters III HL, Tchervenkov CI, Del Duca D, Franklin RCG, Aiello VD, Béland MJ, Colan SD, Gaynor JW, Krogmann ON, Kurosawa H, Maruszewski B, Stellin G, Elliott MJ. The nomenclature, definition and classification of cardiac structures in the setting of heterotaxy. In 2007 Supplement to Cardiology in the Young: Controversies and Challenges Facing Paediatric Cardiovascular Practitioners and their Patients, Anderson RH, Jacobs JP, and Wernovsky G, editors. Cardiology in the Young, Volume 17, Supplement 2, pages 1–28, doi: 10.1017/S1047951107001138, September 2007.
2100	Levocardia	Indicate if the patient has the diagnosis of ‘‘Levocardia’’. ‘‘Levocardia’’ usually considered synonymous with a left-sided ventricular mass, whilst ‘‘levoversion’’ is frequently defined as a configuration where the ventricular apex points to the left [1]. [1]. Jacobs JP, Anderson RH, Weinberg P, Walters III HL, Tchervenkov CI, Del Duca D, Franklin RCG, Aiello VD, Béland MJ, Colan SD, Gaynor JW, Krogmann ON, Kurosawa H, Maruszewski B, Stellin G, Elliott MJ. The nomenclature, definition and

		classification of cardiac structures in the setting of heterotaxy. In 2007 Supplement to Cardiology in the Young: Controversies and Challenges Facing Paediatric Cardiovascular Practitioners and their Patients, Anderson RH, Jacobs JP, and Wernovsky G, editors. Cardiology in the Young, Volume 17, Supplement 2, pages 1–28, doi: 10.1017/S1047951107001138, September 2007.
2110	Mesocardia	Indicate if the patient has the diagnosis of ‘‘Mesocardia’’. “Mesocardia’’ is most usually considered synonymous with the ventricular mass occupying the midline [1]. [1]. Jacobs JP, Anderson RH, Weinberg P, Walters III HL, Tchervenkov CI, Del Duca D, Franklin RCG, Aiello VD, Béland MJ, Colan SD, Gaynor JW, Krogmann ON, Kurosawa H, Maruszewski B, Stellin G, Elliott MJ. The nomenclature, definition and classification of cardiac structures in the setting of heterotaxy. In 2007 Supplement to Cardiology in the Young: Controversies and Challenges Facing Paediatric Cardiovascular Practitioners and their Patients, Anderson RH, Jacobs JP, and Wernovsky G, editors. Cardiology in the Young, Volume 17, Supplement 2, pages 1–28, doi: 10.1017/S1047951107001138, September 2007.
2120	Situs inversus	Indicate if the patient has the diagnosis of “Situs inversus” of the atrial chambers. The development of morphologically right-sided structures on one side of the body, and morphologically left-sided structures on the other side, is termed lateralization. Normal lateralization, the usual arrangement, is also known as ‘‘situs solitus’’. The mirror-imaged arrangement is also known as ‘‘situs inversus’’. The term ‘‘visceroatrial situs’’ is often used to refer to the situs of the viscera and atria when their situs is in agreement. The arrangement of the organs themselves, and the arrangement of the atrial chambers, is not always the same. Should such disharmony be encountered, the sidedness of the organs and atrial chambers must be separately specified [1]. [1]. Jacobs JP, Anderson RH, Weinberg P, Walters III HL, Tchervenkov CI, Del Duca D, Franklin RCG, Aiello VD, Béland MJ, Colan SD, Gaynor JW, Krogmann ON, Kurosawa H, Maruszewski B, Stellin G, Elliott MJ. The nomenclature, definition and classification of cardiac structures in the setting of heterotaxy. In 2007 Supplement to Cardiology in the Young: Controversies and Challenges Facing Paediatric Cardiovascular Practitioners and their Patients, Anderson RH, Jacobs JP, and Wernovsky G, editors. Cardiology in the Young, Volume 17, Supplement 2, pages 1–28, doi: 10.1017/S1047951107001138, September 2007.
1250	Aneurysm, Ventricular, Right (including pseudoaneurysm)	An aneurysm of the right ventricle is defined as a localized dilation or enlargement of the right ventricular wall.
1260	Aneurysm, Ventricular, Left(including pseudoaneurysm)	An aneurysm of the left ventricle is defined as a localized dilation or enlargement of the left ventricular wall.
1270	Aneurysm, Pulmonary artery	An aneurysm of the pulmonary artery is defined as a localized dilation or enlargement of the pulmonary artery trunk and its central branches (right and left pulmonary artery).
1280	Aneurysm, Other	A localized dilation or enlargement of a cardiac vessel or chamber not coded in specific fields available for aortic aneurysm, sinus of Valsalva aneurysm, coronary artery aneurysm, right ventricular aneurysm, left ventricular aneurysm, or pulmonary artery aneurysm.
1290	Hypoplastic RV	Small size of the right ventricle. This morphological abnormality usually is an integral part of other congenital cardiac anomalies and, therefore, frequently does not need to be coded separately. It should, however, be

		coded as secondary to an accompanying congenital cardiac anomaly if the right ventricular hypoplasia is not considered an integral and understood part of the primary congenital cardiac diagnosis. It would rarely be coded as a primary and/or isolated diagnosis.
1300	Hypoplastic LV	Small size of the left ventricle. This morphologicaabnormality usually is an integral part of other congenital cardiac anomalies and, therefore, frequently does not need to be coded separately. It should, however, be coded as secondary to an accompanying congenital cardiac anomaly if the left ventricular hypoplasia is not considered an integral and understood part of the primary congenital cardiac diagnosis. It would rarely be coded as a primary and/or isolated diagnosis.
2070	Postoperative bleeding	Indicate if the patient has the diagnosis of “Postoperative bleeding.”
1310	Mediastinitis	Inflammation/infection of the mediastinum, the cavity between the lungs which holds the heart, great vessels, trachea, esophagus, thymus, and connective tissues. In the United States mediastinitis occurs most commonly following chest surgery.
1320	Endocarditis	An infection of the endocardial surface of the heart, which may involve one or more heart valves (native or prosthetic) or septal defects or prosthetic patch material placed at previous surgery.
1325	Rheumatic heart disease	Heart disease, usually valvar (e.g., mitral or aortic), following an infection with group A streptococci.
1330	Prosthetic valve failure	Indicate if the patient has the diagnosis of “Prosthetic valve failure.” This diagnosis is the primary diagnosis to be entered for patients undergoing replacement of a previously placed valve (not conduit) prosthesis, whatever type (e.g., bioprosthetic, mechanical, etc.). Failure may be due to, among others, patient somatic growth, malfunction of the prosthesis, or calcification or overgrowth of the prosthesis (e.g., pannus formation). Secondary or fundamental diagnosis would relate to the underlying valve disease entity. As an example, a patient undergoing removal or replacement of a prosthetic pulmonary valve previously placed for pulmonary insufficiency after repair of tetralogy of Fallot would have as a primary diagnosis “Prosthetic valve failure”, as a secondary diagnosis “Pulmonary insufficiency”, and as a fundamental diagnosis “Tetralogy of Fallot.”
1340	Myocardial infarction	A myocardial infarction is the development of myocardial necrosis caused by a critical imbalance between the oxygen supply and demand of the myocardium. While a myocardial infarction may be caused by any process that causes this imbalance it most commonly results from plaque rupture with thrombus formation in a coronary vessel, resulting in an acute reduction of blood supply to a portion of the myocardium. Myocardial infarction is a usual accompaniment of anomalous left coronary artery from the pulmonary artery (ALCAPA).
1350	Cardiac tumor	An abnormal growth of tissue in or on the heart, demonstrating partial or complete lack of structural organization, and no functional coordination with normal cardiac tissue. Commonly, a mass is recognized which is distinct from the normal structural components of the heart. A primary cardiac tumor is one that arises directly from tissues of the heart, (e.g., myxoma, fibroelastoma, rhabdomyoma, fibroma, lipoma, pheochromocytoma, teratoma, hemangioma, mesothesioloma, s sarcoma). A secondary cardiac tumor is one that arises from tissues distant from the heart, with subsequent spread to the otherwise normal tissues of the heart, (e.g., renal cell tumor with caval extension from the

		kidney to the level of the heart or tumor with extension from other organs or areas of the body (hepatic, adrenal, uterine, infradiaphragmatic)). N.B., in the nomenclature system developed, cardiac thrombus and cardiac vegetation are categorized as primary cardiac tumors.
1360	Pulmonary AV fistula	An abnormal intrapulmonary connection (fistula) between an artery and vein that occurs in the blood vessels of the lungs. Pulmonary AV fistulas may be seen in association with congenital heart defects; the associated cardiac defect should be coded as well.
1370	Pulmonary embolism	A pulmonary embolus is a blockage of an artery in the lungs by fat, air, clumped tumor cells, or a blood clot.
1385	Pulmonary vascular obstructive disease	Pulmonary vascular obstructive disease (PVOD) other than those specifically defined elsewhere (Eisenmenger's pulmonary vascular obstructive disease, primary pulmonary hypertension, persistent fetal circulation). The spectrum includes PVOD arising from (1) pulmonary arterial hypertension or (2) pulmonary venous hypertension or (3) portal hypertension, or (4) collage vascular disease, or (5) drug or toxin induced, or (6) diseases of the respiratory system, or (7) chronic thromboembolic disease, among others.
1390	Pulmonary vascular obstructive disease (Eisenmenger's)	"Eisenmenger syndrome" could briefly be described as"Acquired severe pulmonary vascular disease associated with congenital heart disease (Eisenmenger)." Eisenmenger syndrome is an acquired condition. In Eisenmenger-type pulmonary vascular obstructive disease, long-term left-to-right shunting (e.g., through a ventricular or atrial septal defect, patent ductus arteriosus, aortopulmonary window) can lead to chronic pulmonary hypertension with resultant pathological changes in the pulmonary vessels. The vessels become thick-walled, stiff, noncompliant, and may be obstructed. In Eisenmenger syndrome, the long-term left-to-right shunting will reverse and become right to left. Please note that the specific heart defect should be coded as a secondary diagnosis.
1400	Primary pulmonary hypertension	Primary pulmonary hypertension is a rare disease characterized by elevated pulmonary artery hypertension with no apparent cause. Two forms are included in the nomenclature, a sporadic form and a familial form which can be linked to the BMPR-II gene.
1410	Persistent fetal circulation	Persistence of the blood flow pattern seen in fetal life, in which high pulmonary vascular resistance in the lungs results in decreased blood flow to the lungs. Normally, after birth pulmonary pressure falls with a fall in pulmonary vascular resistance and there is increased perfusion of the lungs. Persistent fetal circulation, also known as persistent pulmonary hypertension of the newborn, can be related to lung or diaphragm malformations or lung immaturity.
1420	Meconium aspiration	Aspiration of amniotic fluid stained with meconium before, during, or after birth can lead to pulmonary sequelae including (1) pneumothorax, (2) pneumomediastinum, (3) pneumopericardium, (4) lung infection, and (5) meconium aspiration syndrome (MAS) with persistent pulmonary hypertension.
2250	Kawasaki disease	Kawasaki disease, also known as Kawasaki syndrome, is an acute febrile illness of unknown etiology that primarily affects children younger than 5 years of age. It was first described in Japan in 1967, and the first cases outside of Japan were reported in Hawaii in 1976. It is characterized by fever, rash, swelling of the hands and feet, irritation and redness of the whites of the eyes, swollen lymph glands in the neck, and irritation and inflammation of the mouth, lips, and throat. Serious complications of

		Kawasaki disease include coronary artery dilatations and aneurysms, and Kawasaki disease is a leading cause of acquired heart disease in children in the United States. The standard treatment with intravenous immunoglobulin and aspirin substantially decreases the development of coronary artery abnormalities.
1560	Cardiac, Other	Any cardiac diagnosis not specifically delineated in other diagnostic codes.
1570	Thoracic and/or mediastinal, Other	Any thoracic and/or mediastinal disease not specifically delineated in other diagnostic codes.
1580	Peripheral vascular, Other	Any peripheral vascular disease (congenital or acquired) or injury (from trauma or iatrogenic); vessels involved may include, but are not limited to femoral artery, femoral vein, iliac artery, brachial artery, etc.
2260	Complication of cardiovascular catheterization procedure	Unspecified complication of cardiovascular catheterization procedure.
2270	Complication of cardiovascular catheterization procedure, Device embolization	Migration or movement of device introduced during a cardiac catheterization procedure to an unintended location.
2280	Complication of cardiovascular catheterization procedure, Device malfunction	Malfunction of a device introduced during a cardiac catheterization procedure.
2290	Complication of cardiovascular catheterization procedure, Perforation	Perforation or puncture caused by a device introduced during a cardiac catheterization procedure.
2300	Complication of interventional radiology procedure	Unspecified complication of interventional radiology procedure.
2310	Complication of interventional radiology procedure, Device embolization	Migration or movement of device introduced during an interventional radiology procedure to an unintended location.
2320	Complication of interventional radiology procedure, Device malfunction	Malfunction of a device introduced during an interventional radiology procedure.
2330	Complication of interventional radiology procedure, Perforation	Perforation or puncture caused by a device introduced during an interventional radiology procedure.
2340	Foreign body, Intracardiac foreign body	Presence of a foreign body within the heart.
2350	Foreign body, Intravascular foreign body	Presence of a foreign body within an artery or vein.
2360	Open sternum with closed skin	Sternotomy edges not re-approximated prior to closure of skin incision.
2370	Open sternum with open skin (includes membrane placed to close skin)	Sternotomy and skin incision left open following surgery, covered with a membrane or dressing.

2380	Retained sternal wire causing irritation	Surgically placed wire causing soft tissue irritation, pain or swelling (not infected).
2390	Syncope	A transient, self-limited loss of consciousness with an inability to maintain postural tone that is followed by spontaneous recovery. The term syncope excludes seizures, coma, shock, or other states of altered consciousness.
2400	Trauma, Blunt	Injury (ies) sustained from blunt force, caused by motor vehicle accidents, falls, blows or crush injuries.
2410	Trauma, Penetrating	Injury (ies) sustained as a result of sharp force, including cutting or piercing instruments or objects, bites, or firearm injuries from projectiles.
2560	Cardio-respiratory failure not secondary to known structural heart disease	
2570	Myocarditis	
2580	Common AV valve insufficiency	
2590	Protein-losing enteropathy	
2600	Plastic bronchitis	
7000	Normal heart	Normal heart.
7777	Miscellaneous, Other	Any disease (congenital or acquired) not specifically delineated in other diagnostic codes.

Status Post

4010	Status post - PFO, Primary closure
4020	Status post - ASD repair, Primary closure
4030	Status post - ASD repair, Patch
4040	Status post - ASD repair, Device
6110	Status post - ASD repair, Patch + PAPVC repair
4050	Status post - ASD, Common atrium (single atrium), Septation
4060	Status post - ASD creation /enlargement
4070	Status post - ASD partial closure
4080	Status post - Atrial septal fenestration
4085	Status post - Atrial fenestration closure
4100	Status post - VSD repair, Primary closure
4110	Status post - VSD repair, Patch
4120	Status post - VSD repair, Device
4130	Status post - VSD,

	Multiple, Repair
4140	Status post – VSD creation/ enlargement
4150	Status post - Ventricular septal fenestration
4170	Status post - AVC (AVSD) repair, Complete (CAVSD)
4180	Status post - AVC (AVSD) repair, Intermediate (Transitional)
4190	Status post - AVC (AVSD) repair, Partial (Incomplete) (PAVSD)
6300	Status post - Valvuloplasty, Common atrioventricular valve
6250	Status post - Valvuloplasty converted to valve replacement in the same operation, Common atrioventricular valve
6230	Status post - Valve replacement, Common atrioventricular valve
4210	Status post - AP window repair
4220	Status post - Pulmonary artery origin from ascending aorta (hemitruncus) repair
4230	Status post - Truncus arteriosus repair
4240	Status post - Valvuloplasty, Truncal valve
6290	Status post – Valvuloplasty converted to valve replacement in the same operation, Truncal valve
4250	Status post - Valve replacement, Truncal valve
6220	Status post - Truncus + Interrupted aortic arch repair (IAA) repair
4260	Status post - PAPVC repair
4270	Status post - PAPVC,

	Scimitar, Repair
6120	Status post - PAPVC repair, Baffle redirection to left atrium with systemic vein translocation (Warden) (SVC sewn to right atrial appendage)
4280	Status post - TAPVC repair
6200	Status post - TAPVC repair + Shunt - systemic-to pulmonary
4290	Status post - Cor triatriatum repair
4300	Status post - Pulmonary venous stenosis repair
4310	Status post - Atrial baffle procedure (non-Mustard, non-Senning)
4330	Status post – Anomalous systemic venous connection repair
4340	Status post - Systemic venous stenosis repair
4350	Status post - TOF repair, No ventriculotomy
4360	Status post - TOF repair, Ventriculotomy, Nontransanular patch
4370	Status post - TOF repair, Ventriculotomy, Transanular patch
7330	Status post – TOF repair, Ventriculotomy, Transanular patch, plus native valve reconstruction
7340	Status post – TOF repair, Ventriculotomy, Transanular patch, with monocusp or other surgically fashioned RVOT valve
4380	Status post - TOF repair, RV-PA conduit
4390	Status post - TOF - AVC (AVSD) repair

4400	Status post - TOF - Absent pulmonary valve repair
4420	Status post - Pulmonary atresia - VSD (including TOF,PA) repair
6700	Status post - Pulmonary atresia - VSD - MAPCA repair, Complete single stage repair (1-stage that includes bilateral pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])
6710	Status post - Pulmonary atresia - VSD - MAPCA repair, Status post prior complete unifocalization (includes VSD closure + RV to PA connection [with or without conduit])
6720	Status post - Pulmonary atresia - VSD - MAPCA repair, Status post prior incomplete unifocalizarion (includes completion of pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])
6730	Status post - Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Complete unifocalization (all usable MAPCA[s] are incorporated)
6740	Status post - Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Incomplete unifocalization (not all usable MAPCA[s] are incorporated)
6750	Status post - Unifocalization MAPCA(s), Unilateral pulmonary unifocalization
4440	Status post -

	Unifocalization MAPCA(s)
4450	Status post - Occlusion of MAPCA(s)
4460	Status post - Valvuloplasty, Tricuspid
6280	Status post - Valvuloplasty converted to valve replacement in the same operation, Tricuspid
4465	Status post - Ebstein's repair
4470	Status post - Valve replacement, Tricuspid (TVR)
4480	Status post - Valve closure, Tricuspid (exclusion, univentricular approach)
4490	Status post - Valve excision, Tricuspid (without replacement)
4500	Status post - Valve surgery, Other, Tricuspid
4510	Status post – RVOT procedure
4520	Status post – 1 ½ ventricular repair
4530	Status post – PA, reconstruction (plasty), Main (trunk)
4540	Status post - PA, reconstruction (plasty), Branch, Central (within the hilar bifurcation)
4550	Status post - PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch)
7350	Status post – PA, reconstruction (plasty) Branch, Peripheral (at or beyond the first lobar branch, proximal to first segmental branch)
7360	Status post – PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch, beyond the first

	segmental branch)
4570	Status post - DCRV repair
7370	Status post – RV Rehabilitation, Endocardial Resection
4590	Status post - Valvuloplasty, Pulmonic
6270	Status post - Valvuloplasty converted to valve replacement in the same operation, Pulmonic
4600	Status post - Valve replacement, Pulmonic (PVR)
4630	Status post - Valve excision, Pulmonary (without replacement)
4640	Status post - Valve closure, Semilunar
4650	Status post - Valve surgery, Other, Pulmonic
4610	Status post - Conduit placement, RV to PA
4620	Status post - Conduit placement, LV to PA
5774	Status post - Conduit placement, Ventricle to aorta
5772	Status post - Conduit placement, Other
4580	Status post - Conduit reoperation
4660	Status post - Valvuloplasty, Aortic
6240	Status post - Valvuloplasty converted to valve replacement in the same operation, Aortic
6310	Status post - Valvuloplasty converted to valve replacement in the same operation, Aortic – with Ross procedure
6320	Status post - Valvuloplasty converted to valve replacement in the same operation, Aortic – with Ross-Konno

	procedure
4670	Status post - Valve replacement, Aortic (AVR)
4680	Status post - Valve replacement, Aortic (AVR), Mechanical
4690	Status post - Valve replacement, Aortic (AVR), Bioprosthetic
4700	Status post – Valve replacement, Aortic (AVR), Homograft
4715	Status post - Aortic root replacement, Bioprosthetic
4720	Status post - Aortic root replacement, Mechanical
4730	Status post - Aortic root replacement, Homograft
4735	Status post - Aortic root replacement, Valve sparing
4740	Status post - Ross procedure
4750	Status post - Konno procedure
4760	Status post - Ross-Konno procedure
4770	Status post - Other annular enlargement procedure
4780	Status post - Aortic stenosis, Subvalvar, Repair
6100	Status post - Aortic stenosis, Subvalvar, Repair, With myectomy for IHSS
4790	Status post - Aortic stenosis, Supravalvar, Repair
4800	Status post - Valve surgery, Other, Aortic
7380	Status post – Extended Ventricular Septoplasty (modified Konno, VSD creation and patch enlargement of LVOT, sparing aortic valve) for tunnel type sub aortic stenosis

4810	Status post - Sinus of Valsalva, Aneurysm repair
4820	Status post - LV to aorta tunnel repair
4830	Status post - Valvuloplasty, Mitral
6260	Status post - Valvuloplasty converted to valve replacement in the same operation, Mitral
4840	Status post - Mitral stenosis, Supravalvar mitral ring repair
4850	Status post - Valve replacement, Mitral (MVR)
4860	Status post - Valve surgery, Other, Mitral
4870	Status post - Norwood procedure
4880	Status post - HLHS biventricular repair
7390	Status post – LV Endocardial Fibroelastosis resection
6755	Status post - Conduit insertion right ventricle to pulmonary artery + Intraventricular tunnel left ventricle to neoaorta + Arch reconstruction (Rastelli and Norwood type arch reconstruction) (Yasui)
6160	Status post - Hybrid Approach "Stage 1", Application of RPA & LPA bands
6170	Status post - Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)
6180	Status post - Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands
6140	Status post - Hybrid approach "Stage 2", Aortopulmonary

	amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding + Aortic arch repair (Norwood [Stage 1] + Superior Cavopulmonary anastomosis(es) + PA Debanding)
6150	Status post - Hybrid approach "Stage 2", Aortopulmonary amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding + Without aortic arch repair
6760	Status post - Hybrid Approach, Transcardiac balloon dilation
6770	Status post - Hybrid Approach, Transcardiac transcatheter device placement
1590	Status post - Transplant, Heart
1610	Status post - Transplant, Heart and lung
4910	Status post - Partial left ventriculectomy (LV volume reduction surgery) (Batista)
4920	Status post - Pericardial drainage procedure
4930	Status post - Pericardiectomy
4940	Status post - Pericardial procedure, Other
4950	Status post - Fontan, Atrio-pulmonary connection
4960	Status post - Fontan, Atrio-ventricular connection
4970	Status post - Fontan, TCPC, Lateral tunnel, Fenestrated
4980	Status post - Fontan, TCPC, Lateral tunnel, Nonfenestrated
5000	Status post - Fontan,

	TCPC, External conduit, Fenestrated
5010	Status post - Fontan, TCPC, External conduit, Nonfenestrated
6780	Status post - Fontan, TCPC, Intra/extracardiac conduit, Fenestrated
6790	Status post - Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated
7310	Status post - Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Fenestrated
7320	Status post - Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Nonfenestrated
5025	Status post - Fontan revision or conversion (Re-do Fontan)
5030	Status post - Fontan, Other
6340	Status post - Fontan + Atrioventricular valvuloplasty
5035	Status post - Ventricular septation
5050	Status post - Congenitally corrected TGA repair, Atrial switch and ASO (double switch)
5060	Status post - Congenitally corrected TGA repair, Atrial switch and Rastelli
5070	Status post - Congenitally corrected TGA repair, VSD closure
5080	Status post - Congenitally corrected TGA repair, VSD closure and LV to PA conduit
5090	Status post - Congenitally corrected TGA repair, Other
5110	Status post - Arterial switch operation (ASO)
5120	Status post - Arterial

	switch operation (ASO) and VSD repair
5123	Status post - Arterial switch procedure + Aortic arch repair
5125	Status post - Arterial switch procedure and VSD repair + Aortic arch repair
5130	Status post - Senning
5140	Status post - Mustard
5145	Status post - Atrial baffle procedure, Mustard or Senning revision
5150	Status post - Rastelli
5160	Status post - REV
6190	Status post - Aortic root translocation over left ventricle (Including Nikaidoh procedure)
6210	Status post - TGA, Other procedures (Kawashima, LV-PA conduit, other)
7400	Status post – Double root translocation
5180	Status post - DORV, Intraventricular tunnel repair
7410	Status post – DORV repair – No Ventriculotomy
7420	Status post – DORV repair, Ventriculotomoy, Nontransannular patch
7430	Status post – DORV repair, Ventriculotomy, Transannular patch
7440	Status post – DORV repair, RV-PA conduit
7450	Status post – DORV – AVC (AVSD) repair
5200	Status post - DOLV repair
5210	Status post - Coarctation repair, End to end
5220	Status post - Coarctation repair, End to end, Extended
7460	Status post – Coarctation repair, Descending aorta anastomosed to Ascending aorta
5230	Status post - Coarctation

	repair, Subclavian flap
5240	Status post - Coarctation repair, Patch aortoplasty
5250	Status post - Coarctation repair, Interposition graft
7470	Status post – Coarctation repair, Extra-anatomic Bypass graft
5260	Status post - Coarctation repair, Other
5275	Status post - Coarctation repair + VSD repair
5280	Status post - Aortic arch repair
5285	Status post - Aortic arch repair + VSD repair
5290	Status post - Coronary artery fistula ligation
5291	Status post - Anomalous origin of coronary artery from pulmonary artery repair
5300	Status post - Coronary artery bypass
5305	Status post - Anomalous aortic origin of coronary artery (AAOCA) repair
5310	Status post - Coronary artery procedure, Other
5320	Status post - Interrupted aortic arch repair
5330	Status post - PDA closure, Surgical
5340	Status post - PDA closure, Device
5360	Status post - Vascular ring repair
5365	Status post - Aortopexy
5370	Status post - Pulmonary artery sling repair
5380	Status post - Aortic aneurysm repair
5390	Status post - Aortic dissection repair
5400	Status post - Lung biopsy
1600	Status post - Transplant, Lung(s)
5420	Status post - Lung procedure, Other
5440	Status post - Tracheal

	procedure
6800	Status post - Muscle flap, Trunk (i.e., intercostal, pectus, or serratus muscle)
6810	Status post - Muscle flap, Trunk (i.e. latissimus dorsi)
6820	Status post - Removal, Sternal wire
6830	Status post - Rib excision, Complete
6840	Status post - Rib excision, Partial
6850	Status post - Sternal fracture, Open treatment
6860	Status post - Sternal resection, Radical resection of the sternum
6870	Status post - Sternal resection, Radical resection of sternum with mediastinal lymphadenectomy
6880	Status post - Tumor of chest wall - Excision including ribs
6890	Status post - Tumor of chest wall - Excision including ribs, With reconstruction
6900	Status post - Tumor of soft tissue of thorax - Excision of deep subfascial or intramuscular tumor
6910	Status post - Tumor of soft tissue of thorax - Excision of subcutaneous tumor
6920	Status post - Tumor of soft tissue of thorax - Radical resection
6930	Status post - Hyoid myotomy and suspension
6940	Status post - Muscle flap, Neck
6950	Status post - Procedure on neck
6960	Status post - Tumor of soft tissue of neck -

	Excision of deep subfascial or intramuscular tumor
6970	Status post - Tumor of soft tissue of neck - Excision of subcutaneous tumor
6980	Status post - Tumor of soft tissue of neck - Radical resection
6990	Status post - Pectus bar removal
7005	Status post - Pectus bar repositioning
7010	Status post - Pectus repair, Minimally invasive repair (Nuss), With thoracoscopy
7020	Status post - Pectus repair, Minimally invasive repair (Nuss), Without thoracoscopy
7030	Status post - Pectus repair, Open repair
7040	Status post - Division of scalenus anticus, With resection of a cervical rib
7050	Status post - Division of scalenus anticus, Without resection of a cervical rib
7060	Status post - Rib excision, Excision of cervical rib
7070	Status post - Rib excision, Excision of cervical rib, With sympathectomy
7080	Status post - Rib excision, Excision of first rib
7090	Status post - Rib excision, Excision of first rib, With sympathectomy
7100	Status post - Procedure on thorax
5450	Status post - Pacemaker implantation, Permanent
5460	Status post – Pacemaker procedure
6350	Status post - Explantation of pacing system
5470	Status post - ICD (AICD) implantation

5480	Status post - ICD (AICD) ([automatic] implantable cardioverter defibrillator) procedure
5490	Status post - Arrhythmia surgery - atrial, Surgical Ablation
5500	Status post - Arrhythmia surgery - ventricular, Surgical Ablation
6500	Status post - Cardiovascular catheterization procedure, Diagnostic
6520	Status post - Cardiovascular catheterization procedure, Diagnostic, Angiographic data obtained
6550	Status post - Cardiovascular catheterization procedure, Diagnostic, Electrophysiology alteration
6540	Status post - Cardiovascular catheterization procedure, Diagnostic, Hemodynamic alteration
6510	Status post – Cardiovascular catheterization procedure, Diagnositc, Hemodynamic data obtained
6530	Status post - Cardiovascular catheterization procedure, Diagnostic, Transluminal test occlusion
6410	Status post - Cardiovascular catheterization procedure, Therapeutic
6670	Status post - Cardiovascular catheterization

	procedure, Therapeutic, Adjunctive therapy
6570	Status post - Cardiovascular catheterization procedure, Therapeutic, Balloon dilation
6590	Status post - Cardiovascular catheterization procedure, Therapeutic, Balloon valvotomy
6600	Status post - Cardiovascular catheterization procedure, Therapeutic, Coil implantation
6610	Status post - Cardiovascular catheterization procedure, Therapeutic, Device implantation
7110	Status post - Cardiovascular catheterization procedure, Therapeutic, Device implantation attempted
6690	Status post - Cardiovascular catheterization procedure, Therapeutic, Electrophysiological ablation
7120	Status post - Cardiovascular catheterization procedure, Therapeutic, Intravascular foreign body removal
6640	Status post - Cardiovascular catheterization procedure, Therapeutic, Perforation (establishing interchamber and/or intervessel communication)
6580	Status post - Cardiovascular catheterization

	procedure, Therapeutic, Septostomy
6620	Status post - Cardiovascular catheterization procedure, Therapeutic, Stent insertion
6630	Status post - Cardiovascular catheterization procedure, Therapeutic, Stent re-dilation
6650	Status post - Cardiovascular catheterization procedure, Therapeutic, Transcatheter Fontan completion
6660	Status post - Cardiovascular catheterization procedure, Therapeutic, Transcatheter implantation of valve
5590	Status post - Shunt, Systemic to pulmonary, Modified Blalock-Taussig Shunt (MBTS)
5600	Status post - Shunt, Systemic to pulmonary, Central (shunt from aorta)
7130	Status post - Shunt, Systemic to pulmonary, Central (shunt from aorta), Central shunt with an end-to-side connection between the transected main pulmonary artery and the side of the ascending aorta (i.e. Mee shunt)
7230	Status post - Shunt, Sysytemic to pulmonary, Potts - Smith type

	(descending aorta to pulmonary artery)
5610	Status post - Shunt, Systemic to pulmonary, Other
5630	Status post - Shunt, Ligation and takedown
6095	Status post - Shunt, Reoperation
5640	Status post - PA banding (PAB)
5650	Status post - PA debanding
7200	Status post - PA band adjustment
5660	Status post - Damus-Kaye-Stansel procedure (DKS) (creation of AP anastomosis without arch reconstruction)
5670	Status post - Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn)
5680	Status post - Glenn(unidirectional cavopulmonary anastomosis) (unidirectional Glenn)
5690	Status post - Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (bilateral bidirectional Glenn)
5700	Status post - HemiFontan
6330	Status post - Superior cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular valvuloplasty
6130	Status post - Superior Cavopulmonary anastomosis(es) + PA reconstruction
7300	Status post - Takedown of superior cavopulmonary anastomosis
7140	Status post - Hepatic vein to azygous vein

	connection, Direct
7150	Status post - Hepatic vein to azygous vein connection, Interposition graft
7160	Status post – Kawashima operation (superior cavopulmonary connection in setting of interrupted IVC with azygous continuation)
5710	Status post - Palliation, Other
6360	Status post - ECMO cannulation
6370	Status post - ECMO decannulation
5910	Status post - ECMO procedure
5900	Status post - Intraaortic balloon pump (IABP) insertion
5920	Status post - Right/left heart assist device procedure
6390	Status post - VAD explantation
6380	Status post - VAD implantation
7170	Status post - VAD change out
6420	Status post - Echocardiography procedure, Sedated transesophageal echocardiogram
6430	Status post - Echocardiography procedure, Sedated transthoracic echocardiogram
6435	Status post - Non-cardiovascular, Non-thoracic procedure on cardiac patient with cardiac anesthesia
6440	Status post - Radiology procedure on cardiac patient, Cardiac Computerized Axial Tomography (CT Scan)

6450	Status post - Radiology procedure on cardiac patient, Cardiac Magnetic Resonance Imaging (MRI)
6460	Status post - Radiology procedure on cardiac patient, Diagnostic radiology
6470	Status post - Radiology procedure on cardiac patient, Non-Cardiac Computerized Tomography (CT) on cardiac patient
6480	Status post - Radiology procedure on cardiac patient, Non-cardiac Magnetic Resonance Imaging (MRI) on cardiac patient
6490	Status post - Radiology procedure on cardiac patient, Therapeutic radiology
5720	Status post - Aneurysm, Ventricular, Right, Repair
5730	Status post - Aneurysm, Ventricular, Left, Repair
5740	Status post - Aneurysm, Pulmonary artery, Repair
5760	Status post - Cardiac tumor resection
5780	Status post - Pulmonary AV fistula repair/occlusion
5790	Status post - Ligation, Pulmonary artery
5802	Status post - Pulmonary embolectomy, Acute pulmonary embolus
5804	Status post - Pulmonary embolectomy, Chronic pulmonary embolus
5810	Status post - Pleural drainage procedure
5820	Status post - Pleural procedure, Other
5830	Status post - Ligation, Thoracic duct
5840	Status post -

	Decortication
5850	Status post - Esophageal procedure
5860	Status post - Mediastinal procedure
5870	Status post - Bronchoscopy
5880	Status post - Diaphragm plication
5890	Status post - Diaphragm procedure, Other
5930	Status post - VATS (video-assisted thoracoscopic surgery)
5940	Status post - Minimally invasive procedure
5950	Status post - Bypass for noncardiac lesion
5960	Status post - Delayed sternal closure
5970	Status post - Mediastinal exploration
5980	Status post - Sternotomy wound drainage
7180	Status post - Intravascular stent removal
7220	Status post - Removal of transcatheter delivered device from heart
7210	Status post - Removal of transcatheter delivered device from blood vessel
5990	Status post - Thoracotomy, Other
6000	Status post - Cardiotomy, Other
6010	Status post - Cardiac procedure, Other
6020	Status post - Thoracic and/or mediastinal procedure, Other
6030	Status post - Peripheral vascular procedure, Other
6040	Status post – Miscellaneous procedure, Other
11777	Status post - Other procedure

May 2019: How should I enter the diagnosis of a Mustard or Senning baffle leak? This is for patients who had surgery years ago, not recently. **Code the appropriate status post procedure (s/p Mustard or Senning) as well as an ASD to cover the leak; there is no other appropriate code.**

June 2019: We have a patient with the following diagnoses: 1. HLHS, s/p Norwood procedure with a 4mm BT Shunt; 2. Bilateral pulmonary vein stenosis, s/p sutureless repair, s/p bilateral pulmonary vein stents; 3. Obstructed Damus-Kaye-Stansel. Procedures performed: 1. Revision of Damus-Kaye-Stansel; 2. Aortic Arch augmentation; 3. BT Shunt replacement and ECMO. My question is two part: 1. how should I code the obstructed DKS? 2. How do I code the DKS Revision? **Code: Diagnosis: Supravalvar aortic stenosis, D570, s/p DKS; Procedure: if the DKS was taken down and redone, code DKS, but if the DKS was revised with a patch aortoplasty, code "aortic stenosis, supravalvar, repair."**

Long Name:	Primary Diagnosis Indicator	*SeqNo:*	900
Short Name:	**PrimDiag**	*Core:*	Yes
Section Name:	Diagnosis	*Harvest:*	Yes
DBTableName:	Diagnosis		
Definition:	Indicate the diagnosis of primary importance at the time of this surgical procedure. Example: fundamental diagnosis of Tetralogy of Fallot. The current Diagnoses are both pulmonary insufficiency and residual ventricular septal defect. In this case, pulmonary insufficiency will be flagged as the primary diagnosis.		

Intent / Clarification:

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

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Fundamental Diagnosis	*SeqNo:*	374
Short Name:	**FundDiagnosis**	*Core:*	Yes
Section Name:	Diagnosis	*Harvest:*	Yes
DBTableName:	Diagnosis		
Definition:	The fundamental diagnosis is a diagnosis that is carried with a patient throughout life, through all operations and hospitalizations. The fundamental diagnosis is the most complex cardiac anomaly or condition (congenital or acquired) of the patient. Most frequently, the primary diagnosis will also be the fundamental diagnosis. For some operations, however, the fundamental diagnosis and primary diagnosis will be different. For example, consider a child who underwent repair of subaortic stenosis, subsequently develops complete atrioventricular (AV) block, and undergoes pacemaker placement within the same hospitalization. The primary diagnosis for the pacemaker surgery		

is “Arrhythmia, Heart block, Acquired”, while the fundamental diagnosis is “Aortic stenosis, Subvalvar”. Similarly, a patient who has a complete AV canal defect and undergoes either palliation or repair of the defect has a primary and fundamental diagnosis of “AVC (AVSD), Complete CAVSD”. Subsequently, the child develops mitral insufficiency and is re-hospitalized for mitral valve replacement. The primary diagnosis for the mitral valve replacement operation is “Mitral regurgitation”, but the fundamental diagnosis is “AVC (AVSD), Complete CAVSD.” The utilization of the fundamental diagnosis field, it is hoped, will clarify designation of a primary diagnosis, and enable greater specificity in the lesion specific report analyses.

Intent / Clarification:

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

June 2019: Patient has diagnosis 2500, discrete subvalvar stenosis. There is not a notation stating this cannot be used as a Fund Diagnosis on the 3.41form, but the vendor states that it is not listed on the 3.41 Congenital Fund Diagnosis list. Why would this not be acceptable as a Fund Diagnosis? **Agree that D2500, D2510, and D2520 (discrete, IHSS, and Tunnel-like variants of subaortic stenosis would seem reasonable as fundamental diagnoses, but the fall back would be to use D0550 Aortic stenosis, Subvalvar, as the fundamental diagnosis. Discuss with your software vendor.**

Long Name: Procedures Table Unique Record Identifier
Short Name: **ProcUniqueID**
Section Name: Diagnosis
DBTableName: Procedures
Definition: Unique identifier for the record in the Procedures table.

SeqNo: 910
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: Automatic
Format: Text

Long Name: Procedures Link to Operations Table
Short Name: **OperationID**
Section Name: Procedures
DBTableName: Procedures
Definition: An arbitrary, unique value generated by the software that permanently identifies each operation record in the participant's database. This field is the foreign key that links the Procedure record with the associated record in the Operations table.

SeqNo: 920
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: Automatic
Format: Text

Procedures

Long Name: Procedures
Short Name: **Procedure**
Section Name: Procedures
DBTableName: Procedures
Definition: Indicate ALL procedures that were performed during this surgical procedure.

SeqNo: 930
Core: Yes
Harvest: Yes

Intent / Clarification:

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

Harvest Codes and Value Definitions:

Code:	Value:	Definition:
10	PFO, Primary closure	Suture closure of patent foramen ovale (PFO).
20	ASD repair, Primary closure	Suture closure of secundum (most frequently), coronary sinus, sinus venosus or common atrium ASD.
30	ASD repair, Patch	Patch closure (using any type of patch material) of secundum, coronary sinus, or sinus venosus ASD.
40	ASD repair, Device	Closure of any type ASD (including PFO) using a device.
2110	ASD repair, Patch + PAPVC repair	Patch closure (using any type of patch material) of secundum, coronary sinus, or sinus venosus ASD plus PAPVC repair, any type
50	ASD, Common atrium (single atrium), Septation	Septation of common (single) atrium using any type patch material.
60	ASD creation/enlargement	Creation of an atrial septal defect or enlargement of an existing atrial septal defect using a variety of modalities including balloon septostomy, blade septostomy, or surgical septectomy. Creation may be accomplished with or without use of cardiopulmonary bypass.
70	ASD partial closure	Intentional partial closure of any type ASD (partial suture or fenestrated patch closure).
80	Atrial septal fenestration	Creation of a fenestration (window) in the septum between the atrial chambers. Usually performed using a hole punch, creating a specifically sized communication in patch material placed on the atrial septum.
85	Atrial fenestration closure	Closure of previously created atrial fenestration using any method including device, primary suture, or patch.
100	VSD repair, Primary closure	Suture closure of any type VSD.
110	VSD repair, Patch	Patch closure (using any type of patch material) of any type VSD.
120	VSD repair, Device	Closure of any type VSD using a device.
130	VSD, Multiple, Repair	Closure of more than one VSD using any method or combination of methods. Further information regarding each type of VSD closed and method of closure

		can be provided by additionally listing specifics for each VSD closed. In the case of multiple VSDs in which only one is closed the procedure should be coded as closure of a single VSD. The fundamental diagnosis, in this case, would be "VSD, Multiple" and a secondary diagnosis can be the morphological type of VSD that was closed at the time of surgery.
140	VSD creation/enlargement	Creation of a ventricular septal defect or enlargement of an existing ventricular septal defect.
150	Ventricular septal fenestration	Creation of a fenestration (window) in the septum between the ventricular chambers. Usually performed using a hole punch, creating a specifically sized communication in patch material placed on the ventricular septum.
170	AVC (AVSD) repair, Complete (CAVSD)	Repair of complete AV canal (AVSD) using one- or two-patch or other technique, with or without mitral valve cleft repair.
180	AVC (AVSD) repair, Intermediate (Transitional)	Repair of intermediate AV canal (AVSD) using ASD and VSD patch, or ASD patch and VSD suture, or other technique, with or without mitral valve cleft repair.
190	AVC (AVSD) repair, Partial (Incomplete) (PAVSD)	Repair of partial AV canal defect (primum ASD), any technique, with or without repair of cleft mitral valve.
2300	Valvuloplasty, Common atrioventricular valve	Common AV valve repair, any type
2250	Valvuloplasty converted to valve replacement in the same operation, Common atrioventricular valve	Common AV valve repair attempted, converted to valve replacement with prosthetic valve during the same operation
2230	Valve replacement, Common atrioventricular valve	Replacement of the common AV valve with a prosthetic valve
210	AP window repair	Repair of AP window using one- or two-patch technique with cardiopulmonary bypass; or, without cardiopulmonary bypass, using transcatheter device or surgical closure.
220	Pulmonary artery origin from ascending aorta (hemitruncus) repair	Repair of pulmonary artery origin from the ascending aorta by direct reimplantation, autogenous flap, or conduit, with or without use of cardiopulmonary bypass.
230	Truncus arteriosus repair	Truncus arteriosus repair that most frequently includes patch VSD closure and placement of a conduit from RV to PA. In some cases, a conduit is not placed but an RV to PA connection is made by direct association. Very rarely, there is no VSD to be closed. Truncal valve repair or replacement should be coded separately (Valvuloplasty, Truncal valve; Valve replacement, Truncal valve), as would be the case as well with associated arch anomalies requiring repair (e.g., Interrupted aortic arch repair).
240	Valvuloplasty, Truncal valve	Truncal valve repair, any type.
2290	Valvuloplasty converted to valve replacement in the same operation, Truncal valve	Truncal valve repair attempted, converted to valve replacement with prosthetic valve during the same operation
250	Valve replacement, Truncal valve	Replacement of the truncal valve with a prosthetic valve.
2220	Truncus + Interrupted aortic arch repair (IAA) repair	Truncus arteriosus repair usually includes patch VSD closure and placement of a conduit from RV to PA. In some cases, a conduit is not placed but an RV to PA connection is made by direct association. (Very rarely, there is no VSD) plus repair of interrupted aortic arch
260	PAPVC repair	PAPVC repair revolves around whether an intracardiac baffle is created to redirect pulmonary venous return to the left atrium or if the anomalous

		pulmonary vein is translocated and connected to the left atrium directly. If there is an associated ASD and it is closed, that procedure should also be listed.
270	PAPVC, Scimitar, Repair	In scimitar syndrome, PAPVC repair also revolves around whether an intracardiac baffle is created to redirect pulmonary venous return to the left atrium or if the anomalous pulmonary vein is translocated and connected to the left atrium directly. If there is an associated ASD and it is closed, that procedure should also be listed. Occasionally an ASD is created; this procedure also must be listed separately. Concomitant thoracic procedures (e.g., lobectomy, pneumonectomy) should also be included in the procedures listing.
2120	PAPVC repair, Baffle redirection to left atrium with systemic vein translocation(Warden) (SVC sewn to right atrial appendage)	An intracardiac baffle is created to redirect pulmonary venous return to the left atrium and SVC sewn to right atrial appendage)
280	TAPVC repair	Repair of TAPVC, any type. Issues surrounding TAPVC repair involve how the main pulmonary venous confluence anastomosis is fashioned, whether an associated ASD is closed or left open or enlarged (ASD closure and enlargement may be listed separately), and whether, particularly in mixed type TAPVC repair, an additional anomalous pulmonary vein is repaired surgically.
2200	TAPVC repair + Shunt - systemic-to-pulmonary	Repair of TAPVC, any type plus a systemic to pulmonary shunt creation
290	Cor triatriatum repair	Repair of cor triatriatum. Surgical decision making revolves around the approach to the membrane creating the cor triatriatum defect, how any associated ASD is closed, and how any associated anomalous pulmonary vein connection is addressed. Both ASD closure and anomalous pulmonary venous connection may be listed as separate procedures.
300	Pulmonary venous stenosis repair	Repair of pulmonary venous stenosis, whether congenital or acquired. Repair can be accomplished with a variety of approaches: sutureless, patch venoplasty, stent placement, etc.
310	Atrial baffle procedure (non- Mustard, non-Senning)	The atrial baffle procedure code is used primarily for repair of systemic venous anomalies, as in redirection of left superior vena cava drainage to the right atrium.
330	Anomalous systemic venous connection repair	With the exception of atrial baffle procedures (harvest code 310), anomalous systemic venous connection repair includes a range of surgical approaches, including, among others: ligation of anomalous vessels, reimplantation of anomalous vessels (with or without use of a conduit), or redirection of anomalous systemic venous flow through directly to the pulmonary circulation (bidirectional Glenn to redirect LSVC or RSVC to left or right pulmonary artery, respectively).
340	Systemic venous stenosis repair	Stenosis or obstruction of a systemic vein (most commonly SVC or IVC) may be relieved with patch or conduit placement, excision of the stenotic area with primary reanastomosis or direct reimplantation.
350	TOF repair, No ventriculotomy	Tetralogy of Fallot repair (assumes VSD closure and relief of pulmonary stenosis at one or more levels), without use of an incision in the infundibulum of the right ventricle for exposure. In most cases this would be a transatrial and transpulmonary artery approach to repair the VSD and relieve the pulmonary stenosis. If the main pulmonary artery incision is extended proximally through the pulmonary annulus, this must be considered "transannular" and thus a ventricular incision, though the length of the incision onto the ventricle itself may be minimal.
360	TOF repair,	Tetralogy of Fallot repair (assumes VSD closure and relief of pulmonary stenosis

	Ventriculotomy, Nontransanular patch	at one or more levels), with use of a ventriculotomy incision, but without placement of a trans- pulmonary annulus patch. If the main pulmonary artery incision is extended proximally through the pulmonary annulus, this must be considered "transannular" and thus a ventricular incision, though the length of the incision onto the ventricle itself may be minimal.
370	TOF repair, Ventriculotomy, Transanular patch	Tetralogy of Fallot repair (assumes VSD closure and relief of pulmonary stenosis at one or more levels), with use of a ventriculotomy incision and placement of a trans-pulmonary annulus patch. If the main pulmonary artery incision is extended proximally through the pulmonary annulus, this must be considered "transannular" and thus a ventricular incision, though the length of the incision onto the ventricle itself may be minimal.
3330	TOF repair, Ventriculotomy, Transanular patch, plus native valve reconstruction	
3340	TOF repair, Ventriculotomy, Transanular patch with monocusp or other surgically fashioned RVOT valve	
380	TOF repair, RV-PA conduit	Tetralogy of Fallot repair (assumes VSD closure and relief of pulmonary stenosis at one or more levels), with placement of a right ventricle-to-pulmonary artery conduit. In this procedure the major components of pulmonary stenosis are relieved with placement of the RV-PA conduit.
390	TOF - AVC (AVSD) repair	Tetralogy of Fallot repair (assumes VSD closure and relief of pulmonary stenosis at one or more levels), with repair of associated AV canal defect. Repair of associated atrial septal defect or atrioventricular valve repair(s) should be listed as additional or secondary procedures under the primary TOF-AVC procedure.
400	TOF - Absent pulmonary valve repair	Repair of tetralogy of Fallot with absent pulmonary valve complex. In most cases this repair will involve pulmonary valve replacement (pulmonary or aortic homograft, porcine, other) and reduction pulmonary artery arterioplasty.
420	Pulmonary atresia - VSD (including TOF, PA) repair	For patients with pulmonary atresia with ventricular septal defect without MAPCAs, including those with tetralogy of Fallot with pulmonary atresia, repair may entail either a tetralogy-like repair with transannular patch placement, a VSD closure with placement of an RV-PA conduit, or an intraventricular tunnel VSD closure with transannular patch or RV-PA conduit placement. To assure an accurate count of repairs of pulmonary atresia-VSD without MAPCAs, even if a tetralogy-type repair or Rastelli-type repair is used, the pulmonary atresia-VSD code should be the code used, not Rastelli procedure or tetralogy of Fallot repair with transannular patch.
2700	Pulmonary atresia – VSD-MAPCA repair, Complete - single stage repair (1-stage that includes bilateral pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])	1-stage repair that includes bilateral pulmonary unifocalization+ VSD closure + RV to PA connection [with or without conduit])
2710	Pulmonary atresia - VSD - MAPCA repair, Status post prior complete unifocalization (includes	VSD closure + RV to PA connection [with or without conduit]

	VSD closure + RV to PA connection [with or without conduit])	
2720	Pulmonary atresia - VSD - MAPCA repair, Status post prior incomplete unifocalization (includes completion of pulmonary unifocalization + VSD closure+ RV to PA connection [with or without conduit])	Completion of pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])Pulmonary atresia - VSD - MAPCA repair, Status post prior incomplete unifocalization
2730	Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Complete unifocalization (all usable MAPCA[s] are incorporated)	Complete unifocalization , all usable MAPCA[s] are incorporated
2740	Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Incomplete unifocalization (not all usable MAPCA[s] are incorporated)	Incomplete unifocalization, not all usable MAPCA[s] are incorporated
2750	Unifocalization MAPCA(s), Unilateral pulmonary unifocalization	MAPCA(s), Unilateral pulmonary unifocalization (one side)
440	Unifocalization MAPCA(s)	Anastomosis of aortopulmonary collateral arteries into the left, right, or main pulmonary artery or into a tube graft or other type of confluence. The unifocalization procedure may be done on or off bypass.
450	Occlusion of MAPCA(s)	Occlusion, or closing off, of MAPCAs. This may be done with a transcatheter occluding device, usually a coil, or by surgical techniques.
460	Valvuloplasty, Tricuspid	Reconstruction of the tricuspid valve may include but not be limited to a wide range of techniques including: leaflet patch extension, artificial chordae placement, and papillary muscle translocation with or without detachment. Annuloplasty techniques that may be done solely or in combination with leaflet, chordae or muscle repair to achieve a competent valve include: eccentric annuloplasty, Kay annular plication, purse- string annuloplasty (including semicircular annuloplasty), sliding annuloplasty, and annuloplasty with ring placement. Do not use this code if tricuspid valve malfunction is secondary to Ebstein's anomaly; instead use the Ebstein's repair procedure code.
2280	Valvuloplasty converted to valve replacement in the same operation, Tricuspid	Tricuspid valve repair attempted, converted to valve replacement with prosthetic valve during the same operation
465	Ebstein's repair	To assure an accurate count of repairs of Ebstein's anomaly of the tricuspid valve, this procedure code was included. Repair of Ebstein's anomaly may include, among other techniques, repositioning of the tricuspid valve, plication of the atrialized right ventricle, or right reduction atrioplasty. Often associated ASD's may be closed and arrhythmias addressed with surgical ablation procedures. These procedures should be entered as separate procedure codes.
470	Valve replacement, Tricuspid (TVR)	Replacement of the tricuspid valve with a prosthetic valve.

480	Valve closure, Tricuspid (exclusion, univentricular approach)	In a functional single ventricle heart, the tricuspid valve may be closed using a patch, thereby excluding the RV. Tricuspid valve closure may be used for infants with Ebstein's anomaly and severe tricuspid regurgitation or in patients with pulmonary atresia-intact ventricular septum with sinusoids.
490	Valve excision, Tricuspid (without replacement)	Excision of the tricuspid valve without placement of a prosthetic valve.
500	Valve surgery, Other, Tricuspid	Other tricuspid valve surgery not specified in procedure codes.
510	RVOT procedure	Included in this procedural code would be all RVOT procedures not elsewhere specified in the nomenclature system. These might be, among others: resection of subvalvar pulmonary stenosis (not DCRV type; may be localized fibrous diaphragm or high infundibular stenosis), right ventricular patch augmentation, or reduction pulmonary artery arterioplasty.
520	1 1/2 ventricular repair	Partial biventricular repair; includes intracardiac repair with bidirectional cavopulmonary anastomosis to volume unload a small ventricle or poorly functioning ventricle.
530	PA, reconstruction (plasty), Main (trunk)	Reconstruction of the main pulmonary artery trunk commonly using patch material. If balloon angioplasty is performed or a stent is placed in the main pulmonary artery intraoperatively, this code may be used in addition to the balloon dilation or stent placement code. If MPA reconstruction is performed with PA debanding, both codes should be listed.
540	PA, reconstruction (plasty), Branch, Central (within the hilar bifurcation)	Reconstruction of the right or left branch (or both right and left) pulmonary arteries (within the hilar bifurcation) commonly using patch material. If balloon angioplasty is performed or a stent is placed in the right or left (or both) pulmonary artery intraoperatively, this code may be used in addition to the balloon dilation or stent placement code. If, rarely, branch PA banding (single or bilateral) was performed in the past and reconstruction is performed associated with debanding, both codes should be listed.
550	PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch)	Reconstruction of the peripheral right or left branch (or both right and left) pulmonary arteries (at or beyond the hilar bifurcation) commonly using patch material. If balloon angioplasty is performed or a stent is placed in the right or left (or both) peripheral pulmonary artery intraoperatively, this code may be used in addition to the balloon dilation or stent placement code.
3350	PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch, proximal to first segmental branch)	
3360	PA, reconstruction (plasty), Branch, Peripheral (at or beyond the first lobar branch, beyond the first segmental branch)	
570	DCRV repair	Surgical repair of DCRV combines relief of the low infundibular stenosis (via muscle resection) and closure of a VSD when present. A ventriculotomy may be required and is repaired by patch enlargement of the infundibulum. VSD closure and patch enlargement of the infundibulum, if done, should be listed as separate procedure codes.
3370	RV Rehabilitation, Endocardial Resection	

590	Valvuloplasty, Pulmonic	Valvuloplasty of the pulmonic valve may include a range of techniques including but not limited to: valvotomy with or without bypass, commissurotomy, and valvuloplasty.
2270	Valvuloplasty converted to valve replacement in the same operation, Pulmonic	Pulmonic valve repair attempted, converted to valve replacement with prosthetic valve during the same operation
600	Valve replacement, Pulmonic (PVR)	Replacement of the pulmonic valve with a prosthetic valve. Care must be taken to differentiate between homograft pulmonic valve replacement and placement of a homograft RV-PA conduit.
630	Valve excision, Pulmonary (without replacement)	Excision of the pulmonary valve without placement of a prosthetic valve.
640	Valve closure, Semilunar	Closure of a semilunar valve (pulmonic or aortic) by any technique.
650	Valve surgery, Other, Pulmonic	Other pulmonic valve surgery not specified in procedure codes.
610	Conduit placement, RV to PA	Placement of a conduit, any type, from RV to PA. Intent/Clarification: This is initial conduit placement only. Replacements should be included under conduit reoperations.
620	Conduit placement, LV to PA	Placement of a conduit, any type, from LV to PA. Intent/Clarification: This is initial conduit placement only. Replacements should be included under conduit reoperations.
1774	Conduit placement, Ventricle to aorta	Placement of a conduit from the right or left ventricle to the aorta. Intent/Clarification: This is initial conduit placement only. Replacements should be included under conduit reoperations.
1772	Conduit placement, Other	Placement of a conduit from any chamber or vessel to any vessel, valved or valveless, not listed elsewhere. Intent/Clarification: This is initial conduit placement only. Replacements should be included under conduit reoperations.
580	Conduit reoperation	Conduit reoperation is the code to be used in the event of conduit failure, in whatever position (LV to aorta, LV to PA, RA to RV, RV to aorta, RV to PA, etc.), and from whatever cause (somatic growth, stenosis, insufficiency, infection, etc.).
660	Valvuloplasty, Aortic	Valvuloplasty of the aortic valve for stenosis and/or insufficiency including, but not limited to the following techniques: valvotomy (open or closed), commissurotomy, aortic valve suspension, leaflet (left, right or noncoronary) partial resection, reduction, or leaflet shaving, extended valvuloplasty (freeing of leaflets, commissurotomy, and extension of leaflets using autologous or bovine pericardium), or annuloplasty (partial - interrupted or noncircumferential sutures, or complete - circumferential sutures).
2240	Valvuloplasty converted to valve replacement in the same operation, Aortic	Aortic valve repair attempted, converted to valve replacement with prosthetic valve during the same operation
2310	Valvuloplasty converted to valve replacement in the same operation, Aortic – with Ross procedure	Aortic valve repair attempted, converted to valve replacement with a pulmonary autograft and replacement of the pulmonary valve with a homograft conduit during the same operation
2320	Valvuloplasty converted to valve replacement in the same operation, Aortic – with Ross Konno procedure	Aortic valve repair attempted, converted to Konno aortoventriculoplasty using a pulmonary autograft root for the aortic root replacement.
670	Valve replacement, Aortic (AVR)	Replacement of the aortic valve with a prosthetic valve (mechanical, bioprosthetic, or homograft). Use this code only if type of valve prosthesis is unknown or does not fit into the specific valve replacement codes available. Autograft valve replacement should be coded as a Ross procedure.

680	Valve replacement, Aortic (AVR), Mechanical	Replacement of the aortic valve with a mechanical prosthetic valve.
690	Valve replacement, Aortic (AVR), Bioprosthetic	Replacement of the aortic valve with a bioprosthetic prosthetic valve.
700	Valve replacement, Aortic (AVR), Homograft	Replacement of the aortic valve with a homograft prosthetic valve.
715	Aortic root replacement, Bioprosthetic	Replacement of the aortic root (that portion of the aorta attached to the heart; it gives rise to the coronary arteries) with a bioprosthesis (e.g., porcine) in a conduit, often composite.
720	Aortic root replacement, Mechanical	Replacement of the aortic root (that portion of the aorta attached to the heart; it gives rise to the coronary arteries) with a mechanical prosthesis in a composite conduit.
730	Aortic root replacement, Homograft	Replacement of the aortic root (that portion of the aorta attached to the heart; it gives rise to the coronary arteries) with a homograft.
735	Aortic root replacement, Valve sparing	Replacement of the aortic root (that portion of the aorta attached to the heart; it gives rise to the coronary arteries) without replacing the aortic valve (using a tube graft).
740	Ross procedure	Replacement of the aortic valve with a pulmonary autograft and replacement of the pulmonary valve with a homograft conduit. Intent/Clarification: Do not list the pulmonary homograft conduit placement as a separate procedure. The conduit related details can be included in the valve section of the database.
750	Konno procedure	Relief of left ventricular outflow tract obstruction associated with aortic annular hypoplasia, aortic valvar stenosis and/or aortic valvar insufficiency via Konno aortoventriculoplasty. Components of the surgery include a longitudinal incision in the aortic septum, a vertical incision in the outflow tract of the right ventricle to join the septal incision, aortic valve replacement, and patch reconstruction of the outflow tracts of both ventricles.
760	Ross-Konno procedure	Relief of left ventricular outflow tract obstruction associated with aortic annular hypoplasia, aortic valvar stenosis and/or aortic valvar insufficiency via Konno aortoventriculoplasty using a pulmonary autograft root for the aortic root replacement. Intent/Clarification: Do not list the pulmonary homograft conduit placement as a separate procedure. The conduit related details can be included in the valve section of the database.
770	Other annular enlargement procedure	Techniques included under this procedure code include those designed to effect aortic annular enlargement that are not included in other procedure codes. These include the Manouguian and Nicks aortic annular enlargement procedures.
780	Aortic stenosis, Subvalvar, Repair	Subvalvar aortic stenosis repair by a range of techniques including excision, excision and myotomy, excision and myomectomy, myotomy, myomectomy, initial placement of apical-aortic conduit (LV to aorta conduit replacement would be coded as conduit reoperation) , Vouhé aortoventriculoplasty(aortic annular incision at commissure of left and right coronary cusps is carried down to the septum and RV infundibulum; septal muscle is resected, incisions are closed, and the aortic annulus is reconstituted), or other aortoventriculoplasty techniques.
2100	Aortic stenosis, Subvalvar, Repair, With myectomy for IHSS	Subvalvar aortic stenosis repair including excision and myectomy
790	Aortic stenosis, Supravalvar, Repair	Repair of supravalvar aortic stenosis involving all techniques of patch aortoplasty and aortoplasty involving the use of all autologous tissue. In simple patch aortoplasty a diamond- shaped patch may be used, in the Doty technique an extended patch is placed (Y-shaped patch, incision carried into two sinuses), and in the Brom repair the ascending aorta is transected, any fibrous ridge is resected, and the three sinuses are patched separately.

800	Valve surgery, Other, Aortic	Other aortic valve surgery not specified in other procedure codes.
3880	Extended Ventricular Septoplasty (modified Konno, VSD creation and patch enlargement of LVOT, sparing aortic valve for tunnel type sub aortic stenosis)	
810	Sinus of Valsalva, Aneurysm repair	Sinus of Valsalva aneurysm repair can be organized by site of aneurysm (left, right or noncoronary sinus), type of repair (suture, patch graft, or root repair by tube graft or valved conduit), and approach used (from chamber of origin (aorta) or from chamber of penetration (LV, RV, PA, left or right atrium, etc.). Aortic root replacement procedures in association with sinus of Valsalva aneurysm repairs are usually for associated uncorrectable aortic insufficiency or multiple sinus involvement and the aortic root replacement procedure should also be listed. Additional procedures also performed at the time of sinus of Valsalva aneurysm repair include but are not limited to VSD closure, repair or replacement of aortic valve, and coronary reconstruction; these procedures should also be coded separately from the sinus of Valsalva aneurysm repair.
820	LV to aorta tunnel repair	LV to aorta tunnel repair can be accomplished by suture, patch, or both, and may require reimplantation of the right coronary artery. Associated coronary artery procedures should be coded separately from the LV to aorta tunnel repair.
830	Valvuloplasty, Mitral	Repair of mitral valve including, but not limited to: valvotomy (closed or open heart), cleft repair, annuloplasty with or without ring, chordal reconstruction, commissuorotomy, leaflet repair, or papillary muscle repair.
2260	Valvuloplasty converted to valve replacement in the same operation, Mitral	Mitral valve repair attempted, converted to valve replacement with prosthetic valve during the same operation
840	Mitral stenosis, Supravalvar mitral ring repair	Supravalvar mitral ring repair.
850	Valve replacement, Mitral (MVR)	Replacement of mitral valve with prosthetic valve, any kind, in suprannular or annular position.
860	Valve surgery, Other, Mitral	Other mitral valve surgery not specified in procedure codes.
870	Norwood procedure	The Norwood operation is synonymous with the term'Norwood (Stage 1)' and is defined as an aortopulmonary connection and neoaortic arch construction resulting in univentricular physiology and pulmonary blood flow controlled with a calibrated systemic-to-pulmonary artery shunt, or a right ventricle to pulmonary artery conduit, or rarely, a cavopulmonary connection. When coding the procedure “Norwood procedure”, the primary procedure of the operation should be “Norwood procedure.” The second procedure that is coded as part of the Norwood(Stage 1) operation (Procedure 2 after the Norwood procedure) must then document the source of pulmonary blood flow and be chosen from the following eight choices: 1. Shunt, Systemic to pulmonary, Modified Blalock-Taussig Shunt (MBTS) 2. Shunt, Systemic to pulmonary, Central (from aorta or to main pulmonary artery) 3. Shunt, Systemic to pulmonary, Other 4. Conduit placement, RV to PA 5. Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn) 6. Glenn (unidirectional cavopulmonary anastomosis) (unidirectional Glenn) 7. Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (bilateral bidirectional Glenn) 8. HemiFontan

880	HLHS biventricular repair	Performed in patients who have small but adequately sized ventricles to support systemic circulation. These patients usually have small, but not stenotic, aortic and/or mitral valves. Primary biventricular repair has consisted of extensive aortic arch and ascending aorta enlargement with a patch, closure of interventricular and interatrial communications, and conservative approach for left ventricular outflow tract obstruction (which may include mitral stenosis at any level, subaortic stenosis, aortic stenosis, aortic arch hypoplasia, coarctation, or interrupted aortic arch). Concurrent operations (e.g., coarctation repair, aortic valve repair or replacement, etc.) can be coded separately within the database.
3390	LV Endocardial Fibroelastosis resection	
2755	Conduit insertion right ventricle to pulmonary artery + Intraventricular tunnel left ventricle to neoaorta + arch reconstruction (Rastelli and Norwood type arch reconstruction) (Yasui)	
2160	Hybrid Approach "Stage 1", Application of RPA & LPA bands	A “Hybrid Procedure” is defined as a procedure that combines surgical and transcatheter interventional approaches. The term“Hybrid approach” is used somewhat differently than the term“Hybrid Procedure.” A “Hybrid approach” is defined as any of a group of procedures that fit into the general silo of procedures developed from the combined use of surgical and transcatheter interventional techniques. Therefore, not all procedures classified as “Hybrid approach” are truly “Hybrid Procedures.”
2170	Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)	A “Hybrid Procedure” is defined as a procedure that combines surgical and transcatheter interventional approaches. The term“Hybrid approach” is used somewhat differently than the term“Hybrid Procedure.” A “Hybrid approach” is defined as any of a group of procedures that fit into the general silo of procedures developed from the combined use of surgical and transcatheter interventional techniques. Therefore, not all procedures classified as “Hybrid approach” are truly “Hybrid Procedures.”
2180	Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands	A “Hybrid Procedure” is defined as a procedure that combines surgical and transcatheter interventional approaches. The term“Hybrid approach” is used somewhat differently than the term“Hybrid Procedure.” A “Hybrid approach” is defined as any of a group of procedures that fit into the general silo of procedures developed from the combined use of surgical and transcatheter interventional techniques. Therefore, not all procedures classified as “Hybrid approach” are truly “Hybrid Procedures.”
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)	A “Hybrid Procedure” is defined as a procedure that combines surgical and transcatheter interventional approaches. The term“Hybrid approach” is used somewhat differently than the term“Hybrid Procedure.” A “Hybrid approach” is defined as any of a group of procedures that fit into the general silo of procedures developed from the combined use of surgical and transcatheter interventional techniques. Therefore, not all procedures classified as “Hybrid approach” are truly “Hybrid Procedures.” It should be acknowledged that a Hybrid approach "Stage 2"(Aortopulmonary amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding, with or without Aortic arch repair) gets its name not because it has any actual hybrid elements, but because it is part of a planned staged approach that is typically commenced with a hybrid procedure.

2150	Hybrid approach "Stage 2", Aortopulmonary amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding + Without aortic arch repair	A “Hybrid Procedure” is defined as a procedure that combines surgical and transcatheter interventional approaches. The term“Hybrid approach” is used somewhat differently than the term“Hybrid Procedure.” A “Hybrid approach” is defined as any of a group of procedures that fit into the general silo of procedures developed from the combined use of surgical and transcatheter interventional techniques. Therefore, not all procedures classified as “Hybrid approach” are truly “Hybrid Procedures.” It should be acknowledged that a Hybrid approach "Stage 2"(Aortopulmonary amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding, with or without Aortic arch repair) gets its name not because it has any actual hybrid elements, but because it is part of a planned staged approach that is typically commenced with a hybrid procedure.
2760	Hybrid Approach, Transcardiac balloon dilation	
2770	Hybrid Approach, Transcardiac transcatheter device placement	Heart transplantation, any technique, allograft or xenograft.
890	Transplant, Heart	
900	Transplant, Heart and lung	Heart and lung (single or double) transplantation.
910	Partial left ventriculectomy (LV volume reduction surgery) (Batista)	Wedge resection of LV muscle, with suturing of cut edges together, to reduce LV volume.
920	Pericardial drainage procedure	Pericardial drainage can include a range of therapies including, but not limited to: pericardiocentesis, pericardiostomy tube placement, pericardial window creation, and open pericardial drainage (pericardiotomy).
930	Pericardiectomy	Surgical removal of the pericardium.
940	Pericardial procedure, Other	Other pericardial procedures that include, but are not limited to: pericardial reconstruction for congenital absence of the pericardium, pericardial biopsy, pericardial mass or cyst excision.
950	Fontan, Atrio-pulmonary connection	The atrio-pulmonary Fontan is a type of Fontan with connection of the atrium to the pulmonary artery. “The Fontan” is defined as an operation or intervention that results in caval flow from both the upper and lower body draining to the pulmonary circulation in a patient with a functionally univentricular heart.
960	Fontan, Atrio-ventricular connection	The atrio-ventricular Fontan is a type of Fontan with atrio- ventricular connection, either direct or with RA-RV conduit, valved or nonvalved. "The Fontan" is defined as an operation or intervention that results in caval flow from both the upper and lower body draining to the pulmonary circulation in a patient with a functionally univentricular heart.
970	Fontan, TCPC, Lateral tunnel, Fenestrated	The lateral tunnel Fontan is a TCPC type of Fontan Procedure created with anastomosis of SVC and right atrium to the branch pulmonary artery and an intra-atrial baffle to direct IVC flow to pulmonary artery. “The Fontan” is defined as an operation or intervention that results in caval flow from both the upper and lower body draining to the pulmonary circulation in a patient with a functionally univentricular heart. A “TCPC” is a Fontan where both the superior caval vein and the inferior caval vein are connected to the pulmonary circulation through separate connections that are either direct connections or tubular pathways. A fenestration of a Fontan is defined as a communication that is created to allow flow of blood between the systemic and pulmonary venous chambers.

980	Fontan, TCPC, Lateral tunnel, Nonfenestrated	The lateral tunnel Fontan is a TCPC type of Fontan Procedure created with anastomosis of SVC and right atrium to the branch pulmonary artery and an intra-atrial baffle to direct IVC flow to pulmonary artery. “The Fontan” is defined as an operation or intervention that results in caval flow from both the upper and lower body draining to the pulmonary circulation in a patient with a functionally univentricular heart. A “TCPC” is a Fontan where both the superior caval vein and the inferior caval vein are connected to the pulmonary circulation through separate connections that are either direct connections or tubular pathways. A fenestration of a Fontan is defined as a communication that is created to allow flow of blood between the systemic and pulmonary venous chambers.
1000	Fontan, TCPC, External conduit, Fenestrated	The external conduit Fontan is a TCPC type of Fontan operation created with anastomosis of SVC to the branch pulmonary artery a conduit outside of the heart to connect the infradiaphragmatic systemic venous return to the pulmonary artery. “The Fontan” is defined as an operation or intervention that results in caval flow from both the upper and lower body draining to the pulmonary circulation in a patient with a functionally univentricular heart. A “TCPC” is a Fontan where both the superior caval vein and the inferior caval vein are connected to the pulmonary circulation through separate connections that are either direct connections or tubular pathways. A fenestration of a Fontan is defined as a communication that is created to allow flow of blood between the systemic and pulmonary venous chambers.
1010	Fontan, TCPC, External conduit, Nonfenestrated	The external conduit Fontan is a TCPC type of Fontan operation created with anastomosis of SVC to the branch pulmonary artery a conduit outside of the heart to connect the infradiaphragmatic systemic venous return to the pulmonary artery. “The Fontan” is defined as an operation or intervention that results in caval flow from both the upper and lower body draining to the pulmonary circulation in a patient with a functionally univentricular heart. A “TCPC” is a Fontan where both the superior caval vein and the inferior caval vein are connected to the pulmonary circulation through separate connections that are either direct connections or tubular pathways. A fenestration of a Fontan is defined as a communication that is created to allow flow of blood between the systemic and pulmonary venous chambers.
2780	Fontan, TCPC, Intra/extracardiac conduit, Fenestrated	The TCPC with Intra/extracardiac conduit is a TCPC type of Fontan operation created with a tube where the tube is attached to the inferior caval vein inside of the heart, and then the tube passes outside of the heart and is attached to the pulmonary artery outside of the heart. “The Fontan” is defined as an operation or intervention that results in caval flow from both the upper and lower body draining to the pulmonary circulation in a patient with a functionally univentricular heart. A “TCPC” is a Fontan where both the superior caval vein and the inferior caval vein are connected to the pulmonary circulation through separate connections that are either direct connections or tubular pathways. A fenestration of a Fontan is defined as a communication that is created to allow flow of blood between the systemic and pulmonary venous chambers.
2790	Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated	The TCPC with Intra/extracardiac conduit is a TCPC type of Fontan operation created with a tube where the tube is attached to the inferior caval vein inside of the heart, and then the tube passes outside of the heart and is attached to the pulmonary artery outside of the heart. “The Fontan” is defined as an operation or intervention that results in caval flow from both the upper and lower body draining to the pulmonary circulation in a patient with a functionally univentricular heart. A “TCPC” is a Fontan where both the superior caval vein and the inferior caval vein are connected to the pulmonary circulation through separate connections that are either direct connections or tubular pathways. A

		fenestration of a Fontan is defined as a communication that is created to allow flow of blood between the systemic and pulmonary venous chambers.
3310	Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Fenestrated	
3320	Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Nonfenestrated	
1025	Fontan revision or conversion(Re-do Fontan)	"Fontan revision or conversion (Re-do Fontan)" is defined as an operation where a previously created Fontan circuit is either modified or taken down and changed into a different type of Fontan. "The Fontan" is defined as an operation or intervention that results in caval flow from both the upper and lower body draining to the pulmonary circulation in a patient with a functionally univentricular heart. A "TCPC" is a Fontan where both the superior caval vein and the inferior caval vein are connected to the pulmonary circulation through separate connections that are either direct connections or tubular pathways.
1030	Fontan, Other	Other Fontan procedure not specified in procedure codes. May include takedown of a Fontan procedure. "The Fontan" is defined as an operation or intervention that results in caval flow from both the upper and lower body draining to the pulmonary circulation in a patient with a functionally univentricular heart.
2340	Fontan + Atrioventricular valvuloplasty	"Fontan + Atrioventricular valvuloplasty" is defined as an operation to repair the systemic atrioventricular valve combined with a Fontan operation. Please also code the type of Fontan operation performed as the second procedure of this operation. "The Fontan" is defined as an operation or intervention that results in caval flow from both the upper and lower body draining to the pulmonary circulation in a patient with a functionally univentricular heart.
1035	Ventricular septation	Creation of a prosthetic ventricular septum. Surgical procedure used to septate univentricular hearts with two atrioventricular valves. Additional procedures, such as resection of subpulmonic stenosis, should be listed separately.
1050	Congenitally corrected TGA repair, Atrial switch and ASO (double switch)	Repair of congenitally corrected TGA by concomitant atrial switch (Mustard or Senning) and arterial switch operation. VSD closure is usually performed as well; this should be coded separately.
1060	Congenitally corrected TGA repair, Atrial switch and Rastelli	Repair of congenitally corrected TGA by concomitant atrial switch (Mustard or Senning) and VSD closure to the aortic valve with placement of an RV-to-PA conduit.
1070	Congenitally corrected TGA repair, VSD closure	Repair of congenitally corrected TGA by VSD closure only.
1080	Congenitally corrected TGA repair, VSD closure and LV to PA conduit	Repair of congenitally corrected TGA by VSD closure and placement of an LV-to-PA conduit.
1090	Congenitally corrected TGA repair, Other	Any procedures for correction of CCTGA not otherwise specified in other listed procedure codes.
1110	Arterial switch operation (ASO)	Arterial switch operation is used for repair of transposition of the great arteries (TGA). The pulmonary artery and aorta are transected and translocated so that the pulmonary artery arises from the right ventricle and the aorta from the left ventricle. Coronary artery transfer is also accomplished.
1120	Arterial switch operation (ASO) and VSD repair	Arterial switch operation is used for repair of transposition of the great arteries (TGA). The pulmonary artery and aorta are transected and translocated so that the pulmonary artery arises from the right ventricle and the aorta from the left

		ventricle. Coronary artery transfer is also accomplished. The VSD is closed, usually with a patch.
1123	Arterial switch procedure + Aortic arch repair	Concomitant arterial switch operation and repair of the aortic arch in patients with transposition of the great arteries with intact ventricular septum and associated coarctation of the aorta or interrupted aortic arch.
1125	Arterial switch procedure and VSD repair + Aortic arch repair	Concomitant arterial switch operation with VSD closure and repair of aortic arch in patients with transposition of the great arteries with VSD and associated coarctation of the aorta or interrupted aortic arch.
1130	Senning	Atrial baffle procedure for rerouting of venous flow in TGA resulting in a "physiological repair." The caval flow is directed behind the baffle to the mitral valve, left ventricle and pulmonary artery while the pulmonary venous flow is directed in front of the baffle to the tricuspid valve, right ventricle, and aorta. The Senning procedure uses atrial wall to construct the baffle.
1140	Mustard	Atrial baffle procedure for rerouting of venous flow in TGA resulting in a "physiological repair." The caval flow is directed behind the baffle to the mitral valve, left ventricle and pulmonary artery while pulmonary venous flow is directed in front of the baffle to the tricuspid valve, right ventricle, and aorta. The Mustard procedure uses patch material to construct the baffle.
1145	Atrial baffle procedure, Mustard or Senning revision	Revision of a previous atrial baffle procedure (either Mustard or Senning), for any reason (e.g., obstruction, baffle leak).
1150	Rastelli	Most often used for patients with TGA-VSD and significant LVOTO, the Rastelli operation consists of an LV-to-aorta intraventricular baffle closure of the VSD and placement of an RV-to-PA conduit.
1160	REV	The Lecompte (REV) intraventricular repair is designed for patients with abnormalities of ventriculoarterial connection in whom a standard intraventricular tunnel repair cannot be performed. It is also suitable for patients in whom an arterial switch procedure with tunneling of the VSD to the pulmonary artery cannot be performed because of pulmonary (left ventricular outflow tract) stenosis. A right ventriculotomy incision is made. The infundibular (conal) septum, located between the two semilunar valves, is aggressively resected if its presence interferes with the construction of a tunnel from the VSD to the aorta. The VSD is then tunneled to the aorta. The decision to perform or not to perform the Lecompte maneuver should be made at the beginning of the operation. If the Lecompte maneuver is not performed the pulmonary artery is translocated to the right ventricular outflow tract on the side of the aorta that provides the shortest route. (When the decision to perform the Lecompte maneuver has been made, the great vessels are transected and this maneuver is performed at the beginning of the operation.) The pulmonary artery orifice is then closed. The aorta, if it had been transected during the performance of the Lecompte maneuver, is then reconstructed. A vertical incision is made on the anterior aspect of the main pulmonary artery. The posterior margin of the pulmonary artery is sutured to the superior aspect of the vertical right ventriculotomy incision. A generous patch of autologous pericardium is used to close the inferior portion of the right ventriculotomy and the anterior portion of the pulmonary artery. A monocusp pericardial valve is inserted extemporaneously.
2190	Aortic root translocation over left ventricle (Including Nikaidoh procedure)	

2210	TGA, Other procedures (Kawashima, LV-PA conduit, other)	
3400	Double root translocation	
1180	DORV, Intraventricular tunnel repair	Repair of DORV using a tunnel closure of the VSD to the aortic valve. This also includes the posterior straight tunnel repair of Kawashima
3410	DORV repair, No Ventriculotomy	
3420	DORV repair, Ventriculotomy, Nontransannular patch	
3430	DORV repair, Ventriculotomy, Transannular patch	
3440	DORV repair, RV-PA conduit	
3450	DORV – AVC (AVSD) repair	
1200	DOLV repair	Because of the morphologic variability of DOLV, there are many approaches to repair, including: intraventricular tunnel repair directing the VSD to the pulmonary valve, the REV procedure, or the Rastelli procedure. In the case of DOLV use this code for tunnel closure to the pulmonary valve. If the REV or Rastelli procedures are performed then use those respective codes.
1210	Coarctation repair, End to end	Repair of coarctation of aorta by excision of the coarctation segment and end-to-end circumferential anastomosis of the aorta.
1220	Coarctation repair, End to end, Extended	Repair of coarctation of the aorta by excision of the coarctation segment and end-to-end anastomosis of the oblique ends of the aorta, creating an extended anastomosis.
3460	Coarctation repair, Descending aorta anastomosed to Ascending aorta	
1230	Coarctation repair, Subclavian flap	Repair of coarctation of the aorta by ligating, dividing, and opening the subclavian artery, incising the coarctation site, and folding down the subclavian artery onto the incision in the aorta, suturing the subclavian "flap" in place, creating a roof over the area of the previous coarctation.
1240	Coarctation repair, Patch aortoplasty	Repair of coarctation of the aorta by incising the coarctation site with placement of a patch sutured in place longitudinally along the aortotomy edge.
1250	Coarctation repair, Interposition graft	Repair of coarctation of the aorta by resection of the coarctation segment and placement of a prosthetic tubular interposition graft anastomosed circumferentially to the cut ends of the aorta.
3470	Coarctation repair, Extra-anatomic Bypass graft	
1260	Coarctation repair, Other	Any repair of coarctation not specified in procedure codes. This may include, for example, a combination of two approaches for coarctation repair or extra-anatomic bypass graft, etc.
1275	Coarctation repair + VSD repair	Coarctation of aorta repair, any technique, and simultaneous VSD repair, any type VSD, any type repair.
1280	Aortic arch repair	Aortic arch repair, any technique.
1285	Aortic arch repair + VSD repair	Aortic arch repair, any technique, and simultaneous VSD repair, any type VSD, any type repair. This includes repair of IAA with VSD.

1290	Coronary artery fistula ligation	Coronary artery fistula repair using any technique. If additional technique information may be supplied by another procedure code, please list separately (e.g., bypass graft).
1291	Anomalous origin of coronary artery from pulmonary artery repair	Repair of anomalous origin of the coronary artery (any) from the pulmonary artery, by any technique (ligation, translocation with aortic implantation, Takeuchi operation, or bypass graft). If additional technique information may be supplied by another procedure code, please list separately (for example, bypass graft).
1300	Coronary artery bypass	Coronary artery bypass graft procedure, any technique (with or without CPB, venous or arterial graft, one or more grafts, etc.), for any coronary artery pathology (coronary arterial fistula, aneurysm, coronary bridging, atresia of left main, acquired coronary artery disease, etc.).
1305	Anomalous aortic origin of coronary artery from aorta (AAOCA) repair	
1310	Coronary artery procedure, Other	Any coronary artery procedure not specifically listed.
1320	Interrupted aortic arch repair	Repair of interrupted aortic arch (any type) by any technique (direct anastomosis, prosthetic graft, etc.). Does not include repair of IAA-VSD.
1330	PDA closure, Surgical	Closure of a PDA by any surgical technique (ligation, division, clip) using any approach (i.e., thoracotomy, thoracoscopic, etc.).
1340	PDA closure, Device	Closure of a PDA by device using transcatheter techniques.
1360	Vascular ring repair	Repair of vascular ring (any type, except pulmonary artery sling) by any technique.
1365	Aortopexy	Surgical fixation of the aorta to another structure (usually the posterior aspect of the sternum) to relieve compression on another vessel or structure (e.g., trachea).
1370	Pulmonary artery sling repair	Pulmonary artery sling repair by any technique.
1380	Aortic aneurysm repair	Aortic aneurysm repair by any technique.
1390	Aortic dissection repair	Aortic dissection repair by any technique.
1400	Lung biopsy	Lung biopsy, any technique.
1410	Transplant, lung(s)	Lung or lobe transplantation of any type.
1420	Lung procedure, Other	Included in this procedure code would be any lung procedure other than transplant, such as, but not limited to: pneumonectomy (left or right), lobectomy (any lobe), bilobectomy (two lobes), segmental lung resection (any segment), or wedge resection.
1440	Tracheal procedure	Any tracheal procedure, including but not limited to relief of tracheal stenosis (any means including pericardial graft, autograft insertion, homograft insertion, resection with reanastomosis, rib cartilage insertion, or slide tracheoplasty). Tracheal stent placement or balloon dilation should be coded separately.
2800	Muscle flap, Trunk (i.e. intercostal, pectus, or serratus muscle)	A trunk muscle flap (intercostal, pectus, or serratus muscle) is rotated to buttress or augment a suture line, anastomosis or fill the pleural space.
2810	Muscle flap, Trunk (i.e. latissimus dorsi)	A trunk muscle flap (latissimus dorsi) is rotated to buttress or augment a suture line, anastomosis or fill the pleural space.
2820	Removal, Sternal wire	Excision of wire used to approximate sternum, previous sternotomy
2830	Rib excision, Complete	Complete excision of rib(s)
2840	Rib excision, Partial	Partial excision of rib(s)

2850	Sternal fracture, Open treatment	Repair of a sternal fracture with sutures, wires, plates or bars.
2860	Sternal resection, Radical resection of the sternum	Involves removal of the sternum with complex reconstructive requirements for either a tumor or severe sternal infection.
2870	Sternal resection, Radical resection of sternum with mediastinal lymphadenectomy	Involves resection of the sternum and mediastinal lymph node dissection.
2880	Tumor of chest wall - Excision including ribs	Excision of ribs and attached muscles for a benign or malignant tumor of the chest wall. When three or less ribs are taken or if the defect is covered by the scapula, reconstruction may not be necessary.
2890	Tumor of chest wall - Excision including ribs, With reconstruction	Resection of the chest wall tumor with reconstruction of the defect, usually with plastic mesh (marlex, prolene), methylmethracralate/mesh sandwich or a muscle flap.
2900	Tumor of soft tissue of thorax- Excision of deep subfascial or intramuscular tumor	Excision of a deep chest wall tumor that involves the muscles but not the ribs. These would usually be benign tumors such as a fibroma or a deep lipoma.
2910	Tumor of soft tissue of thorax- Excision of subcutaneous tumor	Excision of tumor in the skin/fat of the chest wall-typically a lipoma.
2920	Tumor of soft tissue of thorax- Radical resection	En-bloc, radical excision of a cancer of the chest wall muscles, involving the skin, fat and muscles. Typically it would be a desmoid tumor or a sarcoma malignant fibrous histiocytoma, rhabdomyosarcoma.
2930	Hyoid myotomy and suspension	Typically done as a suprahyoid laryngeal release to reduce tension on a cervical tracheal resection anastomosis. The hyoid bone is cut laterally on both sides to allow it to drop down andthus lower the larynx and trachea.
2940	Muscle flap, Neck	A neck muscle flap is rotated to buttress or augment a suture line, anastomosis or fill a space. Commonly used neck muscles are strap muscles, sternocleidomastoid muscle, levator scapulae.
2950	Procedure on neck	Unlisted procedure of the neck
2960	Tumor of soft tissue of neck - Excision of deep subfascial or intramuscular tumor	Excision of a tumor that involves the muscles of the neck. These would usually be benign tumors such as a fibroma or a deep lipoma.
2970	Tumor of soft tissue of neck - Excision of subcutaneous tumor	Excision of a tumor in the skin/fat of the neck-typically a lipoma.
2980	Tumor of soft tissue of neck - Radical resection	A surgical procedure in which the fibrofatty contents of the neckare removed for the treatment of cervical lymphatic metastases. Neck dissection is most commonly used in the management of cancers of the upper aerodigestive tract. It is also used for malignancies of the skin of the head and neck area, the thyroid, and the salivary glands.
2990	Pectus bar removal	Removal of a previously implanted chest wall bar
3000	Pectus bar repositioning	Repositioning of a previously implanted chest wall bar
3010	Pectus repair, Minimally invasive repair (Nuss), With thoracoscopy	Placement of a Nuss transverse chest wall bar to push the sternum forward to repair a pectus deformity, with thoracoscopy
3020	Pectus repair, Minimally invasive repair (Nuss), Without thoracoscopy	Placement of a Nuss transverse chest wall bar to push the sternum forward to repair a pectus deformity, without thoracoscopy

3030	Pectus repair, Open repair	Resection of several costal cartilages, a partial osteotomy of the sternum, and often placement of a temporary bar for stabilization of pectus chest wall deformity
3040	Division of scalenus anticus, With resection of a cervical rib	Repair of Thoracic Outlet Syndrome variant where the scalenus anticus muscle or a band from it impinges on the brachial plexus along with resection of the abnormal cervical rib
3050	Division of scalenus anticus, Without resection of a cervical rib	Repair of Thoracic Outlet Syndrome variant where the scalenus anticus muscle or a band from it impinges on the brachial plexus along without resection of the abnormal cervical rib
3060	Rib excision, Excision of cervical rib	Removal of the first rib or a cervical rib for treatment of Thoracic Outlet Syndrome
3070	Rib excision, Excision of cervical rib, With sympathectomy	Removal of the first rib or a cervical rib and sympathectomy for treatment of Thoracic Outlet Syndrome
3080	Rib excision, Excision of first rib	Removal of the first rib
3090	Rib excision, Excision of first rib, With sympathectomy	Removal of the first rib and sympathectomy
3100	Procedure on thorax	Unlisted procedure on thorax
1450	Pacemaker implantation, Permanent	Implantation of a permanent pacemaker of any type (e.g., single-chamber, dual-chamber, atrial antitachycardia), with any lead configuration or type (atrial, ventricular, atrial and ventricular, transvenous, epicardial, transmural), by any technique (sternotomy, thoracotomy etc.).
1460	Pacemaker procedure	Any revision to a previously placed pacemaker system including revisions to leads, generators, pacemaker pockets. This may include explantation of pacemakers or leads as well.
2350	Explantation of pacing system	Removal of pacemaker generator and wires
1470	ICD (AICD) implantation	Implantation of an (automatic) implantable cardioverter defibrillator system.
1480	ICD (AICD) ([automatic] implantable cardioverter defibrillator) procedure	Any revision to a previously placed AICD including revisions to leads, pads, generators, pockets. This may include explantation procedures as well.
1490	Arrhythmia surgery - atrial, Surgical Ablation	Surgical ablation (any type) of any atrial arrhythmia.
1500	Arrhythmia surgery - ventricular, Surgical Ablation	Surgical ablation (any type) of any ventricular arrhythmia.
2500	Cardiovascular catheterization procedure, Diagnostic	Invasive diagnostic procedure involving the heart and great vessels
2520	Cardiovascular catheterization procedure, Diagnostic, Angiographic data obtained	Invasive diagnostic procedure involving the heart and great vessels using angiography
2550	Cardiovascular catheterization procedure, Diagnostic, Electrophysiology alteration	
2540	Cardiovascular catheterization procedure,	Invasive diagnostic procedure involving pressure or flow alteration in the cardiovascular system

	Diagnostic, Hemodynamic alteration	
2510	Cardiovascular catheterization procedure, Diagnostic, Hemodynamic data obtained	Invasive diagnostic procedure involving pressure and flow assessment of the heart and great vessels
2530	Cardiovascular catheterization procedure, Diagnostic, Transluminal test occlusion	
2410	Cardiovascular catheterization procedure, Therapeutic	Invasive therapeutic procedure involving the heart and great vessels
2670	Cardiovascular catheterization procedure, Therapeutic, Adjunctive therapy	
1540	Cardiovascular catheterization procedure, Therapeutic, Balloon dilation	Invasive therapeutic procedure involving balloon dilatation of a cardiovascular structure
2590	Cardiovascular catheterization procedure, Therapeutic, Balloon valvotomy	Invasive therapeutic procedure involving balloon dilatation of a valve
1580	Cardiovascular catheterization procedure, Therapeutic, Coil implantation	Invasive therapeutic procedure involving implantation of a coil
1560	Cardiovascular catheterization procedure, Therapeutic, Device implantation	Invasive therapeutic procedure involving implantation of a device
3110	Cardiovascular catheterization procedure, Therapeutic, Device implantation attempted	Invasive therapeutic procedure involving attempted but unsuccessful implantation of a device
2690	Cardiovascular catheterization procedure, Therapeutic, Electrophysiological ablation.	Invasive therapeutic procedure involving Catheter based creation of lesions in the heart with radiofrequency energy, cryotherapy , or ultrasound energy to cure or control arrhythmias
3120	Cardiovascular catheterization procedure, Therapeutic, Intravascular foreign body removal	Invasive therapeutic procedure involving removal of an intravascular foreign body
2640	Cardiovascular catheterization procedure, Therapeutic, Perforation (establishing interchamber and/or intervessel communication)	Invasive therapeutic procedure establishing interchamber and/or intervessel communication

2580	Cardiovascular catheterization procedure, Therapeutic, Septostomy	Invasive therapeutic procedure establishing an intracardiac septa communication
1550	Cardiovascular catheterization procedure, Therapeutic, Stent insertion	Invasive therapeutic procedure involving implantation of a stent
2630	Cardiovascular catheterization procedure, Therapeutic, Stent re-dilation	Invasive therapeutic procedure involving dilatation of a previously implanted stent
2650	Cardiovascular catheterization procedure, Therapeutic, Transcatheter Fontan completion	
2660	Cardiovascular catheterization procedure, Therapeutic, Transcatheter implantation of valve	Invasive therapeutic procedure involving deployment/ implantation of a valve
1590	Shunt, Systemic to pulmonary, Modified Blalock- Taussig Shunt (MBTS)	Placement of a tube graft from a branch of the aortic arch to the pulmonary artery with or without bypass, from any approach (thoracotomy, sternotomy).
1600	Shunt, Systemic to pulmonary, Central (shunt from aorta)	A direct anastomosis or placement of a tube graft from the aorta to the pulmonary artery with or without bypass, from any approach (thoracotomy, sternotomy).
3130	Shunt, Systemic to pulmonary, Central (shunt from aorta), Central shunt with an end-to-side connection between the transected main pulmonary artery and the side of the ascending aorta (i.e. Mee shunt)	Creation of a central shunt with an end-to-side connection between the transected main pulmonary artery and the side of the ascending aorta
3230	Shunt, Systemic to pulmonary, Potts - Smith type(descending aorta to pulmonary artery)	
1610	Shunt, Systemic to pulmonary, Other	Placement of any other systemic-to-pulmonary artery shunt, with or without bypass, from any approach (thoracotomy, sternotomy) that is not otherwise coded. Includes classic Blalock-Taussig systemic-to-pulmonary artery shunt.
1630	Shunt, Ligation and takedown	Takedown of any shunt.
2095	Shunt, Reoperation	Revision or replacement of a previously created shunt
1640	PA banding (PAB)	Placement of a pulmonary artery band, any type.
1650	PA debanding	Debanding of pulmonary artery. Please list separately any pulmonary artery reconstruction required.
3200	PA band adjustment	
1660	Damus-Kaye-Stansel procedure(DKS) (creation	In the Damus-Kaye-Stansel procedure the proximal transected main pulmonary artery is connected by varying techniques to the aorta.

	of AP anastomosis without arch reconstruction)	
1670	Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn)	Superior vena cava to pulmonary artery anastomosis allowing flow to both pulmonary arteries with an end-to-side superior vena-to-pulmonary artery anastomosis.
1680	Glenn (unidirectional cavopulmonary anastomosis) (unidirectional Glenn)	Superior vena cava to ipsilateral pulmonary artery anastomosis (i.e., LSVC to LPA, RSVC to RPA).
1690	Bilateral bidirectional cavopulmonary anastomosis(BBDCPA) (bilateral bidirectional Glenn)	Bilateral superior vena cava-to-pulmonary artery anastomoses (requires bilateral SVCs).
1700	HemiFontan	A HemiFontan is an operation that includes a bidirectional superior vena cava (SVC)-to-pulmonary artery anastomosis and the connection of this "SVC-pulmonary artery amalgamation" to the atrium, with a "dam" between this "SVC-pulmonary artery amalgamation" and the atrium. This operation can be accomplished with a variety of operative strategies including the following two techniques and other techniques that combine elements of both of these approaches: (1) Augmenting both branch pulmonary arteries with a patch and suturing the augmented branch pulmonary arteries to an incision in the medial aspect of the superior vena cava. (With this approach, the pulmonary artery patch forms a roof over the SVC-to-pulmonary artery anastomosis and also forms a "dam" between the SVC-pulmonary artery amalgamation and the right atrium.) (2) Anastomosing both ends of the divided SVC to incisions in the top and bottom of the right pulmonary artery, and using a separate patch to close junction of the SVC and the right atrium.
2330	Superior cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular valvuloplasty	
2130	Superior Cavopulmonary anastomosis(es) + PA reconstruction	
3300	Takedown of superior cavopulmonary anastomosis	
3140	Hepatic vein to azygous vein connection, Direct	
3150	Hepatic vein to azygous vein connection, Interposition graft	
3160	Kawashima operation (superior cavopulmonary connection in setting of interrupted IVC with azygous continuation)	
1710	Palliation, Other	Any other palliative procedure not specifically listed.

2360	ECMO cannulation	Insertion of cannulas for extracorporeal membrane oxygenation
2370	ECMO decannulation	Removal of cannulas for extracorporeal membrane oxygenation
1910	ECMO procedure	Any ECMO procedure (cannulation, decannulation, etc.).
1900	Intraaortic balloon pump (IABP) insertion	Insertion of intraaortic balloon pump by any technique.
1920	Right/left heart assist device procedure	Any right, left, or biventricular assist device procedure (placement, removal etc.).
2390	VAD explantation	Removal of ventricular assist device
2380	VAD implantation	Insertion of a ventricular assist device
3170	VAD change out	Removal of previously inserted ventricular assist device and insertion of a new device
2420	Echocardiography procedure, Sedated transesophageal echocardiogram	Procedural sedation for echocardiogram
2430	Echocardiography procedure, Sedated transthoracic echocardiogram	Procedural sedation for echocardiogram, transthoracic
2435	Non-cardiovascular, Non-thoracic procedure on cardiac patient with cardiac anesthesia	Anesthesia provided by cardiac anesthesiologist for patient with congenital heart disease undergoing a non- cardiovascular, non-thoracic procedure
2440	Radiology procedure on cardiac patient, Cardiac Computerized Axial Tomography (CT Scan)	A patient with congenital heart disease undergoing cardiac CT scan
2450	Radiology procedure on cardiac patient, Cardiac Magnetic Resonance Imaging (MRI)	A patient with congenital heart disease undergoing cardiac MRI
2460	Radiology procedure on cardiac patient, Diagnostic radiology	A patient with congenital heart disease undergoing a diagnostic radiology procedure
2470	Radiology procedure on cardiac patient, Non-Cardiac Computerized Tomography (CT) on cardiac patient	A patient with congenital heart disease undergoing a non-cardiac CT scan
2480	Radiology procedure on cardiac patient, Non-cardiac Magnetic Resonance Imaging(MRI) on cardiac patient	A patient with congenital heart disease undergoing non-cardiac MRI
2490	Radiology procedure on cardiac patient, Therapeutic radiology	A patient with congenital heart disease undergoing a therapeutic radiology procedure
1720	Aneurysm, Ventricular, Right, Repair	Repair of right ventricular aneurysm, any technique.
1730	Aneurysm, Ventricular, Left, Repair	Repair of left ventricular aneurysm, any technique.

1740	Aneurysm, Pulmonary artery, Repair	Repair of pulmonary artery aneurysm, any technique.
1760	Cardiac tumor resection	Resection of cardiac tumor, any type.
1780	Pulmonary AV fistula repair/occlusion	Repair or occlusion of a pulmonary arteriovenous fistula.
1790	Ligation, Pulmonary artery	Ligation or division of the pulmonary artery. Most often performed as a secondary procedure.
1802	Pulmonary embolectomy, Acute pulmonary embolus	Acute pulmonary embolism (clot) removal, through catheter or surgery.
1804	Pulmonary embolectomy, Chronic pulmonary embolus	Chronic pulmonary embolism (clot) removal, through catheter or surgery.
1810	Pleural drainage procedure	Pleural drainage procedure via thoracocentesis, tube thoracostomy, or open surgical drainage.
1820	Pleural procedure, Other	Other pleural procedures not specifically listed; may include pleurodesis (mechanical, talc, antibiotic or other), among others.
1830	Ligation, Thoracic duct	Ligation of the thoracic duct; most commonly for persistent chylothorax.
1840	Decortication	Decortication of the lung by any technique.
1850	Esophageal procedure	Any procedure performed on the esophagus.
1860	Mediastinal procedure	Any non-cardiovascular mediastinal procedure not otherwise listed.
1870	Bronchoscopy	Bronchoscopy, rigid or flexible, for diagnostic, biopsy, or treatment purposes (laser, stent, dilation, lavage).
1880	Diaphragm plication	Plication of the diaphragm; most often for diaphragm paralysis due to phrenic nerve injury.
1890	Diaphragm procedure, Other	Any diaphragm procedure not specifically listed.
1930	VATS (video-assisted thoracoscopic surgery)	Video-assisted thoracoscopic surgery utilized; this code should be used in addition to the specific procedure code (e.g., if PDA ligated using VATS technique, PDA ligation should be primary procedure, VATS should be secondary procedure).
1940	Minimally invasive procedure	Any procedure using minimally invasive technique; this code should be used in addition to the specific procedure code (e.g., if ASD closed using minimally invasive technique, ASD repair should be primary procedure, minimally invasive procedure should be listed additionally).
1950	Bypass for noncardiac lesion	Use of cardiopulmonary bypass for noncardiac lesion; this code may be used in addition to the specific procedure code if one is available (e.g., tracheal procedures may be done using CPB - the tracheal procedure should be the primary procedure and use of cardiopulmonary bypass for noncardiac lesion should be listed additionally).
1960	Delayed sternal closure	Sternal closure effected after patient has left operating room with sternum open, either because of swelling or electively after complex heart procedures. This procedure should be operative type No CPB Cardiovascular.
1970	Mediastinal exploration	Mediastinal exploration, most often for postoperative control of bleeding or tamponade, but may be exploration to assess mediastinal mass, etc.
1980	Sternotomy wound drainage	Drainage of the sternotomy wound.
3180	Intravascular stent removal	Removal of a previously placed intravascular stent
3220	Removal of transcatheter-delivered device from heart	

3210	Removal of transcatheter-delivered device from blood vessel	
1990	Thoracotomy, Other	Any procedure performed through a thoracotomy incision not otherwise listed.
2000	Cardiotomy, Other	Any procedure involving an incision in the heart that is not otherwise listed.
2010	Cardiac procedure, Other	Any cardiac procedure, bypass or non-bypass that is not otherwise listed.
2020	Thoracic and/or mediastinal procedure, Other	Any thoracic and/or mediastinal procedure not otherwise listed.
2030	Peripheral vascular procedure, Other	Any peripheral vascular procedure; may include procedures such as femoral artery repair, iliac artery repair, etc.
2040	Miscellaneous procedure, Other	Any miscellaneous procedure not otherwise listed.
2050	Organ procurement	Procurement of an organ for transplant (most likely, heart, lungs, or heart and lungs).
7777	Other procedure	Any procedure on any organ system not otherwise listed.
7800	Operation canceled before skin incision	Surgical procedure canceled after patient enters the operating room but prior to skin incision
7810	Operation aborted after skin Incision	Surgical procedure canceled after skin incision made

February 2019: There is a PA Band adjustment procedure choice when a PA band is restricted at chest closure, but there does not seem to be a correlating procedure for a Sano shunt restriction with a clip.
Recently, many of our Sano shunts undergo clip placement to restrict shunt flow at the time of delayed sternal closure. How should this be coded? I have found 2 procedures that may fit the shunt restriction, however I would like clarification: should I use RV to PA Conduit re-operation or cardiac other or is there a 3rd option that is better suited... mediastinal, delayed sternal closure would be the 2nd procedure listed. **Code RV to PA conduit re-operation or Shunt re-operation to capture this procedure.**
February 2019: What is the best way to code this procedure? Subxiphoid incision to place a temporary pacing wires; Surgery Type and Procedure Name? **Pacemaker, procedure, Operation type No CPB Cardiovascular**
February 2019: We have an adult patient with infective endocarditis and severe mitral valve dysfunction secondary to perivalvular abscess, prosthetic mitral valve dehiscence and basilar posterolateral fistula between his LV and LA with severe regurgitation. His surgery included debridement of abscessed tissue on his mitral valve annulus followed by repair of his mechanical valve dehiscence. Does this just get coded as a mitral valvuloplasty, or is there a way to code the debridment of the abscessed tissue? **Mitral valve, Other**
March 2019: What is the difference between a Coarctation repair, end to end extended and Aortic Arch repair? The definition for Aortic Arch Repair is extremely vague. **In the aortic arch repair the incision extends beyond the origin of the left internal carotid assuming a left aortic arch**
March 2019: Patient with Hypoplastic left heart syndrome with mitral atresia, heterotaxy syndrome with left atrial isomerism, interrupted inferior vena cava with azygos continuation to the right superior vena cava, status post first-stage Norwood procedure and status post Kawashima procedure, status post pacemaker for sick sinus syndrome with non-function of pacemaker and low heart rates, mild right pulmonary artery narrowing. Procedures: Fontan with 16mm Goretex h-graft from hepatic veins to azygos continuation to the RSVC, patch enlargement of the RPA, placement of new PPM. Do I have to call this Fontan, Other (#1030) which has no STAT score and does this mean that I make the PA Reconstruction the primary with a STAT score of 3? **Use 3310 or 3320**
April 2019: Dx: TAPVR (cardiac), PDA. Procedure: "excised all of the atrial septum. We then were able to see where the coronary sinus was traveling through the posterior aspect of the left atrium, and this was completely unroofed. Then closed the entire area of atrial septal defect using a piece of CorMatrix. Using long list, what's correct way to code this? **TAPVC repair, type 2,cardiac, coronary sinus type,**

May 2019: How would you code decompression of thoracic duct via innominate vein turn down to atrial appendage, or via LSVC to atrial appendage? We have done this for some of our single ventricle patients. **There is no procedure code for this currently in the database, thus code as Cardiac, Other.**
May 2019: Best way to code: Left AV Valve replacement with 25 mm St. Jude valve, with left AV valve annular reconstruction. Right AV valve commisuroplasty. **MV replacement, Tricuspid valvuloplasty.**
June 2019: How best to code following procedure: excision of the ventricular septal defect patch, enlargement of ventriculoseptal defect and baffle closure of the ventricular septal defect to the aorta. **It would be useful to understand the fundamental diagnosis. If that diagnosis is DORV or DTGA/VSD/PS and the prior operation were a Rastelli or a DORV intraventricular repair, then I think that one could use the code for VSD enlargement P0140 or the code for the original DORV operation P1180. This procedure might also be: 3380= Extended Ventricular Septoplasty (modified Konno, VSD creation and patch enlargement of LVOT, sparing aortic valve) for tunnel type sub aortic stenosis.**
June 2019: Arch reconstruction with homograft patch, hilum to hilum PA patch plasty. Bi-directional Glenn shunt. Would this be coded as Norwood Hybrid Stage 2? **Should be coded as Superior Cavopulmonary anastomosis +PA reconstruction and separate code for aortic arch reconstruction P1280. There is no PA to Ao anastomosis and therefore Hybrid Stage 2 does not seem to be correct. Can put the aortic arch reconstruction as the primary, bi-directional Glenn as secondary. You can determine which one is most pertinent. This information is included in the Report Overview of the Data Analysis Report.**
June 2019: I have a follow-up to the March 2019 FAQ on differentiating between an end-to-end extended coarctation repair and aortic arch repair which says "in the aortic arch repair the incision extends beyond the origin of the left internal carotid assuming a left aortic arch." When our surgeons repair neonates with a coarctation and distal arch hypoplasia from the side, they clamp the arch just distal to the brachiocephalic/innominate artery and incise the underside of the arch up to the clamp. The incision doesn't extend beyond the left carotid because they can't clamp past it and maintain brain perfusion. The STS definition of aortic arch hypoplasia includes a definition of distal arch hypoplasia when the diameter of the distal transverse arch (arch between the left carotid and left subclavian arteries) is less than 50% of the diameter of the ascending aorta. Since our neonates undergoing this operation meet this criteria for distal arch hypoplasia, my surgeons believe these patients should be coded with an aortic arch repair. **The procedure code describes the procedure, not the diagnosis. Therefore, this sounds like an extended end to end coarctation repair.**
June 2019: What is the best way to code a procedure for single ventricle (HLHS) with systemic atrioventricular valve regurgitation that: 1. Underwent valvuloplasty on the systemic AV valve (in this case a tricuspid valve)? 2. Subsequently in another OR setting, underwent a valve replacement on the same systemic AV valve (in this case a triscuspid valve). The options from the long list are to use: 1. Atrioventricular valve repair/replacement in single ventricle (but it traces back to "cardiac, other"). 2. Tricuspid valve repair/replacement (seems to understate the surgery). 3. Common AV Valve" repair/ replacement (may be appropriate since is the systemic valve?) **Current options only involve Tricuspid valve repair P0460 or tricuspid valve replacement P0470.**
June 2019: We recently operated on a patient with an infection of a Melody valve placed several years ago inside a pre-existing RV-PA conduit. The Melody valve and conduit were replaced with a valved homograft. I coded the procedure as: 580 conduit replacement, RV to PA Homograft. Should I also code: 3220 Removal of transcatheter delivered device from heart? **Conduit reoperation P580 with endocarditis as a risk factor. You can also code: "3220= Removal of transcatheter delivered device from heart"**
June 2019: I would like some clarification regarding conduit reoperations. In the Nov 2018 training manual, there is an example of a conduit reoperation for upsizing that states the Conduit RV to PA operation should be the primary and then Conduit reoperation should be the secondary operation. The data specs in both 3.3 and 3.41 state to choose conduit reoperation for ANY conduit failure including growth and to include Conduit RV to PA only for the initial operation. So if a patient comes in for conduit failure for any reason and gets a new conduit, we should only be coding conduit reoperation. Is this correct? Otherwise, the stat score changes if you then add the type of conduit. **You can code this type of case as a conduit reoperation. However, coding the conduit type details as a secondary procedure would trump conduit reop for primary procedure so you cannot code together. You can code the type of valved conduit, if applicable, in the valve section.**
July 2019: How would I code this procedure? I have the Mod BT Shunt and the PDA Closure. However, I'm not sure what the procedure code for the transannular patch, ventriculotomy would be. It doesn't appear to fit in any of the procedure codes for this diagnosis or the diagnoses that have this procedure. **RVOT procedure; 510.**

July 2019: Please advise the most appropriate procedure codes for the following: Placement of right atrial venous access for hemodialysis, partial sternal closure, and WoundVAC placement to sternal wound. **Operation type No CPB Cardiovascular, and the procedures are all coded as Other, Cardiac and Other, Mediastinal.**

Long Name:	Primary Procedure Indicator	*SeqNo:*	940
Short Name:	**PrimProc**	*Core:*	Yes
Section Name:	Procedures	*Harvest:*	Yes
DBTableName:	Procedures		
Definition:	Indicate whether this procedure is considered the PRIMARY Procedure performed during this operation. Note that the primary procedure is determined at the data warehouse using the methodology published in the Journal of Thoracic and Cardiovascular Surgery ("An empirically based tool for analyzing mortality associated with congenital heart surgery" Sean M. O'Brien, David R. Clarke, Jeffrey P. Jacobs, Marshall L. Jacobs, Francois G. Lacour-Gayet, Christian Pizarro, Karl F. Welke, Bohdan Maruszewski, Zdzislaw Tobota, Weldon J. Miller, Leslie Hamilton, Eric D. Peterson, Constantine Mavroudis and Fred H. Edwards J Thorac Cardiovasc Surg 2009;138:1139-1153 DOI: 10.1016/j.jtcvs.2009.03.071). If the above methodology does not return a primary procedure, this field will be used to designate primary procedure.		
Intent / Clarification:			
Data Source:	User		
Format:	Text (categorical values specified by STS)		

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

January 2019: Hi, on the last Core group call I asked about a procedure where an ASD is repaired and the surgeon also does a pericardial window. It was stated that I should code the pericardial window as the surgeon dictated that it was done, and if audited my procedures coded would not match what the surgeon dictated. Can this decision be added to the FAQ document? **Every ASD repair (or intracardiac repair) requires the pericardium to be opened and should not be included as a pericardial window. Only code the pericardial window when performing a pericardial drainage procedure.**

February 2019: Complex cardiac patient comes to ED in cardiac arrest (septic and RSV positive). CPR led to ROSC and admitted to PICU for several days. Patient's subsequent extubation led to respiratory and cardiac failure. CT Surgeon prepped neck for ECMO while undergoing CPR (got as far as dissecting out the neck vessels when patient had ROSC again) so operation to place on ECMO aborted. How do I code this? Is operative type "Other"? Procedure "miscellaneous or "other procedure" or "procedure on neck" or "operation aborted after skin incision"? Patient died 2 days later. Do I check the operative mortality box as it wasn't a CPB or no CPB surgery? **Operation type, Other. Yes, check the operative mortality box as the definition does not specify operation type. The operation type will be handled during the analysis.**

July 2019: This is about index procedure determination specifically in reference to a child who has a PA Banding, then goes on for Norwood. Why would the first operation (with lower stat score) be the index procedure, when a Norwood carries a stat 5 score? **The PA Banding is the index procedure because it is the first cardiovascular case the patient had. Currently, this is the way rules work. A group of surgeons are looking at updating the rules so this type of thing doesn't happen.**

July 2019: We have two procedure codes: 190 (AVC repair, partial) and 830 (mitral valvuloplasty). Following the guidelines in the Interpretation Guide, it seems that I should make #830 the primary procedure for the higher STAT score. I cannot find any exceptions in the Interpretation Guide and ask that you verify. **Currently, the mitral valvuloplasty will be the primary procedure. This may be updated with a specific rule in the future.**

July 2019: I can't find the "Exceptions" for VSD Repairs, when it comes to coding multiple procedures that also includes a VSD Procedure. Can you direct me to the area on the website? This was from a few years ago. Not the "Rule" in the Harvest Report. It was a page with a list of exceptions. **The list is in the Overview section of the Data Harvest Report.**

July 2019: I have a question about coding TOF, PS (or any TOF that requires PA reconstruction). If the patient has a TOF, PS repair (any type), but also has PA reconstruction, do you have to code the PA reconstruction (might have a higher stat score than the TOF repairs, but don't most forms of TOF have some form of RVOT/PS?) The data specs say Tetralogy of Fallot repair assumes VSD closure and relief of pulmonary stenosis at one or more levels. It also says to code RVOT obstruction separately, but if you then list the RVOT obstruction repair, it will be higher than the TOF repair, which is the main reason the patient is having the operation. It would be great to have some simple coding examples of these cases in the training manual. This actual patient had a patch closure of VSD, patch enlargement of Left PA, patch enlargement of main PA, and tricuspid valvuloplasty. Surgeon selected TOF, ventriculotomy, transannular patch and PA reconstruction, central, within hilar branch. **Repairs done to the main PA or branch PAs prior to the hilar bifurcation are considered to be a part of the TOF repair. Procedures to the branch PAs beyond the hilar bifurcation should be included as a PA reconstruction procedure. However, the TOF repair is an operation with procedure specific factors and thus will remain the primary procedure of the operation.**

Procedure Specific Factors

Long Name:	Procedure-Specific Factors – Procedure-Specific Factors – Primary Procedure	*SeqNo:*	948
Short Name:	**PSFPrimProc**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate which, if any, of the following "benchmark operations" was the primary procedure for this operation.		

Intent / Clarification:

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

Harvest Codes:

Code:	Value:
10	None of the listed procedures
100	VSD repair, Primary closure
110	VSD repair, Patch
120	VSD repair, Device
130	VSD, Multiple, Repair

390	TOF – AVC (AVSD) repair
350	TOF repair, No ventriculotomy
360	TOF repair, Ventriculotomy, Nontransanular patch
370	TOF repair, Ventriculotomy, Transanular patch
380	TOF repair, RV-PA conduit
400	TOF – Absent pulmonary valve repair
2700	Pulmonary atresia – VSD – MAPCA repair, Complete single stage repair (1-stage that includes bilateral pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])
2710	Pulmonary atresia – VSD – MAPCA repair, Status post prior complete unifocalization (includes VSD closure + RV to PA connection [with or without conduit])
2720	Pulmonary atresia – VSD – MAPCA repair, Status post prior incomplete unifocalizarion (includes completion of pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])
420	Pulmonary atresia – VSD (including TOF, PA) repair
170	AVC (AVSD) repair, Complete (CAVSD)
1670	Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn)
1680	Glenn (unidirectional cavopulmonary anastomosis) (unidirectional Glenn)
1690	Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (bilateral bidirectional Glenn)
1700	HemiFontan
2330	Superior cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular valvuloplasty
2130	Superior Cavopulmonary anastomosis(es) + PA reconstruction
3160	Kawashima operation (superior cavopulmonary connection in setting of interrupted IVC with azygous continuation)
950	Fontan, Atrio-pulmonary connection
960	Fontan, Atrio-ventricular connection
970	Fontan, TCPC, Lateral tunnel, Fenestrated
980	Fontan, TCPC, Lateral tunnel, Nonfenestrated
1000	Fontan, TCPC, External conduit, Fenestrated
1010	Fontan, TCPC, External conduit, Nonfenestrated
2780	Fontan, TCPC, Intra/extracardiac conduit, Fenestrated
2790	Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated
3310	Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Fenestrated
3320	Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Nonfenestrated
1030	Fontan, Other
2340	Fontan + Atrioventricular valvuloplasty
1025	Fontan revision or conversion (Re-do Fontan)
1110	Arterial switch operation (ASO)
1123	Arterial switch procedure + Aortic arch repair
1120	Arterial switch operation (ASO) and VSD repair
1125	Arterial switch procedure and VSD repair + Aortic arch repair
230	Truncus arteriosus repair
2220	Truncus + Interrupted aortic arch repair (IAA) repair
870	Norwood procedure
2160	Hybrid Approach “Stage 1”, Application of RPA & LPA bands
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
465	Ebstein’s repair

Long Name:	Procedure-Specific Factors – Apical VSD	*SeqNo:*	949
Short Name:	**PSFApicalVSD**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Apical VSD was present.		

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors – Procedure-Specific Factors – Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 100|110|120|130|1120|1125
ParentValues: = “VSD repair, Primary closure”, “VSD repair, Patch”, “VSD repair, Device”, “VSD, Multiple, Repair”, “Arterial switch operation (ASO) and VSD repair” or “Arterial switch procedure and VSD repair + Aortic arch repair”

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors – Straddling AV valve	*SeqNo:*	950
Short Name:	**PSFStradAVVal**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Straddling AV valve was present.		

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors – Procedure-Specific Factors – Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 100|110|120|130|1120|1125
ParentValues: = “VSD repair, Primary closure”, “VSD repair, Patch”, “VSD repair, Device”, “VSD, Multiple, Repair”, “Arterial switch

operation (ASO) and VSD repair" or "Arterial switch procedure and VSD repair + Aortic arch repair"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors – Major coronary crossing RVOT – Coronary anomaly restricting RVOT enlargement, (LAD from RCA etc.)	*SeqNo:*	951
Short Name:	**PSFMajCorRVOT**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Major coronary crossing RVOT – Coronary anomaly restricting RVOT enlargement, (LAD from RCA etc.) was present.		

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors – Procedure-Specific Factors – Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 390|350|360|370|380|400|2700|2710|2720|420
ParentValues: = "TOF – AVC (AVSD) repair", "TOF repair, No ventriculotomy", "TOF repair, Ventriculotomy, Nontransanular patch", "TOF repair, Ventriculotomy, Transanular patch", "TOF repair, RV-PA conduit", "TOF – Absent pulmonary valve repair", "Pulmonary atresia – VSD – MAPCA repair, Complete single stage repair (1-stage that includes bilateral pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])", "Pulmonary atresia – VSD – MAPCA repair, Status post prior complete unifocalization (includes VSD closure + RV to PA connection [with or without conduit])", "Pulmonary atresia – VSD – MAPCA repair, Status post prior incomplete unifocalizarion (includes completion of pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])" or "Pulmonary atresia – VSD (including TOF, PA) repair"

Harvest Codes:

Code:	Value:

1	Yes
2	No

Long Name:	Procedure-Specific Factors – VSD, Multiple, Repair	*SeqNo:*	952
Short Name:	**PSFVSDMultRep**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether VSD, Multiple, Repair was present.		
Intent / Clarification:			
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Procedure-Specific Factors – Procedure-Specific Factors – Primary Procedure		
ParentShortName:	**PSFPrimProc**		
ParentHarvestCodes:	390|350|360|370|380|400|2700|2710|2720|420		
ParentValues:	= “TOF – AVC (AVSD) repair”, “TOF repair, No ventriculotomy”, “TOF repair, Ventriculotomy, Nontransanular patch”, “TOF repair, Ventriculotomy, Transanular patch”, “TOF repair, RV-PA conduit”, “TOF – Absent pulmonary valve repair”, “Pulmonary atresia – VSD – MAPCA repair, Complete single stage repair (1-stage that includes bilateral pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])”, “Pulmonary atresia – VSD – MAPCA repair, Status post prior complete unifocalization (includes VSD closure + RV to PA connection [with or without conduit])”, “Pulmonary atresia – VSD – MAPCA repair, Status post prior incomplete unifocalizarion (includes completion of pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])” or “Pulmonary atresia – VSD (including TOF, PA) repair”		

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors – Restrictive VSD	*SeqNo:*	953
Short Name:	**PSFRestrictVSD**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes

DBTableName: Operations
Definition: Indicate whether Restrictive VSD was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors – Procedure-Specific Factors – Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 390|350|360|370|380|400|2700|2710|2720|420
ParentValues: = "TOF – AVC (AVSD) repair", "TOF repair, No ventriculotomy", "TOF repair, Ventriculotomy, Nontransanular patch", "TOF repair, Ventriculotomy, Transanular patch", "TOF repair, RV-PA conduit", "TOF – Absent pulmonary valve repair", "Pulmonary atresia – VSD – MAPCA repair, Complete single stage repair (1-stage that includes bilateral pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])", "Pulmonary atresia – VSD – MAPCA repair, Status post prior complete unifocalization (includes VSD closure + RV to PA connection [with or without conduit])", "Pulmonary atresia – VSD – MAPCA repair, Status post prior incomplete unifocalizarion (includes completion of pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])" or "Pulmonary atresia – VSD (including TOF, PA) repair"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Procedure-Specific Factors – Hypoplastic branch pulmonary arteries (diminished pulmonary vascular bed)
SeqNo: 954
Short Name: **PSFHypoBrPulmArt**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether Hypoplastic branch pulmonary arteries (diminished pulmonary vascular bed) was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors – Procedure-Specific Factors – Primary Procedure

ParentShortName: **PSFPrimProc**

ParentHarvestCodes: 390|350|360|370|380|400|2700|2710|2720|420|1670|1680|1690|1700|2330|2130|3160|950|960|970|980|1000|1010|2780|2790|3310|3320|1030|2340|1025

ParentValues: = "TOF – AVC (AVSD) repair", "TOF repair, No ventriculotomy", "TOF repair, Ventriculotomy, Nontransanular patch", "TOF repair, Ventriculotomy, Transanular patch", "TOF repair, RV-PA conduit", "TOF – Absent pulmonary valve repair", "Pulmonary atresia – VSD – MAPCA repair, Complete single stage repair (1-stage that includes bilateral pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])", "Pulmonary atresia – VSD – MAPCA repair, Status post prior complete unifocalization (includes VSD closure + RV to PA connection [with or without conduit])", "Pulmonary atresia – VSD – MAPCA repair, Status post prior incomplete unifocalizarion (includes completion of pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])", "Pulmonary atresia – VSD (including TOF, PA) repair", "Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn)", "Glenn (unidirectional cavopulmonary anastomosis) (unidirectional Glenn)", "Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (bilateral bidirectional Glenn)", "HemiFontan", "Superior cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular valvuloplasty", "Superior Cavopulmonary anastomosis(es) + PA reconstruction", "Kawashima operation (superior cavopulmonary connection in setting of interrupted IVC with azygous continuation)", "Fontan, Atrio-pulmonary connection", "Fontan, Atrio-ventricular connection", "Fontan, TCPC, Lateral tunnel, Fenestrated", "Fontan, TCPC, Lateral tunnel, Nonfenestrated", "Fontan, TCPC, External conduit, Fenestrated", "Fontan, TCPC, External conduit, Nonfenestrated", "Fontan, TCPC, Intra/extracardiac conduit, Fenestrated", "Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated", "Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Fenestrated", "Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Nonfenestrated", "Fontan, Other", "Fontan + Atrioventricular valvuloplasty" or "Fontan revision or conversion (Re-do Fontan)"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors – AV Valve regurgitation grade 3 and 4 (Severe AV Valve regurgitation)	*SeqNo:*	955
Short Name:	**PSFAVRegurg34**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether AV Valve regurgitation grade 3 and 4 (Severe AV Valve regurgitation) was present.		
Intent / Clarification:	This should be coded if any of the following grades of regurgitation are present: grade3, grade 4, moderate, or severe.		
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Procedure-Specific Factors – Procedure-Specific Factors – Primary Procedure		
ParentShortName:	**PSFPrimProc**		
ParentHarvestCodes:	390|350|360|370|380|400|2700|2710|2720|420 |1670|1680|1690|1700|2330|2130|3160|950 |960|970|980|1000|1010|2780|2790|3310|3320|1030|2340|1025		
ParentValues:	= "TOF – AVC (AVSD) repair", "TOF repair, No ventriculotomy", "TOF repair, Ventriculotomy, Nontransanular patch", "TOF repair, Ventriculotomy, Transanular patch", "TOF repair, RV-PA conduit", "TOF – Absent pulmonary valve repair", "Pulmonary atresia – VSD – MAPCA repair, Complete single stage repair (1-stage that includes bilateral pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])", "Pulmonary atresia – VSD – MAPCA repair, Status post prior complete unifocalization (includes VSD closure + RV to PA connection [with or without conduit])", "Pulmonary atresia – VSD – MAPCA repair, Status post prior incomplete unifocalizarion (includes completion of pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])", "Pulmonary atresia – VSD (including TOF, PA) repair", "Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn)", "Glenn (unidirectional cavopulmonary anastomosis) (unidirectional Glenn)", "Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (bilateral bidirectional Glenn)", "HemiFontan", "Superior cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular valvuloplasty", "Superior Cavopulmonary anastomosis(es) + PA reconstruction", "Kawashima operation (superior cavopulmonary connection in setting of interrupted IVC with azygous continuation)", "Fontan, Atrio-pulmonary connection", "Fontan, Atrio-ventricular connection", "Fontan, TCPC, Lateral tunnel, Fenestrated", "Fontan, TCPC, Lateral tunnel, Nonfenestrated", "Fontan, TCPC, External conduit, Fenestrated", "Fontan, TCPC, External conduit, Nonfenestrated", "Fontan, TCPC, Intra/extracardiac conduit, Fenestrated", "Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated", "Fontan, TCPC,		

External conduit, hepatic veins to pulmonary artery, Fenestrated", "Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Nonfenestrated", "Fontan, Other", "Fontan + Atrioventricular valvuloplasty" or "Fontan revision or conversion (Re-do Fontan)"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Double orifice left atrioventricular valve	*SeqNo:*	956
Short Name:	**PSFDoubOrif**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Double orifice left atrioventricular valve was present.		

Intent / Clarification:

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

ParentLongName:	Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName:	**PSFPrimProc**
ParentHarvestCodes:	390|170
ParentValues:	= "TOF - AVC (AVSD) repair" or "AVC (AVSD) repair, Complete (CAVSD)"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Single papillary muscle in the left ventricle and/or parachute left atrioventricular valve	*SeqNo:*	957
Short Name:	**PSFSingPap**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Single papillary muscle in the left ventricle and/or parachute left atrioventricular valve was present.		

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 390|170
ParentValues: = "TOF - AVC (AVSD) repair" or "AVC (AVSD) repair, Complete (CAVSD)"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Procedure-Specific Factors - Hypoplastic posterior mural leaflet
SeqNo: 958
Short Name: **PSFHypoPostMLeaf**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether Hypoplastic posterior mural leaflet was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 390|170
ParentValues: = "TOF - AVC (AVSD) repair" or "AVC (AVSD) repair, Complete (CAVSD)"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Atrioventricular septal defect with ventricular imbalance: dominant left ventricle, hypoplastic right ventricle	*SeqNo:*	959
Short Name:	**PSFASDDomLeft**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Atrioventricular septal defect with ventricular imbalance: dominant left ventricle and hypoplastic right ventricle was present.		
Intent / Clarification:			
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure		
ParentShortName:	**PSFPrimProc**		
ParentHarvestCodes:	390|170		
ParentValues:	= "TOF - AVC (AVSD) repair" or "AVC (AVSD) repair, Complete (CAVSD)"		

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Atrioventricular septal defect with ventricular imbalance: dominant right ventricle, hypoplastic left ventricle	*SeqNo:*	960
Short Name:	**PSFASDDomRight**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Atrioventricular septal defect with ventricular imbalance: dominant right ventricle and hypoplastic left ventricle was present.		
Intent / Clarification:			
Data Source:	User		
Format:	Text (categorical values specified by STS)		

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 390|170
ParentValues: = "TOF - AVC (AVSD) repair" or "AVC (AVSD) repair, Complete (CAVSD)"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Procedure-Specific Factors - Common atrioventricular valve with unbalanced commitment of valve to left ventricle
SeqNo: 961

Short Name: **PSFCAVLeft**
Core: Yes

Section Name: Procedure-Specific Factors
Harvest: Yes

DBTableName: Operations
Definition: Indicate whether Common atrioventricular valve with unbalanced commitment of valve to left ventricle was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 390|170
ParentValues: = "TOF - AVC (AVSD) repair" or "AVC (AVSD) repair, Complete (CAVSD)"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Procedure-Specific Factors - Common atrioventricular valve with unbalanced commitment of valve to right ventricle
SeqNo: 962

Short Name: **PSFCAVRight**
Core: Yes

Section Name: Procedure-Specific Factors
Harvest: Yes

DBTableName: Operations
Definition: Indicate whether Common atrioventricular valve with unbalanced commitment of valve to right ventricle was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 390|170
ParentValues: = "TOF - AVC (AVSD) repair" or "AVC (AVSD) repair, Complete (CAVSD)"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Procedure-Specific Factors - Moderate to severe systemic ventricular dysfunction
SeqNo: 963

Short Name: **PSFModSevSVD**
Core: Yes

Section Name: Procedure-Specific Factors
Harvest: Yes

DBTableName: Operations
Definition: Indicate whether Moderate to severe systemic ventricular dysfunction was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 1670|1680|1690|1700|2330|2130|3160|950|960|970|980|1000|1010|2780|2790| 3310|3320|1030|2340|1025
ParentValues: = "Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn)", "Glenn (unidirectional cavopulmonary anastomosis) (unidirectional Glenn)", "Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (bilateral bidirectional Glenn)", "HemiFontan", "Superior cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular

valvuloplasty", "Superior Cavopulmonary anastomosis(es) + PA reconstruction", "Kawashima operation (superior cavopulmonary connection in setting of interrupted IVC with azygous continuation)", "Fontan, Atrio-pulmonary connection", "Fontan, Atrio-ventricular connection", "Fontan, TCPC, Lateral tunnel, Fenestrated", "Fontan, TCPC, Lateral tunnel, Nonfenestrated", "Fontan, TCPC, External conduit, Fenestrated", "Fontan, TCPC, External conduit, Nonfenestrated", "Fontan, TCPC, Intra/extracardiac conduit, Fenestrated", "Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated", "Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Fenestrated", "Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Nonfenestrated", "Fontan, Other", "Fontan + Atrioventricular valvuloplasty" or "Fontan revision or conversion (Re-do Fontan)"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Systemic ventricular outflow tract obstruction (subaortic obstruction)	*SeqNo:*	964
Short Name:	**PSFSysVentObs**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Systemic ventricular outflow tract obstruction (subaortic obstruction) was present.		
Intent / Clarification:	Indicate whether obstruction between the dominant ventricle and the systemic circulation was present (e.g., Restrictive bulboventricular foramen/VSD in a patient with tricuspid atresia and transposition of the great arteries).		
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure		
ParentShortName:	**PSFPrimProc**		
ParentHarvestCodes:	1670|1680|1690|1700|2330|2130|3160|950|960|970|980|1000|1010|2780|2790| 3310|3320|1030|2340|1025		
ParentValues:	= "Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn)", "Glenn (unidirectional cavopulmonary anastomosis) (unidirectional Glenn)", "Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (bilateral bidirectional		

Glenn)", "HemiFontan", "Superior cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular valvuloplasty", "Superior Cavopulmonary anastomosis(es) + PA reconstruction", "Kawashima operation (superior cavopulmonary connection in setting of interrupted IVC with azygous continuation)", "Fontan, Atrio-pulmonary connection", "Fontan, Atrio-ventricular connection", "Fontan, TCPC, Lateral tunnel, Fenestrated", "Fontan, TCPC, Lateral tunnel, Nonfenestrated", "Fontan, TCPC, External conduit, Fenestrated", "Fontan, TCPC, External conduit, Nonfenestrated", "Fontan, TCPC, Intra/extracardiac conduit, Fenestrated", "Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated", "Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Fenestrated", "Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Nonfenestrated", "Fontan, Other", "Fontan + Atrioventricular valvuloplasty" or "Fontan revision or conversion (Re-do Fontan)"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Ventricular dominance	*SeqNo:*	965
Short Name:	**PSFVentDom**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate ventricular dominance.		

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 1670|1680|1690|1700|2330|2130|3160|950|960|970|980|1000|1010|2780|2790| 3310|3320|1030|2340|1025
ParentValues: = "Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn)", "Glenn (unidirectional cavopulmonary anastomosis) (unidirectional Glenn)", "Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (bilateral bidirectional Glenn)", "HemiFontan", "Superior cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular

valvuloplasty", "Superior Cavopulmonary anastomosis(es) + PA reconstruction", "Kawashima operation (superior cavopulmonary connection in setting of interrupted IVC with azygous continuation)", "Fontan, Atrio-pulmonary connection", "Fontan, Atrio-ventricular connection", "Fontan, TCPC, Lateral tunnel, Fenestrated", "Fontan, TCPC, Lateral tunnel, Nonfenestrated", "Fontan, TCPC, External conduit, Fenestrated", "Fontan, TCPC, External conduit, Nonfenestrated", "Fontan, TCPC, Intra/extracardiac conduit, Fenestrated", "Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated", "Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Fenestrated", "Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Nonfenestrated", "Fontan, Other", "Fontan + Atrioventricular valvuloplasty" or "Fontan revision or conversion (Re-do Fontan)"

Harvest Codes:

Code:	Value:
1	Left ventricular dominance
2	Right ventricular dominance
3	Balanced
4	Indeterminate ventricular dominance

Long Name:	Procedure-Specific Factors - Posterior coronary loop: circumflex coming off the RCA	*SeqNo:*	970
Short Name:	**PSFPostLoopCirc**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Posterior coronary loop: circumflex coming off the RCA was present.		
Intent / Clarification:			
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure		
ParentShortName:	**PSFPrimProc**		
ParentHarvestCodes:	1110|1123|1120|1125		
ParentValues:	= "Arterial switch operation (ASO)", "Arterial switch procedure + Aortic arch repair", "Arterial switch operation (ASO) and VSD repair" or "Arterial switch procedure and VSD repair + Aortic arch repair"		

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Posterior Coronary Loop: left trunk coming off the RCA	*SeqNo:*	971
Short Name:	**PSFPostLoopLeftTrunc**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Posterior Coronary Loop: left trunk coming off the RCA was present.		

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 1110|1123|1120|1125
ParentValues: = "Arterial switch operation (ASO)", "Arterial switch procedure + Aortic arch repair", "Arterial switch operation (ASO) and VSD repair" or "Arterial switch procedure and VSD repair + Aortic arch repair"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Double Coronary Loops	*SeqNo:*	972
Short Name:	**PSFDoubleLoops**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Double Coronary Loops (inverted origin of right and left coronary arteries) was present.		

Intent / Clarification:

Data Source: User

Format: Text (categorical values specified by STS)

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 1110|1123|1120|1125
ParentValues: = "Arterial switch operation (ASO)", "Arterial switch procedure + Aortic arch repair", "Arterial switch operation (ASO) and VSD repair" or "Arterial switch procedure and VSD repair + Aortic arch repair"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Procedure-Specific Factors - Single Coronary Ostium
SeqNo: 973
Short Name: **PSFSingOst**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether Single coronary ostium was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 1110|1123|1120|1125
ParentValues: = "Arterial switch operation (ASO)", "Arterial switch procedure + Aortic arch repair", "Arterial switch operation (ASO) and VSD repair" or "Arterial switch procedure and VSD repair + Aortic arch repair"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Intramural coronary	*SeqNo:*	974
Short Name:	**PSFIntramuralCor**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Intramural coronary was present.		

Intent / Clarification:

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

ParentLongName:	Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName:	**PSFPrimProc**
ParentHarvestCodes:	1110|1123|1120|1125
ParentValues:	= "Arterial switch operation (ASO)", "Arterial switch procedure + Aortic arch repair", "Arterial switch operation (ASO) and VSD repair" or "Arterial switch procedure and VSD repair + Aortic arch repair"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Large infundibular coronary artery from LAD	*SeqNo:*	975
Short Name:	**PSFLgInfundArt**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Large infundibular coronary artery from LAD was present.		

Intent / Clarification:

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

ParentLongName:	Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName:	**PSFPrimProc**
ParentHarvestCodes:	1110|1123|1120|1125

ParentValues: = "Arterial switch operation (ASO)", "Arterial switch procedure + Aortic arch repair", "Arterial switch operation (ASO) and VSD repair" or "Arterial switch procedure and VSD repair + Aortic arch repair"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Procedure-Specific Factors - Malaligned commissures
SeqNo: 976
Short Name: **PSFMalComm**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether Malaligned commissures was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 1110|1123|1120|1125
ParentValues: = "Arterial switch operation (ASO)", "Arterial switch procedure + Aortic arch repair", "Arterial switch operation (ASO) and VSD repair" or "Arterial switch procedure and VSD repair + Aortic arch repair"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Procedure-Specific Factors - Take down of a commissure
SeqNo: 977
Short Name: **PSFTakeDownComm**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether Take down of a commissure was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 1110|1123|1120|1125
ParentValues: = "Arterial switch operation (ASO)", "Arterial switch procedure + Aortic arch repair", "Arterial switch operation (ASO) and VSD repair" or "Arterial switch procedure and VSD repair + Aortic arch repair"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Procedure-Specific Factors - Aorto-pulmonary diameter mismatch
SeqNo: 978
Short Name: **PSFAortoPulMis**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether Aorto-pulmonary diameter mismatch was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 1110|1123|1120|1125
ParentValues: = "Arterial switch operation (ASO)", "Arterial switch procedure + Aortic arch repair", "Arterial switch operation (ASO) and VSD repair" or "Arterial switch procedure and VSD repair + Aortic arch repair"

Harvest Codes:

Code:	Value:
1	Yes

2	No

Long Name:	Procedure-Specific Factors - Side by side vessels	*SeqNo:*	979
Short Name:	**PSFSideBySide**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Side by side vessels was present.		

Intent / Clarification:

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

ParentLongName:	Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName:	**PSFPrimProc**
ParentHarvestCodes:	1110|1123|1120|1125
ParentValues:	= "Arterial switch operation (ASO)", "Arterial switch procedure + Aortic arch repair", "Arterial switch operation (ASO) and VSD repair" or "Arterial switch procedure and VSD repair + Aortic arch repair"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Posterior native aorta	*SeqNo:*	980
Short Name:	**PSFPostNatAorta**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Posterior native aorta was present.		

Intent / Clarification:

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

ParentLongName:	Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure

ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 1110|1123|1120|1125
ParentValues: = "Arterial switch operation (ASO)", "Arterial switch procedure + Aortic arch repair", "Arterial switch operation (ASO) and VSD repair" or "Arterial switch procedure and VSD repair + Aortic arch repair"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Procedure-Specific Factors - Subaortic obstruction/ conal septum malalignment
SeqNo: 981
Short Name: **PSFSubAObs**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether Subaortic obstruction / conal septum malalignment was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 1110|1123|1120|1125
ParentValues: = "Arterial switch operation (ASO)", "Arterial switch procedure + Aortic arch repair", "Arterial switch operation (ASO) and VSD repair" or "Arterial switch procedure and VSD repair + Aortic arch repair"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Procedure-Specific Factors - Bicuspid native aortic valve (Bicuspid neopulmonary valve)
SeqNo: 982
Short Name: **PSFBicusNatAortic**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes

DBTableName: Operations
Definition: Indicate whether Bicuspid native aortic valve (Bicuspid neopulmonary valve) was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 1110|1123|1120|1125
ParentValues: = "Arterial switch operation (ASO)", "Arterial switch procedure + Aortic arch repair", "Arterial switch operation (ASO) and VSD repair" or "Arterial switch procedure and VSD repair + Aortic arch repair"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Procedure-Specific Factors - Bicuspid native pulmonary valve (Bicuspid neoaortic valve)
SeqNo: 983
Short Name: **PSFBicusNatPulm**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether Bicuspid native pulmonary valve (Bicuspid neoaortic valve) was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 1110|1123|1120|1125
ParentValues: = "Arterial switch operation (ASO)", "Arterial switch procedure + Aortic arch repair", "Arterial switch operation (ASO) and VSD repair" or "Arterial switch procedure and VSD repair + Aortic arch repair"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Truncus type 3 (PA Branches from PDA or descending aorta)	*SeqNo:*	984
Short Name:	**PSFTruncType3**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Truncus type 3 (PA Branches from PDA or descending aorta) was present.		
Intent / Clarification:	This refers to the Van Praagh classification scheme which may also be referred to as Type A3.		
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure		
ParentShortName:	**PSFPrimProc**		
ParentHarvestCodes:	230|2220		
ParentValues:	= "Truncus arteriosus repair" or "Truncus + Interrupted aortic arch repair (IAA) repair"		

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Abnormal coronary	*SeqNo:*	985
Short Name:	**PSFAbnormalCor**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Abnormal coronary was present.		
Intent / Clarification:			
Data Source:	User		
Format:	Text (categorical values specified by STS)		

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 230|2220
ParentValues: = "Truncus arteriosus repair" or "Truncus + Interrupted aortic arch repair (IAA) repair"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Procedure-Specific Factors - Truncal valve regurgitation (moderate to severe)
SeqNo: 986
Short Name: **PSFTruncValRegurg**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether Truncal valve regurgitation (moderate to severe) was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 230|2220
ParentValues: = "Truncus arteriosus repair" or "Truncus + Interrupted aortic arch repair (IAA) repair"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Procedure-Specific Factors - Truncal Valve stenosis (moderate to severe)
SeqNo: 987
Short Name: **PSFTruncValSten**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes

DBTableName: Operations
Definition: Indicate whether Truncal valve stenosis (moderate to severe) was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 230|2220
ParentValues: = "Truncus arteriosus repair" or "Truncus + Interrupted aortic arch repair (IAA) repair"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Procedure-Specific Factors - Source of pulmonary blood flow: Shunt - systemic artery-to-pulmonary artery
SeqNo: 988

Short Name: **PSFSrcPulFloShuntSys**
Core: Yes

Section Name: Procedure-Specific Factors
Harvest: Yes

DBTableName: Operations
Definition: Indicate whether Source of pulmonary blood flow: Shunt - systemic artery-to- pulmonary artery was present.

Intent / Clarification: This should not be selected if a REVERSE Blalock-Taussig shunt is placed to augment perfusion.

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 870|2160|2170|2180
ParentValues: = "Norwood procedure", "Hybrid Approach "Stage 1", Application of RPA & LPA bands", "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)" or "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Source of pulmonary blood flow: Shunt - ventricle-to- pulmonary artery	*SeqNo:*	989
Short Name:	**PSFSrcPulFloShuntVent**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Source of pulmonary blood flow: Shunt - ventricle-to-pulmonary artery was present.		

Intent / Clarification:

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

ParentLongName:	Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName:	**PSFPrimProc**
ParentHarvestCodes:	870|2160|2170|2180
ParentValues:	= "Norwood procedure", "Hybrid Approach "Stage 1", Application of RPA & LPA bands", "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)" or "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Source of pulmonary blood flow: Superior caval vein-to- pulmonary artery	*SeqNo:*	990
Short Name:	**PSFSrcPulFloSuper**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Source of pulmonary blood flow: Superior caval vein-to-pulmonary artery was present.		

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 870|2160|2170|2180
ParentValues: = "Norwood procedure", "Hybrid Approach "Stage 1", Application of RPA & LPA bands", "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)" or "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Procedure-Specific Factors - Source of pulmonary blood flow: Banded Central PAs
SeqNo: 991
Short Name: **PSFSrcPulFloBandPA**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate if the source of pulmonary blood flow is from the main pulmonary artery to the distal pulmonary arteries via branch pulmonary arteries that have been surgically narrowed (banded).

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 870|2160|2170|2180
ParentValues: = "Norwood procedure", "Hybrid Approach "Stage 1", Application of RPA & LPA bands", "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)" or "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Ascending aorta < 2 mm	*SeqNo:*	992
Short Name:	**PSFAscAortaLT2**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Ascending aorta < 2 mm was present.		

Intent / Clarification:

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

ParentLongName:	Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName:	**PSFPrimProc**
ParentHarvestCodes:	870|2160|2170|2180
ParentValues:	= "Norwood procedure", "Hybrid Approach "Stage 1", Application of RPA & LPA bands", "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)" or "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Aortic atresia	*SeqNo:*	993
Short Name:	**PSFAortAtresia**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Aortic atresia was present.		

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 870|2160|2170|2180
ParentValues: = "Norwood procedure", "Hybrid Approach "Stage 1", Application of RPA & LPA bands", "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)" or "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Procedure-Specific Factors - Aortic stenosis
SeqNo: 994
Short Name: **PSFAortSten**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether Aortic stenosis was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 870|2160|2170|2180
ParentValues: = "Norwood procedure", "Hybrid Approach "Stage 1", Application of RPA & LPA bands", "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)" or "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Procedure-Specific Factors - Mitral atresia
SeqNo: 995

Short Name:	**PSFMitralAtresia**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Mitral atresia was present.		

Intent / Clarification:

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

ParentLongName:	Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName:	**PSFPrimProc**
ParentHarvestCodes:	870|2160|2170|2180
ParentValues:	= "Norwood procedure", "Hybrid Approach "Stage 1", Application of RPA & LPA bands", "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)" or "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Mitral stenosis	*SeqNo:*	996
Short Name:	**PSFMitralSten**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Mitral stenosis was present.		

Intent / Clarification:

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

ParentLongName:	Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName:	**PSFPrimProc**
ParentHarvestCodes:	870|2160|2170|2180
ParentValues:	= "Norwood procedure", "Hybrid Approach "Stage 1", Application of RPA & LPA bands", "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)" or "Hybrid Approach

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

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Sinusoids	*SeqNo:*	997
Short Name:	**PSFSinusoids**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the presence of sinusoids was present.		

Intent / Clarification:

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

ParentLongName:	Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName:	**PSFPrimProc**
ParentHarvestCodes:	870|2160|2170|2180
ParentValues:	= "Norwood procedure", "Hybrid Approach "Stage 1", Application of RPA & LPA bands", "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)" or "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Intact atrial septum	*SeqNo:*	998
Short Name:	**PSFIntactAtrSep**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Intact atrial septum was present.		

Intent / Clarification:

Data Source:	User

Format: Text (categorical values specified by STS)

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 870|2160|2170|2180
ParentValues: = "Norwood procedure", "Hybrid Approach "Stage 1", Application of RPA & LPA bands", "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)" or "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Procedure-Specific Factors - Obstructed pulmonary venous return with severely restrictive ASD
SeqNo: 999

Short Name: **PSFObsPulVenRet**
Core: Yes

Section Name: Procedure-Specific Factors
Harvest: Yes

DBTableName: Operations
Definition: Indicate whether Obstructed pulmonary venous return with severely restrictive ASD was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 870|2160|2170|2180
ParentValues: = "Norwood procedure", "Hybrid Approach "Stage 1", Application of RPA & LPA bands", "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)" or "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Aberrant right subclavian artery	*SeqNo:*	1000
Short Name:	**PSFAberrantRtSubclav**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Aberrant right subclavian artery was present.		

Intent / Clarification:

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

ParentLongName:	Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName:	**PSFPrimProc**
ParentHarvestCodes:	870|2160|2170|2180
ParentValues:	= "Norwood procedure", "Hybrid Approach "Stage 1", Application of RPA & LPA bands", "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)" or "Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Procedure-Specific Factors - TV Repair	*SeqNo:*	1001
Short Name:	**PSFTVRep**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether TV Repair was present.		

Intent / Clarification:

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

ParentLongName:	Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName:	**PSFPrimProc**
ParentHarvestCodes:	465

ParentValues: = "Ebstein's repair"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Procedure-Specific Factors - TV Repair - Monocusp
SeqNo: 1002
Short Name: **PSFTVRepMono**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether TV Repair - Monocusp was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - TV Repair
ParentShortName: **PSFTVRep**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Procedure-Specific Factors - TV Repair - Bileaflet Repair
SeqNo: 1004
Short Name: **PSFTVRepBileaf**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether TV Repair - Bileaflet Repair was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - TV Repair

ParentShortName: **PSFTVRep**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Procedure-Specific Factors - TV Repair - Cone Repair - 360 Degrees Leaflet Approximation
SeqNo: 1006

Short Name: **PSFTVRepCone**
Core: Yes

Section Name: Procedure-Specific Factors
Harvest: Yes

DBTableName: Operations
Definition: Indicate whether TV Repair - Cone Repair - 360 Degrees Leaflet Approximation was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - TV Repair
ParentShortName: **PSFTVRep**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Procedure-Specific Factors - Sebening Stitch (Anterior RV Papillary Muscle To Ventricular Septum)
SeqNo: 1008

Short Name: **PSFSebening**
Core: Yes

Section Name: Procedure-Specific Factors
Harvest: Yes

DBTableName: Operations
Definition: Indicate whether Sebening Stitch (Anterior RV Papillary Muscle To Ventricular Septum) was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 465
ParentValues: = "Ebstein's repair"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Procedure-Specific Factors - Annular Reduction
SeqNo: 1009
Short Name: **PSFAnnRed**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether Annular Reduction was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 465
ParentValues: = "Ebstein's repair"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Procedure-Specific Factors - Annular Reduction - Plication
SeqNo: 1010
Short Name: **PSFAnnRedPlic**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations

Definition: Indicate whether Annular Reduction - Plication was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Annular Reduction
ParentShortName: **PSFAnnRed**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Procedure-Specific Factors - Annular Reduction - Partial Ring (C-Shaped Anterior And Inferior Annulus)
SeqNo: 1012
Short Name: **PSFAnnRedPartial**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether Annular Reduction - Partial Ring (C-Shaped Anterior And Inferior Annulus) was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Annular Reduction
ParentShortName: **PSFAnnRed**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Annular Reduction - Eccentric Ring (Inferior Annulus)	*SeqNo:*	1014
Short Name:	**PSFAnnRedEccent**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Annular Reduction - Eccentric Ring (Inferior Annulus) was present.		

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Annular Reduction
ParentShortName: **PSFAnnRed**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Atrialized RV Plication	*SeqNo:*	1016
Short Name:	**PSFAtrialRVPlic**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Atrialized RV Plication was present.		

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 465
ParentValues: = "Ebstein's repair"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Procedure-Specific Factors - Atrialized RV Resection	*SeqNo:*	1018
Short Name:	**PSFAtrialRVRes**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Atrialized RV Resection was present.		

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 465
ParentValues: = "Ebstein's repair"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Procedure-Specific Factors - ASD/PFO Closure	*SeqNo:*	1020
Short Name:	**PSFASDPFO**	*Core:*	Yes
Section Name:	Procedure-Specific Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether ASD/PFO Closure was present.		

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 465
ParentValues: = "Ebstein's repair"

Harvest Codes:

Code:	Value:
1	Yes
2	No
3	Subtotal

Long Name: Procedure-Specific Factors - Reduction Atrioplasty
SeqNo: 1022
Short Name: **PSFRedAtrio**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether Reduction Atrioplasty was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 465
ParentValues: = "Ebstein's repair"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Procedure-Specific Factors - Arrhythmia Surgery
SeqNo: 1023
Short Name: **PSFArrSurg**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether Arrhythmia Surgery was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**

ParentHarvestCodes: 465
ParentValues: = "Ebstein's repair"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Procedure-Specific Factors - Arrhythmia Surgery - Cavotricuspid Isthmus Ablation
SeqNo: 1024
Short Name: **PSFArrSurgCavo**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether Arrhythmia Surgery - Cavotricuspid Isthmus Ablation was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Arrhythmia Surgery
ParentShortName: **PSFArrSurg**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Procedure-Specific Factors - Arrhythmia Surgery - Modified Right Atrial Maze
SeqNo: 1026
Short Name: **PSFArrSurgModMaze**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether Arrhythmia Surgery - Modified Right Atrial Maze was present.

Intent / Clarification:

Data Source: User

Format: Text (categorical values specified by STS)

ParentLongName: Procedure-Specific Factors - Arrhythmia Surgery
ParentShortName: **PSFArrSurg**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Procedure-Specific Factors - Arrhythmia Surgery - Left Atrial Cox Maze
SeqNo: 1028
Short Name: **PSFArrSurgCoxMaze**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether Arrhythmia Surgery - Left Atrial Cox Maze was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Arrhythmia Surgery
ParentShortName: **PSFArrSurg**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Procedure-Specific Factors - Arrhythmia Surgery - Pulmonary Vein Isolation
SeqNo: 1030
Short Name: **PSFArrSurgPulmIso**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations

Definition: Indicate whether Arrhythmia Surgery - Pulmonary Vein Isolation was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Arrhythmia Surgery
ParentShortName: **PSFArrSurg**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Procedure-Specific Factors - Bidirectional Cavopulmonary Anastomosis
SeqNo: 1032
Short Name: **PSFBiCavoAnast**
Core: Yes
Section Name: Procedure-Specific Factors
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether Bidirectional Cavopulmonary Anastomosis was present.

Intent / Clarification:

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

ParentLongName: Procedure-Specific Factors - Procedure-Specific Factors - Primary Procedure
ParentShortName: **PSFPrimProc**
ParentHarvestCodes: 465
ParentValues: = "Ebstein's repair"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Operative

Long Name:	Procedure Location	*SeqNo:*	1054
Short Name:	**ProcLoc**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the location where the operation/procedure was performed.		

Intent / Clarification:

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

Harvest Codes and Value Definitions:

Code:	Value:	Definition
9	Cardiac OR	Indicate if the operation/procedure was performed in the following location: Cardiac OR (Cardiac Operating Room).
10	General OR	Indicate if the operation/procedure was performed in the following location: General OR (General Operating Room).
3	Hybrid Suite	Indicate if the operation/procedure was performed in the following location: Hybrid Suite. A “Hybrid Suite” is defined as a room that is designed for both surgical procedures and transcatheter interventional procedures. A “Hybrid Procedure” is defined as a procedure that combines surgical and transcatheter interventional approaches. The term “Hybrid approach” is used somewhat differently than the term “Hybrid Procedure.” A “Hybrid approach” is defined as any of a group of procedures that fit into the general silo of procedures developed from the combined use of surgical and transcatheter interventional techniques. Therefore, not all procedures classified as “Hybrid approach” are truly “Hybrid Procedures.”
2	Cath lab	Indicate if the operation/procedure was performed in the following location: Cath lab (Cardiac catheterization laboratory).
11	ICU	Indicate if the operation/procedure was performed in the following location: ICU (Intensive Care Unit).
4	CVICU	Indicate if the operation/procedure was performed in the following location: CVICU (CardioVascular Intensive Care Unit).
5	NICU	Indicate if the operation/procedure was performed in the following location: NICU (Neonatal Intensive Care Unit).
6	PICU	Indicate if the operation/procedure was performed in the following location: PICU (Pediatric Intensive Care Unit).
7	SICU	Indicate if the operation/procedure was performed in the following location: SICU (Surgical Intensive Care Unit).
12	Radiology Suite	Indicate if the operation/procedure was performed in the following location: Radiology Suite.
13	Procedure Room	Indicate if the operation/procedure was performed in the following location: Procedure Room.
8	Other	Indicate if the operation/procedure was performed in the following location: Other (Any location not contained in this list).

Long Name:	Status	*SeqNo:*	1055
Short Name:	**Status**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the clinical status of the patient prior to entering the operating room.		

Intent / Clarification:

For transplant patients:

- If the patient is in-house and on ECMO code the case as Emergent.
- If the patient is in-house but not on ECMO, code the case as Urgent.
- If the patient comes from home, and is on a VAD or drips, code as Urgent
- Any other patient from home should be coded as Elective.

For VAD/ECMO decanulation:

- Should not be salvage dispite on-going ECMO support. The exception to salvage is when decanulation is the sole intervention. In other words, if someone on ECMO goes in for say addition of a BT shunt and gets decannulated in the OR, salvage is reasonable. However, if someone on ECMO was decanulated because they have improved, salvage should not be used. It should be urgent.

Data Source: User
Format: Integer

Harvest Codes and Value Definitions:

Code:	Value:	Definition:
1	Elective	The patient's cardiovascular status has been stable in the days or weeks prior to the operation. The procedure could be deferred without increased risk of compromised outcome.
2	Urgent	Procedure required during same hospitalization in order to minimize chance of further clinical deterioration.
3	Emergent	Patients requiring emergency operations will have ongoing severe cardiovascular compromise, not responsive to any form of therapy except cardiac surgery. An emergency operation is one in which there should be no delay in providing operative intervention.
4	Salvage	The patient is undergoing CPR en route to the OR or prior to anesthesia induction or has ongoing ECMO support to maintain life.

Long Name:	Operation Type	*SeqNo:*	1056
Short Name:	**OpType**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the type of primary surgical procedure performed.		

Intent / Clarification: The operation type for a procedure that was aborted after skin incision or after induction is to be coded as operation type Other. Major structural repairs done on the heart, great vessels, or branches of the great vessels while the patient is receiving mechanical circulatory support should be coded as CPB Cardiovascular. Minor repairs (for example sternal closures, mediastinal explorations, cannula repositioning etc.) completed while the patient is receiving mechanical circulatory support should be coded as operation type ECMO, VAD Operation Done with CPB, or VAD Operation Done Without CPB as appropriate.

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

Harvest Codes and Value Definitions:

Code:	Value:	Definition:
1	CPB Cardiovascular	If the procedure is cardiovascular (includes the heart, great vessels, or any branches of the great vessels), and cardiopulmonary bypass is used, this should be chosen as the case category. Do not choose this case category for operations that are not cardiovascular, even if cardiopulmonary bypass is used (see OpType 9, below). Most lung transplants involve anastomosis to the left atrium (as well as anastomosis to distal main PA or central branch PA). This would be considered a cardiovascular procedure. Transplant, Lung(s) is a STAT Categroy 3 procedure.
2	No CPB Cardiovascular	If the procedure is cardiovascular, but cardiopulmonary bypass is not used, this must be chosen as the case category. This includes any procedure that includes the heart, great vessels, or any of the branches from the great vessels, where CPB is not used. Examples include but are not limited to: coarctation of the aorta repair, creation of a systemic-to-pulmonary artery shunt, patent ductus arteriosus ligation. A delayed sternal closure is included in this category.
9	CPB Non-Cardiovascular	Procedures that are done with bypass support that do not involve a concomitant cardiovascular procedure. For example, tracheal surgery, neurosurgical procedures, resuscitation and rewarming of drowning victims. These cases are not included in the numerator or denominator of mortality calculations or reports. Tracheal reconstructions done on CPB, withoug a concomitant cardiovascular procedure are OpType 9 - CPB Non-cardiovascular. This would pertain, for example to a slide tracheoplasty or tracheal patch- plasty done on CPB. But, if the operation also includes a cardiovascular procedure (as in operation for PA sling with both tracheal repair and division/reimplantation of pulmonary artery), then it would be CPB Cardiovascular.
3	ECMO	If ECMO cannulation or decannulation is the primary procedure performed, this category must be chosen. However, if ECMO is initiated for support at the end of another type procedure (i.e., CPB, No CPB Cardiovascular), that procedure takes precedence and the category code would not be ECMO.
4	Thoracic	If a procedure is performed on a structure within the chest cavity but does not involve the cardiac chambers or vessels, it would be a Thoracic category case (for example, lobectomy, pectus excavatum/carinatum

		repair, and anterior spine exposure). There will be thoracic cases that require cardiopulmonary bypass (e.g., some types of tracheal reconstructions). In those cases, the use of cardiopulmonary bypass takes precedence and the case wouldnot be Thoracic, but CPB Non-Cardiovascular.
5	Interventional Cardiology	If an interventional device (e.g., occluder, stent) is placed in the operating room as the primary procedure performed, this category must be chosen. However, if in the course of another type procedure (i.e., CPB, No CPB Cardiovascular), an interventional device is placed in addition to the other procedure, the other category takes precedence and the case would not be Interventional Cardiology.
6	VAD Operation Done With CPB	Ventricular Assist Device procedure done with CPB. This includes operations to insert the VAD, or to remove the VAD.
7	VAD Operation Done Without CPB	Ventricular Assist Device procedure done without CPB.This includes operations to insert the VAD, to remove the VAD, or any procedure performed while on the VAD.
8	Non-cardiac, Non-thoracic procedure on cardiac patient with cardiac anesthesia	Any non-cardiac or non-thoracic procedure such as a general surgical procedure with anesthesia provided by cardiac anesthesiology because of the patient's underlying cardiac physiology.
777	Other	All other procedures that do not fall within the above definitions should be coded as category Other. This would include but not be limited to supportive minor procedures (e.g., line placements)

ECMO or CPB Examples

Procedures performed while a patient is on ECMO can be coded as Op Type "ECMO" ***if they are done exclusively for the purpose of facilitating ECMO support.***

A patient is admitted to the hospital and requires emergent ECMO cannulation. The next day the patient is taken to the OR for BT Shunt placement done on ECMO. Op Type? **If the BT Shunt is done on ECMO, this should be coded as Op Type CPB because the ECMO circuit is functioning as a CPB circuit in this situation.**

A patient who winds up on ECMO and has a shunt revision while on ECMO support is a ***different type of scenario***, and under those circumstances it is most likely that the procedure "shunt revision" ***should be considered to be of Op Type CPB, with the understanding that ECMO circuit is being used to provide CPB support.***

If the patient was transitioned from ECMO to bypass in the OR and then transitioned back to ECMO at the end of the case you would code the **op type as CPB with the pre-op risk factor of ECMO and the post-op complication of ECMO.**

If the patient was de-cannulated from ECMO prior to the placement of the shunt and the shunt was done with no support you would code the Op Type as **No CPB Cardiovascular**.

Patient arrives in CVICU and needs cannulation on ECMO. The consent and discussion with the family is for ECMO. Patient is cannulated for ECMO in the OR and during the procedure it is noted that the patient has excessive pulmonary blood flow and needs a PAB to help control pulmonary blood flow and the patient is better supported on ECMO. **This situation would be coded as ECMO.**

Patient has bleeding requiring mediastinal exploration while on ECMO. **This situation would be coded as ECMO.**

Patient returns to the OR for an unbalanced AVC repair while on ECMO. The consent and the operative report note that the case was for the repair. Case completed and the patient returns to the CVICU on ECMO. **This situation is coded as a CPB Cardiovascular case since the case is a cardiovascular procedure even if the patient returns to the CVICU on ECMO. This would also be the index procedure for the patient.**

Patient arrives in the CVICU. The patient needs a PAB. The consent and the operative report identify that the patient is going to have a PAB. During the procedure the patient is identified to need ECMO as well. **This is coded as a CV case with or without CPB depending on the operative report, if the PAB was done while on ECMO (cannulation occurred before the PAB) the op type is CPB.**

Patient arrives in CVICU and needs cannulation for ECMO. The consent and discussion with the family is for ECMO. The patient is cannulated for ECMO. **This is coded as ECMO.**

Patient is decannulated from ECMO. Chest is closed. T**his is coded as ECMO.**

FAQs

February 2019: need clarification on operation types, since there are exceptions to the definitions that aren't specifically stated in the specs. The definitions say: No CPB - "If the procedure is cardiovascular, but cardiopulmonary bypass is not used, this must be chosen as the case category. This includes any procedure that includes the heart, great vessels, or any of the branches from the great vessels, where CPB is not used." Thoracic - "If a procedure is performed on a structure within the chest cavity but does not involve the cardiac chambers or vessels, it would be a Thoracic category case." Since delayed sternal closures, epigastric pacemaker generator revisions and sternal re-wiring are No CPB, then what about the following procedures: sternotomy wound drainage (does it matter how deep the infection is or if it's during the the same admission as index operation?), sternal resections, pleural drainage and sternal wire removal? **Delayed sternal closures are No CPB Cardiovascular, PM procedures are also No CPB Cardiovascular, and sternal wire removal is Thoracic. Pleural drainage is Thoracic. Wound infection / concern / debridement following a cardiac surgery is No CPB Cardiovascular.**

March 2019: What op type should be used for a Diaphragm Plication? **Thoracic**

March 2019: We had a patient who had a pacemaker box and leads removal at an outside hospital, then came to us POD 18 and had a wound drainage and debridement POD 19. Is that considered No CPB since it was after a cardiac op even though it was a separate admission and institution, or is it considered Thoracic? **This is a thoracic case. The first hospital should code this as complication of the 1st operation.**

March 2019: When a surgeon does carotid cut down in interventional cardiology, how is this coded? IS it other, no CPB Cardiovascular or thoracic? **Code as 'Other'.**

April 2019: Patient went to OR for PA reconstruction of RPA with patch arterioplasty. Not able to establish sufficient flow and consulted with cardiologist who agreed to try stent insertion in the RPA. Patient was closed in OR and immediately moved to Cath Lab. Stent insertion resulted in vessel rupture and bleeding. Surgeon called to cath lab to open chest to determine location of bleed. Patient left OR at 15:09; and surgeon scrubbed back in 19:30. Is this entered as 2 separate operations? **Count as 2 separate cases and include the following complications on the first case: unplanned interventional cardiac catheterization and bleeding requiring reoperation. For those sites who also participate in the anesthesia database, the data manager can separate the anesthesia times based on when the surgeon enters the cath lab for the second case.**

June 2019: We currently have a patient with heterotaxy with associated abnormal abdominal situs that had a BT shunt and pacemaker placed a few months back. The patient now needs a g-tube, but the current pacemaker device is where the g-tube needs to be placed. We repositioned the pacemaker generator to the other side. Since the pacemaker was moved to allow for the g-tube placement, could this be coded as 'other' or does it still need to be coded as 'no CPB cardiovascular'? **Suggest that this revision of the pacemaker site be coded as a No CPB Cardiovascular procedure and the complication recorded as a non-cardiac reoperation.**

June 2019: I have several questions about a very complex patient who went to cath lab for a diagnostic cath. She arrested at the end of the cath and the surgeon prepped her for ECMO, but she had ROSC and did not go on. After extubation, she arrested again and was then placed on ECMO. She was in a junctional rhythm and so the surgeon put in a temporary pacing wire through a subxiphoid incision while on ECMO. Would this be considered a NO CPB op type or CPB op type since it was done on ECMO but is a pacemaker procedure? The patient then had a cardiac cath with another complication requiring urgent surgery to repair a hole. Is the Op type cpb with pre-op factors and post-op complications of ECMO? Then ended up on an L-VAD with ECMO and listed for transplant. She had multiple other explorations/bronchs while on the VAD. Eventually had multi-system organ failure and hemorrhages and expired. Am I

correct in that the pacing wire insertion will be the index, an operative mortality, and the only case that will be analyzed? **Suggest that the original procedure is op type ECMO. I personally think that it is misleading to have the placement of a temporary pacing wire to manage junctional rhythm or ligation of a PDA to facilitate ECMO management as non-CPB Cardiovascular procedures. I think all of this patient's procedures should be op type ECMO or VAD.**

July 2019: Why would a mediastinal operation that did not involve the heart, great vessels or any branches from the great vessels be coded as a No CPB Cardiovascular case? Why wouldn't this be coded as Thoracic or Other Op Type? **It would depend on what is being done. Pericardial windows are considered 'Op Type – Thoracic'; Pacer procedures are 'Op Type – No CPB Cardiovascular'.**

Long Name:	Near Infrared Spectroscopy (NIRS) Cerebral Metrics Used	*SeqNo:*	1057
Short Name:	**NIRSCerUsed**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether cerebral oximetry was monitored.		

Intent / Clarification:

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

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Near Infrared Spectroscopy (NIRS) Cerebral Metrics Used - Preoperatively	*SeqNo:*	1058
Short Name:	**NIRSCerPre**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether cerebral oximetry was monitored during the preoperative period.		

Intent / Clarification:

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

ParentLongName:	Near Infrared Spectroscopy (NIRS) Cerebral Metrics Used
ParentShortName:	**NIRSCerUsed**
ParentHarvestCodes:	1
ParentValues:	= "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Near Infrared Spectroscopy (NIRS) Cerebral Metrics Used - Intraoperatively
SeqNo: 1059

Short Name: **NIRSCerIntra**
Core: Yes

Section Name: Operative
Harvest: Yes

DBTableName: Operations

Definition: Indicate whether cerebral oximetry was monitored during the intraoperative period.

Intent / Clarification:

Data Source: User

Format: Text (categorical values specified by STS)

ParentLongName: Near Infrared Spectroscopy (NIRS) Cerebral Metrics Used

ParentShortName: **NIRSCerUsed**

ParentHarvestCodes: 1

ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Near Infrared Spectroscopy (NIRS) Cerebral Metrics Used - Postoperatively
SeqNo: 1060

Short Name: **NIRSCerPost**
Core: Yes

Section Name: Operative
Harvest: Yes

DBTableName: Operations

Definition: Indicate whether cerebral oximetry was monitored during the postoperative period.

Intent / Clarification:

Data Source: User

Format: Text (categorical values specified by STS)

ParentLongName: Near Infrared Spectroscopy (NIRS) Cerebral Metrics Used
ParentShortName: **NIRSCerUsed**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Near Infrared Spectroscopy (NIRS) Somatic Metrics Used
SeqNo: 1061
Short Name: **NIRSSomUsed**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether somatic oximetry was monitored.

Intent / Clarification:

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

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Near Infrared Spectroscopy (NIRS) Somatic Metrics Used - Preoperatively
SeqNo: 1062
Short Name: **NIRSSomPre**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether somatic oximetry was monitored during the preoperative period.

Intent / Clarification:

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

ParentLongName: Near Infrared Spectroscopy (NIRS) Somatic Metrics Used
ParentShortName: **NIRSSomUsed**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Near Infrared Spectroscopy (NIRS) Somatic Metrics Used - Intraoperatively	*SeqNo:*	1063
Short Name:	**NIRSSomIntra**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether somatic oximetry was monitored during the intraoperative period.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Near Infrared Spectroscopy (NIRS) Somatic Metrics Used
ParentShortName:	**NIRSSomUsed**
ParentHarvestCodes:	1
ParentValues:	= "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Near Infrared Spectroscopy (NIRS) Somatic Metrics Used - Postoperatively	*SeqNo:*	1064
Short Name:	**NIRSSomPost**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether somatic oximetry was monitored during the postoperative period.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Near Infrared Spectroscopy (NIRS) Somatic Metrics Used
ParentShortName:	**NIRSSomUsed**
ParentHarvestCodes:	1

ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Time Patient Entered the OR
Short Name: **OREntryT**
Section Name: Operative
DBTableName: Operations
Definition: Indicate to the nearest minute (using 24-hour clock) the time the patient entered the OR. If the procedure was performed in a location other than the OR, record the time when the sterile field was set up.

SeqNo: 1065
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Time - hh:mm (24-hour clock)

Long Name: Skin Incision Start Time
Short Name: **SIStartT**
Section Name: Operative
DBTableName: Operations
Definition: Indicate to the nearest minute (using 24-hour clock) the time the skin incision was made.

SeqNo: 1066
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Time - hh:mm (24-hour clock)

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

SeqNo: 1067
Core: Yes
Harvest: Yes

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.

Long Name:	Intubation Date and Time	*SeqNo:*	1068
Short Name:	**IntubateDT**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the date (mm/dd/yyyy) and time (hh:mm) (24 hour clock) ventilatory support started. Capture the intubation closest to the surgical start time. If the patient was intubated upon admission and remained intubated until the surgical start time, capture this intubations date and time. If the patient was admitted intubated (intubated at another institution) and remained continually intubated until the surgical start time, capture the patient's admission date and time. If the patient was admitted with a tracheostomy in place without ventilatory support, capture the date and time closest to the surgical start time that ventilatory support was initiated. If the patient was admitted with a tracheostomy in place receiving chronic ventilatory support, capture the admission date and time. If the intubation date and time is otherwise unknown, enter the date and time the patient entered the operating room. Do not alter the previously established date and time that ventilatory support was initiated for scenarios including, but not limited to, interruptions in ventilatory support due to accidental extubation/de-cannulation, elective tube change etc.		

Intent / Clarification:

Data Source:	User
Format:	Date/Time - mm/dd/yyyy hh:mm
ParentLongName:	Endotracheal Intubation was Performed
ParentShortName:	**Intubate**
ParentHarvestCodes:	1
Parent Value:	= "Yes"

July 2019: If the patient was intubated prior to surgery do we still enter intubation extubation under post op tab (Ventilator Information)? **Yes, you should capture the intubation that occurs closest to the date and time of the procedure – whether this occurs in the operating room or any time prior to the operation. While this is grouped on the post op tab, the information is still to be included.**

Long Name:	Initial Extubation Date and Time	*SeqNo:*	1069
Short Name:	**ExtubateDT**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the date (mm/dd/yyyy) and time (hh:mm) (24 hour clock) ventilatory support initially ceased after surgery. Capture the extubation closest to the surgical stop time.If the patient has a tracheostomy and is separated from the mechanical ventilator postoperatively within the hospital admission, capture the date and time of separation from the mechanical ventilator closest to the surgical stop time. If the patient expires while intubated or /cannulated and on the ventilator, capture the date and time of expiration. If patient discharged on chronic ventilatory support, capture the date and time of discharge.		
Intent / Clarification:			
Data Source:	User		
Format:	Date/Time - mm/dd/yyyy hh:mm		
ParentLongName:	Endotracheal Intubation was Performed		
ParentShortName:	**Intubate**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Extubated In The Operating Room Or By Anesthesia Team	*SeqNo:*	1070
Short Name:	**ExtubInOR**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the endotracheal tube was removed in the OR or in the immediate postoperative time period after leaving the OR by the anesthesia team of record. This would include patients transported from the OR to the ICU or recovery areas who were extubated upon arrival in that location prior to care being handed off to another physician or the patient being connected to another ventilator.		

Intent / Clarification: If the patient was extubated in the OR and subsequently reintubated in the OR due to respiratory failure, code this field as yes, extubated in the OR. Also answer Yes, Re-intubated After Initial Postoperative Extubation (Sequence Number 1071) and include complication Postoperative/Postprocedural respiratory insufficiency requiring reintubation (Complication code 160). Code this field as No, not extubated in the OR if the extubation occurred anywhere outside of the OR including if the extubation occurred immediately following arrival to the ICU.

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

ParentLongName: Endotracheal Intubation was Performed
ParentShortName: **Intubate**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Re-Intubated After Initial Postoperative Extubation
SeqNo: 1071
Short Name: **ReIntubate**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether the patient was re-intubated after the initial postoperative extubation.

Intent / Clarification: Code as yes if the patient was reintubated for any reason, elective or otherwise, including reintuation for elective procedures and non-cardiac procedures.

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

ParentLongName: Endotracheal Intubation was Performed
ParentShortName: **Intubate**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Final Extubation Date and Time	*SeqNo:*	1072
Short Name:	**FinExtubDT**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the date (mm/dd/yyyy) and time (hh:mm) (24 hour clock) ventilatory support last ceased prior to discharge after surgery. Capture the extubation time closest to discharge. If the patient has a tracheostomy and is separated from the mechanical ventilator more than once postoperatively within the hospital admission, capture the date and time of separation from the mechanical ventilator closest to the hospital discharge. If the patient expires while intubated or cannulated and on the ventilator, capture the date and time of expiration. If the patient was discharged on chronic ventilatory support, capture the date and time of discharge.		
Intent / Clarification:			
Data Source:	User		
Format:	Date/Time - mm/dd/yyyy hh:mm		
ParentLongName:	Re-Intubated After Initial Postoperative Extubation		
ParentShortName:	**ReIntubate**		
ParentHarvestCodes:	1		
ParentValues:	= "Yes"		

Long Name:	Incision Type - Sternotomy	*SeqNo:*	1073
Short Name:	**IncisTyStern**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether a full sternotomy approach was used during this procedure.		
Intent / Clarification:			
Data Source:	User		
Format:	Text (categorical values specified by STS)		

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

February 2019: Definition states to "Indicate whether a full sternotomy approach was used during this procedure." I am unsure how to complete for a Delayed Sternal Closure when sternum was left open. Mark as "No"? **There is no incision made for this procedure, the answer is No.**

Long Name:	Incision Type - Partial Sternotomy	*SeqNo:*	1074
Short Name:	**IncisTyPartStern**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether a partial sternotomy approach was used during this procedure.		

Intent / Clarification:

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

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Partial Sternotomy Location	*SeqNo:*	1075
Short Name:	**PartSternLocat**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the partial sternotomy location.		

Intent / Clarification:

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

ParentLongName: Incision Type - Partial Sternotomy
ParentShortName: **IncisTyPartStern**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Upper
2	Lower

Long Name:	Incision Type - Clamshell Thoracotomy	*SeqNo:*	1076
Short Name:	**IncisTyClam**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether a clamshell thoracotomy approach was used during this procedure.		

Intent / Clarification:

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

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Incision Type - Thoracotomy	*SeqNo:*	1077
Short Name:	**IncisTyThor**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether a thoracotomy approach was used during this procedure.		

Intent / Clarification:

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

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Thoracotomy Location	*SeqNo:*	1078
Short Name:	**ThoraLocat**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the location of the thoracotomy.		

Intent / Clarification:

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

ParentLongName: Incision Type - Thoracotomy
ParentShortName: **IncisTyThor**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Left
2	Right

Long Name: Incision Type – Video-Assisted Thoracoscopy (VATS)
Short Name: **IncisTyVATS**
Section Name: Operative
DBTableName: Operations
Definition: Indicate whether a VATS (Video-Assisted Thoracoscopy) approach was used during this procedure.

SeqNo: 1079
Core: Yes
Harvest: Yes

Intent / Clarification:

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

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: VATS Location
Short Name: **VATSLocat**
Section Name: Operative
DBTableName: Operations
Definition: Indicate the location of the VATS approach.

SeqNo: 1080
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Incision Type - Video-Assisted Thoracoscopy (VATS)
ParentShortName: **IncisTyVATS**
ParentHarvestCodes: 1

ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Left
2	Right

Long Name: Time of Skin Closure
Short Name: **SIStopT**
Section Name: Operative
DBTableName: Operations
Definition: Indicate to the nearest minute (using 24-hour clock) the time the skin incision was closed. If patient leaves the operating room with an open incision, collect the time dressings were applied to the incision.

SeqNo: 1081
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Time - hh:mm (24-hour clock)

Long Name: Time Patient Exited the OR
Short Name: **ORExitT**
Section Name: Operative
DBTableName: Operations
Definition: Indicate to the nearest minute (using 24-hour clock) the time the patient exits the operating room. If the procedure was performed in a location other than the OR, record the time when the sterile field was taken down.

SeqNo: 1082
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Time - hh:mm (24-hour clock)

Long Name: Procedure Extended Through Midnight
Short Name: **MultiDay**
Section Name: Operative
DBTableName: Operations
Definition: Indicate whether the procedure continued through midnight from one day to the next.

SeqNo: 1083
Core: Yes
Harvest: Yes

Intent / Clarification:

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

Code:	*Value:*
1	Yes
2	No

Long Name: Surgeon
SeqNo: 1084
Short Name: **Surgeon**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate the name of the primary surgeon performing this surgical procedure. The name, NPI and signature of all surgeons contributing data to the database must be on file with the STS for data files to be accepted.

Intent / Clarification:

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

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|2|9|3|4|6|7|777
ParentValues: = "CPB Cardiovascular", "No CPB Cardiovascular", "CPB Non-Cardiovascular", "ECMO", "Thoracic", "VAD Operation Done With CPB", "VAD Operation Done Without CPB." or "Other"

Long Name: Surgeon National Provider Identifier
SeqNo: 1085
Short Name: **SurgNPI**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate the individual-level National Provider Identifier (NPI) of the surgeon performing the procedure.

Intent / Clarification:

Data Source: Lookup
Format: Text

ParentLongName: Operation Type

ParentShortName: **OpType**
ParentHarvestCodes: 1|2|9|3|4|6|7|777
ParentValues: = "CPB Cardiovascular", "No CPB Cardiovascular", "CPB Non-Cardiovascular", "ECMO", "Thoracic", "VAD Operation Done With CPB", "VAD Operation Done Without CPB." or "Other"

Long Name: Taxpayer Identification Number
Short Name: **TIN**
Section Name: Preoperative Factors
DBTableName: Operations
Definition: Indicate the group-level Taxpayer Identification Number for the Taxpayer holder of record for the Surgeon's National Provider Identifier that performed the procedure.

SeqNo: 1086
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Text

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|2|9|3|4|6|7|777
ParentValues: = "CPB Cardiovascular", "No CPB Cardiovascular", "CPB Non-Cardiovascular", "ECMO", "Thoracic", "VAD Operation Done With CPB", "VAD Operation Done Without CPB." or "Other"

Long Name: Reoperation Within This Admission
Short Name: **ReOpInAdm**
Section Name: Preoperative Factors
DBTableName: Operations
Definition: Indicate whether this is a second, or third (or more) operation within the same hospital admission.

SeqNo: 1087
Core: Yes
Harvest: Yes

Intent / Clarification: Mediastinal explorations or washouts are to be included as Unplanned reoperations regardless of whether the sternum was open or not.
If a Glenn is performed after a Norwood, it is always a **planned** operation, regardless of whether or not the patient went home between the Norwood and Glenn.
Tracheostomies and gastrostomies are **unplanned** noncardiac operations because they are not planned at the time of the original operation. A rare exception is a planned tracheostomy after a trachel reconstruction.
BT shunt for a tet followed by full tet repair is planned reoperation.

Data Source: User

Format:	Text (categorical values specified by STS)
ParentLongName:	Operation Type
ParentShortName:	**OpType**
ParentHarvestCodes:	1|2|9|3|4|6|7|777
ParentValues:	= "CPB Cardiovascular", "No CPB Cardiovascular", "CPB Non-Cardiovascular", "ECMO", "Thoracic", "VAD Operation Done With CPB", "VAD Operation Done Without CPB." or "Other"

Harvest Codes and Value Definitions:

Code:	Value:	Definition:
1	Yes - Planned reoperation	Indicate whether this operation is a second, or third (or more) operation within the same hospital admission that was planned. The following operations will always be coded as "Planned Reoperation": (1) Delayed Sternal Closure, (2) ECMO Decannulation, (3) VAD Decannulation, (4) Removal of Broviac catheter. The following operations will always be coded as "Unplanned Reoperation": (1) Reoperation for bleeding (2) Reoperation for infection (3) Reoperation for hemodynamic instability (4) Reoperation for initiation of ECMO or VAD (5) Reoperation for residual or recurrent lesion.
3	Yes - Unplanned reoperation	Indicate whether this operation is a second, or third (or more) operation within the same hospital admission that was not planned. The following operations will always be coded as "Planned Reoperation": (1) Delayed Sternal Closure, (2) ECMO Decannulation, (3) VAD Decannulation, (4) Removal of Broviac catheter. The following operations will always be coded as "Unplanned Reoperation": (1) Reoperation for bleeding (2) Reoperation for infection (3) Reoperation for hemodynamic instability (4) Reoperation for initiation of ECMO or VAD (5) Reoperation for residual or recurrent lesion.
2	No	Indicate whether this operation is NOT a second, or third (or more) operation within the same hospital admission.

January 2019: A patient was born at our hospital with multiple cardiac anomalies including Coarctation of Aorta and VSD. Patient had Coarc. repair done first and then at a later date within the same admission the patient had the VSD closed. Is the VSD closure considered a planned re-op or unplanned? **It would depend on the initial surgical plan prior to the coarctation of the aorta repair. Some centers initially plan a staged repair.**

July 2019: Reoperation Within This Admission (SeqNo: 1087): Is this reoperation operations including other than heart operation? For example, if the patient had lung surgery, then underwent heart surgery, does it count as yes to reoperation? **If the prior operation was not cardiac (CPB or No CPB Cardiovascular), do not count it as a reoperation. A prior thoracic operation would not be a reoperation during this hospitalization.**

Long Name:	Number of Prior Cardiothoracic Operations	*SeqNo:*	1090
Short Name:	**PrvCtOpN**	*Core:*	Yes
Section Name:	Preoperative Factors	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate, prior to this admission's surgical procedure, how many cardiothoracic (heart or great vessels) surgical procedures were		

	performed with or without cardiopulmonary bypass (CPB). Also include lung procedures utilizing CPB or tracheal procedures utilizing CPB. See Operation Type for further clarification.
Low Value:	0
High Value:	200
Intent / Clarification:	
Data Source:	User
Format:	Integer
ParentLongName:	Operation Type
ParentShortName:	**OpType**
ParentHarvestCodes:	1|2|9|3|4|6|7|777
Parent Value:	= "CPB Cardiovascular", "No CPB Cardiovascular", "CPB Non-Cardiovascular", "ECMO", "Thoracic", "VAD Operation Done With CPB", "VAD Operation Done Without CPB." or "Other"

February 2019: This question is about coding ECMO ops in the prior ops and complications fields. I know that ECMO cannulations/decannulations don't need to be counted as prior cardiothoracic ops, and they don't need to be coded as unplanned cardiac reops, but what about mediastinal explorations/procedures performed while a patient is on ECMO and other ops with op type ECMO? Are these not counted either, or are they considered unplanned cardiac reops and counted as prior ops since they were performed to support the patient and not just to initiate or discontinue ECMO support? I guess the distinction I'm looking for is do these rules only apply to cannulations and decannulations, or anything while on ECMO (aside from ops using ECMO for bypass)? **Correct, do not include ECMO procedures in the prior operation count. If a mediastinal exploration occurs while a patient is on ECMO post cardiac surgery, the operation type of the mediastinal exploration is ECMO but should still be counted as an unplanned cardiac reoperation in the complications.**

Long Name:	Number of Prior CPB Cardiothoracic Operations	*SeqNo:*	1100
Short Name:	**PrvCtOpN**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate how many cardiothoracic surgical procedures were performed on this patient, prior to this surgical procedure, utilizing CPB (do not include CPB support or ECMO support).		
Low Value:	0		
High Value:	50		
Intent / Clarification:			
Data Source:	User		
Format:	Integer		
ParentLongName:	Operation Type		
ParentShortName:	**OpType**		
ParentHarvestCodes:	1|2|9|3|4|6|7|777		

Parent Value: = "CPB Cardiovascular", "No CPB Cardiovascular", "CPB Non-Cardiovascular", "ECMO", "Thoracic", "VAD Operation Done With CPB", "VAD Operation Done Without CPB." or "Other"

Long Name: Cross Clamp Time - No CPB
Short Name: **XClampTmNC**
Section Name: Operative
DBTableName: Operations
Definition: Indicate the total number of minutes the aorta is completely cross-clamped during this surgical procedure. Enter zero if no cross-clamp was used.
Low Value: 0
High Value: 600

SeqNo: 1130
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 2
Parent Value: = "No CPB Cardiovascular"

Long Name: CPB Blood Prime
Short Name: **CPBPrimed**
Section Name: Operative
DBTableName: Operations
Definition: Indicate whether the CPB circuit was primed with blood other than the patient's own blood.

SeqNo: 1140
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|9|6
Parent Value: = "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	PRBC	*SeqNo:*	1141
Short Name:	**PRBC**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the number of mls of PRBC used for CPB blood prime.		
Low Value:	0		
High Value:	5000		

Intent / Clarification:

Data Source:	User
Format:	Integer
ParentLongName:	CPB Blood Prime
ParentShortName:	**CPBPrimed**
ParentHarvestCodes:	1
Parent Value:	= "Yes"

Long Name:	FFP	*SeqNo:*	1142
Short Name:	**FFP**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the number of mls of FFP used for CPB blood prime.		
Low Value:	0		
High Value:	5000		

Intent / Clarification:

Data Source:	User
Format:	Integer
ParentLongName:	CPB Blood Prime
ParentShortName:	**CPBPrimed**
ParentHarvestCodes:	1
Parent Value:	= "Yes"

Long Name:	Whole Blood	*SeqNo:*	1143
Short Name:	**WholeBlood**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the number of mls of whole blood used for CPB blood prime.		
Low Value:	0		

High Value: 5000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: CPB Blood Prime
ParentShortName: **CPBPrimed**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Cardiopulmonary Bypass Time
Short Name: **CPBTm**
Section Name: Operative
DBTableName: Operations
Definition: Indicate the total number of minutes that systemic return is diverted into the cardiopulmonary bypass (CPB) circuit and returned to the systemic system. This time period (Cardiopulmonary Bypass Time) includes all periods of cerebral perfusion and sucker bypass. This time period (Cardiopulmonary Bypass Time) excludes any circulatory arrest and modified ultrafiltration periods. If more than one period of CPB is required during the surgical procedure, the sum of all the CPB periods will equal the total number of CPB minutes. Enter zero if cardiopulmonary bypass technique was not used.

SeqNo: 1150
Core: Yes
Harvest: Yes

Low Value: 0
High Value: 999

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|9|6
Parent Value: = "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Long Name: Cross Clamp Time - CPB
Short Name: **XClampTm**
Section Name: Operative
DBTableName: Operations
Definition: Indicate the total number of minutes that the coronary circulation is mechanically isolated from systemic circulation, either by an aortic cross clamp or systemic circulatory arrest.

SeqNo: 1160
Core: Yes
Harvest: Yes

This time period (Cross Clamp Time) includes all intervals of intermittent or continuous cardioplegia administration. If more than one cross clamp period is required during this surgical procedure, the sum of the cross clamp periods is equal to the total number of cross clamp minutes. Enter zero if the coronary circulation was never mechanically isolated from systemic circulation, either by an aortic cross clamp or systemic circulatory arrest. For the following two operations:
(1) “Transplant, Heart”, and (2) “Transplant, Heart and lung”, the field “Cross Clamp Time” will be defined as the cross clamp time of the donor heart. Therefore, these two operations represent the only operations where the field “Cross Clamp Time” can be greater than the field “Cardiopulmonary Bypass Time”.

Low Value: 0
High Value: 600

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|9|6
Parent Value: = "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Long Name: Circulatory Arrest Time
Short Name: **DHCATm**
Section Name: Operative
DBTableName: Operations
Definition: Indicate the total number of minutes of complete cessation of blood flow to the patient. This time period (Circulatory Arrest Time) excludes any periods of cerebral perfusion. If more than one period of circulatory arrest is required during this surgical procedure, the sum of these periods is equal to the total duration of circulatory arrest. Enter zero if circulatory arrest technique was not used.

SeqNo: 1170
Core: Yes
Harvest: Yes

Low Value: 0
High Value: 200

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|9|6

Parent Value: = "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Long Name: Induced Fibrillation
Short Name: **InducedFib**
Section Name: Operative
DBTableName: Operations
Definition: Indicate whether ventricular fibrillation was intentionally induced during this procedure.

SeqNo: 1175
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|9|6
Parent Value: = "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Induced Fibrillation Time - Minutes
Short Name: **InducedFibTmMin**
Section Name: Operative
DBTableName: Operations
Definition: Indicate the total number of whole minutes of intentionally induced ventricular fibrillation. This time period includes all intervals of intermittent or continuously induced fibrillation. If more than one fibrillation period is required during this surgical procedure, the total number of minutes and seconds is equal to the sum of the individual periods.

SeqNo: 1176
Core: Yes
Harvest: Yes

Low Value: 1
High Value: 360

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Induced Fibrillation

ParentShortName: **InducedFib**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Induced Fibrillation Time - Seconds
Short Name: **InducedFibTmSec**
Section Name: Operative
DBTableName: Operations
Definition: Indicate the number of additional seconds of intentionally induced ventricular fibrillation. This time period includes all intervals of intermittent or continuously induced fibrillation. If more than one fibrillation period is required during this surgical procedure, the total number of minutes and seconds is equal to the sum of the individual periods.

SeqNo: 1177
Core: Yes
Harvest: Yes

Low Value: 0
High Value: 59

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Induced Fibrillation
ParentShortName: **InducedFib**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Patient Temperature Monitoring Site - Bladder
Short Name: **TempSiteBla**
Section Name: Operative
DBTableName: Operations
Definition: Indicate whether the bladder monitoring site was utilized during this procedure to determine lowest and highest patient temperature during cardiopulmonary bypass.

SeqNo: 1180
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|9|6
Parent Value: = "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Lowest Core Temperature - Bladder
Short Name: **LowCTmpBla**
Section Name: Operative
DBTableName: Operations
Definition: Indicate the lowest temperature (Celsius) achieved during cardiopulmonary bypass as recorded using the bladder monitoring site.
Low Value: 1.0
High Value: 37.0

SeqNo: 1190
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Real

ParentLongName: Patient Temperature Monitoring Site - Bladder
ParentShortName: **TempSiteBla**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Patient Temperature Monitoring Site - Esophageal
Short Name: **TempSiteEso**
Section Name: Operative
DBTableName: Operations
Definition: Indicate whether the esophageal monitoring site was utilized during this procedure to determine lowest and highest patient temperature during cardiopulmonary bypass.

SeqNo: 1200
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|9|6
Parent Value: = "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Lowest Core Temperature - Esophageal
Short Name: **LowCTmpEso**
Section Name: Operative
DBTableName: Operations
Definition: Indicate the lowest temperature (Celsius) achieved during cardiopulmonary bypass as recorded using the esophageal monitoring site.
Low Value: 1.0
High Value: 37.0

SeqNo: 1210
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Real

ParentLongName: Patient Temperature Monitoring Site - Esophageal
ParentShortName: **TempSiteEso**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Patient Temperature Monitoring Site - Nasopharyngeal
Short Name: **TempSiteNas**
Section Name: Operative
DBTableName: Operations
Definition: Indicate whether the nasopharyngeal monitoring site was utilized during this procedure to determine lowest and highest patient temperature during cardiopulmonary bypass.
Low Value: 1.0
High Value: 37.0

SeqNo: 1220
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|9|6
Parent Value: = "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Patient Temperature Monitoring Site - Nasopharyngeal	*SeqNo:*	1230
Short Name:	**LowCTmpNas**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the lowest temperature (Celsius) achieved during cardiopulmonary bypass as recorded using the nasopharyngeal monitoring site.		
Low Value:	1.0		
High Value:	37.0		

Intent / Clarification:

Data Source:	User
Format:	Real
ParentLongName:	Patient Temperature Monitoring Site - Nasopharyngeal
ParentShortName:	**TempSiteNas**
ParentHarvestCodes:	1
Parent Value:	= "Yes"

Long Name:	Patient Temperature Monitoring Site - Rectal	*SeqNo:*	1240
Short Name:	**TempSiteRec**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the rectal monitoring site was utilized during this procedure to determine lowest and highest patient temperature during cardiopulmonary bypass.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Operation Type
ParentShortName:	**OpType**
ParentHarvestCodes:	1|9|6
Parent Value:	= "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Lowest Core Temperature - Rectal	*SeqNo:*	1250
Short Name:	**LowCTmpRec**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the lowest temperature (Celsius) achieved during cardiopulmonary bypass as recorded using the rectal monitoring site.		
Low Value:	1.0		
High Value:	37.0		

Intent / Clarification:

Data Source:	User
Format:	Real
ParentLongName:	Patient Temperature Monitoring Site - Rectal
ParentShortName:	**TempSiteRec**
ParentHarvestCodes:	1
Parent Value:	= "Yes"

Long Name:	Patient Temperature Monitoring Site - Tympanic	*SeqNo:*	1260
Short Name:	**TempSiteTym**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the tympanic monitoring site was utilized during this procedure to determine lowest and highest patient temperature during cardiopulmonary bypass.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Operation Type
ParentShortName:	**OpType**
ParentHarvestCodes:	1|9|6
ParentValues:	= "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Lowest Core Temperature - Tympanic	*SeqNo:*	1270
Short Name:	**LowCTmpTym**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the lowest temperature (Celsius) achieved during cardiopulmonary bypass as recorded using the tympanic monitoring site.		
Low Value:	1.0		
High Value:	37.0		

Intent / Clarification:

Data Source:	User
Format:	Real
ParentLongName:	Patient Temperature Monitoring Site - Tympanic
ParentShortName:	**TempSiteTym**
ParentHarvestCodes:	1
Parent Value:	= "Yes"

Long Name:	Patient Temperature Monitoring Site - Other	*SeqNo:*	1280
Short Name:	**TempSiteOth**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether any other monitoring site was utilized during this procedure to determine lowest and highest patient temperature during cardiopulmonary bypass.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Operation Type
ParentShortName:	**OpType**
ParentHarvestCodes:	1|9|6
Parent Value:	= "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Lowest Core Temperature - Other	*SeqNo:*	1290
Short Name:	**LowCTmpOth**	*Core:*	Yes

Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the lowest temperature (Celsius) achieved during cardiopulmonary bypass as recorded using the other monitoring site.		
Low Value:	1.0		
High Value:	37.0		
Intent / Clarification:			
Data Source:	User		
Format:	Real		
ParentLongName:	Patient Temperature Monitoring Site - Other		
ParentShortName:	**TempSiteOth**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Cooling Time Prior To Initiation of Hypothermic Circulatory Arrest Or Selective Cerebral Perfusion	*SeqNo:*	1301
Short Name:	**CoolTimePrior**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the cooling time prior to initiation of hypothermic circulatory arrest or selective cerebral perfusion.		
Low Value:	0		
High Value:	180		
Intent / Clarification:			
Data Source:	User		
Format:	Integer		
ParentLongName:	Operation Type		
ParentShortName:	**OpType**		
ParentHarvestCodes:	1|9|6		
Parent Value:	= "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"		

<u>February 2019:</u> There is a new field in 3.41 that asks the below question: “Cooling Time Prior to Initiation of Hypothermic Circulatory Arrest or Selective Cerebral Perfusion: ____ Rewarm Time: _____Minutes Cool” Time Definition: Indicate the cooling time prior to initiation of hypothermic circulatory arrest or selective cerebral perfusion. (It does not grey out in my software as in a parent/child field). Rewarm Definition: Indicate the number of minutes from the initiation of rewarming until the target rewarming temperature is achieved. My question is, if the patient requires neither hypothermic circ arrest nor selective cerebral perfusion, should the space remain blank or should we put a zero in the field? And does the rewarm question now relate to hypothermic circ arrest or cerebral perfusion since it is now placed right under the cool time/circ arrest/cerebral perfusion field? Leave it blank or zero if neither used? **Collect Cooling and rewarming time on all cases where CPB is used. Cooling time should include the time of active cooling up to the point of initiation of hypothermic circulatory arrest or selective cerebral perfusion if**

these modalities were used or to the patient's lowest desired temperature. Ignore phrase in parentheses from the data collection form.

Long Name:	Rewarming Time	*SeqNo:*	1310
Short Name:	**RewarmTime**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the number of minutes from the initiation of rewarming until the target rewarming temperature is achieved.		
Low Value:	0		
High Value:	500		
Intent / Clarification:			
Data Source:	User		
Format:	Integer		
ParentLongName:	Operation Type		
ParentShortName:	**OpType**		
ParentHarvestCodes:	1|9|6		
Parent Value:	= "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"		

Long Name:	Cerebral Perfusion Utilized	*SeqNo:*	1320
Short Name:	**CPerfUtil**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether cerebral perfusion was performed.		
Intent / Clarification:			
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Operation Type		
ParentShortName:	**OpType**		
ParentHarvestCodes:	1|9|6		
Parent Value:	= "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"		

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Cerebral Perfusion Time	*SeqNo:*	1330
Short Name:	**CPerfTime**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the total number of minutes cerebral perfusion was performed. This would include antegrade or retrograde cerebral perfusion strategies.		
Low Value:	1		
High Value:	999		
Intent / Clarification:			
Data Source:	User		
Format:	Integer		
ParentLongName:	Cerebral Perfusion Utilized		
ParentShortName:	**CPerfUtil**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Cerebral Perfusion Cannulation Site - Innominate Artery	*SeqNo:*	1340
Short Name:	**CPerfCanInn**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the innominate artery cannulation site was utilized for cerebral perfusion.		
Intent / Clarification:			
Data Source:	User		
Format:	Real		
ParentLongName:	Cerebral Perfusion Utilized		
ParentShortName:	**CPerfUtil**		
ParentHarvestCodes:	1		
ParentValues:	= "Yes"		

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Cerebral Perfusion Cannulation Site - Right Subclavian	*SeqNo:*	1350

Short Name:	**CPerfCanRSub**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the right subclavian cannulation site was utilized for cerebral perfusion.		

Intent / Clarification:

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

ParentLongName: Cerebral Perfusion Utilized
ParentShortName: **CPerfUtil**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Cerebral Perfusion Cannulation Site - Right Axillary Artery	*SeqNo:*	1360
Short Name:	**CPerfCanRAx**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the right axillary artery cannulation site was utilized for cerebral perfusion.		

Intent / Clarification:

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

ParentLongName: Cerebral Perfusion Utilized
ParentShortName: **CPerfUtil**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Cerebral Perfusion Cannulation Site - Right Carotid Artery	*SeqNo:*	1370
Short Name:	**CPerfCanRCar**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the right carotid artery cannulation site was utilized for cerebral perfusion.		

Intent / Clarification:

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

ParentLongName: Cerebral Perfusion Utilized
ParentShortName: **CPerfUtil**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Cerebral Perfusion Cannulation Site - Left Carotid Artery	*SeqNo:*	1380
Short Name:	**CPerfCanLCar**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the left carotid artery cannulation site was utilized for cerebral perfusion.		

Intent / Clarification:

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

ParentLongName: Cerebral Perfusion Utilized
ParentShortName: **CPerfUtil**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Cerebral Perfusion Cannulation Site - Superior Vena Cava	*SeqNo:*	1390
Short Name:	**CPerfCanSVC**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the superior vena cava cannulation site was utilized for cerebral perfusion.		

Intent / Clarification:

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

ParentLongName: Cerebral Perfusion Utilized
ParentShortName: **CPerfUtil**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Cerebral Perfusion Periods	*SeqNo:*	1400
Short Name:	**CPerfPer**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the number of periods of cerebral perfusion. For example, if the cerebral perfusion time is a total of 20 minutes and the patient received 4 separate 5 minute periods of cerebral perfusion, the cerebral perfusion periods would be 4.		
Low Value:	1		
High Value:	20		

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Cerebral Perfusion Utilized
ParentShortName: **CPerfUtil**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name:	Cerebral Perfusion Flow Rate	*SeqNo:*	1410
Short Name:	**CPerfFlow**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the cerebral perfusion flow rate in milliliters per kilogram (mL/kg) per minute.		
Low Value:	1		
High Value:	999		
Intent / Clarification:			
Data Source:	User		
Format:	Integer		
ParentLongName:	Cerebral Perfusion Utilized		
ParentShortName:	**CPerfUtil**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Cerebral Perfusion Temperature	*SeqNo:*	1420
Short Name:	**CPerfTemp**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the perfusate temperature (Celsius) maintained during cerebral perfusion.		
Low Value:	1		
High Value:	37		
Intent / Clarification:			
Data Source:	User		
Format:	Integer		
ParentLongName:	Cerebral Perfusion Utilized		
ParentShortName:	**CPerfUtil**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Arterial Blood Gas Management During Cooling	*SeqNo:*	1430
Short Name:	**ABldGasMgt**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the arterial blood gas management strategy utilized during the cooling phase of cardiopulmonary bypass prior to initiation of circulatory arrest or cerebral perfusion.		

Intent / Clarification:

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

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|9|6
ParentValues: = "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Harvest Codes:

Code:	Value:
1	Alpha STAT
2	pH STAT
3	pH STAT cooling/Alpha STAT rewarming
4	Other combination

Long Name: Hematocrit Prior to Circulatory Arrest or Cerebral Perfusion
Short Name: **HCTPriCircA**
Section Name: Operative
DBTableName: Operations
Definition: Indicate the last hematocrit value prior to initiation of circulatory arrest or cerebral perfusion.
Low Value: 5.0
High Value: 70.0

SeqNo: 1440
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Real

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|9|6
Parent Value: = "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Long Name: Cardioplegia Type
Short Name: **CplegiaType**
Section Name: Operative

SeqNo: 1460
Core: Yes
Harvest: Yes

DBTableName: Operations
Definition: Indicate the type of cardioplegia used.

Intent / Clarification:

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

ParentLongName: Cardioplegia Delivery
ParentShortName: **CplegiaDeliv**
ParentHarvestCodes: 2|3|4
ParentValues: = "Antegrade", "Retrograde" or "Both"
Harvest Codes:

Code:	Value:
1	Blood
2	Crystalloid
3	Both
4	Other

March 2019: Our perfusion team was wondering if del Nido mixed 1 part blood to 4 parts crystalloid is blood or both? At one point we were under the impression that if it had any blood then the answer was blood. **This should be coded as blood.**
May 2019: Under Cardioplegia Delivery (Cong_STS_32cardioplegia solution) when del Nido is used by perfusion in our institute it is always mixed with blood. Should the cardioplegia type not be" both" instead of "blood"? The question below is in the STS training manual for 3.41 version. Please qualify. March 2019: Our perfusion team was wondering if del Nido mixed 1 part blood to 4 parts crystalloid is blood or both? At one point we were under the impression that if it had any blood then the answer was blood. This should be coded blood. **If there is *any* blood, it is considered blood. If there is no blood, it is crystalloid. If one dose is blood and one dose is crystalloid, then both is chosen.**

Long Name: Cardioplegia Solution
Short Name: **CplegiaSolution**
Section Name: Operative
DBTableName: Operations
Definition: Indicate the cardioplegia solution used during this procedure.

SeqNo: 1470
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Cardioplegia Delivery
ParentShortName: **CplegiaDeliv**
ParentHarvestCodes: 2|3|4
ParentValues: = "Antegrade", "Retrograde" or "Both"
Harvest Codes:

Code:	Value:
1	del Nido

2	Custodiol/Bretchneider (HTK)
3	Buckberg
4	Plegisol/St. Thomas
5	University of Wisconsin
6	Celsior
7	Roe's Solution
8	Microplegia with potassium
9	Microplegia with Adenocaine
90	Other

Long Name: Cardioplegia Number Of Doses — *SeqNo:* 1490
Short Name: **CplegiaDose** — *Core:* Yes
Section Name: Operative — *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the number of doses of cardioplegia administered.
Low Value: 1
High Value: 50

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Cardioplegia Delivery
ParentShortName: **CardioplegiaDeliv**
ParentHarvestCodes: 2|3|4
Parent Value: = "Antegrade", "Retrograde" or "Both"

Long Name: Hematocrit - First after initiating CPB — *SeqNo:* 1640
Short Name: **HCTFirst** — *Core:* Yes
Section Name: Operative — *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the first hematocrit measured after initiating CPB.
Low Value: 5.0
High Value: 70.0

Intent / Clarification:

Data Source: User
Format: Real

ParentLongName: Operation Type
ParentShortName: **OpType**

ParentHarvestCodes: 1|9|6
Parent Value: = "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Long Name: Hematocrit - Last Measured During CPB
SeqNo: 1650
Short Name: **HCTLast**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate the last hematocrit measured during CPB.
Low Value: 5.0
High Value: 70.0

Intent / Clarification:

Data Source: User
Format: Real

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|9|6
Parent Value: = "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Long Name: Hematocrit - Post-CPB and Post-Protamine
SeqNo: 1660
Short Name: **HCTPost**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate the hematocrit measured post-CPB following protamine administration.
Low Value: 5.0
High Value: 70.0

Intent / Clarification:

Data Source: User
Format: Real

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|9|6
Parent Value: = "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Long Name:	Ultrafiltration Performed	*SeqNo:*	1671
Short Name:	**UltrafilPerform**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether ultra-filtration was performed.		

Intent / Clarification:

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

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|9|6
ParentValues: = "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Ultrafiltration Performed When	*SeqNo:*	1672
Short Name:	**UltraFilPerfWhen**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate when ultra-filtration was performed.		

Intent / Clarification:

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

ParentLongName: Ultrafiltration Performed
ParentShortName: **UltrafilPerform**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	During CPB,
2	After CPB, MUF
3	During and after CPB

Long Name:	Pulmonary Vascular Resistance Measured Within 6 Months	*SeqNo:*	1770
Short Name:	**PVRMeas**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the Pulmonary Vascular Resistance (PVR) in Woods units was measured by cardiac catheterization within 6 months prior to this operation.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Operation Type
ParentShortName:	**OpType**
ParentHarvestCodes:	1|2|9|3|4|6|7|777
ParentValues:	= "CPB Cardiovascular", "No CPB Cardiovascular", "CPB Non-Cardiovascular", "ECMO", "Thoracic", "VAD Operation Done With CPB", "VAD Operation Done Without CPB." or "Other"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Pulmonary Vascular Resistance	*SeqNo:*	1780
Short Name:	**PVR**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	If the patient's weight is greater than or equal to 40 kilograms, indicate the pulmonary vascular resistance (in Wood units) as measured by cardiac catheterization.		
Low Value:	0.0		
High Value:	100.0		

Intent / Clarification:

Data Source:	User
Format:	Real
ParentLongName:	
ParentShortName:	**PVRMeas|WeightKg**
ParentHarvestCodes:	1|>=40
Parent Value:	1|>=40

March 2019: If the patient had a cath within 6 months of the surgical procedure, however PVR was not calculated in Woods units, would the parent question answer to "Did the patient have PVR measured?" be no? **Indicate that it wasn't measured.**

Long Name:	Pulmonary Vascular Resistance Index PVRI	*SeqNo:*	1790
Short Name:	**PVR**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	If the patient's weight is less than 40 kilograms, indicate the Pulmonary Vascular Resistance Index (in Wood units x m2) as measured by cardiac catheterization.		
Low Value:	0.0		
High Value:	100.0		

Intent / Clarification:

Data Source:	User
Format:	Real
ParentLongName:	
ParentShortName:	**PVRMeas|WeightKg**
ParentHarvestCodes:	1|>=40
Parent Value:	1|>=40

Long Name:	Anticoagulant Used	*SeqNo:*	1792
Short Name:	**AnticoagUsed**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether an anticoagulant was used during the procedure.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Operation Type
ParentShortName:	**OpType**
ParentHarvestCodes:	1|9|6
Parent Value:	= "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No
3	Unknown

May 2019: Anticoagulant used: If the Perfusionist is using heparin in the pump prime and I cannot see that any other heparin is utilized during the case, am I answering yes to the question, anticoagulant used during the procedure? **Any heparin given during the procedure would be coded as a 'yes' for anticoagulant**.

Long Name:	Anticoagulant Used - Unfractionated Heparin	*SeqNo:*	1793
Short Name:	**AnticoagUnfHep**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether unfractionated heparin was used during the procedure.		

Intent / Clarification:

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

ParentLongName: Anticoagulant Used
ParentShortName: **AnticoagUsed**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Anticoagulant Used - Argatroban	*SeqNo:*	1794
Short Name:	**AnticoagArg**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Argatroban was used during the procedure.		

Intent / Clarification:

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

ParentLongName: Anticoagulant Used
ParentShortName: **AnticoagUsed**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes

2	No

Long Name:	Anticoagulant Used - Bivaluridin	*SeqNo:*	1795
Short Name:	**AnticoagBival**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Bivaluridin was used during the procedure.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Anticoagulant Used
ParentShortName:	**AnticoagUsed**
ParentHarvestCodes:	1
ParentValues:	= "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Anticoagulant Used - Other	*SeqNo:*	1796
Short Name:	**AnticoagOth**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether another anticoagulant was used during the procedure.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Anticoagulant Used
ParentShortName:	**AnticoagUsed**
ParentHarvestCodes:	1
ParentValues:	= "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Blood and Blood-Related Products

Long Name:	Blood Type	*SeqNo:*	1850
Short Name:	**BloodType**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the patient's blood type.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Operation Type
ParentShortName:	**OpType**
ParentHarvestCodes:	1|9|6
ParentValues:	= "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Harvest Codes:

Code:	Value:
1	A
2	B
3	O
4	AB
5	Unknown

Long Name:	Rhesus Factor	*SeqNo:*	1860
Short Name:	**Rh**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the patient's Rh factor.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Operation Type
ParentShortName:	**OpType**
ParentHarvestCodes:	1|9|6
ParentValues:	= "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Harvest Codes:

Code:	Value:
1	Positive
2	Negative
3	Unknown

Long Name:	Autologous Transfusion	*SeqNo:*	2461
Short Name:	**AutologousTrans**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the patient was transfused with any autologous blood products that had been collected prior to surgery (e.g. self-donated).		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Operation Type
ParentShortName:	**OpType**
ParentHarvestCodes:	1|9|6
ParentValues:	= "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

May 2019: I have a questions regarding phlebotomized blood. On our older patients that we are going to do bloodless surgery, we phlebotomize blood if the HCT is high enough once we go on bypass and give it back if needed after coming off bypass. Do we say "Yes" to Autologous blood? The training manual definition of Autologous blood is donated "prior to surgery". Is there a place to document how much was given back? I have looked at the training manual and can't find any reference to phlebotomized blood. **Yes, this is autologous blood and there is not a field for collecting the amount given back to the patient.**

Long Name:	Cell Saver/Cell Salvage in mL	*SeqNo:*	2463
Short Name:	**CellSavSalML**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the volume in mL of cell saver / cell salvage used for blood conservation during the procedure.		
Low Value:	0		
High Value:	10000		

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|9|6
Parent Value: = "CPB Cardiovascular", "CPB Non-Cardiovascular" or "VAD Operation Done With CPB"

March 2019: Version 3.41 is now requesting the volume of Cell Saver blood infused. Is this the volume infused only in the operating room, or does it also include the volume infused after admission to the ICU? **Include OR and ICU volumes.**

Long Name: Transfusion of Non-Autologous Blood Products During or After Procedure
SeqNo: 2825
Short Name: **TransfusBldProdAny**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether the patient received non-autologous (self-donated) blood products during or after this procedure.

Intent / Clarification:

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

Harvest Codes:

Code:	*Value:*
1	Yes
2	No
3	Patient / family refused

May 2019: Are we still collecting blood for multiple surgeries like we did in version 3.3, where all blood goes on the index op and the rest of the operations are marked as no? Forgive me if this has been mentioned, but I couldn't find it in the specs or FAQs. **Recommendation is that all blood units go to the index case but realize that some organizations are not doing it this way. Just be consistent.**
June 2019: Does the volume included in this section include what is given as part of the CPB blood prime? **Yes, this includes blood in the prime.**

Long Name: Transfusion of Non-Autologous Blood Products Initiated Before Leaving OR
SeqNo: 2830
Short Name: **TransfusBldProdBefore**
Core: Yes

Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate whether the patient received non-autologous (self-donated) blood products during or after this procedure.

Intent / Clarification:

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

ParentLongName: Transfusion of Non-Autologous Blood Products During or After Procedure
ParentShortName: **TransfusBldProdAny**
ParentHarvestCodes: 1
Parent Value: = "Yes"
Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Blood Products Transfused - Packed Red Blood Cells (PRBC) in mL - Initiated Before Leaving OR *SeqNo:* 2832
Short Name: **BldProdPRBCMLBef** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the number of mL of Packed Red Blood Cells (PRBC) the patient received during the procedure (including CPB PRIME).
Low Value: 0
High Value: 10000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Transfusion of Non-Autologous Blood Products Initiated Before Leaving OR
ParentShortName: **TransfusBldProdBefore**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Blood Products Transfused - Fresh Frozen Plasma (FFP) in mL - Initialted Before Leaving OR *SeqNo:* 2833
Short Name: **BldProdFFPMLBef** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations

Definition:	Indicate the number of mL of Fresh Frozen Plasma (FFP) the patient received during the procedure (including CPB PRIME).
Low Value:	0
High Value:	10000
Intent / Clarification:	
Data Source:	User
Format:	Integer
ParentLongName:	Transfusion of Non-Autologous Blood Products Initiated Before Leaving OR
ParentShortName:	**TransfusBldProdBefore**
ParentHarvestCodes:	1
Parent Value:	= "Yes"

Long Name:	Blood Products Transfused - Fresh Plasma in mL - Initiated Before Leaving OR	*SeqNo:*	2834
Short Name:	**BldProdFreshPMLBef**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the number of mL of Fresh Plasma (<72 Hours Post-collection, never frozen) the patient received during the procedure (including CPB PRIME).		
Low Value:	0		
High Value:	10000		
Intent / Clarification:			
Data Source:	User		
Format:	Integer		
ParentLongName:	Transfusion of Non-Autologous Blood Products Initiated Before Leaving OR		
ParentShortName:	**TransfusBldProdBefore**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Blood Products Transfused - Platelets in mL - Initiated Before Leaving OR	*SeqNo:*	2836
Short Name:	**BldProdPlatMLBef**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the number of mL of Individual Platelets, including concentrated, the patient received during the procedure (including CPB PRIME).		
Low Value:	0		

High Value: 10000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Transfusion of Non-Autologous Blood Products Initiated Before Leaving OR
ParentShortName: **TransfusBldProdBefore**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Blood Products Transfused - Cryoprecipitate in mL - Initiated Before Leaving OR
SeqNo: 2837
Short Name: **BldProdCryoMLBef**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate the number of mL of Cryoprecipitate the patient received during the procedure (including CPB PRIME).
Low Value: 0
High Value: 10000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Transfusion of Non-Autologous Blood Products Initiated Before Leaving OR
ParentShortName: **TransfusBldProdBefore**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Blood Products Transfused - Fresh Whole Blood in mL - Initiated Before Leaving OR
SeqNo: 2838
Short Name: **BldProdFreshWBMLBef**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate the number of mL of Fresh Whole Blood (< 72 Hours post-collection) the patient received during the procedure (including CPB PRIME).
Low Value: 0
High Value: 10000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Transfusion of Non-Autologous Blood Products Initiated Before Leaving OR
ParentShortName: **TransfusBldProdBefore**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Blood Products Transfused - Whole Blood in mL - Initiated Before Leaving OR
SeqNo: 2839
Short Name: **BldProdWBMLBef**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate the number of mL of Whole Blood (> 72 hours post-collection) the patient received during the procedure (including CPB PRIME).
Low Value: 0
High Value: 10000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Transfusion of Non-Autologous Blood Products Initiated Before Leaving OR
ParentShortName: **TransfusBldProdBefore**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Transfusion of Blood Products Within 24 Hours Post-Procedure
SeqNo: 2840
Short Name: **TransfusBldProdLT24**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether the patient received blood products within 24 hours post-procedure.

Intent / Clarification: This would be blood transfused AFTER anesthesia end time for this procedure up to 24 hours after arrival in the ICU.

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

ParentLongName: Transfusion of Non-Autologous Blood Products Initiated Before Leaving OR

ParentShortName: **TransfusBldProdBefore**
ParentHarvestCodes: 1
Parent Value: = "Yes"
Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Blood Products Transfused - Packed Red Blood Cells (PRBC) in mL - Transfused Within 24 Hours Post-Procedure
SeqNo: 2841
Short Name: **BldProdPRBCMLLT24**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate the number of mL of Packed Red Blood Cells (PRBC) the patient received within 24 hours post-procedure.
Low Value: 0
High Value: 10000

Intent / Clarification: This would be blood transfused AFTER anesthesia end time for this procedure up to 24 hours after arrival in the ICU.

Data Source: User
Format: Integer

ParentLongName: Transfusion of Blood Products Within 24 Hours Post-Procedure
ParentShortName: **TransfusBldProdLT24**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Blood Products Transfused - Fresh Frozen Plasma (FFP) in mL - Transfused Within 24 Hours Post-Procedure
SeqNo: 2842
Short Name: **BldProdFFPMLLT24**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate the number of mL of Fresh Frozen Plasma (FFP) the patient received within 24 hours post-procedure.
Low Value: 0
High Value: 10000

Intent / Clarification: This would be blood transfused AFTER anesthesia end time for this procedure up to 24 hours after arrival in the ICU.

Data Source: User
Format: Integer

ParentLongName: Transfusion of Blood Products Within 24 Hours Post-Procedure

ParentShortName: **TransfusBldProdLT24**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Blood Products Transfused - Fresh Plasma in mL - Transfused Within 24 Hours Post- Procedure
SeqNo: 2843
Short Name: **BldProdFreshPMLLT24**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate the number of mL of Fresh Plasma (<72 Hours Post-collection, never frozen) the patient received within 24 hours post-procedure.

Low Value: 0
High Value: 10000

Intent / Clarification: This would be blood transfused AFTER anesthesia end time for this procedure up to 24 hours after arrival in the ICU.

Data Source: User
Format: Integer

ParentLongName: Transfusion of Blood Products Within 24 Hours Post-Procedure
ParentShortName: **TransfusBldProdLT24**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Blood Products Transfused - Platelets in mL - Transfused Within 24 Hours Post- Procedure
SeqNo: 2845
Short Name: **BldProdPlatMLLT24**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate the number of mL of Individual Platelets, including concentrated, the patient received within 24 hours post-procedure.

Low Value: 0
High Value: 10000

Intent / Clarification: This would be blood transfused AFTER anesthesia end time for this procedure up to 24 hours after arrival in the ICU.

Data Source: User
Format: Integer

ParentLongName: Transfusion of Blood Products Within 24 Hours Post-Procedure
ParentShortName: **TransfusBldProdLT24**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name:	Blood Products Transfused - Cryoprecipitate in mL - Transfused Within 24 Hours Post-Procedure	*SeqNo:*	2846
Short Name:	**BldProdCryoMLLT24**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the number of mL of Cryoprecipitate the patient received within 24 hours post-procedure.		
Low Value:	0		
High Value:	10000		
Intent / Clarification:	This would be blood transfused AFTER anesthesia end time for this procedure up to 24 hours after arrival in the ICU.		
Data Source:	User		
Format:	Integer		
ParentLongName:	Transfusion of Blood Products Within 24 Hours Post-Procedure		
ParentShortName:	**TransfusBldProdLT24**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Blood Products Transfused - Fresh Whole Blood in mL - Transfused Within 24 Hours Post-Procedure	*SeqNo:*	2847
Short Name:	**BldProdFreshWBMLLT24**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the number of mL of Fresh Whole Blood (< 72 Hours post-collection) the patient received within 24 hours post-procedure.		
Low Value:	0		
High Value:	10000		
Intent / Clarification:	This would be blood transfused AFTER anesthesia end time for this procedure up to 24 hours after arrival in the ICU.		
Data Source:	User		
Format:	Integer		
ParentLongName:	Transfusion of Blood Products Within 24 Hours Post-Procedure		
ParentShortName:	**TransfusBldProdLT24**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Blood Products Transfused - Whole Blood in mL - Transfused Within 24 Hours Post- Procedure	*SeqNo:*	2848
Short Name:	**BldProdWBMLLT24**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the number of mL of Whole Blood (> 72 hours post-collection) the patient received within 24 hours post-procedure.		
Low Value:	0		
High Value:	10000		
Intent / Clarification:	This would be blood transfused AFTER anesthesia end time for this procedure up to 24 hours after arrival in the ICU.		
Data Source:	User		
Format:	Integer		
ParentLongName:	Transfusion of Blood Products Within 24 Hours Post-Procedure		
ParentShortName:	**TransfusBldProdLT24**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Transfusion of Blood Products After 24 Hours Post-Procedure	*SeqNo:*	2849
Short Name:	**TransfusBldProdGT24**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the patient received blood products after 24 hours post-procedure.		
Intent / Clarification:	Intent is to capture blood transfusion for this procedure occurring more than 24 hours after arrival into the ICU.		
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Transfusion of Non-Autologous Blood Products Initiated Before Leaving OR		
ParentShortName:	**TransfusBldProdBefore**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		
Harvest Codes:			

Code:	*Value:*
1	Yes
2	No

Long Name:	Blood Products Transfused - Packed Red Blood Cells (PRBC) in mL - Transfused After 24 Hours Post-Procedure	*SeqNo:*	2850
Short Name:	**BldProdPRBCMLGT24**	*Core:*	Yes

Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the number of mL of Packed Red Blood Cells (PRBC) the patient received after 24 hours post-procedure.		
Low Value: 0			
High Value: 10000			
Intent / Clarification:	Intent is to capture blood transfusion for this procedure occurring more than 24 hours after arrival into the ICU.		
Data Source:	User		
Format:	Integer		
ParentLongName:	Transfusion of Blood Products After 24 Hours Post-Procedure		
ParentShortName:	**TransfusBldProdGT24**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Blood Products Transfused - Fresh Frozen Plasma (FFP) in mL - Transfused After 24 Hours Post-Procedure	*SeqNo:*	2851
Short Name:	**BldProdFFPMLGT24**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the number of mL of Fresh Frozen Plasma (FFP) the patient received after 24 hours post-procedure.		
Low Value: 0			
High Value: 10000			
Intent / Clarification:	Intent is to capture blood transfusion for this procedure occurring more than 24 hours after arrival into the ICU.		
Data Source:	User		
Format:	Integer		
ParentLongName:	Transfusion of Blood Products After 24 Hours Post-Procedure		
ParentShortName:	**TransfusBldProdGT24**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Blood Products Transfused - Fresh Plasma in mL- Transfused After 24 Hours Post- Procedure	*SeqNo:*	2852
Short Name:	**BldProdFreshPMLGT24**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the number of mL of Fresh Plasma (<72 Hours Post-collection, never frozen) the patient received after 24 hours post-procedure.		
Low Value: 0			

High Value: 10000

Intent / Clarification: Intent is to capture blood transfusion for this procedure occurring more than 24 hours after arrival into the ICU.

Data Source: User
Format: Integer

ParentLongName: Transfusion of Blood Products After 24 Hours Post-Procedure
ParentShortName: **TransfusBldProdGT24**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Blood Products Transfused - Platelets in mL - Transfused After 24 Hours Post- Procedure
SeqNo: 2854
Short Name: **BldProdFreshPMLGT24**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate the number of mL of Individual Platelets, including concentrated, the patient received after 24 hours post-procedure.
Low Value: 0
High Value: 10000

Intent / Clarification: To capture blood transfusion for this procedure occurring more than 24 hours after arrival into the ICU.

Data Source: User
Format: Integer

ParentLongName: Transfusion of Blood Products After 24 Hours Post-Procedure
ParentShortName: **TransfusBldProdGT24**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Blood Products Transfused - Cryoprecipitate in mL - Transfused After 24 Hours Post-Procedure
SeqNo: 2855
Short Name: **BldProdCryoMLGT24**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate the number of mL of Cryoprecipitate the patient received after 24 hours post- procedure.
Low Value: 0
High Value: 10000

Intent / Clarification:	To capture blood transfusion for this procedure occurring more than 24 hours after arrival into the ICU.
Data Source:	User
Format:	Integer
ParentLongName:	Transfusion of Blood Products After 24 Hours Post-Procedure
ParentShortName:	**TransfusBldProdGT24**
ParentHarvestCodes:	1
Parent Value:	= "Yes"

Long Name:	Blood Products Transfused - Fresh Whole Blood in mL - Transfused After 24 Hours Post-Procedure	*SeqNo:*	2856
Short Name:	**BldProdFreshWBMLGT24**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the number of mL of Fresh Whole Blood (< 72 Hours post-collection) the patient received after 24 hours post-procedure.		
Low Value:	0		
High Value:	10000		
Intent / Clarification:	To capture blood transfusion for this procedure occurring more than 24 hours after arrival into the ICU.		
Data Source:	User		
Format:	Integer		
ParentLongName:	Transfusion of Blood Products After 24 Hours Post-Procedure		
ParentShortName:	**TransfusBldProdGT24**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Blood Products Transfused - Whole Blood in mL - Transfused After 24 Hours Post- Procedure	*SeqNo:*	2857
Short Name:	**BldProdWBMLGT24**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the number of mL of Whole Blood (> 72 hours post-collection) the patient received after 24 hours post-procedure.		
Low Value:	0		
High Value:	10000		
Intent / Clarification:	To capture blood transfusion for this procedure occurring more than 24 hours after arrival into the ICU.		

Data Source: User
Format: Integer

ParentLongName: Transfusion of Blood Products After 24 Hours Post-Procedure
ParentShortName: **TransfusBldProdGT24**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Directed Donor Units
SeqNo: 2858
Short Name: **DirDonorUnits**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether the patient received any directed donor transfusions during this procedure.

Intent / Clarification:

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

ParentLongName: Transfusion of Non-Autologous Blood Products Initiated Before Leaving OR
ParentShortName: **TransfusBldProdBefore**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Antifibrinolytic Used Intraoperatively
SeqNo: 2859
Short Name: **AntifibUsage**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether antifibrinolytics were used intraoperatively.

Intent / Clarification:

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

Code:	*Value:*
1	Yes
2	No

Long Name:	Epsilon Amino-Caproic Acid (Amicar,EACA) Used	*SeqNo:*	2860
Short Name:	**AntifibEpUse**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether EACA was used.		

Intent / Clarification:

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

ParentLongName: Antifibrinolytic Used Intraoperatively
ParentShortName: **AntifibUsage**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Epsilon Amino-Caproic Acid (Amicar,EACA) Load mg	*SeqNo:*	2861
Short Name:	**AntifibEpLoadMG**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the loading dose in mg of epsilon aminocaproic acid (Amicar) given during this procedure. Enter zero if no loading dose given.		
Low Value:	0		
High Value:	30000		

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Epsilon Amino-Caproic Acid (Amicar,EACA) Used
ParentShortName: **AntifibEpUse**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name:	Epsilon Amino-Caproic Acid (Amicar,EACA) Pump Prime mg	*SeqNo:*	2862
Short Name:	**AntifibEpPrimeMG**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		

Definition: Indicate the pump priming dose in mg of epsilon aminocaproic acid (Amicar) given during this procedure. Enter zero if no pump priming dose given.

Low Value: 0
High Value: 30000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Epsilon Amino-Caproic Acid (Amicar,EACA) Used
ParentShortName: **AntifibEpUse**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: EACA Dosed As mg per ml of Pump Prime *SeqNo:* 2863
Short Name: **AntifibEpPrimeDose** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate whether the Epsilon Amino-Caproic Acid was dosed as mg per ml of Pump Prime.

Intent / Clarification:

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

ParentLongName: Epsilon Amino-Caproic Acid (Amicar,EACA) Pump Prime mg
ParentShortName: **AntifibEpPrimeMG**
ParentHarvestCodes: >0
ParentValues: >0

Harvest Codes:

Code:	Value:
1	Yes
2	No
9	Unknown

Long Name: Epsilon Amino-Caproic Acid (Amicar,EACA) Infusion Rate mg/kg/hr *SeqNo:* 2864
Short Name: **AntifibEpInfRate** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the infusion rate in mg/kg/hour of epsilon aminocaproic acid (Amicar) given during this procedure. Enter zero if no infusion initiated.

Low Value: 0
High Value: 200

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Epsilon Amino-Caproic Acid (Amicar,EACA) Used
ParentShortName: **AntifibEpUse**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Tranexamic Acid Used
Short Name: **AntifibTranexUse**
Section Name: Operative
DBTableName: Operations
Definition: Indicate whether tranexamic acid was used during this procedure.

SeqNo: 2865
Core: Yes
Harvest: Yes

Low Value: 0
High Value: 200

Intent / Clarification:

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

ParentLongName: Antifibrinolytic Used Intraoperatively
ParentShortName: **AntifibUsage**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Tranexamic Acid Load mg
Short Name: **AntifibTranexLoadMG**
Section Name: Operative
DBTableName: Operations
Definition: Indicate the loading dose in mg of tranexamic acid given during this procedure. Enter zero if no loading dose given.

SeqNo: 2866
Core: Yes
Harvest: Yes

Low Value: 0
High Value: 15000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Tranexamic Acid Used
ParentShortName: **AntifibTranexUse**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Tranexamic Acid Pump Prime mg *SeqNo:* 2867
Short Name: **AntifibTranexPrimeMG** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the pump priming dose in mg of tranexamic acid given during this procedure. Enter zero if no pump priming dose given.
Low Value: 0
High Value: 15000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Tranexamic Acid Used
ParentShortName: **AntifibTranexUse**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Tranexamic Dosed As mg per ml of Pump Prime *SeqNo:* 2868
Short Name: **AntifibTranexPrimeDose** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate whether the Tranexamic was dosed as mg per ml of Pump Prime.

Intent / Clarification:

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

ParentLongName: Tranexamic Acid Pump Prime mg
ParentShortName: **AntifibTranexPrimeMG**
ParentHarvestCodes: >0
ParentValues: >0

Harvest Codes:

Code:	Value:
1	Yes
2	No
9	Unknown

Long Name: Tranexamic Acid Infusion Rate mg/kg/hr
SeqNo: 2869
Short Name: **AntifibTranexInfRate**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate the infusion rate in mg/kg/hour of tranexamic acid given during this procedure. Enter zero if no infusion initiated.

Low Value: 0
High Value: 25.0

Intent / Clarification:

Data Source: User
Format: Real

ParentLongName: Tranexamic Acid Used
ParentShortName: **AntifibTranexUse**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Trasylol (Aprotinin) Used
SeqNo: 2870
Short Name: **AntifibTrasylUse**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether trasylol (aprotinin) was given to the patient during this procedure.

Intent / Clarification:

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

ParentLongName: Antifibrinolytic Used Intraoperatively
ParentShortName: **AntifibUsage**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Trasylol (Aprotinin) Load cc	*SeqNo:*	2871
Short Name:	**AntifibTrasylLoadCC**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the loading dose of trasylol (aprotinin) in cc used during this procedure. Enter zero if no loading dose was used.		
Low Value:	0		
High Value:	400		
Intent / Clarification:			
Data Source:	User		
Format:	Integer		
ParentLongName:	Trasylol (Aprotinin) Used		
ParentShortName:	**AntifibTrasylUse**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Trasylol (Aprotinin) Pump Prime cc	*SeqNo:*	2872
Short Name:	**AntifibTrasylPrimeCC**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the pump priming dose of trasylol (aprotinin) in cc used during this procedure. Enter zero if no pump priming dose was used.		
Low Value:	0		
High Value:	400		
Intent / Clarification:			
Data Source:	User		
Format:	Integer		
ParentLongName:	Trasylol (Aprotinin) Used		
ParentShortName:	**AntifibTrasylUse**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Trasylol (Aprotinin) Infusion Rate cc/kg/hr	*SeqNo:*	2873
Short Name:	**AntifibTrasylInfRate**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		

Definition: Indicate the infusion rate of trasylol (aprotinin) in cc/kg/hour used during this procedure. Enter zero if no infusion initiated.

Low Value: 0.0
High Value: 10.0

Intent / Clarification:

Data Source: User
Format: Real

ParentLongName: Trasylol (Aprotinin) Used
ParentShortName: **AntifibTrasylUse**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Procoagulent Used Intraoperatively *SeqNo:* 2874
Short Name: **ProcoagUsage** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate whether procoagulents were used intraoperatively.

Intent / Clarification:

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

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Factor VIIa (Novoseven) Usage *SeqNo:* 2875
Short Name: **ProcoagFactorVIIa** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate whether Factor VIIa (Novoseven) was administered intraoperatively.

Intent / Clarification:

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

ParentLongName: Procoagulent Used Intraoperatively
ParentShortName: **ProcoagUsage**

ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Factor VIIa (Novoseven) mcg - Dose 1
Short Name: **ProcoagFactorVIIa1MCG**
Section Name: Operative
DBTableName: Operations
Definition: Indicate the first dose in micrograms of Factor VIIa given during this procedure.
Low Value: 1
High Value: 20000

SeqNo: 2876
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Factor VIIa (Novoseven) Usage
ParentShortName: **ProcoagFactorVIIa**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Factor VIIa (Novoseven) mcg - Dose 2
Short Name: **ProcoagFactorVIIa2MCG**
Section Name: Operative
DBTableName: Operations
Definition: Indicate the second dose in micrograms of Factor VIIa given during this procedure. Enter zero if no second dose given.
Low Value: 0
High Value: 20000

SeqNo: 2877
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Factor VIIa (Novoseven) Usage
ParentShortName: **ProcoagFactorVIIa**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name:	Factor VIIa (Novoseven) mcg - Dose 3	*SeqNo:*	2878
Short Name:	**ProcoagFactorVIIa3MCG**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the third dose in micrograms of Factor VIIa given during this procedure. Enter zero if no third dose given.		
Low Value:	0		
High Value:	20000		
Intent / Clarification:			
Data Source:	User		
Format:	Integer		
ParentLongName:	Factor VIIa (Novoseven) mcg - Dose 2		
ParentShortName:	**ProcoagFactorVIIa2MCG**		
ParentHarvestCodes:	>0		
Parent Value:	>0		

Long Name:	Prothrombin Complex Concentrate - 4 (PCC-4, KCentra) Usage	*SeqNo:*	2879
Short Name:	**ProCmplxCon4**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Prothrombin Complex Concentrate - 4 (PCC-4, KCentra) was administered intraoperatively.		
Intent / Clarification:			
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Procoagulent Used Intraoperatively		
ParentShortName:	**ProcoagUsage**		
ParentHarvestCodes:	1		
ParentValues:	= "Yes"		

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Prothrombin Complex Concentrate - 4 (PCC-4, KCentra) units - Dose 1	*SeqNo:*	2880
Short Name:	**ProCmplxCon4Ds1UN**	*Core:*	Yes

Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the first dose in units of Prothrombin Complex Concentrate - 4 (PCC-4, KCentra).		
Low Value:	1		
High Value:	10000		
Intent / Clarification:			
Data Source:	User		
Format:	Integer		
ParentLongName:	Prothrombin Complex Concentrate - 4 (PCC-4, KCentra) Usage		
ParentShortName:	**ProCmplxCon4**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Prothrombin Complex Concentrate - 4 (PCC-4, KCentra) units - Dose 2	*SeqNo:*	2881
Short Name:	**ProCmplxCon4Ds2UN**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the second dose in units of Prothrombin Complex Concentrate - 4 (PCC-4, KCentra). Enter zero if no second dose given.		
Low Value:	0		
High Value:	10000		
Intent / Clarification:			
Data Source:	User		
Format:	Integer		
ParentLongName:	Prothrombin Complex Concentrate - 4 (PCC-4, KCentra) Usage		
ParentShortName:	**ProCmplxCon4**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Prothrombin Complex Concentrate - 4 (PCC-4, KCentra) units - Dose 3	*SeqNo:*	2882
Short Name:	**ProCmplxCon4Ds3UN**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the third dose in units of Prothrombin Complex Concentrate - 4 (PCC-4, KCentra). Enter zero if no third dose given.		
Low Value:	0		
High Value:	10000		
Intent / Clarification:			

Data Source: User
Format: Integer

ParentLongName: Prothrombin Complex Concentrate - 4 (PCC-4, KCentra) units - Dose 2
ParentShortName: **ProCmplxCon4Ds2UN**
ParentHarvestCodes: >0
Parent Value: >0

Long Name: Prothrombin Complex Concentrate - 4 With Factor VIIa (FEIBA) Usage *SeqNo:* 2883
Short Name: **ProCmplxCon4W7a** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate whether Prothrombin Complex Concentrate - 4 With Factor VIIa (FEIBA) was administered intraoperatively.

Intent / Clarification:

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

ParentLongName: Procoagulent Used Intraoperatively
ParentShortName: **ProcoagUsage**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Prothrombin Complex Concentrate - 4 With Factor VIIa (FEIBA) units - Dose 1 *SeqNo:* 2884
Short Name: **ProCmplxCon4W7a1UN** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the first dose in units of Prothrombin Complex Concentrate - 4 With Factor VIIa (FEIBA).
Low Value: 1
High Value: 20000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Prothrombin Complex Concentrate - 4 With Factor VIIa (FEIBA) Usage
ParentShortName: **ProCmplxCon4W7a**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Prothrombin Complex Concentrate - 4 With Factor VIIa (FEIBA) units - Dose 2 *SeqNo:* 2885
Short Name: **ProCmplxCon4W7a2UN** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the second dose in units of Prothrombin Complex Concentrate - 4 With Factor VIIa (FEIBA). Enter zero if no second dose given.
Low Value: 0
High Value: 20000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Prothrombin Complex Concentrate - 4 With Factor VIIa (FEIBA) Usage
ParentShortName: **ProCmplxCon4W7a**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Prothrombin Complex Concentrate - 4 With Factor VIIa (FEIBA) units - Dose 3 *SeqNo:* 2886
Short Name: **ProCmplxCon4W7a3UN** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the third dose in units of Prothrombin Complex Concentrate - 4 With Factor VIIa (FEIBA). Enter zero if no third dose given.
Low Value: 0
High Value: 20000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Prothrombin Complex Concentrate - 4 With Factor VIIa (FEIBA) units - Dose 2

ParentShortName: **ProCmplxCon4W7a2UN**
ParentHarvestCodes: >0
Parent Value: >0

Long Name: Prothrombin Complex Concentrate - 3 (PCC-3, ProfilNine-SD) Usage
SeqNo: 2887
Short Name: **ProCmplxCon3**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether Prothrombin Complex Concentrate - 3 (PCC-3, ProfilNine-SD) was administered intraoperatively.

Intent / Clarification:

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

ParentLongName: Procoagulent Used Intraoperatively
ParentShortName: **ProcoagUsage**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Prothrombin Complex Concentrate - 3 (PCC-3, ProfilNine-SD) units - Dose 1
SeqNo: 2888
Short Name: **ProCmplxCon3Ds1UN**
Core: Yes
Section Name: Operative
Harvest: Yes
DBTableName: Operations
Definition: Indicate the first dose in units of Prothrombin Complex Concentrate - 3 (PCC-3, ProfilNine-SD).
Low Value: 1
High Value: 2000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Prothrombin Complex Concentrate - 3 (PCC-3, ProfilNine-SD) Usage
ParentShortName: **ProCmplxCon3**

ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Prothrombin Complex Concentrate - 3 (PCC-3, ProfilNine-SD) units - Dose 2 *SeqNo:* 2889
Short Name: **ProCmplxCon3Ds2UN** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the second dose in units of Prothrombin Complex Concentrate - 3 (PCC-3, ProfilNine-SD). Enter zero if no second dose given.
Low Value: 0
High Value: 2000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Prothrombin Complex Concentrate - 3 (PCC-3, ProfilNine-SD) Usage
ParentShortName: **ProCmplxCon3**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Prothrombin Complex Concentrate - 3 (PCC-3, ProfilNine-SD) units - Dose 3 *SeqNo:* 2890
Short Name: **ProCmplxCon3Ds3UN** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the third dose in units of Prothrombin Complex Concentrate - 3 (PCC-3, ProfilNine-SD). Enter zero if no third dose given.
Low Value: 0
High Value: 2000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Prothrombin Complex Concentrate - 3 (PCC-3, ProfilNine-SD) units - Dose 2
ParentShortName: **ProCmplxCon3Ds2UN**
ParentHarvestCodes: >0
Parent Value: >0

Long Name:	Octaplex Prothrombin Concentrate Usage	*SeqNo:*	2891
Short Name:	**Octaplex**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Octaplex Prothrombin Concentrate was administered intraoperatively.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Procoagulent Used Intraoperatively
ParentShortName:	**ProcoagUsage**
ParentHarvestCodes:	1
ParentValues:	= "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Octaplex Prothrombin Concentrate Units - Dose 1	*SeqNo:*	2892
Short Name:	**OctaplexDs1**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the first dose in international units (IU) of Octaplex Prothrombin Concentrate.		
Low Value:	1		
High Value:	6000		

Intent / Clarification:

Data Source:	User
Format:	Integer
ParentLongName:	Octaplex Prothrombin Concentrate Usage
ParentShortName:	**Octaplex**
ParentHarvestCodes:	1
Parent Value:	= "Yes"

Long Name:	Octaplex Prothrombin Concentrate Units - Dose 2	*SeqNo:*	2893

Short Name:	**OctaplexDs2**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the second dose in international units (IU) of Octaplex Prothrombin Concentrate.		
Low Value:	0		
High Value:	6000		
Intent / Clarification:			
Data Source:	User		
Format:	Integer		
ParentLongName:	Octaplex Prothrombin Concentrate Usage		
ParentShortName:	**Octaplex**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Octaplex Prothrombin Concentrate Units - Dose 3	*SeqNo:*	2894
Short Name:	**OctaplexDs3**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the third dose in international units (IU) of Octaplex Prothrombin Concentrate.		
Low Value:	0		
High Value:	6000		
Intent / Clarification:			
Data Source:	User		
Format:	Integer		
ParentLongName:	Octaplex Prothrombin Concentrate Units - Dose 2		
ParentShortName:	**OctaplexDs2**		
ParentHarvestCodes:	>0		
Parent Value:	>0		

Long Name:	Fibrinogen Concentrate Usage	*SeqNo:*	2895
Short Name:	**ProcoagFibrin**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether Fibrinogen Concentrate was administered intraoperatively.		
Intent / Clarification:			

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

ParentLongName: Procoagulent Used Intraoperatively
ParentShortName: **ProcoagUsage**
ParentHarvestCodes: 1
Parent Value: = "Yes"
Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Fibrinogen Concentrate mg - Dose 1 *SeqNo:* 2896
Short Name: **ProcoagFibrin1MG** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the first dose in mg of fibrinogen concentrate given during this procedure.
Low Value: 1
High Value: 10000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Fibrinogen Concentrate Usage
ParentShortName: **ProcoagFibrin**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Fibrinogen Concentrate mg - Dose 2 *SeqNo:* 2897
Short Name: **ProcoagFibrin2MG** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the second dose in mg of fibrinogen concentrate given during this procedure. Enter zero if no second dose given.
Low Value: 0
High Value: 10000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Fibrinogen Concentrate Usage

ParentShortName: **ProcoagFibrin**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Fibrinogen Concentrate mg - Dose 3 *SeqNo:* 2898
Short Name: **ProcoagFibrin3MG** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the third dose in mg of fibrinogen concentrate given during this procedure. Enter zero if no third dose given.
Low Value: 0
High Value: 10000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Fibrinogen Concentrate mg - Dose 2
ParentShortName: **ProcoagFibrin2MG**
ParentHarvestCodes: >0
Parent Value: >0

Long Name: Antithrombin 3 (AT3) Concentrate Usage *SeqNo:* 2899
Short Name: **ProcoagAntithrom** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate whether Antithrombin 3 (AT3) Concentrate was administered intraoperatively.

Intent / Clarification:

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

ParentLongName: Procoagulent Used Intraoperatively
ParentShortName: **ProcoagUsage**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Antithrombin 3 Concentrate units - Dose 1	*SeqNo:*	2900
Short Name:	**ProcoagAntithrom1**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the first dose in units of antithrombin 3 concentrate given during this procedure.		
Low Value:	1		
High Value:	5000		
Intent / Clarification:			
Data Source:	User		
Format:	Integer		
ParentLongName:	Antithrombin 3 (AT3) Concentrate Usage		
ParentShortName:	**ProcoagAntithrom**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Antithrombin 3 Concentrate units - Dose 2	*SeqNo:*	2901
Short Name:	**ProcoagAntithrom2**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the second dose in units of antithrombin 3 concentrate given during this procedure. Enter zero if no second dose given.		
Low Value:	0		
High Value:	5000		
Intent / Clarification:			
Data Source:	User		
Format:	Integer		
ParentLongName:	Antithrombin 3 (AT3) Concentrate Usage		
ParentShortName:	**ProcoagAntithrom**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Antithrombin 3 Concentrate units - Dose 3	*SeqNo:*	2902
Short Name:	**ProcoagAntithrom3**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes

DBTableName: Operations
Definition: Indicate the third dose in units of antithrombin 3 concentrate given during this procedure. Enter zero if no third dose given.
Low Value: 0
High Value: 5000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Antithrombin 3 Concentrate units - Dose 2
ParentShortName: **ProcoagAntithrom2**
ParentHarvestCodes: >0
Parent Value: >0

Long Name: Desmopressin (DDAVP) Usage *SeqNo:* 2903
Short Name: **ProcoagDesmo** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate whether Desmopressin (DDAVP) was administered intraoperatively.

Intent / Clarification:

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

ParentLongName: Procoagulent Used Intraoperatively
ParentShortName: **ProcoagUsage**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Desmopressin (DDAVP) mcg - Dose 1 *SeqNo:* 2904
Short Name: **ProcoagDesmo1MCG** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the first dose in micrograms of desmopressin (DDAVP) given during this procedure.

Low Value: 1
High Value: 1000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Desmopressin (DDAVP) Usage
ParentShortName: **ProcoagDesmo**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Desmopressin (DDAVP) mcg - Dose 2 *SeqNo:* 2905
Short Name: **ProcoagDesmo2MCG** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the second dose in micrograms of desmopressin (DDAVP) given during this procedure. Enter zero if no second dose given.
Low Value: 0
High Value: 1000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Desmopressin (DDAVP) Usage
ParentShortName: **ProcoagDesmo**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Desmopressin (DDAVP) mcg - Dose 3 *SeqNo:* 2906
Short Name: **ProcoagDesmo3MCG** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the third dose in micrograms of desmopressin (DDAVP) given during this procedure. Enter zero if no third dose given.
Low Value: 0
High Value: 1000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Desmopressin (DDAVP) mcg - Dose 2
ParentShortName: **ProcoagDesmo2MCG**
ParentHarvestCodes: >0
Parent Value: >0

Long Name: Humate P Usage *SeqNo:* 2907
Short Name: **ProcoagHumateP** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate whether Humate P was used during this procedure.

Intent / Clarification:

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

ParentLongName: Procoagulent Used Intraoperatively
ParentShortName: **ProcoagUsage**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Humate P Units - Dose 1 *SeqNo:* 2908
Short Name: **ProcoagHumateP1UN** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the number of units in the first dosage of Humate P.
Low Value: 1
High Value: 10000

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Humate P Usage
ParentShortName: **ProcoagHumateP**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name:	Humate P Units - Dose 2	*SeqNo:*	2909
Short Name:	**ProcoagHumateP2UN**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the number of units in the second dosage of Humate P. Enter zero if no second dose given.		
Low Value:	0		
High Value:	10000		
Intent / Clarification:			
Data Source:	User		
Format:	Integer		
ParentLongName:	Humate P Usage		
ParentShortName:	**ProcoagHumateP**		
ParentHarvestCodes:	1		
Parent Value:	= "Yes"		

Long Name:	Humate P Units - Dose 3	*SeqNo:*	2910
Short Name:	**ProcoagHumateP3UN**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the number of units in the third dosage of Humate P. Enter zero if no third dose given.		
Low Value:	0		
High Value:	10000		
Intent / Clarification:			
Data Source:	User		
Format:	Integer		
ParentLongName:	Humate P Units - Dose 2		
ParentShortName:	**ProcoagHumateP2UN**		
ParentHarvestCodes:	>0		
Parent Value:	>0		

Long Name:	Point Of Care Coagulation Testing Utilized Intraoperatively	*SeqNo:*	2911
Short Name:	**POCCoagTstUtil**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes

DBTableName: Operations
Definition: Indicate whether point of care coagulation testing was utilized intraoperatively.

Intent / Clarification:

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

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Point Of Care Coagulation Testing - Thromboelastography (TEG) *SeqNo:* 2912
Short Name: **POCCoagTstTEG** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate whether point of care coagulation testing included Thromboelastography (TEG).

Intent / Clarification:

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

ParentLongName: Point Of Care Coagulation Testing Utilized Intraoperatively
ParentShortName: **POCCoagTstUtil**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Point Of Care Coagulation Testing - ROTEM *SeqNo:* 2913
Short Name: **POCCoagTstROTEM** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate whether point of care coagulation testing included ROTEM.

Intent / Clarification:

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

ParentLongName: Point Of Care Coagulation Testing Utilized Intraoperatively
ParentShortName: **POCCoagTstUtil**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Point Of Care Coagulation Testing - Sonoclot *SeqNo:* 2914
Short Name: **POCCoagTstSon** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate whether point of care coagulation testing included Sonoclot.

Intent / Clarification:

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

ParentLongName: Point Of Care Coagulation Testing Utilized Intraoperatively
ParentShortName: **POCCoagTstUtil**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Point Of Care Coagulation Testing - Heparin Concentration (Hepcon, HMS) *SeqNo:* 2915
Short Name: **POCCoagTstHep** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations

Definition: Indicate whether point of care coagulation testing included Heparin Concentration (Hepcon, HMS).

Intent / Clarification:

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

ParentLongName: Point Of Care Coagulation Testing Utilized Intraoperatively
ParentShortName: **POCCoagTstUtil**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Point Of Care Coagulation Testing - INR/PT/aPTT (iStat or equivalent) *SeqNo:* 2916
Short Name: **POCCoagTstINR** *Core:* Yes
Section Name: Operative *Harvest:* Yes
DBTableName: Operations
Definition: Indicate whether point of care coagulation testing included INR/PT/aPTT (iStat or equivalent).

Intent / Clarification:

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

ParentLongName: Point Of Care Coagulation Testing Utilized Intraoperatively
ParentShortName: **POCCoagTstUtil**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Point Of Care Coagulation Testing - ACT *SeqNo:* 2917
Short Name: **POCCoagTstACT** *Core:* Yes

Section Name: Operative
DBTableName: Operations
Definition: Indicate whether point of care coagulation testing was used intraoperatively.

Harvest: Yes

Intent / Clarification:

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

ParentLongName: Point Of Care Coagulation Testing Utilized Intraoperatively
ParentShortName: **POCCoagTstUtil**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

CABG Procedures

Long Name: CAB
Short Name: **OpCAB**
Section Name: CABG Procedures
DBTableName: Operations
Definition: Indicate whether coronary artery bypass grafting was done.

SeqNo: 2927
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|2
ParentValues: = "CPB Cardiovascular" or "No CPB Cardiovascular"

Harvest Codes:

Code:	Value:

1	Yes
2	No

Long Name: Dist Anast - Art #
Short Name: **DistArt**
Section Name: CABG Procedures
DBTableName: Operations
Definition: Indicate the total number of distal anastomoses with arterial conduits, whether IMA, radial artery, etc.
Low Value: 0
High Value: 9

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: CAB
ParentShortName: **OpCAB 1**
ParentHarvestCodes:
Parent Value: = "Yes"

SeqNo: 2928
Core: Yes
Harvest: Yes

Long Name: Dist Anast - Vein #
Short Name: **DistVein**
Section Name: CABG Procedures
DBTableName: Operations
Definition: Indicate the total number of distal anastomoses with venous conduits.
Low Value: 0
High Value: 9

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: CAB
ParentShortName: **OpCAB 1**
ParentHarvestCodes:
Parent Value: = "Yes"

SeqNo: 2929
Core: Yes
Harvest: Yes

Long Name:	IMA Artery Used	*SeqNo:*	2930
Short Name:	**IMAArtUs**	*Core:*	Yes
Section Name:	CABG Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate which, if any, Internal Mammary Artery(ies) (IMA) were used for grafts.		
Intent / Clarification:			
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	CAB		
ParentShortName:	**OpCAB 1**		
ParentHarvestCodes:			
ParentValues:	= "Yes"		

Harvest Codes:

Code:	Value:
1	Left IMA
2	Right IMA
3	Both IMAs
4	No IMA

Valve Procedures

Long Name:	Valve	*SeqNo:*	2940
Short Name:	**OpValve**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether a surgical procedure was done on the Aortic, Mitral, Tricuspid, Pulmonic, common AV valve or truncal valve.		
Intent / Clarification:	Answer 'yes' if any type of intervention was done on a valve, regardless of whether it was a major part of the operation.		
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Operation Type		
ParentShortName:	**OpType**		
ParentHarvestCodes:	1|2		
ParentValues:	= "CPB Cardiovascular" or "No CPB Cardiovascular"		

Harvest Codes:

Code:	Value:

1	Yes
2	No

Long Name:	Valve Device Explanted And/Or Implanted	*SeqNo:*	3140
Short Name:	**ValExImp**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether a valve device of any type was explanted and/or implanted during this procedure.		
Intent / Clarification:	Answer 'yes' for explantation for valve devices only, not native valves.		
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Valve		
ParentShortName:	**OpValve**		
ParentHarvestCodes:	1		
ParentValues:	= "Yes"		

Harvest Codes:

Code:	Value:
1	No
2	Yes, Explanted
3	Yes, Implanted
4	Yes, Explanted and Implanted

Long Name:	Valve Explant Type #1	*SeqNo:*	3150
Short Name:	**ValExType1**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the type of the first valve or device explanted.		
Intent / Clarification:			
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Valve Device Explanted And/Or Implanted		
ParentShortName:	**ValExImp**		

ParentHarvestCodes: 2|4
ParentValues: = "Yes, Explanted" or "Yes, Explanted and Implanted"

Harvest Codes:

Code:	Value:
1	Mechanical
2	Bioprosthetic
3	Homograft/Allograft
4	Autograft
5	Annuloplasty band/ring
6	Mitral clip
7	Surgeon fashioned
8	Transcatheter device
9	Other

Long Name: Valve Explant Unique Device Identifier (UDI) - 1 *SeqNo:* 3151
Short Name: **ValExpUDI1** *Core:* Yes
Section Name: Valve Procedures *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the Unique Device Identifier (UDI) of the first explanted valve device if available, otherwise leave blank.

Intent / Clarification:

Data Source: User
Format: Text

ParentLongName: Valve Explant Type #1
ParentShortName: **ValExType1**
ParentHarvestCodes: 1|2|5|6|8|9
ParentValues: = "Mechanical", "Bioprosthetic", "Annuloplasty band/ring", "Mitral clip", "Transcatheter device" or "Other"

Long Name: Valve Explant Model #1 *SeqNo:* 3152
Short Name: **ValExMod1** *Core:* Yes
Section Name: Valve Procedures *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the type of the first valve or device explanted.

Intent / Clarification:

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

ParentLongName: Valve Explant Type #1

ParentShortName: **ValExType1**
ParentHarvestCodes: 1|2|5|6|8|9
ParentValues: = "Mechanical", "Bioprosthetic", "Annuloplasty band/ring", "Mitral clip", "Transcatheter device" or "Other"

Harvest Codes:

201	500DM## - Medtronic Open Pivot Standard Mitral Heart Valve
202	500FA## - Medtronic Open Pivot Standard Aortic Heart Valve
203	501DA## - Medtronic Open Pivot AP Series Aortic Heart Valve
204	501DM## - Medtronic Open Pivot AP Series Mitral Heart Valve
205	502AG## - Medtronic Open Pivot Aortic Valved Graft (AVG)
206	503DA## - Medtronic Open Pivot APex Series Heart Valve
207	505DA## - Medtronic Open Pivot AP360 Series Aortic Heart Valve
208	A010 - CryoLife Ascending Thoracic Aorta
209	A020 - CryoLife Descending Thoracic Aorta
210	A030 - CryoLife Pulmonary Artery
211	AV00 - CryoLife Aortic Valve and Conduit
212	AV10 - CryoLife Aortic Valve without Conduit
214	PV00 - CryoLife Pulmonary Valve & Conduit
215	PV10 - CryoLife Pulmonary Valve without Conduit
216	R010 - CryoLife Aortoiliac Grafts
217	R020 - CryoLife Femoral Popliteal Artery
218	SGPV00 - CryoLife SG Pulmonary Valve & Conduit
219	SGPV10 - CryoLife SG Pulmonary Valve without Conduit
220	V010 - CryoLife Saphenous Vein
221	V060 - CryoLife Femoral Vein
224	2500## - Edwards Prima Aortic Stentless Bioprosthesis
225	2500P## - Edwards Prima Plus Stentless Aortic Bioprosthesis
226	2625## - Carpentier-Edwards Porcine Aortic Bioprosthesis
227	2650## - Carpentier-Edwards S.A.V. Aortic Porcine Bioprosthesis
228	2700## - Carpentier-Edwards Perimount Pericardial Aortic Bioprosthesis
229	2700TFX## - Carpentier- Edwards Perimount Theon Pericardial Aortic Bioprosthesis with ThermaFix Process
230	2800## - Carpentier-Edwards Perimount RSR Pericardial Aortic Bioprosthesis
231	2800TFX## - Carpentier- Edwards Perimount Theon RSR Pericardial Aortic Bioprosthesis with ThermaFix Process
232	3000## - Carpentier-Edwards Perimount Magna Pericardial Aortic Bioprosthesis
233	3000TFX## - Carpentier- Edwards Perimount Magna Pericardial Aortic Bioprosthesis with ThermaFix Process
234	3160## - Edwards- Duromedics Bileaflet Prostheses
235	3300TFX## - Carpentier- Edwards Perimount Magna Ease Pericardial Aortic Bioprosthesis with ThermaFix Process
236	3600## - Edwards Mira Mechanical Valve

237 3600f## - Edwards Mira Mechanical Valve
238 3600u## - Edwards Mira Mechanical Valve
239 4100## - Carpentier- McCarthy-Adams IMR ETlogix Mitral Annuloplasty Ring
240 4200## - Edwards GeoForm Mitral Annuloplasty Ring
241 4300## - Carpentier-Edwards Bioprosthetic Valved Conduit
242 4400## - Carpentier-Edwards Classic Mitral Annuloplasty Ring
243 4425## - Carpentier-Edwards Classic Mitral Annuloplasty Ring with Duraflo Treatment
244 4450## - Carpentier-Edwards Physio Mitral Annuloplasty Ring
245 4475## - Carpentier-Edwards Physio Annuloplasty Ring with Duraflo Treatment
246 4500## - Carpentier-Edwards Classic Tricuspid Annuloplasty Ring
247 4525## - Carpentier-Edwards Classic Tricuspid Annuloplasty Ring with Duraflo Treatment
248 4600## - Crosgrove-Edwards Mitral/Tricuspid Annuloplasty Ring
249 4625## - Crosgrove-Edwards Annuloplasty System with Duraflo Treatment
250 4900## - Edwards MC3 Tricuspid Annuloplasty System
251 5100## - Edwards DETlogix Mitral Annuloplasty Ring
252 5100M## - Edwards Myxomatous Annuloplasty Ring
253 5200## - Carpentier-Edwards Physio II Mitral Annuloplasty Ring
254 6625## - Carpentier-Edwards Porcine Mitral Bioprosthesis
255 6625-ESR-LP## - Carpentier- Edwards Duraflex Low Pressure Porcine Mitral Bioprosthesis with Extended Suture Ring
256 6625LP## - Carpentier-Edwards Duraflex Low Pressure Porcine Mitral Bioprosthesis
257 6900P## - Carpentier-Edwards Perimount Plus Mitral Pericardial Bioprosthesis
258 6900PTFX## - Carpentier-Edwards Perimount Theon Mitral Pericardial Bioprosthesis with ThermaFix Process
259 7000TFX## - Carpentier-Edwards Perimount Magna Mitral Pericardial Bioprosthesis
260 7200TFX## - Carpentier-Edwards Perimount Magna Mitral Ease Pericardial Bioprosthesis
261 7300TFX## - Carpentier-Edwards Perimount Magna Mitral Ease Pericardial Bioprosthesis with ThermaFix Process
262 9000## - Cribier-Edwards Aortic Bioprosthesis
263 9000PHV## - Cribier-Edwards Aortic Bioprosthesis
264 9000TFX## - Edwards Sapien Transcatheter Heart Valve
265 9120## - Edwards-Duromedics Bileaflet Prostheses
266 9600## - Edwards Mira Mechanical Valve
267 AAL - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Large
268 AAM - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Medium
269 AAS - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Small
270 DLHPA - LifeNet CardioGraft Decellularized Hemi-Pulmonary Artery with Matracell - Left
271 DRHPA - LifeNet CardioGraft Decellularized Hemi- Pulmonary Artery with Matracell - Right
272 HVAL - LifeNet CardioGraft Aortic Heart Valve - Large
273 HVAM - LifeNet CardioGraft Aortic Heart Valve - Medium
274 HVAS - LifeNet CardioGraft Aortic Heart Valve - Small
275 HVPL - LifeNet CardioGraft Pulmonary Heart Valve - Large

276 HVPM - LifeNet CardioGraft Pulmonary Heart Valve - Medium
277 HVPS - LifeNet CardioGraft Pulmonary Heart Valve - Small
278 LHPA - LifeNet CardioGraft Hemi-Pulmonary Artery - Left
279 PAL - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Large
280 PAM - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Medium
281 PAS - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Small
282 RHPA - LifeNet CardioGraft Hemi-Pulmonary Artery - Right
283 TAL - LifeNet CardioGraft Thoracic Aorta Non-valved - Large
284 TAM - LifeNet CardioGraft Thoracic Aorta Non-valved - Medium
286 174A - ## - Medtronic Hancock Apical Left Ventricle Connector
287 200## - Medtronic Contegra Unsupported Pulmonary Valve Conduit
288 200S## - Medtronic Contegra Supported Pulmonary Valve Conduit
289 305C2## - Medtronic Mosaic Standard Cinch - Aortic
290 305U2## - Medtronic Mosaic Ultra Cinch - Aortic
291 310## - Medtronic Mosaic Mitral
292 610B## - Medtronic Duran Band
293 610R## - Medtronic Duran Ring
294 620B## - Medtronic Duran AnCore Band
295 620BG## - Medtronic Duran AnCore Band With Chordal Guide
296 620R## - Medtronic Duran AnCore Ring
297 620RG## - Medtronic Duran Ancore Ring With Chordal Guide
298 638B## - Medtronic CG Future Band
299 638R## - Medtronic CG Future Composite Ring
300 670 - Medtronic Simplici-T Annuloplasty System
301 680R## - Medtronic Profile 3D Ring
302 995CS## - Medtronic Freestyle, Complete Subcoronary - CS
303 995MS## - Medtronic Freestyle, Modified Subcoronary - MS
304 FR995-## - Medtronic Freestyle, Full Root - FR
307 HC105-## - Medtronic Hancock Low-porosity Valved Conduit
308 HC150-## - Medtronic Hancock Modified Orifice Pulmonic Valved Conduit
309 T505C2## - Medtronic Hancock II Aortic Cinch
310 T505U2## - Medtronic Hancock II Ultra Cinch
311 T510C## - Medtronic Hancock II Mitral
312 ONXA## - On-X Aortic Valve with standard sewing ring
313 ONXAC## - On-X Aortic Valve with Conform-X Sewing Ring
314 ONXACE## - On-X Aortic Valve with Conform-X Sewing Ring, extended
315 ONXAE## - On-X Aortic Valve with standard sewing ring, extended
316 ONXM## - On-X Mitral Valve with standard sewing ring
317 ONXMC## - On-X Mitral Valve with Conform-X Sewing Ring
327 LXA## - Sorin Group Mitroflow Aortic Pericardial Heart Valve
328 A5-0## - Sorin Group: Carbomedics Standard Aortic Valve
329 AF-8## - Sorin Group: Carbomedics AnnuloFlex Annuloplasty System

330 AP-0## - Sorin Group: Carbomedics Carbo-Seal Ascending Aortic Prosthesis
331 AR-7## - Sorin Group: Carbomedics AnnuloFlo Annuloplasty System
332 CP-0## - Sorin Group: Carbomedics Carbo-Seal Valsalva Ascending Aortic Prosthesis
333 F7-0## - Sorin Group: Carbomedics OptiForm Mitral Valve
334 M7-0## - Sorin Group: Carbomedics Standard Mitral Valve
335 R5-0## - Sorin Group: Carbomedics Reduced Series Aortic Valve
336 S5-0## - Sorin Group: Carbomedics Top Hat Supra- Annular Aortic Valve
337 ##A-101 - St. Jude Medical Mechanical Aortic Heart Valve
338 ##AEC-102 - St. Jude Medical Mechanical Heart Valve
339 ##AECJ-502 - St. Jude Medical Masters Series Aortic Mechanical Valve, Expanded Cuff
340 ##AECS-602 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
341 ##AEHPJ-505 - St. Jude Medical Masters HP Mechanical Valve, Expanded Cuff
342 ##AEHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
343 ##AET-104 - St. Jude Medical Mechanical Heart Valve
344 ##AETJ-504 - St. Jude Medical Masters Series Mechanical Heart Valve
345 ##AFHPJ-505 - St. Jude Medical Masters HP Aortic Mechanical Valve, Flex Cuff
346 ##AG-701 - St. Jude Medical Regent Valve with Silzone Coating
347 ##AGF-706 - St. Jude Medical Regent Valve with Silzone Coating
348 ##AGFN-756 - St. Jude Medical Regent Aortic Mechanical Valve, Flex Cuff
349 ##AGN-751 - St. Jude Medical Regent Aortic Mechanical Valve, Standard Cuff
350 ##AHP-105 - St. Jude Medical Mechanical Heart Valve Hemodynamic Plus (HP) Series
351 ##AHPJ-505 - St. Jude Medical Masters HP Aortic Mechanical Heart Valve, Standard Cuff
352 ##AHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
353 ##AJ-501 - St. Jude Medical Masters Series Aortic Mechanical Valve, Standard Cuff
354 ##AS-601 - St. Jude Medical Masters Mechanical Heart Valve with Silzone Coating
355 ##AT-103 - St. Jude Medical Mechanical Heart Valve
356 ##ATJ-503 - St. Jude Medical Masters Series Aortic Mechanical Valve, PTFE Cuff
357 ##CAVG-404 - St. Jude Medical Coated Aortic Valved Graft Prosthesis
358 ##CAVGJ-514 - St. Jude Medical Masters Series Aortic Valved Graft
359 ##CAVGJ-514-00 - St. Jude Medical Masters Aortic Valved Graft, Hemashield Technology
360 ##M-101 - St. Jude Medical Mechanical Mitral Heart Valve
361 ##MEC-102 - St. Jude Medical Mechanical Heart Valve
362 ##MECJ-502 - St. Jude Medical Masters Series Mitral Mechanical Valve, Expanded Cuff
363 ##MECS-602 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
364 ##MEHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
365 ##MET-104 - St. Jude Medical Mechanical Heart Valve
366 ##METJ-504 - St. Jude Medical Masters Series Mitral Mechanical Valve, Expanded PTFE Cuff
367 ##MHP-105 - St. Jude Medical Mechanical Heart Valve Hemodynamic Plus (HP) Series
368 ##MHPJ-505 - St. Jude Medical Masters HP Mitral Mechanical Heart Valve, Standard Cuff
369 ##MHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
370 ##MJ-501 - St. Jude Medical Masters Series Mitral Mechanical Valve, Standard Cuff
371 ##MS-601 - St. Jude Medical Masters Mechanical Heart Valve with Silzone Coating

372 ##MT-103 - St. Jude Medical Mechanical Heart Valve
373 ##MTJ-503 - St. Jude Medical Masters Series Mitral Mechanical Valve, PTFE Cuff
374 ##VAVGJ-515 - St. Jude Medical Masters HP Aortic Valved Graft
375 AFR-## - St. Jude Medical Attune Flexible Adjustable Annuloplasty Ring
376 B10-##A - St. Jude Medical Biocor Aortic Valve
377 B10-##A-00 - St. Jude Medical Biocor Aortic Valve
378 B10-##M - St. Jude Medical Biocor Mitral Valve
379 B10-##M-00 - St. Jude Medical Biocor Mitral Valve
380 B100-##A-00 - St. Jude Medical Biocor Stented Aortic Tissue Valve
381 B100-##M-00 - St. Jude Medical Biocor Stented Mitral Tissue Valve
382 B10SP-## - St. Jude Medical Biocor Supra Stented Porcine Heart Valve
383 B20-0##A - St. Jude Medical Biocor Porcine Stentless Bioprosthetic Heart Valve
384 B30-##A - St. Jude Medical Biocor Valve
385 B30-##M - St. Jude Medical Biocor Valve
386 BSP100-## - St. Jude Medical Biocor Supra Aortic Stented Tissue Valve
387 E100-##A-00 - St. Jude Medical Epic Aortic Stented Tissue Valve
388 E100-##M-00 - St. Jude Medical Epic Mitral Stented Tissue Valve
389 EL-##A - St. Jude Medical Epic Aortic Valve
390 EL-##M - St. Jude Medical Epic Mitral Valve
391 ELS-##A - St. Jude Medical Epic Tissue Aortic Valve with Silzone Coating
392 ELS-##M - St. Jude Medical Epic Tissue Mitral Valve with Silzone Coating
393 ESP100-##-00 - St. Jude Medical Epic Supra Aortic Stented Tissue Valve
394 ESP100-##A-00 - St. Jude Medical Epic Stented Aortic Tissue Valve
395 ROOT-## - St. Jude Medical Toronto Root with BiLinx AC
396 RSAR-## - St. Jude Medical SJM Rigid Saddle Ring
397 SARP-## - St. Jude Medical SJM STguin Semi-Rigid Annuloplasty Ring
398 SARS-M## - St. Jude Medical STguin Annuloplasty Ring with Silzone Coating
399 SPA-101-## - St. Jude Medical Toronto SPV Valve
400 SPA-201-## - St. Jude Medical Toronto SPV II Bioprosthetic Heart Valve
401 TAB-## - St. Jude Medical Tailor Flexible Annuloplasty Band
402 TAR-## - St. Jude Medical Tailor Annuloplasty Ring with Silzone Coating
403 TARP-## - St. Jude Medical Tailor Flexible Annuloplasty Ring
404 PB10-## - Medtronic Melody Transcatheter Pulmonary Valve
405 700FF## - Medtronic Simulus FLX-O Ring
406 700FC## - Medtronic Simulus FLX-C Band
407 735AF## - Medtronic Simulus Adjustable Ring
408 800SR## - Medtronic Simulus Semi-rigid Ring
409 900SFC## - Medtronic TriAd Tricuspid Annuloplasty Ring
410 1000-## - Medtronic 3f Aortic Bioprosthesis
411 6200## - Carpentier-Edwards Physio Tricuspid Annuloplasty Ring
412 9300TFX## - Edwards Sapien Transcatheter Heart Valve
413 305## - Medtronic Mosaic Ultra Porcine Heart Valve

415 TF-##A - St. Jude Medical Trifecta Aortic Stented Tissue Valve
416 505DM## - Medtronic Open Pivot AP360 Series Mitral Heart Valve
417 800SC## - Medtronic Simulus Semi-rigid Mitral Annuloplasty Ring
418 6000-## - Medtronic 3f Enable Aortic Bioprosthesis
419 PH00 - Cryolife Pulmonary Hemi-Artery
420 SGPH00 - Cryolife SG Pulmonary Hemi-Artery
421 690R## - Medtronic Contour 3D Annuloplasty ring
422 735AC## - Medtronic Simulus Adjustable Band
423 9600TFX## - Edwards Sapien Transcatheter Heart Valve
425 H607 - Medtronic post Annuloplasty band (Split, Mayo)
428 ICV08## - Sorin Group Sovering Annuloplasty
429 ICV09## - Sorin Group MEMO 3D Semi-rigid Annuloplasty Ring
432 A1-0## - Sorin Group: Carbomedics Orbis Universal Aortic Valve
433 M2-0## - Sorin Group: Carbomedics Orbis Universal Mitral Valve
434 PF ## - Sorin Group PF ## - Sorin Group Stentless
435 PS ## - Sorin Group Pericarbon More Mitral
436 ART ## SOP - Sorin Group Soprano Armonia
437 ART ## SG - Sorin Group Freedom Solo
438 ART ## LFA- Sorin Group Bicarbon Fitline Aortic
439 MTR ## LFM- Sorin Group Bicarbon Fitline Mitral
440 ART ## LOV- Sorin Group Bicarbon Overline Aortic
441 ART ## LSA- Sorin Group Bicarbon Slimline Aortic
442 8300A## - Edwards Intuity Valve System (outside US)
443 8300AB## - Edwards Intuity Elite Valve System (outside US)
444 8300ACD## - Edwards Intuity Elite Valve System
445 9355NF## - Edwards Sapien XT Transcatheter Valve with NovaFlex System
446 9355ASP## - Edwards Sapien XT Transcatheter Valve with Ascendra System
447 S3TF1## - Edwards Sapien 3 Transcatheter Valve with Commander System
448 S3TA1## - Edwards Sapien 3 Transcatheter Valve with Certitude System
449 CRS-P3-640 – Medtronic CoreValve
450 CRS-P3-943 – Medtronic CoreValve
451 MCS-P3 – Medtronic CoreValve
452 MCS-P4 – Medtronic CoreValve Evolut
453 ONXAN## - On-X Aortic Heart Valve with Anatomic Sewing Ring
454 ONXANE## - On-X Valve with Anatomic Sewing ring and Extended Holder
455 ONXAAP## - On-X Ascending Aortic Prosthesis
456 ICV12## - Sorin Solo Smart Aortic Valve
457 ICV13## - Sorin Group MEMO 3D Rechord Annuloplasty Ring
458 DLA## - Sorin Group Mitroflow Aortic Pericardial Heart Valve with PRT
459 MVC0##- Sorin Group Mitroflow Valsalva Conduit
460 1260 ### - Starr-Edwards Silastic Ball Aortic Heart Valve Prosthesis
461 6120 ### - Starr Edwards Silastic Ball Mitral Heart Valve Prosthesis

462 73##1088 - Vascutek Gelweave Plexus Graft
463 7300##ADP - Vascutek Terumo Gelweave Vascular 45Prosthesis
464 7320## - Vascutek Gelweave Trifucate Arch Graft
465 7350##ST - Vascutek Gelweave Pre-curved Graft
466 8300AB### - Edwards Intuity Elite Valve
467 8300KITB### - Edwards Intuity Elite Valve System
468 9600CM## - Edward Sapien
469 ART##SMT - Sorin Solo Smart
470 CNA19 - Sorin Crown PRT Tissue Valve
471 CNA21 - Sorin Crown PRT Tissue Valve
472 CNA23 - Sorin Crown PRT Tissue Valve
473 CNA25 - Sorin Crown PRT Tissue Valve
474 CNA27 - Sorin Crown PRT Tissue Valve
475 DPPGK - LifeNet CardioGRAFT Thick Pulmonary Patch (decellularized)
476 DPPGN – LifeNet CardioGRAFT Thin Pulmonary Patch (decellularized)
477 EVOLUTR-##-US - Medtronic CoreValve Evolut R
478 H749LTV##0 - Boston Scientific Lotus Transcatheter Valve
479 ICV1208 - Sorin Perceval Tissue Valves
480 ICV1209 - Sorin Perceval Tissue Valves
481 ICV1210 - Sorin Perceval Tissue Valves
482 ICV1211 - Sorin Perceval Tissue Valves
483 ICV1248 - Solo Smart Aortic Tissue Valves
484 ICV1264 - Solo Smart Aortic Tissue Valves
485 ICV1265 - Solo Smart Aortic Tissue Valves
486 ICV1331 - Sorin MEMO 3D RECHORD Annuloplasty Ring
487 ICV1332 - Sorin MEMO 3D RECHORD Annuloplasty Ring
488 ICV1333 - Sorin MEMO 3D RECHORD Annuloplasty Ring
489 ICV1334 - Sorin MEMO 3D RECHORD Annuloplasty Ring
490 ICV1335 - Sorin MEMO 3D RECHORD Annuloplasty Ring
491 ICV1336 - Sorin MEMO 3D RECHORD Annuloplasty Ring
492 ICV1337 - Sorin MEMO 3D RECHORD Annuloplasty Ring
493 IVC1247 - Solo Smart Aortic Tissue Valves
494 LMCP - LifeNet CardioGRAFT Left Mono Cusp Patch
495 MCP - LifeNet CardioGRAFT Mono Cusp Patch
496 PPGK - LifeNet CardioGRAFT Thick Pulmonary Patch
497 PPGN - LifeNet CardioGRAFT Thin Pulmonary Patch
498 PRT-## - Portico Transcatheter Aortic Valve
499 RMCP - LifeNet CardioGRAFT Right Mono Cusp Patch
500 TAS - LifeNet CardioGraft Thoracic Aorta - Small 16mm and less
501 TFGT-##A - St. Jude Medical Trifecta with Glide Technology (GT) Aortic Stented Tissue Valve
502 Z65LOTUSKIT## - Lotus Valve Kit

503	11500AXX - Edwards Inspiris Resilia Aortic Valve
777	Other US FDA-Approved Device
778	Other Non-US FDA- Approved Device

Long Name:	Valve Explant Device Size #1	*SeqNo:*	3153
Short Name:	**ValExDevSz1**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the size of the first valve or device explanted.		
Low Value:	15		
High Value:	33		

Intent / Clarification:

Data Source:	User
Format:	Integer
ParentLongName:	Valve Explant Type #1
ParentShortName:	**ValExType1**
ParentHarvestCodes:	1|2|5|6|9
Parent Value:	= "Mechanical", "Bioprosthetic", "Annuloplasty band/ring", "Mitral clip" or "Other"

Long Name:	Second Valve Explanted or Device Removed	*SeqNo:*	3160
Short Name:	**ValEx2**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether a second valve or device was explanted.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Valve Device Explanted And/Or Implanted
ParentShortName:	**ValExImp**
ParentHarvestCodes:	2|4
ParentValues:	= "Yes, Explanted" or "Yes, Explanted and Implanted"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Valve Explant Type #2	*SeqNo:*	3170
Short Name:	**ValExType2**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the type of the second valve or device explanted.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Second Valve Explanted or Device Removed
ParentShortName:	**ValEx2**
ParentHarvestCodes:	1
ParentValues:	= "Yes"

Harvest Codes:

Code:	Value:
1	Mechanical
2	Bioprosthetic
3	Homograft/Allograft
4	Autograft
5	Annuloplasty band/ring
6	Mitral clip
7	Surgeon fashioned
8	Transcatheter device
9	Other

Long Name:	Valve Explant Unique Device Identifier (UDI) - 2	*SeqNo:*	3171
Short Name:	**ValExpUDI2**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the Unique Device Identifier (UDI) of the second explanted valve device if available, otherwise leave blank.		

Intent / Clarification:

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

ParentLongName: Valve Explant Type #2
ParentShortName: **ValExType2**
ParentHarvestCodes: 1|2|5|6|8|9
ParentValues: = "Mechanical", "Bioprosthetic", "Annuloplasty band/ring", "Mitral clip", "Transcatheter device" or "Other"

Long Name: Valve Explant Model #2 *SeqNo:* 3172
Short Name: **ValExMod2** *Core:* Yes
Section Name: Valve Procedures *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the type of the second valve or device explanted.

Intent / Clarification:

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

ParentLongName: Valve Explant Type #2
ParentShortName: **ValExType2**
ParentHarvestCodes: 1|2|5|6|8|9
ParentValues: = "Mechanical", "Bioprosthetic", "Annuloplasty band/ring", "Mitral clip", "Transcatheter device" or "Other"

Harvest Codes:

201	500DM## - Medtronic Open Pivot Standard Mitral Heart Valve
202	500FA## - Medtronic Open Pivot Standard Aortic Heart Valve
203	501DA## - Medtronic Open Pivot AP Series Aortic Heart Valve
204	501DM## - Medtronic Open Pivot AP Series Mitral Heart Valve
205	502AG## - Medtronic Open Pivot Aortic Valved Graft (AVG)
206	503DA## - Medtronic Open Pivot APex Series Heart Valve
207	505DA## - Medtronic Open Pivot AP360 Series Aortic Heart Valve
208	A010 - CryoLife Ascending Thoracic Aorta
209	A020 - CryoLife Descending Thoracic Aorta
210	A030 - CryoLife Pulmonary Artery
211	AV00 - CryoLife Aortic Valve and Conduit
212	AV10 - CryoLife Aortic Valve without Conduit
214	PV00 - CryoLife Pulmonary Valve & Conduit
215	PV10 - CryoLife Pulmonary Valve without Conduit

216 R010 - CryoLife Aortoiliac Grafts
217 R020 - CryoLife Femoral Popliteal Artery
218 SGPV00 - CryoLife SG Pulmonary Valve & Conduit
219 SGPV10 - CryoLife SG Pulmonary Valve without Conduit
220 V010 - CryoLife Saphenous Vein
221 V060 - CryoLife Femoral Vein
224 2500## - Edwards Prima Aortic Stentless Bioprosthesis
225 2500P## - Edwards Prima Plus Stentless Aortic Bioprosthesis
226 2625## - Carpentier-Edwards Porcine Aortic Bioprosthesis
227 2650## - Carpentier-Edwards S.A.V. Aortic Porcine Bioprosthesis
228 2700## - Carpentier-Edwards Perimount Pericardial Aortic Bioprosthesis
229 2700TFX## - Carpentier- Edwards Perimount Theon Pericardial Aortic Bioprosthesis with ThermaFix Process
230 2800## - Carpentier-Edwards Perimount RSR Pericardial Aortic Bioprosthesis
231 2800TFX## - Carpentier- Edwards Perimount Theon RSR Pericardial Aortic Bioprosthesis with ThermaFix Process
232 3000## - Carpentier-Edwards Perimount Magna Pericardial Aortic Bioprosthesis
233 3000TFX## - Carpentier- Edwards Perimount Magna Pericardial Aortic Bioprosthesis with ThermaFix Process
234 3160## - Edwards- Duromedics Bileaflet Prostheses
235 3300TFX## - Carpentier- Edwards Perimount Magna Ease Pericardial Aortic Bioprosthesis with ThermaFix Process
236 3600## - Edwards Mira Mechanical Valve
237 3600f## - Edwards Mira Mechanical Valve
238 3600u## - Edwards Mira Mechanical Valve
239 4100## - Carpentier- McCarthy-Adams IMR ETlogix Mitral Annuloplasty Ring
240 4200## - Edwards GeoForm Mitral Annuloplasty Ring
241 4300## - Carpentier-Edwards Bioprosthetic Valved Conduit
242 4400## - Carpentier-Edwards Classic Mitral Annuloplasty Ring
243 4425## - Carpentier-Edwards Classic Mitral Annuloplasty Ring with Duraflo Treatment
244 4450## - Carpentier-Edwards Physio Mitral Annuloplasty Ring
245 4475## - Carpentier-Edwards Physio Annuloplasty Ring with Duraflo Treatment
246 4500## - Carpentier-Edwards Classic Tricuspid Annuloplasty Ring
247 4525## - Carpentier-Edwards Classic Tricuspid Annuloplasty Ring with Duraflo Treatment
248 4600## - Crosgrove-Edwards Mitral/Tricuspid Annuloplasty Ring
249 4625## - Crosgrove-Edwards Annuloplasty System with Duraflo Treatment
250 4900## - Edwards MC3 Tricuspid Annuloplasty System
251 5100## - Edwards DETlogix Mitral Annuloplasty Ring
252 5100M## - Edwards Myxomatous Annuloplasty Ring
253 5200## - Carpentier-Edwards Physio II Mitral Annuloplasty Ring

254 6625## - Carpentier-Edwards Porcine Mitral Bioprosthesis
255 6625-ESR-LP## - Carpentier- Edwards Duraflex Low Pressure Porcine Mitral Bioprosthesis with Extended Suture Ring
256 6625LP## - Carpentier-Edwards Duraflex Low Pressure Porcine Mitral Bioprosthesis
257 6900P## - Carpentier-Edwards Perimount Plus Mitral Pericardial Bioprosthesis
258 6900PTFX## - Carpentier-Edwards Perimount Theon Mitral Pericardial Bioprosthesis with ThermaFix Process
259 7000TFX## - Carpentier-Edwards Perimount Magna Mitral Pericardial Bioprosthesis
260 7200TFX## - Carpentier-Edwards Perimount Magna Mitral Ease Pericardial Bioprosthesis
261 7300TFX## - Carpentier-Edwards Perimount Magna Mitral Ease Pericardial Bioprosthesis with ThermaFix Process
262 9000## - Cribier-Edwards Aortic Bioprosthesis
263 9000PHV## - Cribier-Edwards Aortic Bioprosthesis
264 9000TFX## - Edwards Sapien Transcatheter Heart Valve
265 9120## - Edwards-Duromedics Bileaflet Prostheses
266 9600## - Edwards Mira Mechanical Valve
267 AAL - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Large
268 AAM - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Medium
269 AAS - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Small
270 DLHPA - LifeNet CardioGraft Decellularized Hemi-Pulmonary Artery with Matracell - Left
271 DRHPA - LifeNet CardioGraft Decellularized Hemi- Pulmonary Artery with Matracell - Right
272 HVAL - LifeNet CardioGraft Aortic Heart Valve - Large
273 HVAM - LifeNet CardioGraft Aortic Heart Valve - Medium
274 HVAS - LifeNet CardioGraft Aortic Heart Valve - Small
275 HVPL - LifeNet CardioGraft Pulmonary Heart Valve - Large
276 HVPM - LifeNet CardioGraft Pulmonary Heart Valve - Medium
277 HVPS - LifeNet CardioGraft Pulmonary Heart Valve - Small
278 LHPA - LifeNet CardioGraft Hemi-Pulmonary Artery - Left
279 PAL - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Large
280 PAM - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Medium
281 PAS - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Small
282 RHPA - LifeNet CardioGraft Hemi-Pulmonary Artery - Right
283 TAL - LifeNet CardioGraft Thoracic Aorta Non-valved - Large
284 TAM - LifeNet CardioGraft Thoracic Aorta Non-valved - Medium
286 174A - ## - Medtronic Hancock Apical Left Ventricle Connector
287 200## - Medtronic Contegra Unsupported Pulmonary Valve Conduit
288 200S## - Medtronic Contegra Supported Pulmonary Valve Conduit
289 305C2## - Medtronic Mosaic Standard Cinch - Aortic
290 305U2## - Medtronic Mosaic Ultra Cinch - Aortic
291 310## - Medtronic Mosaic Mitral

292 610B## - Medtronic Duran Band
293 610R## - Medtronic Duran Ring
294 620B## - Medtronic Duran AnCore Band
295 620BG## - Medtronic Duran AnCore Band With Chordal Guide
296 620R## - Medtronic Duran AnCore Ring
297 620RG## - Medtronic Duran Ancore Ring With Chordal Guide
298 638B## - Medtronic CG Future Band
299 638R## - Medtronic CG Future Composite Ring
300 670 - Medtronic Simplici-T Annuloplasty System
301 680R## - Medtronic Profile 3D Ring
302 995CS## - Medtronic Freestyle, Complete Subcoronary - CS
303 995MS## - Medtronic Freestyle, Modified Subcoronary - MS
304 FR995-## - Medtronic Freestyle, Full Root - FR
307 HC105-## - Medtronic Hancock Low-porosity Valved Conduit
308 HC150-## - Medtronic Hancock Modified Orifice Pulmonic Valved Conduit
309 T505C2## - Medtronic Hancock II Aortic Cinch
310 T505U2## - Medtronic Hancock II Ultra Cinch
311 T510C## - Medtronic Hancock II Mitral
312 ONXA## - On-X Aortic Valve with standard sewing ring
313 ONXAC## - On-X Aortic Valve with Conform-X Sewing Ring
314 ONXACE## - On-X Aortic Valve with Conform-X Sewing Ring, extended
315 ONXAE## - On-X Aortic Valve with standard sewing ring, extended
316 ONXM## - On-X Mitral Valve with standard sewing ring
317 ONXMC## - On-X Mitral Valve with Conform-X Sewing Ring
327 LXA## - Sorin Group Mitroflow Aortic Pericardial Heart Valve
328 A5-0## - Sorin Group: Carbomedics Standard Aortic Valve
329 AF-8## - Sorin Group: Carbomedics AnnuloFlex Annuloplasty System
330 AP-0## - Sorin Group: Carbomedics Carbo-Seal Ascending Aortic Prosthesis
331 AR-7## - Sorin Group: Carbomedics AnnuloFlo Annuloplasty System
332 CP-0## - Sorin Group: Carbomedics Carbo-Seal Valsalva Ascending Aortic Prosthesis
333 F7-0## - Sorin Group: Carbomedics OptiForm Mitral Valve
334 M7-0## - Sorin Group: Carbomedics Standard Mitral Valve
335 R5-0## - Sorin Group: Carbomedics Reduced Series Aortic Valve
336 S5-0## - Sorin Group: Carbomedics Top Hat Supra- Annular Aortic Valve
337 ##A-101 - St. Jude Medical Mechanical Aortic Heart Valve
338 ##AEC-102 - St. Jude Medical Mechanical Heart Valve
339 ##AECJ-502 - St. Jude Medical Masters Series Aortic Mechanical Valve, Expanded Cuff
340 ##AECS-602 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
341 ##AEHPJ-505 - St. Jude Medical Masters HP Mechanical Valve, Expanded Cuff

342 ##AEHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
343 ##AET-104 - St. Jude Medical Mechanical Heart Valve
344 ##AETJ-504 - St. Jude Medical Masters Series Mechanical Heart Valve
345 ##AFHPJ-505 - St. Jude Medical Masters HP Aortic Mechanical Valve, Flex Cuff
346 ##AG-701 - St. Jude Medical Regent Valve with Silzone Coating
347 ##AGF-706 - St. Jude Medical Regent Valve with Silzone Coating
348 ##AGFN-756 - St. Jude Medical Regent Aortic Mechanical Valve, Flex Cuff
349 ##AGN-751 - St. Jude Medical Regent Aortic Mechanical Valve, Standard Cuff
350 ##AHP-105 - St. Jude Medical Mechanical Heart Valve Hemodynamic Plus (HP) Series
351 ##AHPJ-505 - St. Jude Medical Masters HP Aortic Mechanical Heart Valve, Standard Cuff
352 ##AHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
353 ##AJ-501 - St. Jude Medical Masters Series Aortic Mechanical Valve, Standard Cuff
354 ##AS-601 - St. Jude Medical Masters Mechanical Heart Valve with Silzone Coating
355 ##AT-103 - St. Jude Medical Mechanical Heart Valve
356 ##ATJ-503 - St. Jude Medical Masters Series Aortic Mechanical Valve, PTFE Cuff
357 ##CAVG-404 - St. Jude Medical Coated Aortic Valved Graft Prosthesis
358 ##CAVGJ-514 - St. Jude Medical Masters Series Aortic Valved Graft
359 ##CAVGJ-514-00 - St. Jude Medical Masters Aortic Valved Graft, Hemashield Technology
360 ##M-101 - St. Jude Medical Mechanical Mitral Heart Valve
361 ##MEC-102 - St. Jude Medical Mechanical Heart Valve
362 ##MECJ-502 - St. Jude Medical Masters Series Mitral Mechanical Valve, Expanded Cuff
363 ##MECS-602 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
364 ##MEHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
365 ##MET-104 - St. Jude Medical Mechanical Heart Valve
366 ##METJ-504 - St. Jude Medical Masters Series Mitral Mechanical Valve, Expanded PTFE Cuff
367 ##MHP-105 - St. Jude Medical Mechanical Heart Valve Hemodynamic Plus (HP) Series
368 ##MHPJ-505 - St. Jude Medical Masters HP Mitral Mechanical Heart Valve, Standard Cuff
369 ##MHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
370 ##MJ-501 - St. Jude Medical Masters Series Mitral Mechanical Valve, Standard Cuff
371 ##MS-601 - St. Jude Medical Masters Mechanical Heart Valve with Silzone Coating
372 ##MT-103 - St. Jude Medical Mechanical Heart Valve
373 ##MTJ-503 - St. Jude Medical Masters Series Mitral Mechanical Valve, PTFE Cuff
374 ##VAVGJ-515 - St. Jude Medical Masters HP Aortic Valved Graft
375 AFR-## - St. Jude Medical Attune Flexible Adjustable Annuloplasty Ring
376 B10-##A - St. Jude Medical Biocor Aortic Valve
377 B10-##A-00 - St. Jude Medical Biocor Aortic Valve
378 B10-##M - St. Jude Medical Biocor Mitral Valve
379 B10-##M-00 - St. Jude Medical Biocor Mitral Valve
380 B100-##A-00 - St. Jude Medical Biocor Stented Aortic Tissue Valve

381 B100-##M-00 - St. Jude Medical Biocor Stented Mitral Tissue Valve
382 B10SP-## - St. Jude Medical Biocor Supra Stented Porcine Heart Valve
383 B20-0##A - St. Jude Medical Biocor Porcine Stentless Bioprosthetic Heart Valve
384 B30-##A - St. Jude Medical Biocor Valve
385 B30-##M - St. Jude Medical Biocor Valve
386 BSP100-## - St. Jude Medical Biocor Supra Aortic Stented Tissue Valve
387 E100-##A-00 - St. Jude Medical Epic Aortic Stented Tissue Valve
388 E100-##M-00 - St. Jude Medical Epic Mitral Stented Tissue Valve
389 EL-##A - St. Jude Medical Epic Aortic Valve
390 EL-##M - St. Jude Medical Epic Mitral Valve
391 ELS-##A - St. Jude Medical Epic Tissue Aortic Valve with Silzone Coating
392 ELS-##M - St. Jude Medical Epic Tissue Mitral Valve with Silzone Coating
393 ESP100-##-00 - St. Jude Medical Epic Supra Aortic Stented Tissue Valve
394 ESP100-##A-00 - St. Jude Medical Epic Stented Aortic Tissue Valve
395 ROOT-## - St. Jude Medical Toronto Root with BiLinx AC
396 RSAR-## - St. Jude Medical SJM Rigid Saddle Ring
397 SARP-## - St. Jude Medical SJM STguin Semi-Rigid Annuloplasty Ring
398 SARS-M## - St. Jude Medical STguin Annuloplasty Ring with Silzone Coating
399 SPA-101-## - St. Jude Medical Toronto SPV Valve
400 SPA-201-## - St. Jude Medical Toronto SPV II Bioprosthetic Heart Valve
401 TAB-## - St. Jude Medical Tailor Flexible Annuloplasty Band
402 TAR-## - St. Jude Medical Tailor Annuloplasty Ring with Silzone Coating
403 TARP-## - St. Jude Medical Tailor Flexible Annuloplasty Ring
404 PB10-## - Medtronic Melody Transcatheter Pulmonary Valve
405 700FF## - Medtronic Simulus FLX-O Ring
406 700FC## - Medtronic Simulus FLX-C Band
407 735AF## - Medtronic Simulus Adjustable Ring
408 800SR## - Medtronic Simulus Semi-rigid Ring
409 900SFC## - Medtronic TriAd Tricuspid Annuloplasty Ring
410 1000-## - Medtronic 3f Aortic Bioprosthesis
411 6200## - Carpentier-Edwards Physio Tricuspid Annuloplasty Ring
412 9300TFX## - Edwards Sapien Transcatheter Heart Valve
413 305## - Medtronic Mosaic Ultra Porcine Heart Valve
415 TF-##A - St. Jude Medical Trifecta Aortic Stented Tissue Valve
416 505DM## - Medtronic Open Pivot AP360 Series Mitral Heart Valve
417 800SC## - Medtronic Simulus Semi-rigid Mitral Annuloplasty Ring
418 6000-## - Medtronic 3f Enable Aortic Bioprosthesis
419 PH00 - Cryolife Pulmonary Hemi-Artery
420 SGPH00 - Cryolife SG Pulmonary Hemi-Artery

421 690R## - Medtronic Contour 3D Annuloplasty ring
422 735AC## - Medtronic Simulus Adjustable Band
423 9600TFX## - Edwards Sapien Transcatheter Heart Valve
425 H607 - Medtronic post Annuloplasty band (Split, Mayo)
428 ICV08## - Sorin Group Sovering Annuloplasty
429 ICV09## - Sorin Group MEMO 3D Semi-rigid Annuloplasty Ring
432 A1-0## - Sorin Group: Carbomedics Orbis Universal Aortic Valve
433 M2-0## - Sorin Group: Carbomedics Orbis Universal Mitral Valve
434 PF ## - Sorin Group PF ## - Sorin Group Stentless
435 PS ## - Sorin Group Pericarbon More Mitral
436 ART ## SOP - Sorin Group Soprano Armonia
437 ART ## SG - Sorin Group Freedom Solo
438 ART ## LFA- Sorin Group Bicarbon Fitline Aortic
439 MTR ## LFM- Sorin Group Bicarbon Fitline Mitral
440 ART ## LOV- Sorin Group Bicarbon Overline Aortic
441 ART ## LSA- Sorin Group Bicarbon Slimline Aortic
442 8300A## - Edwards Intuity Valve System (outside US)
443 8300AB## - Edwards Intuity Elite Valve System (outside US)
444 8300ACD## - Edwards Intuity Elite Valve System
445 9355NF## - Edwards Sapien XT Transcatheter Valve with NovaFlex System
446 9355ASP## - Edwards Sapien XT Transcatheter Valve with Ascendra System
447 S3TF1## - Edwards Sapien 3 Transcatheter Valve with Commander System
448 S3TA1## - Edwards Sapien 3 Transcatheter Valve with Certitude System
449 CRS-P3-640 – Medtronic CoreValve
450 CRS-P3-943 – Medtronic CoreValve
451 MCS-P3 – Medtronic CoreValve
452 MCS-P4 – Medtronic CoreValve Evolut
453 ONXAN## - On-X Aortic Heart Valve with Anatomic Sewing Ring
454 ONXANE## - On-X Valve with Anatomic Sewing ring and Extended Holder
455 ONXAAP## - On-X Ascending Aortic Prosthesis
456 ICV12## - Sorin Solo Smart Aortic Valve
457 ICV13## - Sorin Group MEMO 3D Rechord Annuloplasty Ring
458 DLA## - Sorin Group Mitroflow Aortic Pericardial Heart Valve with PRT
459 MVC0##- Sorin Group Mitroflow Valsalva Conduit
460 1260 ### - Starr-Edwards Silastic Ball Aortic Heart Valve Prosthesis
461 6120 ### - Starr Edwards Silastic Ball Mitral Heart Valve Prosthesis
462 73##1088 - Vascutek Gelweave Plexus Graft
463 7300##ADP - Vascutek Terumo Gelweave Vascular 45Prosthesis
464 7320## - Vascutek Gelweave Trifucate Arch Graft

465 7350##ST - Vascutek Gelweave Pre-curved Graft
466 8300AB### - Edwards Intuity Elite Valve
467 8300KITB### - Edwards Intuity Elite Valve System
468 9600CM## - Edward Sapien
469 ART##SMT - Sorin Solo Smart
470 CNA19 - Sorin Crown PRT Tissue Valve
471 CNA21 - Sorin Crown PRT Tissue Valve
472 CNA23 - Sorin Crown PRT Tissue Valve
473 CNA25 - Sorin Crown PRT Tissue Valve
474 CNA27 - Sorin Crown PRT Tissue Valve
475 DPPGK - LifeNet CardioGRAFT Thick Pulmonary Patch (decellularized)
476 DPPGN – LifeNet CardioGRAFT Thin Pulmonary Patch (decellularized)
477 EVOLUTR-##-US - Medtronic CoreValve Evolut R
478 H749LTV##0 - Boston Scientific Lotus Transcatheter Valve
479 ICV1208 - Sorin Perceval Tissue Valves
480 ICV1209 - Sorin Perceval Tissue Valves
481 ICV1210 - Sorin Perceval Tissue Valves
482 ICV1211 - Sorin Perceval Tissue Valves
483 ICV1248 - Solo Smart Aortic Tissue Valves
484 ICV1264 - Solo Smart Aortic Tissue Valves
485 ICV1265 - Solo Smart Aortic Tissue Valves
486 ICV1331 - Sorin MEMO 3D RECHORD Annuloplasty Ring
487 ICV1332 - Sorin MEMO 3D RECHORD Annuloplasty Ring
488 ICV1333 - Sorin MEMO 3D RECHORD Annuloplasty Ring
489 ICV1334 - Sorin MEMO 3D RECHORD Annuloplasty Ring
490 ICV1335 - Sorin MEMO 3D RECHORD Annuloplasty Ring
491 ICV1336 - Sorin MEMO 3D RECHORD Annuloplasty Ring
492 ICV1337 - Sorin MEMO 3D RECHORD Annuloplasty Ring
493 IVC1247 - Solo Smart Aortic Tissue Valves
494 LMCP - LifeNet CardioGRAFT Left Mono Cusp Patch
495 MCP - LifeNet CardioGRAFT Mono Cusp Patch
496 PPGK - LifeNet CardioGRAFT Thick Pulmonary Patch
497 PPGN - LifeNet CardioGRAFT Thin Pulmonary Patch
498 PRT-## - Portico Transcatheter Aortic Valve
499 RMCP - LifeNet CardioGRAFT Right Mono Cusp Patch
500 TAS - LifeNet CardioGraft Thoracic Aorta - Small 16mm and less
501 TFGT-##A - St. Jude Medical Trifecta with Glide Technology (GT) Aortic Stented Tissue Valve
502 Z65LOTUSKIT## - Lotus Valve Kit
503 11500AXX - Edwards Inspiris Resilia Aortic Valve

777	Other US FDA-Approved Device
778	Other Non-US FDA- Approved Device

Long Name:	Valve Explant Device Size #2	*SeqNo:*	3173
Short Name:	**ValExDevSz2**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the size of the second valve or device explanted.		
Low Value:	15		
High Value:	33		

Intent / Clarification:

Data Source:	User
Format:	Integer
ParentLongName:	Valve Explant Type #2
ParentShortName:	**ValExType2**
ParentHarvestCodes:	1|2|5|6|9
Parent Value:	= "Mechanical", "Bioprosthetic", "Annuloplasty band/ring", "Mitral clip" or "Other"

Long Name:	Third Valve Explanted or Device Removed	*SeqNo:*	3180
Short Name:	**ValEx3**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether a third valve or device was explanted.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Second Valve Explanted or Device Removed
ParentShortName:	**ValEx2**
ParentHarvestCodes:	1
ParentValues:	= "Yes"

Harvest Codes:

Code:	Value:
1	Yes

2	No

Long Name: Valve Explant Type #3 *SeqNo:* 3190
Short Name: **ValExType3** *Core:* Yes
Section Name: Valve Procedures *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the type of the third valve or device explanted.

Intent / Clarification:

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

ParentLongName: Third Valve Explanted or Device Removed
ParentShortName: **ValEx3**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Harvest Codes:

Code:	Value:
1	Mechanical
2	Bioprosthetic
3	Homograft/Allograft
4	Autograft
5	Annuloplasty band/ring
6	Mitral clip
7	Surgeon fashioned
8	Transcatheter device
9	Other

Long Name: Valve Explant Unique Device Identifier (UDI) - 3 *SeqNo:* 3191
Short Name: **ValExpUDI3** *Core:* Yes
Section Name: Valve Procedures *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the Unique Device Identifier (UDI) of the third explanted valve device if available, otherwise leave blank.

Intent / Clarification:

Data Source: User
Format: Text

ParentLongName: Valve Explant Type #3
ParentShortName: **ValExType3**
ParentHarvestCodes: 1|2|5|6|8|9

Parent Value: = "Mechanical", "Bioprosthetic", "Annuloplasty band/ring", "Mitral clip" or "Other"

Long Name: Valve Explant Model #3
Short Name: **ValExMod3**
Section Name: Valve Procedures
DBTableName: Operations
Definition: Indicate the type of the third valve or device explanted.

SeqNo: 3192
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Valve Explant Type #3
ParentShortName: **ValExType3**
ParentHarvestCodes: 1|2|5|6|8|9
Parent Value: = "Mechanical", "Bioprosthetic", "Annuloplasty band/ring", "Mitral clip" or "Other"

Harvest Codes:

201	500DM## - Medtronic Open Pivot Standard Mitral Heart Valve
202	500FA## - Medtronic Open Pivot Standard Aortic Heart Valve
203	501DA## - Medtronic Open Pivot AP Series Aortic Heart Valve
204	501DM## - Medtronic Open Pivot AP Series Mitral Heart Valve
205	502AG## - Medtronic Open Pivot Aortic Valved Graft (AVG)
206	503DA## - Medtronic Open Pivot APex Series Heart Valve
207	505DA## - Medtronic Open Pivot AP360 Series Aortic Heart Valve
208	A010 - CryoLife Ascending Thoracic Aorta
209	A020 - CryoLife Descending Thoracic Aorta
210	A030 - CryoLife Pulmonary Artery
211	AV00 - CryoLife Aortic Valve and Conduit
212	AV10 - CryoLife Aortic Valve without Conduit
214	PV00 - CryoLife Pulmonary Valve & Conduit
215	PV10 - CryoLife Pulmonary Valve without Conduit
216	R010 - CryoLife Aortoiliac Grafts
217	R020 - CryoLife Femoral Popliteal Artery
218	SGPV00 - CryoLife SG Pulmonary Valve & Conduit
219	SGPV10 - CryoLife SG Pulmonary Valve without Conduit
220	V010 - CryoLife Saphenous Vein
221	V060 - CryoLife Femoral Vein
224	2500## - Edwards Prima Aortic Stentless Bioprosthesis

225 2500P## - Edwards Prima Plus Stentless Aortic Bioprosthesis
226 2625## - Carpentier-Edwards Porcine Aortic Bioprosthesis
227 2650## - Carpentier-Edwards S.A.V. Aortic Porcine Bioprosthesis
228 2700## - Carpentier-Edwards Perimount Pericardial Aortic Bioprosthesis
229 2700TFX## - Carpentier- Edwards Perimount Theon Pericardial Aortic Bioprosthesis with ThermaFix Process
230 2800## - Carpentier-Edwards Perimount RSR Pericardial Aortic Bioprosthesis
231 2800TFX## - Carpentier- Edwards Perimount Theon RSR Pericardial Aortic Bioprosthesis with ThermaFix Process
232 3000## - Carpentier-Edwards Perimount Magna Pericardial Aortic Bioprosthesis
233 3000TFX## - Carpentier- Edwards Perimount Magna Pericardial Aortic Bioprosthesis with ThermaFix Process
234 3160## - Edwards- Duromedics Bileaflet Prostheses
235 3300TFX## - Carpentier- Edwards Perimount Magna Ease Pericardial Aortic Bioprosthesis with ThermaFix Process
236 3600## - Edwards Mira Mechanical Valve
237 3600f## - Edwards Mira Mechanical Valve
238 3600u## - Edwards Mira Mechanical Valve
239 4100## - Carpentier- McCarthy-Adams IMR ETlogix Mitral Annuloplasty Ring
240 4200## - Edwards GeoForm Mitral Annuloplasty Ring
241 4300## - Carpentier-Edwards Bioprosthetic Valved Conduit
242 4400## - Carpentier-Edwards Classic Mitral Annuloplasty Ring
243 4425## - Carpentier-Edwards Classic Mitral Annuloplasty Ring with Duraflo Treatment
244 4450## - Carpentier-Edwards Physio Mitral Annuloplasty Ring
245 4475## - Carpentier-Edwards Physio Annuloplasty Ring with Duraflo Treatment
246 4500## - Carpentier-Edwards Classic Tricuspid Annuloplasty Ring
247 4525## - Carpentier-Edwards Classic Tricuspid Annuloplasty Ring with Duraflo Treatment
248 4600## - Crosgrove-Edwards Mitral/Tricuspid Annuloplasty Ring
249 4625## - Crosgrove-Edwards Annuloplasty System with Duraflo Treatment
250 4900## - Edwards MC3 Tricuspid Annuloplasty System
251 5100## - Edwards DETlogix Mitral Annuloplasty Ring
252 5100M## - Edwards Myxomatous Annuloplasty Ring
253 5200## - Carpentier-Edwards Physio II Mitral Annuloplasty Ring
254 6625## - Carpentier-Edwards Porcine Mitral Bioprosthesis
255 6625-ESR-LP## - Carpentier- Edwards Duraflex Low Pressure Porcine Mitral Bioprosthesis with Extended Suture Ring
256 6625LP## - Carpentier-Edwards Duraflex Low Pressure Porcine Mitral Bioprosthesis
257 6900P## - Carpentier-Edwards Perimount Plus Mitral Pericardial Bioprosthesis
258 6900PTFX## - Carpentier-Edwards Perimount Theon Mitral Pericardial Bioprosthesis with ThermaFix Process
259 7000TFX## - Carpentier-Edwards Perimount Magna Mitral Pericardial Bioprosthesis
260 7200TFX## - Carpentier-Edwards Perimount Magna Mitral Ease Pericardial Bioprosthesis
261 7300TFX## - Carpentier-Edwards Perimount Magna Mitral Ease Pericardial Bioprosthesis with

ThermaFix Process
9000## - Cribier-Edwards Aortic Bioprosthesis
9000PHV## - Cribier-Edwards Aortic Bioprosthesis
9000TFX## - Edwards Sapien Transcatheter Heart Valve
9120## - Edwards-Duromedics Bileaflet Prostheses
9600## - Edwards Mira Mechanical Valve
AAL - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Large
AAM - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Medium
AAS - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Small
DLHPA - LifeNet CardioGraft Decellularized Hemi-Pulmonary Artery with Matracell - Left
DRHPA - LifeNet CardioGraft Decellularized Hemi- Pulmonary Artery with Matracell - Right
HVAL - LifeNet CardioGraft Aortic Heart Valve - Large
HVAM - LifeNet CardioGraft Aortic Heart Valve - Medium
HVAS - LifeNet CardioGraft Aortic Heart Valve - Small
HVPL - LifeNet CardioGraft Pulmonary Heart Valve - Large
HVPM - LifeNet CardioGraft Pulmonary Heart Valve - Medium
HVPS - LifeNet CardioGraft Pulmonary Heart Valve - Small
LHPA - LifeNet CardioGraft Hemi-Pulmonary Artery - Left
PAL - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Large
PAM - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Medium
PAS - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Small
RHPA - LifeNet CardioGraft Hemi-Pulmonary Artery - Right
TAL - LifeNet CardioGraft Thoracic Aorta Non-valved - Large
TAM - LifeNet CardioGraft Thoracic Aorta Non-valved - Medium
174A - ## - Medtronic Hancock Apical Left Ventricle Connector
200## - Medtronic Contegra Unsupported Pulmonary Valve Conduit
200S## - Medtronic Contegra Supported Pulmonary Valve Conduit
305C2## - Medtronic Mosaic Standard Cinch - Aortic
305U2## - Medtronic Mosaic Ultra Cinch - Aortic
310## - Medtronic Mosaic Mitral
610B## - Medtronic Duran Band
610R## - Medtronic Duran Ring
620B## - Medtronic Duran AnCore Band
620BG## - Medtronic Duran AnCore Band With Chordal Guide
620R## - Medtronic Duran AnCore Ring
620RG## - Medtronic Duran Ancore Ring With Chordal Guide
638B## - Medtronic CG Future Band
638R## - Medtronic CG Future Composite Ring
670 - Medtronic Simplici-T Annuloplasty System
680R## - Medtronic Profile 3D Ring
995CS## - Medtronic Freestyle, Complete Subcoronary - CS
995MS## - Medtronic Freestyle, Modified Subcoronary - MS

304 FR995-## - Medtronic Freestyle, Full Root - FR
307 HC105-## - Medtronic Hancock Low-porosity Valved Conduit
308 HC150-## - Medtronic Hancock Modified Orifice Pulmonic Valved Conduit
309 T505C2## - Medtronic Hancock II Aortic Cinch
310 T505U2## - Medtronic Hancock II Ultra Cinch
311 T510C## - Medtronic Hancock II Mitral
312 ONXA## - On-X Aortic Valve with standard sewing ring
313 ONXAC## - On-X Aortic Valve with Conform-X Sewing Ring
314 ONXACE## - On-X Aortic Valve with Conform-X Sewing Ring, extended
315 ONXAE## - On-X Aortic Valve with standard sewing ring, extended
316 ONXM## - On-X Mitral Valve with standard sewing ring
317 ONXMC## - On-X Mitral Valve with Conform-X Sewing Ring
327 LXA## - Sorin Group Mitroflow Aortic Pericardial Heart Valve
328 A5-0## - Sorin Group: Carbomedics Standard Aortic Valve
329 AF-8## - Sorin Group: Carbomedics AnnuloFlex Annuloplasty System
330 AP-0## - Sorin Group: Carbomedics Carbo-Seal Ascending Aortic Prosthesis
331 AR-7## - Sorin Group: Carbomedics AnnuloFlo Annuloplasty System
332 CP-0## - Sorin Group: Carbomedics Carbo-Seal Valsalva Ascending Aortic Prosthesis
333 F7-0## - Sorin Group: Carbomedics OptiForm Mitral Valve
334 M7-0## - Sorin Group: Carbomedics Standard Mitral Valve
335 R5-0## - Sorin Group: Carbomedics Reduced Series Aortic Valve
336 S5-0## - Sorin Group: Carbomedics Top Hat Supra- Annular Aortic Valve
337 ##A-101 - St. Jude Medical Mechanical Aortic Heart Valve
338 ##AEC-102 - St. Jude Medical Mechanical Heart Valve
339 ##AECJ-502 - St. Jude Medical Masters Series Aortic Mechanical Valve, Expanded Cuff
340 ##AECS-602 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
341 ##AEHPJ-505 - St. Jude Medical Masters HP Mechanical Valve, Expanded Cuff
342 ##AEHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
343 ##AET-104 - St. Jude Medical Mechanical Heart Valve
344 ##AETJ-504 - St. Jude Medical Masters Series Mechanical Heart Valve
345 ##AFHPJ-505 - St. Jude Medical Masters HP Aortic Mechanical Valve, Flex Cuff
346 ##AG-701 - St. Jude Medical Regent Valve with Silzone Coating
347 ##AGF-706 - St. Jude Medical Regent Valve with Silzone Coating
348 ##AGFN-756 - St. Jude Medical Regent Aortic Mechanical Valve, Flex Cuff
349 ##AGN-751 - St. Jude Medical Regent Aortic Mechanical Valve, Standard Cuff
350 ##AHP-105 - St. Jude Medical Mechanical Heart Valve Hemodynamic Plus (HP) Series
351 ##AHPJ-505 - St. Jude Medical Masters HP Aortic Mechanical Heart Valve, Standard Cuff
352 ##AHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
353 ##AJ-501 - St. Jude Medical Masters Series Aortic Mechanical Valve, Standard Cuff
354 ##AS-601 - St. Jude Medical Masters Mechanical Heart Valve with Silzone Coating
355 ##AT-103 - St. Jude Medical Mechanical Heart Valve
356 ##ATJ-503 - St. Jude Medical Masters Series Aortic Mechanical Valve, PTFE Cuff

357 ##CAVG-404 - St. Jude Medical Coated Aortic Valved Graft Prosthesis
358 ##CAVGJ-514 - St. Jude Medical Masters Series Aortic Valved Graft
359 ##CAVGJ-514-00 - St. Jude Medical Masters Aortic Valved Graft, Hemashield Technology
360 ##M-101 - St. Jude Medical Mechanical Mitral Heart Valve
361 ##MEC-102 - St. Jude Medical Mechanical Heart Valve
362 ##MECJ-502 - St. Jude Medical Masters Series Mitral Mechanical Valve, Expanded Cuff
363 ##MECS-602 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
364 ##MEHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
365 ##MET-104 - St. Jude Medical Mechanical Heart Valve
366 ##METJ-504 - St. Jude Medical Masters Series Mitral Mechanical Valve, Expanded PTFE Cuff
367 ##MHP-105 - St. Jude Medical Mechanical Heart Valve Hemodynamic Plus (HP) Series
368 ##MHPJ-505 - St. Jude Medical Masters HP Mitral Mechanical Heart Valve, Standard Cuff
369 ##MHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
370 ##MJ-501 - St. Jude Medical Masters Series Mitral Mechanical Valve, Standard Cuff
371 ##MS-601 - St. Jude Medical Masters Mechanical Heart Valve with Silzone Coating
372 ##MT-103 - St. Jude Medical Mechanical Heart Valve
373 ##MTJ-503 - St. Jude Medical Masters Series Mitral Mechanical Valve, PTFE Cuff
374 ##VAVGJ-515 - St. Jude Medical Masters HP Aortic Valved Graft
375 AFR-## - St. Jude Medical Attune Flexible Adjustable Annuloplasty Ring
376 B10-##A - St. Jude Medical Biocor Aortic Valve
377 B10-##A-00 - St. Jude Medical Biocor Aortic Valve
378 B10-##M - St. Jude Medical Biocor Mitral Valve
379 B10-##M-00 - St. Jude Medical Biocor Mitral Valve
380 B100-##A-00 - St. Jude Medical Biocor Stented Aortic Tissue Valve
381 B100-##M-00 - St. Jude Medical Biocor Stented Mitral Tissue Valve
382 B10SP-## - St. Jude Medical Biocor Supra Stented Porcine Heart Valve
383 B20-0##A - St. Jude Medical Biocor Porcine Stentless Bioprosthetic Heart Valve
384 B30-##A - St. Jude Medical Biocor Valve
385 B30-##M - St. Jude Medical Biocor Valve
386 BSP100-## - St. Jude Medical Biocor Supra Aortic Stented Tissue Valve
387 E100-##A-00 - St. Jude Medical Epic Aortic Stented Tissue Valve
388 E100-##M-00 - St. Jude Medical Epic Mitral Stented Tissue Valve
389 EL-##A - St. Jude Medical Epic Aortic Valve
390 EL-##M - St. Jude Medical Epic Mitral Valve
391 ELS-##A - St. Jude Medical Epic Tissue Aortic Valve with Silzone Coating
392 ELS-##M - St. Jude Medical Epic Tissue Mitral Valve with Silzone Coating
393 ESP100-##-00 - St. Jude Medical Epic Supra Aortic Stented Tissue Valve
394 ESP100-##A-00 - St. Jude Medical Epic Stented Aortic Tissue Valve
395 ROOT-## - St. Jude Medical Toronto Root with BiLinx AC
396 RSAR-## - St. Jude Medical SJM Rigid Saddle Ring
397 SARP-## - St. Jude Medical SJM STguin Semi-Rigid Annuloplasty Ring
398 SARS-M## - St. Jude Medical STguin Annuloplasty Ring with Silzone Coating

399 SPA-101-## - St. Jude Medical Toronto SPV Valve
400 SPA-201-## - St. Jude Medical Toronto SPV II Bioprosthetic Heart Valve
401 TAB-## - St. Jude Medical Tailor Flexible Annuloplasty Band
402 TAR-## - St. Jude Medical Tailor Annuloplasty Ring with Silzone Coating
403 TARP-## - St. Jude Medical Tailor Flexible Annuloplasty Ring
404 PB10-## - Medtronic Melody Transcatheter Pulmonary Valve
405 700FF## - Medtronic Simulus FLX-O Ring
406 700FC## - Medtronic Simulus FLX-C Band
407 735AF## - Medtronic Simulus Adjustable Ring
408 800SR## - Medtronic Simulus Semi-rigid Ring
409 900SFC## - Medtronic TriAd Tricuspid Annuloplasty Ring
410 1000-## - Medtronic 3f Aortic Bioprosthesis
411 6200## - Carpentier-Edwards Physio Tricuspid Annuloplasty Ring
412 9300TFX## - Edwards Sapien Transcatheter Heart Valve
413 305## - Medtronic Mosaic Ultra Porcine Heart Valve
415 TF-##A - St. Jude Medical Trifecta Aortic Stented Tissue Valve
416 505DM## - Medtronic Open Pivot AP360 Series Mitral Heart Valve
417 800SC## - Medtronic Simulus Semi-rigid Mitral Annuloplasty Ring
418 6000-## - Medtronic 3f Enable Aortic Bioprosthesis
419 PH00 - Cryolife Pulmonary Hemi-Artery
420 SGPH00 - Cryolife SG Pulmonary Hemi-Artery
421 690R## - Medtronic Contour 3D Annuloplasty ring
422 735AC## - Medtronic Simulus Adjustable Band
423 9600TFX## - Edwards Sapien Transcatheter Heart Valve
425 H607 - Medtronic post Annuloplasty band (Split, Mayo)
428 ICV08## - Sorin Group Sovering Annuloplasty
429 ICV09## - Sorin Group MEMO 3D Semi-rigid Annuloplasty Ring
432 A1-0## - Sorin Group: Carbomedics Orbis Universal Aortic Valve
433 M2-0## - Sorin Group: Carbomedics Orbis Universal Mitral Valve
434 PF ## - Sorin Group PF ## - Sorin Group Stentless
435 PS ## - Sorin Group Pericarbon More Mitral
436 ART ## SOP - Sorin Group Soprano Armonia
437 ART ## SG - Sorin Group Freedom Solo
438 ART ## LFA- Sorin Group Bicarbon Fitline Aortic
439 MTR ## LFM- Sorin Group Bicarbon Fitline Mitral
440 ART ## LOV- Sorin Group Bicarbon Overline Aortic
441 ART ## LSA- Sorin Group Bicarbon Slimline Aortic
442 8300A## - Edwards Intuity Valve System (outside US)
443 8300AB## - Edwards Intuity Elite Valve System (outside US)
444 8300ACD## - Edwards Intuity Elite Valve System
445 9355NF## - Edwards Sapien XT Transcatheter Valve with NovaFlex System
446 9355ASP## - Edwards Sapien XT Transcatheter Valve with Ascendra System

447 S3TF1## - Edwards Sapien 3 Transcatheter Valve with Commander System
448 S3TA1## - Edwards Sapien 3 Transcatheter Valve with Certitude System
449 CRS-P3-640 – Medtronic CoreValve
450 CRS-P3-943 – Medtronic CoreValve
451 MCS-P3 – Medtronic CoreValve
452 MCS-P4 – Medtronic CoreValve Evolut
453 ONXAN## - On-X Aortic Heart Valve with Anatomic Sewing Ring
454 ONXANE## - On-X Valve with Anatomic Sewing ring and Extended Holder
455 ONXAAP## - On-X Ascending Aortic Prosthesis
456 ICV12## - Sorin Solo Smart Aortic Valve
457 ICV13## - Sorin Group MEMO 3D Rechord Annuloplasty Ring
458 DLA## - Sorin Group Mitroflow Aortic Pericardial Heart Valve with PRT
459 MVC0##- Sorin Group Mitroflow Valsalva Conduit
460 1260 ### - Starr-Edwards Silastic Ball Aortic Heart Valve Prosthesis
461 6120 ### - Starr Edwards Silastic Ball Mitral Heart Valve Prosthesis
462 73##1088 - Vascutek Gelweave Plexus Graft
463 7300##ADP - Vascutek Terumo Gelweave Vascular 45Prosthesis
464 7320## - Vascutek Gelweave Trifucate Arch Graft
465 7350##ST - Vascutek Gelweave Pre-curved Graft
466 8300AB### - Edwards Intuity Elite Valve
467 8300KITB### - Edwards Intuity Elite Valve System
468 9600CM## - Edward Sapien
469 ART##SMT - Sorin Solo Smart
470 CNA19 - Sorin Crown PRT Tissue Valve
471 CNA21 - Sorin Crown PRT Tissue Valve
472 CNA23 - Sorin Crown PRT Tissue Valve
473 CNA25 - Sorin Crown PRT Tissue Valve
474 CNA27 - Sorin Crown PRT Tissue Valve
475 DPPGK - LifeNet CardioGRAFT Thick Pulmonary Patch (decellularized)
476 DPPGN – LifeNet CardioGRAFT Thin Pulmonary Patch (decellularized)
477 EVOLUTR-##-US - Medtronic CoreValve Evolut R
478 H749LTV##0 - Boston Scientific Lotus Transcatheter Valve
479 ICV1208 - Sorin Perceval Tissue Valves
480 ICV1209 - Sorin Perceval Tissue Valves
481 ICV1210 - Sorin Perceval Tissue Valves
482 ICV1211 - Sorin Perceval Tissue Valves
483 ICV1248 - Solo Smart Aortic Tissue Valves
484 ICV1264 - Solo Smart Aortic Tissue Valves
485 ICV1265 - Solo Smart Aortic Tissue Valves
486 ICV1331 - Sorin MEMO 3D RECHORD Annuloplasty Ring
487 ICV1332 - Sorin MEMO 3D RECHORD Annuloplasty Ring

488	ICV1333 - Sorin MEMO 3D RECHORD Annuloplasty Ring
489	ICV1334 - Sorin MEMO 3D RECHORD Annuloplasty Ring
490	ICV1335 - Sorin MEMO 3D RECHORD Annuloplasty Ring
491	ICV1336 - Sorin MEMO 3D RECHORD Annuloplasty Ring
492	ICV1337 - Sorin MEMO 3D RECHORD Annuloplasty Ring
493	IVC1247 - Solo Smart Aortic Tissue Valves
494	LMCP - LifeNet CardioGRAFT Left Mono Cusp Patch
495	MCP - LifeNet CardioGRAFT Mono Cusp Patch
496	PPGK - LifeNet CardioGRAFT Thick Pulmonary Patch
497	PPGN - LifeNet CardioGRAFT Thin Pulmonary Patch
498	PRT-## - Portico Transcatheter Aortic Valve
499	RMCP - LifeNet CardioGRAFT Right Mono Cusp Patch
500	TAS - LifeNet CardioGraft Thoracic Aorta - Small 16mm and less
501	TFGT-##A - St. Jude Medical Trifecta with Glide Technology (GT) Aortic Stented Tissue Valve
502	Z65LOTUSKIT## - Lotus Valve Kit
503	11500AXX - Edwards Inspiris Resilia Aortic Valve
777	Other US FDA-Approved Device
778	Other Non-US FDA- Approved Device

Long Name:	Valve Explant Device Size #3	*SeqNo:*	3193
Short Name:	**ValExDevSz3**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the size of the third valve or device explanted.		
Low Value:	15		
High Value:	33		

Intent / Clarification:

Data Source:	User
Format:	Integer
ParentLongName:	Valve Explant Type #3
ParentShortName:	**ValExType3**
ParentHarvestCodes:	1|2|5|6|9
Parent Value:	= "Mechanical", "Bioprosthetic", "Annuloplasty band/ring", "Mitral clip" or "Other"

Long Name:	Fourth Valve Explanted or Device Removed	*SeqNo:*	3200
Short Name:	**ValEx4**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes

DBTableName: Operations
Definition: Indicate whether a fourth valve or device was explanted.

Intent / Clarification:

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

ParentLongName: Third Valve Explanted or Device Removed
ParentShortName: **ValEx3**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Valve Explant Type #4
Short Name: **ValExType4**
Section Name: Valve Procedures
DBTableName: Operations
Definition: Indicate the type of the fourth valve or device explanted.

SeqNo: 3210
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Fourth Valve Explanted or Device Removed
ParentShortName: **ValEx4**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Mechanical
2	Bioprosthetic
3	Homograft/Allograft
4	Autograft
5	Annuloplasty band/ring
6	Mitral clip
7	Surgeon fashioned
8	Transcatheter device
9	Other

Long Name:	Valve Explant Unique Device Identifier (UDI) - 4	*SeqNo:*	3211
Short Name:	**ValExpUDI4**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the Unique Device Identifier (UDI) of the fourth explanted valve device if available, otherwise leave blank.		

Intent / Clarification:

Data Source:	User
Format:	Text
ParentLongName:	Valve Explant Type #4
ParentShortName:	**ValExType4**
ParentHarvestCodes:	1|2|5|6|8|9
ParentValues:	= "Mechanical", "Bioprosthetic", "Annuloplasty band/ring", "Mitral clip", "Transcatheter device" or "Other"

Long Name:	Valve Explant Model #4	*SeqNo:*	3212
Short Name:	**ValexMod4**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the type of the fourth valve or device explanted.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Valve Explant Type #4
ParentShortName:	**ValExType4**
ParentHarvestCodes:	1|2|5|6|8|9
ParentValues:	= "Mechanical", "Bioprosthetic", "Annuloplasty band/ring", "Mitral clip", "Transcatheter device" or "Other"

Harvest Codes:

201	500DM## - Medtronic Open Pivot Standard Mitral Heart Valve
202	500FA## - Medtronic Open Pivot Standard Aortic Heart Valve
203	501DA## - Medtronic Open Pivot AP Series Aortic Heart Valve
204	501DM## - Medtronic Open Pivot AP Series Mitral Heart Valve

205 502AG## - Medtronic Open Pivot Aortic Valved Graft (AVG)
206 503DA## - Medtronic Open Pivot APex Series Heart Valve
207 505DA## - Medtronic Open Pivot AP360 Series Aortic Heart Valve
208 A010 - CryoLife Ascending Thoracic Aorta
209 A020 - CryoLife Descending Thoracic Aorta
210 A030 - CryoLife Pulmonary Artery
211 AV00 - CryoLife Aortic Valve and Conduit
212 AV10 - CryoLife Aortic Valve without Conduit
214 PV00 - CryoLife Pulmonary Valve & Conduit
215 PV10 - CryoLife Pulmonary Valve without Conduit
216 R010 - CryoLife Aortoiliac Grafts
217 R020 - CryoLife Femoral Popliteal Artery
218 SGPV00 - CryoLife SG Pulmonary Valve & Conduit
219 SGPV10 - CryoLife SG Pulmonary Valve without Conduit
220 V010 - CryoLife Saphenous Vein
221 V060 - CryoLife Femoral Vein
224 2500## - Edwards Prima Aortic Stentless Bioprosthesis
225 2500P## - Edwards Prima Plus Stentless Aortic Bioprosthesis
226 2625## - Carpentier-Edwards Porcine Aortic Bioprosthesis
227 2650## - Carpentier-Edwards S.A.V. Aortic Porcine Bioprosthesis
228 2700## - Carpentier-Edwards Perimount Pericardial Aortic Bioprosthesis
229 2700TFX## - Carpentier- Edwards Perimount Theon Pericardial Aortic Bioprosthesis with ThermaFix Process
230 2800## - Carpentier-Edwards Perimount RSR Pericardial Aortic Bioprosthesis
231 2800TFX## - Carpentier- Edwards Perimount Theon RSR Pericardial Aortic Bioprosthesis with ThermaFix Process
232 3000## - Carpentier-Edwards Perimount Magna Pericardial Aortic Bioprosthesis
233 3000TFX## - Carpentier- Edwards Perimount Magna Pericardial Aortic Bioprosthesis with ThermaFix Process
234 3160## - Edwards- Duromedics Bileaflet Prostheses
235 3300TFX## - Carpentier- Edwards Perimount Magna Ease Pericardial Aortic Bioprosthesis with ThermaFix Process
236 3600## - Edwards Mira Mechanical Valve
237 3600f## - Edwards Mira Mechanical Valve
238 3600u## - Edwards Mira Mechanical Valve
239 4100## - Carpentier- McCarthy-Adams IMR ETlogix Mitral Annuloplasty Ring
240 4200## - Edwards GeoForm Mitral Annuloplasty Ring
241 4300## - Carpentier-Edwards Bioprosthetic Valved Conduit
242 4400## - Carpentier-Edwards Classic Mitral Annuloplasty Ring
243 4425## - Carpentier-Edwards Classic Mitral Annuloplasty Ring with Duraflo Treatment
244 4450## - Carpentier-Edwards Physio Mitral Annuloplasty Ring
245 4475## - Carpentier-Edwards Physio Annuloplasty Ring with Duraflo Treatment

246 4500## - Carpentier-Edwards Classic Tricuspid Annuloplasty Ring
247 4525## - Carpentier-Edwards Classic Tricuspid Annuloplasty Ring with Duraflo Treatment
248 4600## - Crosgrove-Edwards Mitral/Tricuspid Annuloplasty Ring
249 4625## - Crosgrove-Edwards Annuloplasty System with Duraflo Treatment
250 4900## - Edwards MC3 Tricuspid Annuloplasty System
251 5100## - Edwards DETlogix Mitral Annuloplasty Ring
252 5100M## - Edwards Myxomatous Annuloplasty Ring
253 5200## - Carpentier-Edwards Physio II Mitral Annuloplasty Ring
254 6625## - Carpentier-Edwards Porcine Mitral Bioprosthesis
255 6625-ESR-LP## - Carpentier- Edwards Duraflex Low Pressure Porcine Mitral Bioprosthesis with Extended Suture Ring
256 6625LP## - Carpentier-Edwards Duraflex Low Pressure Porcine Mitral Bioprosthesis
257 6900P## - Carpentier-Edwards Perimount Plus Mitral Pericardial Bioprosthesis
258 6900PTFX## - Carpentier-Edwards Perimount Theon Mitral Pericardial Bioprosthesis with ThermaFix Process
259 7000TFX## - Carpentier-Edwards Perimount Magna Mitral Pericardial Bioprosthesis
260 7200TFX## - Carpentier-Edwards Perimount Magna Mitral Ease Pericardial Bioprosthesis
261 7300TFX## - Carpentier-Edwards Perimount Magna Mitral Ease Pericardial Bioprosthesis with ThermaFix Process
262 9000## - Cribier-Edwards Aortic Bioprosthesis
263 9000PHV## - Cribier-Edwards Aortic Bioprosthesis
264 9000TFX## - Edwards Sapien Transcatheter Heart Valve
265 9120## - Edwards-Duromedics Bileaflet Prostheses
266 9600## - Edwards Mira Mechanical Valve
267 AAL - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Large
268 AAM - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Medium
269 AAS - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Small
270 DLHPA - LifeNet CardioGraft Decellularized Hemi-Pulmonary Artery with Matracell - Left
271 DRHPA - LifeNet CardioGraft Decellularized Hemi- Pulmonary Artery with Matracell - Right
272 HVAL - LifeNet CardioGraft Aortic Heart Valve - Large
273 HVAM - LifeNet CardioGraft Aortic Heart Valve - Medium
274 HVAS - LifeNet CardioGraft Aortic Heart Valve - Small
275 HVPL - LifeNet CardioGraft Pulmonary Heart Valve - Large
276 HVPM - LifeNet CardioGraft Pulmonary Heart Valve - Medium
277 HVPS - LifeNet CardioGraft Pulmonary Heart Valve - Small
278 LHPA - LifeNet CardioGraft Hemi-Pulmonary Artery - Left
279 PAL - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Large
280 PAM - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Medium
281 PAS - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Small
282 RHPA - LifeNet CardioGraft Hemi-Pulmonary Artery - Right
283 TAL - LifeNet CardioGraft Thoracic Aorta Non-valved - Large
284 TAM - LifeNet CardioGraft Thoracic Aorta Non-valved - Medium

286 174A - ## - Medtronic Hancock Apical Left Ventricle Connector
287 200## - Medtronic Contegra Unsupported Pulmonary Valve Conduit
288 200S## - Medtronic Contegra Supported Pulmonary Valve Conduit
289 305C2## - Medtronic Mosaic Standard Cinch - Aortic
290 305U2## - Medtronic Mosaic Ultra Cinch - Aortic
291 310## - Medtronic Mosaic Mitral
292 610B## - Medtronic Duran Band
293 610R## - Medtronic Duran Ring
294 620B## - Medtronic Duran AnCore Band
295 620BG## - Medtronic Duran AnCore Band With Chordal Guide
296 620R## - Medtronic Duran AnCore Ring
297 620RG## - Medtronic Duran Ancore Ring With Chordal Guide
298 638B## - Medtronic CG Future Band
299 638R## - Medtronic CG Future Composite Ring
300 670 - Medtronic Simplici-T Annuloplasty System
301 680R## - Medtronic Profile 3D Ring
302 995CS## - Medtronic Freestyle, Complete Subcoronary - CS
303 995MS## - Medtronic Freestyle, Modified Subcoronary - MS
304 FR995-## - Medtronic Freestyle, Full Root - FR
307 HC105-## - Medtronic Hancock Low-porosity Valved Conduit
308 HC150-## - Medtronic Hancock Modified Orifice Pulmonic Valved Conduit
309 T505C2## - Medtronic Hancock II Aortic Cinch
310 T505U2## - Medtronic Hancock II Ultra Cinch
311 T510C## - Medtronic Hancock II Mitral
312 ONXA## - On-X Aortic Valve with standard sewing ring
313 ONXAC## - On-X Aortic Valve with Conform-X Sewing Ring
314 ONXACE## - On-X Aortic Valve with Conform-X Sewing Ring, extended
315 ONXAE## - On-X Aortic Valve with standard sewing ring, extended
316 ONXM## - On-X Mitral Valve with standard sewing ring
317 ONXMC## - On-X Mitral Valve with Conform-X Sewing Ring
327 LXA## - Sorin Group Mitroflow Aortic Pericardial Heart Valve
328 A5-0## - Sorin Group: Carbomedics Standard Aortic Valve
329 AF-8## - Sorin Group: Carbomedics AnnuloFlex Annuloplasty System
330 AP-0## - Sorin Group: Carbomedics Carbo-Seal Ascending Aortic Prosthesis
331 AR-7## - Sorin Group: Carbomedics AnnuloFlo Annuloplasty System
332 CP-0## - Sorin Group: Carbomedics Carbo-Seal Valsalva Ascending Aortic Prosthesis
333 F7-0## - Sorin Group: Carbomedics OptiForm Mitral Valve
334 M7-0## - Sorin Group: Carbomedics Standard Mitral Valve
335 R5-0## - Sorin Group: Carbomedics Reduced Series Aortic Valve
336 S5-0## - Sorin Group: Carbomedics Top Hat Supra- Annular Aortic Valve
337 ##A-101 - St. Jude Medical Mechanical Aortic Heart Valve
338 ##AEC-102 - St. Jude Medical Mechanical Heart Valve

##AECJ-502 - St. Jude Medical Masters Series Aortic Mechanical Valve, Expanded Cuff
##AECS-602 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
##AEHPJ-505 - St. Jude Medical Masters HP Mechanical Valve, Expanded Cuff
##AEHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
##AET-104 - St. Jude Medical Mechanical Heart Valve
##AETJ-504 - St. Jude Medical Masters Series Mechanical Heart Valve
##AFHPJ-505 - St. Jude Medical Masters HP Aortic Mechanical Valve, Flex Cuff
##AG-701 - St. Jude Medical Regent Valve with Silzone Coating
##AGF-706 - St. Jude Medical Regent Valve with Silzone Coating
##AGFN-756 - St. Jude Medical Regent Aortic Mechanical Valve, Flex Cuff
##AGN-751 - St. Jude Medical Regent Aortic Mechanical Valve, Standard Cuff
##AHP-105 - St. Jude Medical Mechanical Heart Valve Hemodynamic Plus (HP) Series
##AHPJ-505 - St. Jude Medical Masters HP Aortic Mechanical Heart Valve, Standard Cuff
##AHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
##AJ-501 - St. Jude Medical Masters Series Aortic Mechanical Valve, Standard Cuff
##AS-601 - St. Jude Medical Masters Mechanical Heart Valve with Silzone Coating
##AT-103 - St. Jude Medical Mechanical Heart Valve
##ATJ-503 - St. Jude Medical Masters Series Aortic Mechanical Valve, PTFE Cuff
##CAVG-404 - St. Jude Medical Coated Aortic Valved Graft Prosthesis
##CAVGJ-514 - St. Jude Medical Masters Series Aortic Valved Graft
##CAVGJ-514-00 - St. Jude Medical Masters Aortic Valved Graft, Hemashield Technology
##M-101 - St. Jude Medical Mechanical Mitral Heart Valve
##MEC-102 - St. Jude Medical Mechanical Heart Valve
##MECJ-502 - St. Jude Medical Masters Series Mitral Mechanical Valve, Expanded Cuff
##MECS-602 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
##MEHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
##MET-104 - St. Jude Medical Mechanical Heart Valve
##METJ-504 - St. Jude Medical Masters Series Mitral Mechanical Valve, Expanded PTFE Cuff
##MHP-105 - St. Jude Medical Mechanical Heart Valve Hemodynamic Plus (HP) Series
##MHPJ-505 - St. Jude Medical Masters HP Mitral Mechanical Heart Valve, Standard Cuff
##MHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
##MJ-501 - St. Jude Medical Masters Series Mitral Mechanical Valve, Standard Cuff
##MS-601 - St. Jude Medical Masters Mechanical Heart Valve with Silzone Coating
##MT-103 - St. Jude Medical Mechanical Heart Valve
##MTJ-503 - St. Jude Medical Masters Series Mitral Mechanical Valve, PTFE Cuff
##VAVGJ-515 - St. Jude Medical Masters HP Aortic Valved Graft
AFR-## - St. Jude Medical Attune Flexible Adjustable Annuloplasty Ring
B10-##A - St. Jude Medical Biocor Aortic Valve
B10-##A-00 - St. Jude Medical Biocor Aortic Valve
B10-##M - St. Jude Medical Biocor Mitral Valve
B10-##M-00 - St. Jude Medical Biocor Mitral Valve
B100-##A-00 - St. Jude Medical Biocor Stented Aortic Tissue Valve

381 B100-##M-00 - St. Jude Medical Biocor Stented Mitral Tissue Valve
382 B10SP-## - St. Jude Medical Biocor Supra Stented Porcine Heart Valve
383 B20-0##A - St. Jude Medical Biocor Porcine Stentless Bioprosthetic Heart Valve
384 B30-##A - St. Jude Medical Biocor Valve
385 B30-##M - St. Jude Medical Biocor Valve
386 BSP100-## - St. Jude Medical Biocor Supra Aortic Stented Tissue Valve
387 E100-##A-00 - St. Jude Medical Epic Aortic Stented Tissue Valve
388 E100-##M-00 - St. Jude Medical Epic Mitral Stented Tissue Valve
389 EL-##A - St. Jude Medical Epic Aortic Valve
390 EL-##M - St. Jude Medical Epic Mitral Valve
391 ELS-##A - St. Jude Medical Epic Tissue Aortic Valve with Silzone Coating
392 ELS-##M - St. Jude Medical Epic Tissue Mitral Valve with Silzone Coating
393 ESP100-##-00 - St. Jude Medical Epic Supra Aortic Stented Tissue Valve
394 ESP100-##A-00 - St. Jude Medical Epic Stented Aortic Tissue Valve
395 ROOT-## - St. Jude Medical Toronto Root with BiLinx AC
396 RSAR-## - St. Jude Medical SJM Rigid Saddle Ring
397 SARP-## - St. Jude Medical SJM STguin Semi-Rigid Annuloplasty Ring
398 SARS-M## - St. Jude Medical STguin Annuloplasty Ring with Silzone Coating
399 SPA-101-## - St. Jude Medical Toronto SPV Valve
400 SPA-201-## - St. Jude Medical Toronto SPV II Bioprosthetic Heart Valve
401 TAB-## - St. Jude Medical Tailor Flexible Annuloplasty Band
402 TAR-## - St. Jude Medical Tailor Annuloplasty Ring with Silzone Coating
403 TARP-## - St. Jude Medical Tailor Flexible Annuloplasty Ring
404 PB10-## - Medtronic Melody Transcatheter Pulmonary Valve
405 700FF## - Medtronic Simulus FLX-O Ring
406 700FC## - Medtronic Simulus FLX-C Band
407 735AF## - Medtronic Simulus Adjustable Ring
408 800SR## - Medtronic Simulus Semi-rigid Ring
409 900SFC## - Medtronic TriAd Tricuspid Annuloplasty Ring
410 1000-## - Medtronic 3f Aortic Bioprosthesis
411 6200## - Carpentier-Edwards Physio Tricuspid Annuloplasty Ring
412 9300TFX## - Edwards Sapien Transcatheter Heart Valve
413 305## - Medtronic Mosaic Ultra Porcine Heart Valve
415 TF-##A - St. Jude Medical Trifecta Aortic Stented Tissue Valve
416 505DM## - Medtronic Open Pivot AP360 Series Mitral Heart Valve
417 800SC## - Medtronic Simulus Semi-rigid Mitral Annuloplasty Ring
418 6000-## - Medtronic 3f Enable Aortic Bioprosthesis
419 PH00 - Cryolife Pulmonary Hemi-Artery
420 SGPH00 - Cryolife SG Pulmonary Hemi-Artery
421 690R## - Medtronic Contour 3D Annuloplasty ring
422 735AC## - Medtronic Simulus Adjustable Band
423 9600TFX## - Edwards Sapien Transcatheter Heart Valve

425 H607 - Medtronic post Annuloplasty band (Split, Mayo)
428 ICV08## - Sorin Group Sovering Annuloplasty
429 ICV09## - Sorin Group MEMO 3D Semi-rigid Annuloplasty Ring
432 A1-0## - Sorin Group: Carbomedics Orbis Universal Aortic Valve
433 M2-0## - Sorin Group: Carbomedics Orbis Universal Mitral Valve
434 PF ## - Sorin Group PF ## - Sorin Group Stentless
435 PS ## - Sorin Group Pericarbon More Mitral
436 ART ## SOP - Sorin Group Soprano Armonia
437 ART ## SG - Sorin Group Freedom Solo
438 ART ## LFA- Sorin Group Bicarbon Fitline Aortic
439 MTR ## LFM- Sorin Group Bicarbon Fitline Mitral
440 ART ## LOV- Sorin Group Bicarbon Overline Aortic
441 ART ## LSA- Sorin Group Bicarbon Slimline Aortic
442 8300A## - Edwards Intuity Valve System (outside US)
443 8300AB## - Edwards Intuity Elite Valve System (outside US)
444 8300ACD## - Edwards Intuity Elite Valve System
445 9355NF## - Edwards Sapien XT Transcatheter Valve with NovaFlex System
446 9355ASP## - Edwards Sapien XT Transcatheter Valve with Ascendra System
447 S3TF1## - Edwards Sapien 3 Transcatheter Valve with Commander System
448 S3TA1## - Edwards Sapien 3 Transcatheter Valve with Certitude System
449 CRS-P3-640 – Medtronic CoreValve
450 CRS-P3-943 – Medtronic CoreValve
451 MCS-P3 – Medtronic CoreValve
452 MCS-P4 – Medtronic CoreValve Evolut
453 ONXAN## - On-X Aortic Heart Valve with Anatomic Sewing Ring
454 ONXANE## - On-X Valve with Anatomic Sewing ring and Extended Holder
455 ONXAAP## - On-X Ascending Aortic Prosthesis
456 ICV12## - Sorin Solo Smart Aortic Valve
457 ICV13## - Sorin Group MEMO 3D Rechord Annuloplasty Ring
458 DLA## - Sorin Group Mitroflow Aortic Pericardial Heart Valve with PRT
459 MVC0##- Sorin Group Mitroflow Valsalva Conduit
460 1260 ### - Starr-Edwards Silastic Ball Aortic Heart Valve Prosthesis
461 6120 ### - Starr Edwards Silastic Ball Mitral Heart Valve Prosthesis
462 73##1088 - Vascutek Gelweave Plexus Graft
463 7300##ADP - Vascutek Terumo Gelweave Vascular 45Prosthesis
464 7320## - Vascutek Gelweave Trifucate Arch Graft
465 7350##ST - Vascutek Gelweave Pre-curved Graft
466 8300AB### - Edwards Intuity Elite Valve
467 8300KITB### - Edwards Intuity Elite Valve System
468 9600CM## - Edward Sapien
469 ART##SMT - Sorin Solo Smart
470 CNA19 - Sorin Crown PRT Tissue Valve

471	CNA21 - Sorin Crown PRT Tissue Valve
472	CNA23 - Sorin Crown PRT Tissue Valve
473	CNA25 - Sorin Crown PRT Tissue Valve
474	CNA27 - Sorin Crown PRT Tissue Valve
475	DPPGK - LifeNet CardioGRAFT Thick Pulmonary Patch (decellularized)
476	DPPGN – LifeNet CardioGRAFT Thin Pulmonary Patch (decellularized)
477	EVOLUTR-##-US - Medtronic CoreValve Evolut R
478	H749LTV##0 - Boston Scientific Lotus Transcatheter Valve
479	ICV1208 - Sorin Perceval Tissue Valves
480	ICV1209 - Sorin Perceval Tissue Valves
481	ICV1210 - Sorin Perceval Tissue Valves
482	ICV1211 - Sorin Perceval Tissue Valves
483	ICV1248 - Solo Smart Aortic Tissue Valves
484	ICV1264 - Solo Smart Aortic Tissue Valves
485	ICV1265 - Solo Smart Aortic Tissue Valves
486	ICV1331 - Sorin MEMO 3D RECHORD Annuloplasty Ring
487	ICV1332 - Sorin MEMO 3D RECHORD Annuloplasty Ring
488	ICV1333 - Sorin MEMO 3D RECHORD Annuloplasty Ring
489	ICV1334 - Sorin MEMO 3D RECHORD Annuloplasty Ring
490	ICV1335 - Sorin MEMO 3D RECHORD Annuloplasty Ring
491	ICV1336 - Sorin MEMO 3D RECHORD Annuloplasty Ring
492	ICV1337 - Sorin MEMO 3D RECHORD Annuloplasty Ring
493	IVC1247 - Solo Smart Aortic Tissue Valves
494	LMCP - LifeNet CardioGRAFT Left Mono Cusp Patch
495	MCP - LifeNet CardioGRAFT Mono Cusp Patch
496	PPGK - LifeNet CardioGRAFT Thick Pulmonary Patch
497	PPGN - LifeNet CardioGRAFT Thin Pulmonary Patch
498	PRT-## - Portico Transcatheter Aortic Valve
499	RMCP - LifeNet CardioGRAFT Right Mono Cusp Patch
500	TAS - LifeNet CardioGraft Thoracic Aorta - Small 16mm and less
501	TFGT-##A - St. Jude Medical Trifecta with Glide Technology (GT) Aortic Stented Tissue Valve
502	Z65LOTUSKIT## - Lotus Valve Kit
503	11500AXX - Edwards Inspiris Resilia Aortic Valve
777	Other US FDA-Approved Device
778	Other Non-US FDA- Approved Device

Long Name:	Valve Explant Device Size #4	*SeqNo:*	3213
Short Name:	**ValExDevSz4**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		

Definition: Indicate the size of the fourth valve or device explanted.
Low Value: 15
High Value: 33

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Valve Explant Type #4
ParentShortName: **ValExType4**
ParentHarvestCodes: 1|2|5|6|9
Parent Value: = "Mechanical", "Bioprosthetic", "Annuloplasty band/ring", "Mitral clip" or "Other"

Long Name: Valve Implant Type #1 *SeqNo:* 3220
Short Name: **ValImpLoc1** *Core:* Yes
Section Name: Valve Procedures *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the type of the first valve or device implanted.

Intent / Clarification:

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

ParentLongName: Valve Device Explanted And/Or Implanted
ParentShortName: **ValExImp**
ParentHarvestCodes: 3|4
ParentValues: = "Yes, Implanted" or "Yes, Explanted and Implanted"

Harvest Codes:

Code:	Value:
1	Aortic
2	Mitral
3	Tricuspid
4	Pulmonic
5	Common AV
6	Truncal

Long Name: Valve Implant Type #1 *SeqNo:* 3230
Short Name: **ValImpType1** *Core:* Yes
Section Name: Valve Procedures *Harvest:* Yes

DBTableName: Operations
Definition: Indicate the type of the first valve or device implanted.

Intent / Clarification: If a commercially supplied device is used at all, regardless of surgeon alterations, select commercially supplied device.

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

ParentLongName: Valve Device Explanted And/Or Implanted
ParentShortName: **ValExImp**
ParentHarvestCodes: 3|4
ParentValues: = "Yes, Implanted" or "Yes, Explanted and Implanted"

Harvest Codes:

Code:	Value:
1	Surgeon fashioned
2	Autograft
3	Commercially supplied device
4	Transcatheter device

April 2019: I have a patient who received a Gore-tex graft. I could not find this in the list of implants made available on STS. Seq 3230 states if a commercially supplied device is used at all, regardless of surgeon alterations, select commercially supplied device. I did find the Gore-tex under surgeon fashioned choice. Which valve implant type is the correct choice? Surgeon fashioned or commercially supplied device? **Was the valve made by the surgeon or was there a commercial valve supplied that the surgeon made alterations to? If the surgeon used the Gore-tex graft to create a valve, select surgeon fashioned choice and select Gore-tex. If this was a commercially supplied device, select commercially supplied device and if the valve is not listed, select Other US FDA approved device or Other Non-US FDA approved device.**

Long Name: Valve Implant Surgeon Fashioned Material #1 *SeqNo:* 3240
Short Name: **ValImpSFMat1** *Core:* Yes
Section Name: Valve Procedures *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the material used to fashion the first valve or device.

Intent / Clarification:

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

ParentLongName: Valve Implant Type #1
ParentShortName: **ValImpType1**
ParentHarvestCodes: 1
ParentValues: = "Surgeon fashioned"

Harvest Codes:

Code:	Value:

1	PTFE (Gore-Tex)
2	Pericardium
9	Other

Long Name:	Valve Implant Commercial Device Model Number #1	*SeqNo:*	3250
Short Name:	**ValImpComMod1**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the name of the prosthesis implanted. The names provided include the manufacturer's model number with "xx" substituting for the device size. Note that the model number is different from the serial number.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Valve Implant Type #1
ParentShortName:	**ValImpType1**
ParentHarvestCodes:	3|4
ParentValues:	= "Commercially supplied device" or "Transcatheter device"

Harvest Codes:

201	500DM## - Medtronic Open Pivot Standard Mitral Heart Valve
202	500FA## - Medtronic Open Pivot Standard Aortic Heart Valve
203	501DA## - Medtronic Open Pivot AP Series Aortic Heart Valve
204	501DM## - Medtronic Open Pivot AP Series Mitral Heart Valve
205	502AG## - Medtronic Open Pivot Aortic Valved Graft (AVG)
206	503DA## - Medtronic Open Pivot APex Series Heart Valve
207	505DA## - Medtronic Open Pivot AP360 Series Aortic Heart Valve
208	A010 - CryoLife Ascending Thoracic Aorta
209	A020 - CryoLife Descending Thoracic Aorta
210	A030 - CryoLife Pulmonary Artery
211	AV00 - CryoLife Aortic Valve and Conduit
212	AV10 - CryoLife Aortic Valve without Conduit
214	PV00 - CryoLife Pulmonary Valve & Conduit
215	PV10 - CryoLife Pulmonary Valve without Conduit
216	R010 - CryoLife Aortoiliac Grafts
217	R020 - CryoLife Femoral Popliteal Artery
218	SGPV00 - CryoLife SG Pulmonary Valve & Conduit

219 SGPV10 - CryoLife SG Pulmonary Valve without Conduit
220 V010 - CryoLife Saphenous Vein
221 V060 - CryoLife Femoral Vein
224 2500## - Edwards Prima Aortic Stentless Bioprosthesis
225 2500P## - Edwards Prima Plus Stentless Aortic Bioprosthesis
226 2625## - Carpentier-Edwards Porcine Aortic Bioprosthesis
227 2650## - Carpentier-Edwards S.A.V. Aortic Porcine Bioprosthesis
228 2700## - Carpentier-Edwards Perimount Pericardial Aortic Bioprosthesis
229 2700TFX## - Carpentier- Edwards Perimount Theon Pericardial Aortic Bioprosthesis with ThermaFix Process
230 2800## - Carpentier-Edwards Perimount RSR Pericardial Aortic Bioprosthesis
231 2800TFX## - Carpentier- Edwards Perimount Theon RSR Pericardial Aortic Bioprosthesis with ThermaFix Process
232 3000## - Carpentier-Edwards Perimount Magna Pericardial Aortic Bioprosthesis
233 3000TFX## - Carpentier- Edwards Perimount Magna Pericardial Aortic Bioprosthesis with ThermaFix Process
234 3160## - Edwards- Duromedics Bileaflet Prostheses
235 3300TFX## - Carpentier- Edwards Perimount Magna Ease Pericardial Aortic Bioprosthesis with ThermaFix Process
236 3600## - Edwards Mira Mechanical Valve
237 3600f## - Edwards Mira Mechanical Valve
238 3600u## - Edwards Mira Mechanical Valve
239 4100## - Carpentier- McCarthy-Adams IMR ETlogix Mitral Annuloplasty Ring
240 4200## - Edwards GeoForm Mitral Annuloplasty Ring
241 4300## - Carpentier-Edwards Bioprosthetic Valved Conduit
242 4400## - Carpentier-Edwards Classic Mitral Annuloplasty Ring
243 4425## - Carpentier-Edwards Classic Mitral Annuloplasty Ring with Duraflo Treatment
244 4450## - Carpentier-Edwards Physio Mitral Annuloplasty Ring
245 4475## - Carpentier-Edwards Physio Annuloplasty Ring with Duraflo Treatment
246 4500## - Carpentier-Edwards Classic Tricuspid Annuloplasty Ring
247 4525## - Carpentier-Edwards Classic Tricuspid Annuloplasty Ring with Duraflo Treatment
248 4600## - Crosgrove-Edwards Mitral/Tricuspid Annuloplasty Ring
249 4625## - Crosgrove-Edwards Annuloplasty System with Duraflo Treatment
250 4900## - Edwards MC3 Tricuspid Annuloplasty System
251 5100## - Edwards DETlogix Mitral Annuloplasty Ring
252 5100M## - Edwards Myxomatous Annuloplasty Ring
253 5200## - Carpentier-Edwards Physio II Mitral Annuloplasty Ring
254 6625## - Carpentier-Edwards Porcine Mitral Bioprosthesis
255 6625-ESR-LP## - Carpentier- Edwards Duraflex Low Pressure Porcine Mitral Bioprosthesis with Extended Suture Ring

256 6625LP## - Carpentier-Edwards Duraflex Low Pressure Porcine Mitral Bioprosthesis
257 6900P## - Carpentier-Edwards Perimount Plus Mitral Pericardial Bioprosthesis
258 6900PTFX## - Carpentier-Edwards Perimount Theon Mitral Pericardial Bioprosthesis with ThermaFix Process
259 7000TFX## - Carpentier-Edwards Perimount Magna Mitral Pericardial Bioprosthesis
260 7200TFX## - Carpentier-Edwards Perimount Magna Mitral Ease Pericardial Bioprosthesis
261 7300TFX## - Carpentier-Edwards Perimount Magna Mitral Ease Pericardial Bioprosthesis with ThermaFix Process
262 9000## - Cribier-Edwards Aortic Bioprosthesis
263 9000PHV## - Cribier-Edwards Aortic Bioprosthesis
264 9000TFX## - Edwards Sapien Transcatheter Heart Valve
265 9120## - Edwards-Duromedics Bileaflet Prostheses
266 9600## - Edwards Mira Mechanical Valve
267 AAL - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Large
268 AAM - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Medium
269 AAS - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Small
270 DLHPA - LifeNet CardioGraft Decellularized Hemi-Pulmonary Artery with Matracell - Left
271 DRHPA - LifeNet CardioGraft Decellularized Hemi- Pulmonary Artery with Matracell - Right
272 HVAL - LifeNet CardioGraft Aortic Heart Valve - Large
273 HVAM - LifeNet CardioGraft Aortic Heart Valve - Medium
274 HVAS - LifeNet CardioGraft Aortic Heart Valve - Small
275 HVPL - LifeNet CardioGraft Pulmonary Heart Valve - Large
276 HVPM - LifeNet CardioGraft Pulmonary Heart Valve - Medium
277 HVPS - LifeNet CardioGraft Pulmonary Heart Valve - Small
278 LHPA - LifeNet CardioGraft Hemi-Pulmonary Artery - Left
279 PAL - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Large
280 PAM - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Medium
281 PAS - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Small
282 RHPA - LifeNet CardioGraft Hemi-Pulmonary Artery - Right
283 TAL - LifeNet CardioGraft Thoracic Aorta Non-valved - Large
284 TAM - LifeNet CardioGraft Thoracic Aorta Non-valved - Medium
286 174A - ## - Medtronic Hancock Apical Left Ventricle Connector
287 200## - Medtronic Contegra Unsupported Pulmonary Valve Conduit
288 200S## - Medtronic Contegra Supported Pulmonary Valve Conduit
289 305C2## - Medtronic Mosaic Standard Cinch - Aortic
290 305U2## - Medtronic Mosaic Ultra Cinch - Aortic
291 310## - Medtronic Mosaic Mitral
292 610B## - Medtronic Duran Band
293 610R## - Medtronic Duran Ring
294 620B## - Medtronic Duran AnCore Band

295 620BG## - Medtronic Duran AnCore Band With Chordal Guide
296 620R## - Medtronic Duran AnCore Ring
297 620RG## - Medtronic Duran Ancore Ring With Chordal Guide
298 638B## - Medtronic CG Future Band
299 638R## - Medtronic CG Future Composite Ring
300 670 - Medtronic Simplici-T Annuloplasty System
301 680R## - Medtronic Profile 3D Ring
302 995CS## - Medtronic Freestyle, Complete Subcoronary - CS
303 995MS## - Medtronic Freestyle, Modified Subcoronary - MS
304 FR995-## - Medtronic Freestyle, Full Root - FR
307 HC105-## - Medtronic Hancock Low-porosity Valved Conduit
308 HC150-## - Medtronic Hancock Modified Orifice Pulmonic Valved Conduit
309 T505C2## - Medtronic Hancock II Aortic Cinch
310 T505U2## - Medtronic Hancock II Ultra Cinch
311 T510C## - Medtronic Hancock II Mitral
312 ONXA## - On-X Aortic Valve with standard sewing ring
313 ONXAC## - On-X Aortic Valve with Conform-X Sewing Ring
314 ONXACE## - On-X Aortic Valve with Conform-X Sewing Ring, extended
315 ONXAE## - On-X Aortic Valve with standard sewing ring, extended
316 ONXM## - On-X Mitral Valve with standard sewing ring
317 ONXMC## - On-X Mitral Valve with Conform-X Sewing Ring
327 LXA## - Sorin Group Mitroflow Aortic Pericardial Heart Valve
328 A5-0## - Sorin Group: Carbomedics Standard Aortic Valve
329 AF-8## - Sorin Group: Carbomedics AnnuloFlex Annuloplasty System
330 AP-0## - Sorin Group: Carbomedics Carbo-Seal Ascending Aortic Prosthesis
331 AR-7## - Sorin Group: Carbomedics AnnuloFlo Annuloplasty System
332 CP-0## - Sorin Group: Carbomedics Carbo-Seal Valsalva Ascending Aortic Prosthesis
333 F7-0## - Sorin Group: Carbomedics OptiForm Mitral Valve
334 M7-0## - Sorin Group: Carbomedics Standard Mitral Valve
335 R5-0## - Sorin Group: Carbomedics Reduced Series Aortic Valve
336 S5-0## - Sorin Group: Carbomedics Top Hat Supra- Annular Aortic Valve
337 ##A-101 - St. Jude Medical Mechanical Aortic Heart Valve
338 ##AEC-102 - St. Jude Medical Mechanical Heart Valve
339 ##AECJ-502 - St. Jude Medical Masters Series Aortic Mechanical Valve, Expanded Cuff
340 ##AECS-602 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
341 ##AEHPJ-505 - St. Jude Medical Masters HP Mechanical Valve, Expanded Cuff
342 ##AEHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
343 ##AET-104 - St. Jude Medical Mechanical Heart Valve
344 ##AETJ-504 - St. Jude Medical Masters Series Mechanical Heart Valve

345 ##AFHPJ-505 - St. Jude Medical Masters HP Aortic Mechanical Valve, Flex Cuff
346 ##AG-701 - St. Jude Medical Regent Valve with Silzone Coating
347 ##AGF-706 - St. Jude Medical Regent Valve with Silzone Coating
348 ##AGFN-756 - St. Jude Medical Regent Aortic Mechanical Valve, Flex Cuff
349 ##AGN-751 - St. Jude Medical Regent Aortic Mechanical Valve, Standard Cuff
350 ##AHP-105 - St. Jude Medical Mechanical Heart Valve Hemodynamic Plus (HP) Series
351 ##AHPJ-505 - St. Jude Medical Masters HP Aortic Mechanical Heart Valve, Standard Cuff
352 ##AHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
353 ##AJ-501 - St. Jude Medical Masters Series Aortic Mechanical Valve, Standard Cuff
354 ##AS-601 - St. Jude Medical Masters Mechanical Heart Valve with Silzone Coating
355 ##AT-103 - St. Jude Medical Mechanical Heart Valve
356 ##ATJ-503 - St. Jude Medical Masters Series Aortic Mechanical Valve, PTFE Cuff
357 ##CAVG-404 - St. Jude Medical Coated Aortic Valved Graft Prosthesis
358 ##CAVGJ-514 - St. Jude Medical Masters Series Aortic Valved Graft
359 ##CAVGJ-514-00 - St. Jude Medical Masters Aortic Valved Graft, Hemashield Technology
360 ##M-101 - St. Jude Medical Mechanical Mitral Heart Valve
361 ##MEC-102 - St. Jude Medical Mechanical Heart Valve
362 ##MECJ-502 - St. Jude Medical Masters Series Mitral Mechanical Valve, Expanded Cuff
363 ##MECS-602 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
364 ##MEHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
365 ##MET-104 - St. Jude Medical Mechanical Heart Valve
366 ##METJ-504 - St. Jude Medical Masters Series Mitral Mechanical Valve, Expanded PTFE Cuff
367 ##MHP-105 - St. Jude Medical Mechanical Heart Valve Hemodynamic Plus (HP) Series
368 ##MHPJ-505 - St. Jude Medical Masters HP Mitral Mechanical Heart Valve, Standard Cuff
369 ##MHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
370 ##MJ-501 - St. Jude Medical Masters Series Mitral Mechanical Valve, Standard Cuff
371 ##MS-601 - St. Jude Medical Masters Mechanical Heart Valve with Silzone Coating
372 ##MT-103 - St. Jude Medical Mechanical Heart Valve
373 ##MTJ-503 - St. Jude Medical Masters Series Mitral Mechanical Valve, PTFE Cuff
374 ##VAVGJ-515 - St. Jude Medical Masters HP Aortic Valved Graft
375 AFR-## - St. Jude Medical Attune Flexible Adjustable Annuloplasty Ring
376 B10-##A - St. Jude Medical Biocor Aortic Valve
377 B10-##A-00 - St. Jude Medical Biocor Aortic Valve
378 B10-##M - St. Jude Medical Biocor Mitral Valve
379 B10-##M-00 - St. Jude Medical Biocor Mitral Valve
380 B100-##A-00 - St. Jude Medical Biocor Stented Aortic Tissue Valve
381 B100-##M-00 - St. Jude Medical Biocor Stented Mitral Tissue Valve
382 B10SP-## - St. Jude Medical Biocor Supra Stented Porcine Heart Valve
383 B20-0##A - St. Jude Medical Biocor Porcine Stentless Bioprosthetic Heart Valve

384 B30-##A - St. Jude Medical Biocor Valve
385 B30-##M - St. Jude Medical Biocor Valve
386 BSP100-## - St. Jude Medical Biocor Supra Aortic Stented Tissue Valve
387 E100-##A-00 - St. Jude Medical Epic Aortic Stented Tissue Valve
388 E100-##M-00 - St. Jude Medical Epic Mitral Stented Tissue Valve
389 EL-##A - St. Jude Medical Epic Aortic Valve
390 EL-##M - St. Jude Medical Epic Mitral Valve
391 ELS-##A - St. Jude Medical Epic Tissue Aortic Valve with Silzone Coating
392 ELS-##M - St. Jude Medical Epic Tissue Mitral Valve with Silzone Coating
393 ESP100-##-00 - St. Jude Medical Epic Supra Aortic Stented Tissue Valve
394 ESP100-##A-00 - St. Jude Medical Epic Stented Aortic Tissue Valve
395 ROOT-## - St. Jude Medical Toronto Root with BiLinx AC
396 RSAR-## - St. Jude Medical SJM Rigid Saddle Ring
397 SARP-## - St. Jude Medical SJM STguin Semi-Rigid Annuloplasty Ring
398 SARS-M## - St. Jude Medical STguin Annuloplasty Ring with Silzone Coating
399 SPA-101-## - St. Jude Medical Toronto SPV Valve
400 SPA-201-## - St. Jude Medical Toronto SPV II Bioprosthetic Heart Valve
401 TAB-## - St. Jude Medical Tailor Flexible Annuloplasty Band
402 TAR-## - St. Jude Medical Tailor Annuloplasty Ring with Silzone Coating
403 TARP-## - St. Jude Medical Tailor Flexible Annuloplasty Ring
404 PB10-## - Medtronic Melody Transcatheter Pulmonary Valve
405 700FF## - Medtronic Simulus FLX-O Ring
406 700FC## - Medtronic Simulus FLX-C Band
407 735AF## - Medtronic Simulus Adjustable Ring
408 800SR## - Medtronic Simulus Semi-rigid Ring
409 900SFC## - Medtronic TriAd Tricuspid Annuloplasty Ring
410 1000-## - Medtronic 3f Aortic Bioprosthesis
411 6200## - Carpentier-Edwards Physio Tricuspid Annuloplasty Ring
412 9300TFX## - Edwards Sapien Transcatheter Heart Valve
413 305## - Medtronic Mosaic Ultra Porcine Heart Valve
415 TF-##A - St. Jude Medical Trifecta Aortic Stented Tissue Valve
416 505DM## - Medtronic Open Pivot AP360 Series Mitral Heart Valve
417 800SC## - Medtronic Simulus Semi-rigid Mitral Annuloplasty Ring
418 6000-## - Medtronic 3f Enable Aortic Bioprosthesis
419 PH00 - Cryolife Pulmonary Hemi-Artery
420 SGPH00 - Cryolife SG Pulmonary Hemi-Artery
421 690R## - Medtronic Contour 3D Annuloplasty ring
422 735AC## - Medtronic Simulus Adjustable Band
423 9600TFX## - Edwards Sapien Transcatheter Heart Valve

425 H607 - Medtronic post Annuloplasty band (Split, Mayo)
428 ICV08## - Sorin Group Sovering Annuloplasty
429 ICV09## - Sorin Group MEMO 3D Semi-rigid Annuloplasty Ring
432 A1-0## - Sorin Group: Carbomedics Orbis Universal Aortic Valve
433 M2-0## - Sorin Group: Carbomedics Orbis Universal Mitral Valve
434 PF ## - Sorin Group PF ## - Sorin Group Stentless
435 PS ## - Sorin Group Pericarbon More Mitral
436 ART ## SOP - Sorin Group Soprano Armonia
437 ART ## SG - Sorin Group Freedom Solo
438 ART ## LFA- Sorin Group Bicarbon Fitline Aortic
439 MTR ## LFM- Sorin Group Bicarbon Fitline Mitral
440 ART ## LOV- Sorin Group Bicarbon Overline Aortic
441 ART ## LSA- Sorin Group Bicarbon Slimline Aortic
442 8300A## - Edwards Intuity Valve System (outside US)
443 8300AB## - Edwards Intuity Elite Valve System (outside US)
444 8300ACD## - Edwards Intuity Elite Valve System
445 9355NF## - Edwards Sapien XT Transcatheter Valve with NovaFlex System
446 9355ASP## - Edwards Sapien XT Transcatheter Valve with Ascendra System
447 S3TF1## - Edwards Sapien 3 Transcatheter Valve with Commander System
448 S3TA1## - Edwards Sapien 3 Transcatheter Valve with Certitude System
449 CRS-P3-640 – Medtronic CoreValve
450 CRS-P3-943 – Medtronic CoreValve
451 MCS-P3 – Medtronic CoreValve
452 MCS-P4 – Medtronic CoreValve Evolut
453 ONXAN## - On-X Aortic Heart Valve with Anatomic Sewing Ring
454 ONXANE## - On-X Valve with Anatomic Sewing ring and Extended Holder
455 ONXAAP## - On-X Ascending Aortic Prosthesis
456 ICV12## - Sorin Solo Smart Aortic Valve
457 ICV13## - Sorin Group MEMO 3D Rechord Annuloplasty Ring
458 DLA## - Sorin Group Mitroflow Aortic Pericardial Heart Valve with PRT
459 MVC0##- Sorin Group Mitroflow Valsalva Conduit
460 1260 ### - Starr-Edwards Silastic Ball Aortic Heart Valve Prosthesis
461 6120 ### - Starr Edwards Silastic Ball Mitral Heart Valve Prosthesis
462 73##1088 - Vascutek Gelweave Plexus Graft
463 7300##ADP - Vascutek Terumo Gelweave Vascular 45Prosthesis
464 7320## - Vascutek Gelweave Trifucate Arch Graft
465 7350##ST - Vascutek Gelweave Pre-curved Graft
466 8300AB### - Edwards Intuity Elite Valve
467 8300KITB### - Edwards Intuity Elite Valve System

468 9600CM## - Edward Sapien
469 ART##SMT - Sorin Solo Smart
470 CNA19 - Sorin Crown PRT Tissue Valve
471 CNA21 - Sorin Crown PRT Tissue Valve
472 CNA23 - Sorin Crown PRT Tissue Valve
473 CNA25 - Sorin Crown PRT Tissue Valve
474 CNA27 - Sorin Crown PRT Tissue Valve
475 DPPGK - LifeNet CardioGRAFT Thick Pulmonary Patch (decellularized)
476 DPPGN – LifeNet CardioGRAFT Thin Pulmonary Patch (decellularized)
477 EVOLUTR-##-US - Medtronic CoreValve Evolut R
478 H749LTV##0 - Boston Scientific Lotus Transcatheter Valve
479 ICV1208 - Sorin Perceval Tissue Valves
480 ICV1209 - Sorin Perceval Tissue Valves
481 ICV1210 - Sorin Perceval Tissue Valves
482 ICV1211 - Sorin Perceval Tissue Valves
483 ICV1248 - Solo Smart Aortic Tissue Valves
484 ICV1264 - Solo Smart Aortic Tissue Valves
485 ICV1265 - Solo Smart Aortic Tissue Valves
486 ICV1331 - Sorin MEMO 3D RECHORD Annuloplasty Ring
487 ICV1332 - Sorin MEMO 3D RECHORD Annuloplasty Ring
488 ICV1333 - Sorin MEMO 3D RECHORD Annuloplasty Ring
489 ICV1334 - Sorin MEMO 3D RECHORD Annuloplasty Ring
490 ICV1335 - Sorin MEMO 3D RECHORD Annuloplasty Ring
491 ICV1336 - Sorin MEMO 3D RECHORD Annuloplasty Ring
492 ICV1337 - Sorin MEMO 3D RECHORD Annuloplasty Ring
493 IVC1247 - Solo Smart Aortic Tissue Valves
494 LMCP - LifeNet CardioGRAFT Left Mono Cusp Patch
495 MCP - LifeNet CardioGRAFT Mono Cusp Patch
496 PPGK - LifeNet CardioGRAFT Thick Pulmonary Patch
497 PPGN - LifeNet CardioGRAFT Thin Pulmonary Patch
498 PRT-## - Portico Transcatheter Aortic Valve
499 RMCP - LifeNet CardioGRAFT Right Mono Cusp Patch
500 TAS - LifeNet CardioGraft Thoracic Aorta - Small 16mm and less
501 TFGT-##A - St. Jude Medical Trifecta with Glide Technology (GT) Aortic Stented Tissue Valve
502 Z65LOTUSKIT## - Lotus Valve Kit
503 11500AXX - Edwards Inspiris Resilia Aortic Valve
777 Other US FDA-Approved Device
778 Other Non-US FDA- Approved Device

Long Name:	Valve Implant Unique Device Identifier (UDI) - 1	*SeqNo:*	3261
Short Name:	**ValImpUDI1**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the Unique Device Identifier (UDI) of the first implanted valve device if available, otherwise leave blank.		

Intent / Clarification:

Data Source:	User
Format:	Text
ParentLongName:	Valve Implant Type #1
ParentShortName:	**ValImpType1**
ParentHarvestCodes:	3|4
ParentValues:	= "Commercially supplied device" or "Transcatheter device"

Long Name:	Valve Implant Commercial Device Size #1	*SeqNo:*	3262
Short Name:	**ValImpComSz1**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the size of the second implanted valve or device.		
Low Value:	15		
High Value:	33		

Intent / Clarification:

Data Source:	User
Format:	Integer
ParentLongName:	Valve Implant Type #1
ParentShortName:	**ValImpType1**
ParentHarvestCodes:	3
Parent Value:	= "Commercially supplied device"

Long Name:	Second Valve Implant	*SeqNo:*	3270
Short Name:	**ValImp2**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether a second valve or device was implanted.		

Intent / Clarification:

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

ParentLongName: Valve Device Explanted And/Or Implanted
ParentShortName: **ValExImp**
ParentHarvestCodes: 3|4
ParentValues: = "Yes, Implanted" or "Yes, Explanted and Implanted"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Valve Implant Type #2 *SeqNo:* 3280
Short Name: **ValImpLoc2** *Core:* Yes
Section Name: Valve Procedures *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the location of the second valve or device implanted.

Intent / Clarification:

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

ParentLongName: Second Valve Implant
ParentShortName: **ValImp2**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Aortic
2	Mitral
3	Tricuspid
4	Pulmonic
5	Common AV
6	Truncal

July 2019: My patient required a Dacron patch for their Ventricular Septal Defect. I am looking at the options under location and am not sure which option to select. **Patches are not included in the valve implant section.**

Long Name:	Valve Implant Type #2	*SeqNo:*	3290
Short Name:	**ValImpType2**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the type of the second valve or device implanted.		
Intent / Clarification:	If a commercially supplied device is used at all, regardless of surgeon alterations, select commercially supplied device.		
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Second Valve Implant		
ParentShortName:	**ValImp2**		
ParentHarvestCodes:	1		
ParentValues:	= "Yes"		

Harvest Codes:

Code:	Value:
1	Surgeon fashioned
2	Autograft
3	Commercially supplied device
4	Transcatheter device

Long Name:	Valve Implant Surgeon Fashioned Material #2	*SeqNo:*	3300
Short Name:	**ValImpSFMat2**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the material used to fashion the second valve or device.		
Intent / Clarification:			
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Valve Implant Type #2		
ParentShortName:	**ValImpType2**		
ParentHarvestCodes:	1		
ParentValues:	= "Surgeon fashioned"		

Harvest Codes:

Code:	Value:
1	PTFE (Gore-Tex)
2	Pericardium
9	Other

Long Name:	Valve Implant Commercial Device Model Number #2	*SeqNo:*	3310
Short Name:	**ValImpComMod2**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the name of the prosthesis implanted. The names provided include the manufacturer's model number with "xx" substituting for the device size.		

Intent / Clarification:

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

ParentLongName: Valve Implant Type #2
ParentShortName: **ValImpType2**
ParentHarvestCodes: 3|4
ParentValues: = "Commercially supplied device" or "Transcatheter device"

Harvest Codes:

201	500DM## - Medtronic Open Pivot Standard Mitral Heart Valve
202	500FA## - Medtronic Open Pivot Standard Aortic Heart Valve
203	501DA## - Medtronic Open Pivot AP Series Aortic Heart Valve
204	501DM## - Medtronic Open Pivot AP Series Mitral Heart Valve
205	502AG## - Medtronic Open Pivot Aortic Valved Graft (AVG)
206	503DA## - Medtronic Open Pivot APex Series Heart Valve
207	505DA## - Medtronic Open Pivot AP360 Series Aortic Heart Valve
208	A010 - CryoLife Ascending Thoracic Aorta
209	A020 - CryoLife Descending Thoracic Aorta
210	A030 - CryoLife Pulmonary Artery
211	AV00 - CryoLife Aortic Valve and Conduit
212	AV10 - CryoLife Aortic Valve without Conduit
214	PV00 - CryoLife Pulmonary Valve & Conduit
215	PV10 - CryoLife Pulmonary Valve without Conduit
216	R010 - CryoLife Aortoiliac Grafts
217	R020 - CryoLife Femoral Popliteal Artery
218	SGPV00 - CryoLife SG Pulmonary Valve & Conduit
219	SGPV10 - CryoLife SG Pulmonary Valve without Conduit
220	V010 - CryoLife Saphenous Vein
221	V060 - CryoLife Femoral Vein
224	2500## - Edwards Prima Aortic Stentless Bioprosthesis
225	2500P## - Edwards Prima Plus Stentless Aortic Bioprosthesis

226 2625## - Carpentier-Edwards Porcine Aortic Bioprosthesis
227 2650## - Carpentier-Edwards S.A.V. Aortic Porcine Bioprosthesis
228 2700## - Carpentier-Edwards Perimount Pericardial Aortic Bioprosthesis
229 2700TFX## - Carpentier- Edwards Perimount Theon Pericardial Aortic Bioprosthesis with ThermaFix Process
230 2800## - Carpentier-Edwards Perimount RSR Pericardial Aortic Bioprosthesis
231 2800TFX## - Carpentier- Edwards Perimount Theon RSR Pericardial Aortic Bioprosthesis with ThermaFix Process
232 3000## - Carpentier-Edwards Perimount Magna Pericardial Aortic Bioprosthesis
233 3000TFX## - Carpentier- Edwards Perimount Magna Pericardial Aortic Bioprosthesis with ThermaFix Process
234 3160## - Edwards- Duromedics Bileaflet Prostheses
235 3300TFX## - Carpentier- Edwards Perimount Magna Ease Pericardial Aortic Bioprosthesis with ThermaFix Process
236 3600## - Edwards Mira Mechanical Valve
237 3600f## - Edwards Mira Mechanical Valve
238 3600u## - Edwards Mira Mechanical Valve
239 4100## - Carpentier- McCarthy-Adams IMR ETlogix Mitral Annuloplasty Ring
240 4200## - Edwards GeoForm Mitral Annuloplasty Ring
241 4300## - Carpentier-Edwards Bioprosthetic Valved Conduit
242 4400## - Carpentier-Edwards Classic Mitral Annuloplasty Ring
243 4425## - Carpentier-Edwards Classic Mitral Annuloplasty Ring with Duraflo Treatment
244 4450## - Carpentier-Edwards Physio Mitral Annuloplasty Ring
245 4475## - Carpentier-Edwards Physio Annuloplasty Ring with Duraflo Treatment
246 4500## - Carpentier-Edwards Classic Tricuspid Annuloplasty Ring
247 4525## - Carpentier-Edwards Classic Tricuspid Annuloplasty Ring with Duraflo Treatment
248 4600## - Crosgrove-Edwards Mitral/Tricuspid Annuloplasty Ring
249 4625## - Crosgrove-Edwards Annuloplasty System with Duraflo Treatment
250 4900## - Edwards MC3 Tricuspid Annuloplasty System
251 5100## - Edwards DETlogix Mitral Annuloplasty Ring
252 5100M## - Edwards Myxomatous Annuloplasty Ring
253 5200## - Carpentier-Edwards Physio II Mitral Annuloplasty Ring
254 6625## - Carpentier-Edwards Porcine Mitral Bioprosthesis
255 6625-ESR-LP## - Carpentier- Edwards Duraflex Low Pressure Porcine Mitral Bioprosthesis with Extended Suture Ring
256 6625LP## - Carpentier-Edwards Duraflex Low Pressure Porcine Mitral Bioprosthesis
257 6900P## - Carpentier-Edwards Perimount Plus Mitral Pericardial Bioprosthesis
258 6900PTFX## - Carpentier-Edwards Perimount Theon Mitral Pericardial Bioprosthesis with ThermaFix Process
259 7000TFX## - Carpentier-Edwards Perimount Magna Mitral Pericardial Bioprosthesis
260 7200TFX## - Carpentier-Edwards Perimount Magna Mitral Ease Pericardial Bioprosthesis
261 7300TFX## - Carpentier-Edwards Perimount Magna Mitral Ease Pericardial Bioprosthesis with ThermaFix Process

262 9000## - Cribier-Edwards Aortic Bioprosthesis
263 9000PHV## - Cribier-Edwards Aortic Bioprosthesis
264 9000TFX## - Edwards Sapien Transcatheter Heart Valve
265 9120## - Edwards-Duromedics Bileaflet Prostheses
266 9600## - Edwards Mira Mechanical Valve
267 AAL - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Large
268 AAM - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Medium
269 AAS - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Small
270 DLHPA - LifeNet CardioGraft Decellularized Hemi-Pulmonary Artery with Matracell - Left
271 DRHPA - LifeNet CardioGraft Decellularized Hemi- Pulmonary Artery with Matracell - Right
272 HVAL - LifeNet CardioGraft Aortic Heart Valve - Large
273 HVAM - LifeNet CardioGraft Aortic Heart Valve - Medium
274 HVAS - LifeNet CardioGraft Aortic Heart Valve - Small
275 HVPL - LifeNet CardioGraft Pulmonary Heart Valve - Large
276 HVPM - LifeNet CardioGraft Pulmonary Heart Valve - Medium
277 HVPS - LifeNet CardioGraft Pulmonary Heart Valve - Small
278 LHPA - LifeNet CardioGraft Hemi-Pulmonary Artery - Left
279 PAL - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Large
280 PAM - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Medium
281 PAS - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Small
282 RHPA - LifeNet CardioGraft Hemi-Pulmonary Artery - Right
283 TAL - LifeNet CardioGraft Thoracic Aorta Non-valved - Large
284 TAM - LifeNet CardioGraft Thoracic Aorta Non-valved - Medium
286 174A - ## - Medtronic Hancock Apical Left Ventricle Connector
287 200## - Medtronic Contegra Unsupported Pulmonary Valve Conduit
288 200S## - Medtronic Contegra Supported Pulmonary Valve Conduit
289 305C2## - Medtronic Mosaic Standard Cinch - Aortic
290 305U2## - Medtronic Mosaic Ultra Cinch - Aortic
291 310## - Medtronic Mosaic Mitral
292 610B## - Medtronic Duran Band
293 610R## - Medtronic Duran Ring
294 620B## - Medtronic Duran AnCore Band
295 620BG## - Medtronic Duran AnCore Band With Chordal Guide
296 620R## - Medtronic Duran AnCore Ring
297 620RG## - Medtronic Duran Ancore Ring With Chordal Guide
298 638B## - Medtronic CG Future Band
299 638R## - Medtronic CG Future Composite Ring
300 670 - Medtronic Simplici-T Annuloplasty System
301 680R## - Medtronic Profile 3D Ring
302 995CS## - Medtronic Freestyle, Complete Subcoronary - CS
303 995MS## - Medtronic Freestyle, Modified Subcoronary - MS
304 FR995-## - Medtronic Freestyle, Full Root - FR

307 HC105-## - Medtronic Hancock Low-porosity Valved Conduit
308 HC150-## - Medtronic Hancock Modified Orifice Pulmonic Valved Conduit
309 T505C2## - Medtronic Hancock II Aortic Cinch
310 T505U2## - Medtronic Hancock II Ultra Cinch
311 T510C## - Medtronic Hancock II Mitral
312 ONXA## - On-X Aortic Valve with standard sewing ring
313 ONXAC## - On-X Aortic Valve with Conform-X Sewing Ring
314 ONXACE## - On-X Aortic Valve with Conform-X Sewing Ring, extended
315 ONXAE## - On-X Aortic Valve with standard sewing ring, extended
316 ONXM## - On-X Mitral Valve with standard sewing ring
317 ONXMC## - On-X Mitral Valve with Conform-X Sewing Ring
327 LXA## - Sorin Group Mitroflow Aortic Pericardial Heart Valve
328 A5-0## - Sorin Group: Carbomedics Standard Aortic Valve
329 AF-8## - Sorin Group: Carbomedics AnnuloFlex Annuloplasty System
330 AP-0## - Sorin Group: Carbomedics Carbo-Seal Ascending Aortic Prosthesis
331 AR-7## - Sorin Group: Carbomedics AnnuloFlo Annuloplasty System
332 CP-0## - Sorin Group: Carbomedics Carbo-Seal Valsalva Ascending Aortic Prosthesis
333 F7-0## - Sorin Group: Carbomedics OptiForm Mitral Valve
334 M7-0## - Sorin Group: Carbomedics Standard Mitral Valve
335 R5-0## - Sorin Group: Carbomedics Reduced Series Aortic Valve
336 S5-0## - Sorin Group: Carbomedics Top Hat Supra- Annular Aortic Valve
337 ##A-101 - St. Jude Medical Mechanical Aortic Heart Valve
338 ##AEC-102 - St. Jude Medical Mechanical Heart Valve
339 ##AECJ-502 - St. Jude Medical Masters Series Aortic Mechanical Valve, Expanded Cuff
340 ##AECS-602 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
341 ##AEHPJ-505 - St. Jude Medical Masters HP Mechanical Valve, Expanded Cuff
342 ##AEHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
343 ##AET-104 - St. Jude Medical Mechanical Heart Valve
344 ##AETJ-504 - St. Jude Medical Masters Series Mechanical Heart Valve
345 ##AFHPJ-505 - St. Jude Medical Masters HP Aortic Mechanical Valve, Flex Cuff
346 ##AG-701 - St. Jude Medical Regent Valve with Silzone Coating
347 ##AGF-706 - St. Jude Medical Regent Valve with Silzone Coating
348 ##AGFN-756 - St. Jude Medical Regent Aortic Mechanical Valve, Flex Cuff
349 ##AGN-751 - St. Jude Medical Regent Aortic Mechanical Valve, Standard Cuff
350 ##AHP-105 - St. Jude Medical Mechanical Heart Valve Hemodynamic Plus (HP) Series
351 ##AHPJ-505 - St. Jude Medical Masters HP Aortic Mechanical Heart Valve, Standard Cuff
352 ##AHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
353 ##AJ-501 - St. Jude Medical Masters Series Aortic Mechanical Valve, Standard Cuff
354 ##AS-601 - St. Jude Medical Masters Mechanical Heart Valve with Silzone Coating
355 ##AT-103 - St. Jude Medical Mechanical Heart Valve
356 ##ATJ-503 - St. Jude Medical Masters Series Aortic Mechanical Valve, PTFE Cuff
357 ##CAVG-404 - St. Jude Medical Coated Aortic Valved Graft Prosthesis

##CAVGJ-514 - St. Jude Medical Masters Series Aortic Valved Graft
##CAVGJ-514-00 - St. Jude Medical Masters Aortic Valved Graft, Hemashield Technology
##M-101 - St. Jude Medical Mechanical Mitral Heart Valve
##MEC-102 - St. Jude Medical Mechanical Heart Valve
##MECJ-502 - St. Jude Medical Masters Series Mitral Mechanical Valve, Expanded Cuff
##MECS-602 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
##MEHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
##MET-104 - St. Jude Medical Mechanical Heart Valve
##METJ-504 - St. Jude Medical Masters Series Mitral Mechanical Valve, Expanded PTFE Cuff
##MHP-105 - St. Jude Medical Mechanical Heart Valve Hemodynamic Plus (HP) Series
##MHPJ-505 - St. Jude Medical Masters HP Mitral Mechanical Heart Valve, Standard Cuff
##MHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
##MJ-501 - St. Jude Medical Masters Series Mitral Mechanical Valve, Standard Cuff
##MS-601 - St. Jude Medical Masters Mechanical Heart Valve with Silzone Coating
##MT-103 - St. Jude Medical Mechanical Heart Valve
##MTJ-503 - St. Jude Medical Masters Series Mitral Mechanical Valve, PTFE Cuff
##VAVGJ-515 - St. Jude Medical Masters HP Aortic Valved Graft
AFR-## - St. Jude Medical Attune Flexible Adjustable Annuloplasty Ring
B10-##A - St. Jude Medical Biocor Aortic Valve
B10-##A-00 - St. Jude Medical Biocor Aortic Valve
B10-##M - St. Jude Medical Biocor Mitral Valve
B10-##M-00 - St. Jude Medical Biocor Mitral Valve
B100-##A-00 - St. Jude Medical Biocor Stented Aortic Tissue Valve
B100-##M-00 - St. Jude Medical Biocor Stented Mitral Tissue Valve
B10SP-## - St. Jude Medical Biocor Supra Stented Porcine Heart Valve
B20-0##A - St. Jude Medical Biocor Porcine Stentless Bioprosthetic Heart Valve
B30-##A - St. Jude Medical Biocor Valve
B30-##M - St. Jude Medical Biocor Valve
BSP100-## - St. Jude Medical Biocor Supra Aortic Stented Tissue Valve
E100-##A-00 - St. Jude Medical Epic Aortic Stented Tissue Valve
E100-##M-00 - St. Jude Medical Epic Mitral Stented Tissue Valve
EL-##A - St. Jude Medical Epic Aortic Valve
EL-##M - St. Jude Medical Epic Mitral Valve
ELS-##A - St. Jude Medical Epic Tissue Aortic Valve with Silzone Coating
ELS-##M - St. Jude Medical Epic Tissue Mitral Valve with Silzone Coating
ESP100-##-00 - St. Jude Medical Epic Supra Aortic Stented Tissue Valve
ESP100-##A-00 - St. Jude Medical Epic Stented Aortic Tissue Valve
ROOT-## - St. Jude Medical Toronto Root with BiLinx AC
RSAR-## - St. Jude Medical SJM Rigid Saddle Ring
SARP-## - St. Jude Medical SJM STguin Semi-Rigid Annuloplasty Ring
SARS-M## - St. Jude Medical STguin Annuloplasty Ring with Silzone Coating
SPA-101-## - St. Jude Medical Toronto SPV Valve

400 SPA-201-## - St. Jude Medical Toronto SPV II Bioprosthetic Heart Valve
401 TAB-## - St. Jude Medical Tailor Flexible Annuloplasty Band
402 TAR-## - St. Jude Medical Tailor Annuloplasty Ring with Silzone Coating
403 TARP-## - St. Jude Medical Tailor Flexible Annuloplasty Ring
404 PB10-## - Medtronic Melody Transcatheter Pulmonary Valve
405 700FF## - Medtronic Simulus FLX-O Ring
406 700FC## - Medtronic Simulus FLX-C Band
407 735AF## - Medtronic Simulus Adjustable Ring
408 800SR## - Medtronic Simulus Semi-rigid Ring
409 900SFC## - Medtronic TriAd Tricuspid Annuloplasty Ring
410 1000-## - Medtronic 3f Aortic Bioprosthesis
411 6200## - Carpentier-Edwards Physio Tricuspid Annuloplasty Ring
412 9300TFX## - Edwards Sapien Transcatheter Heart Valve
413 305## - Medtronic Mosaic Ultra Porcine Heart Valve
415 TF-##A - St. Jude Medical Trifecta Aortic Stented Tissue Valve
416 505DM## - Medtronic Open Pivot AP360 Series Mitral Heart Valve
417 800SC## - Medtronic Simulus Semi-rigid Mitral Annuloplasty Ring
418 6000-## - Medtronic 3f Enable Aortic Bioprosthesis
419 PH00 - Cryolife Pulmonary Hemi-Artery
420 SGPH00 - Cryolife SG Pulmonary Hemi-Artery
421 690R## - Medtronic Contour 3D Annuloplasty ring
422 735AC## - Medtronic Simulus Adjustable Band
423 9600TFX## - Edwards Sapien Transcatheter Heart Valve
425 H607 - Medtronic post Annuloplasty band (Split, Mayo)
428 ICV08## - Sorin Group Sovering Annuloplasty
429 ICV09## - Sorin Group MEMO 3D Semi-rigid Annuloplasty Ring
432 A1-0## - Sorin Group: Carbomedics Orbis Universal Aortic Valve
433 M2-0## - Sorin Group: Carbomedics Orbis Universal Mitral Valve
434 PF ## - Sorin Group PF ## - Sorin Group Stentless
435 PS ## - Sorin Group Pericarbon More Mitral
436 ART ## SOP - Sorin Group Soprano Armonia
437 ART ## SG - Sorin Group Freedom Solo
438 ART ## LFA- Sorin Group Bicarbon Fitline Aortic
439 MTR ## LFM- Sorin Group Bicarbon Fitline Mitral
440 ART ## LOV- Sorin Group Bicarbon Overline Aortic
441 ART ## LSA- Sorin Group Bicarbon Slimline Aortic
442 8300A## - Edwards Intuity Valve System (outside US)
443 8300AB## - Edwards Intuity Elite Valve System (outside US)
444 8300ACD## - Edwards Intuity Elite Valve System
445 9355NF## - Edwards Sapien XT Transcatheter Valve with NovaFlex System
446 9355ASP## - Edwards Sapien XT Transcatheter Valve with Ascendra System
447 S3TF1## - Edwards Sapien 3 Transcatheter Valve with Commander System

448 S3TA1## - Edwards Sapien 3 Transcatheter Valve with Certitude System
449 CRS-P3-640 – Medtronic CoreValve
450 CRS-P3-943 – Medtronic CoreValve
451 MCS-P3 – Medtronic CoreValve
452 MCS-P4 – Medtronic CoreValve Evolut
453 ONXAN## - On-X Aortic Heart Valve with Anatomic Sewing Ring
454 ONXANE## - On-X Valve with Anatomic Sewing ring and Extended Holder
455 ONXAAP## - On-X Ascending Aortic Prosthesis
456 ICV12## - Sorin Solo Smart Aortic Valve
457 ICV13## - Sorin Group MEMO 3D Rechord Annuloplasty Ring
458 DLA## - Sorin Group Mitroflow Aortic Pericardial Heart Valve with PRT
459 MVC0##- Sorin Group Mitroflow Valsalva Conduit
460 1260 ### - Starr-Edwards Silastic Ball Aortic Heart Valve Prosthesis
461 6120 ### - Starr Edwards Silastic Ball Mitral Heart Valve Prosthesis
462 73##1088 - Vascutek Gelweave Plexus Graft
463 7300##ADP - Vascutek Terumo Gelweave Vascular 45Prosthesis
464 7320## - Vascutek Gelweave Trifucate Arch Graft
465 7350##ST - Vascutek Gelweave Pre-curved Graft
466 8300AB### - Edwards Intuity Elite Valve
467 8300KITB### - Edwards Intuity Elite Valve System
468 9600CM## - Edward Sapien
469 ART##SMT - Sorin Solo Smart
470 CNA19 - Sorin Crown PRT Tissue Valve
471 CNA21 - Sorin Crown PRT Tissue Valve
472 CNA23 - Sorin Crown PRT Tissue Valve
473 CNA25 - Sorin Crown PRT Tissue Valve
474 CNA27 - Sorin Crown PRT Tissue Valve
475 DPPGK - LifeNet CardioGRAFT Thick Pulmonary Patch (decellularized)
476 DPPGN – LifeNet CardioGRAFT Thin Pulmonary Patch (decellularized)
477 EVOLUTR-##-US - Medtronic CoreValve Evolut R
478 H749LTV##0 - Boston Scientific Lotus Transcatheter Valve
479 ICV1208 - Sorin Perceval Tissue Valves
480 ICV1209 - Sorin Perceval Tissue Valves
481 ICV1210 - Sorin Perceval Tissue Valves
482 ICV1211 - Sorin Perceval Tissue Valves
483 ICV1248 - Solo Smart Aortic Tissue Valves
484 ICV1264 - Solo Smart Aortic Tissue Valves
485 ICV1265 - Solo Smart Aortic Tissue Valves
486 ICV1331 - Sorin MEMO 3D RECHORD Annuloplasty Ring
487 ICV1332 - Sorin MEMO 3D RECHORD Annuloplasty Ring
488 ICV1333 - Sorin MEMO 3D RECHORD Annuloplasty Ring

489	ICV1334 - Sorin MEMO 3D RECHORD Annuloplasty Ring
490	ICV1335 - Sorin MEMO 3D RECHORD Annuloplasty Ring
491	ICV1336 - Sorin MEMO 3D RECHORD Annuloplasty Ring
492	ICV1337 - Sorin MEMO 3D RECHORD Annuloplasty Ring
493	IVC1247 - Solo Smart Aortic Tissue Valves
494	LMCP - LifeNet CardioGRAFT Left Mono Cusp Patch
495	MCP - LifeNet CardioGRAFT Mono Cusp Patch
496	PPGK - LifeNet CardioGRAFT Thick Pulmonary Patch
497	PPGN - LifeNet CardioGRAFT Thin Pulmonary Patch
498	PRT-## - Portico Transcatheter Aortic Valve
499	RMCP - LifeNet CardioGRAFT Right Mono Cusp Patch
500	TAS - LifeNet CardioGraft Thoracic Aorta - Small 16mm and less
501	TFGT-##A - St. Jude Medical Trifecta with Glide Technology (GT) Aortic Stented Tissue Valve
502	Z65LOTUSKIT## - Lotus Valve Kit
503	11500AXX - Edwards Inspiris Resilia Aortic Valve
777	Other US FDA-Approved Device
778	Other Non-US FDA- Approved Device

Long Name:	Valve Implant Unique Device Identifier (UDI) - 2	*SeqNo:*	3321
Short Name:	**ValImpUDI2**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the Unique Device Identifier (UDI) of the second implanted valve device if available, otherwise leave blank.		

Intent / Clarification:

Data Source:	User
Format:	Text

ParentLongName:	Valve Implant #2
ParentShortName:	**ValImpType2**
ParentHarvestCodes:	3|4
ParentValues:	= "Commercially supplied device" or "Transcatheter device"

Long Name:	Valve Implant Commercial Device Size #2	*SeqNo:*	3322
Short Name:	**ValImpComSz2**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the size of the second implanted valve or device.		

Low Value: 15
High Value: 33

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Valve Implant Type #2
ParentShortName: **ValImpType2**
ParentHarvestCodes: 3
Parent Value: = "Commercially supplied device"

Long Name: Third Valve Implant
Short Name: **ValImp3**
Section Name: Valve Procedures
DBTableName: Operations
Definition: Indicate whether a third valve or device was implanted.

SeqNo: 3330
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Second Valve Implant
ParentShortName: **ValImp2**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Valve Implant Location #3
Short Name: **ValImpLoc3**
Section Name: Valve Procedures
DBTableName: Operations
Definition: Indicate the location of the third valve or device implanted.

SeqNo: 3340
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Third Valve Implant
ParentShortName: **ValImp3**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Aortic
2	Mitral
3	Tricuspid
4	Pulmonic
5	Common AV
6	Truncal

Long Name: Valve Implant Type #3 *SeqNo:* 3350
Short Name: **ValImpType3** *Core:* Yes
Section Name: Valve Procedures *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the type of the third valve or device implanted.

Intent / Clarification: If a commercially supplied device is used at all, regardless of surgeon alterations, select commercially supplied device.

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

ParentLongName: Third Valve Implant
ParentShortName: **ValImp3**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Surgeon fashioned
2	Autograft
3	Commercially supplied device
4	Transcatheter device

Long Name: Valve Implant Surgeon Fashioned Material #3 *SeqNo:* 3360
Short Name: **ValImpSFMat3** *Core:* Yes

Section Name: Valve Procedures *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the material used to fashion the third valve or device.

Intent / Clarification:

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

ParentLongName: Valve Implant Type #3
ParentShortName: **ValImpType3**
ParentHarvestCodes: 1
ParentValues: = "Surgeon fashioned"

Harvest Codes:

Code:	Value:
1	PTFE (Gore-Tex)
2	Pericardium
9	Other

Long Name: Valve Implant Commercial Device Model Number #3 *SeqNo:* 3370
Short Name: **ValImpComMod3** *Core:* Yes
Section Name: Valve Procedures *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the name of the prosthesis implanted. The names provided include the manufacturer's model number with "xx" substituting for the device size.

Intent / Clarification:

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

ParentLongName: Valve Implant Type #3
ParentShortName: **ValImp3**
ParentHarvestCodes: 3|4
ParentValues: = "Commercially supplied device" or "Transcatheter device"

Harvest Codes:

201	500DM## - Medtronic Open Pivot Standard Mitral Heart Valve
202	500FA## - Medtronic Open Pivot Standard Aortic Heart Valve
203	501DA## - Medtronic Open Pivot AP Series Aortic Heart Valve
204	501DM## - Medtronic Open Pivot AP Series Mitral Heart Valve
205	502AG## - Medtronic Open Pivot Aortic Valved Graft (AVG)

206 503DA## - Medtronic Open Pivot APex Series Heart Valve
207 505DA## - Medtronic Open Pivot AP360 Series Aortic Heart Valve
208 A010 - CryoLife Ascending Thoracic Aorta
209 A020 - CryoLife Descending Thoracic Aorta
210 A030 - CryoLife Pulmonary Artery
211 AV00 - CryoLife Aortic Valve and Conduit
212 AV10 - CryoLife Aortic Valve without Conduit
214 PV00 - CryoLife Pulmonary Valve & Conduit
215 PV10 - CryoLife Pulmonary Valve without Conduit
216 R010 - CryoLife Aortoiliac Grafts
217 R020 - CryoLife Femoral Popliteal Artery
218 SGPV00 - CryoLife SG Pulmonary Valve & Conduit
219 SGPV10 - CryoLife SG Pulmonary Valve without Conduit
220 V010 - CryoLife Saphenous Vein
221 V060 - CryoLife Femoral Vein
224 2500## - Edwards Prima Aortic Stentless Bioprosthesis
225 2500P## - Edwards Prima Plus Stentless Aortic Bioprosthesis
226 2625## - Carpentier-Edwards Porcine Aortic Bioprosthesis
227 2650## - Carpentier-Edwards S.A.V. Aortic Porcine Bioprosthesis
228 2700## - Carpentier-Edwards Perimount Pericardial Aortic Bioprosthesis
229 2700TFX## - Carpentier- Edwards Perimount Theon Pericardial Aortic Bioprosthesis with ThermaFix Process
230 2800## - Carpentier-Edwards Perimount RSR Pericardial Aortic Bioprosthesis
231 2800TFX## - Carpentier- Edwards Perimount Theon RSR Pericardial Aortic Bioprosthesis with ThermaFix Process
232 3000## - Carpentier-Edwards Perimount Magna Pericardial Aortic Bioprosthesis
233 3000TFX## - Carpentier- Edwards Perimount Magna Pericardial Aortic Bioprosthesis with ThermaFix Process
234 3160## - Edwards- Duromedics Bileaflet Prostheses
235 3300TFX## - Carpentier- Edwards Perimount Magna Ease Pericardial Aortic Bioprosthesis with ThermaFix Process
236 3600## - Edwards Mira Mechanical Valve
237 3600f## - Edwards Mira Mechanical Valve
238 3600u## - Edwards Mira Mechanical Valve
239 4100## - Carpentier- McCarthy-Adams IMR ETlogix Mitral Annuloplasty Ring
240 4200## - Edwards GeoForm Mitral Annuloplasty Ring
241 4300## - Carpentier-Edwards Bioprosthetic Valved Conduit
242 4400## - Carpentier-Edwards Classic Mitral Annuloplasty Ring
243 4425## - Carpentier-Edwards Classic Mitral Annuloplasty Ring with Duraflo Treatment
244 4450## - Carpentier-Edwards Physio Mitral Annuloplasty Ring
245 4475## - Carpentier-Edwards Physio Annuloplasty Ring with Duraflo Treatment
246 4500## - Carpentier-Edwards Classic Tricuspid Annuloplasty Ring

247 4525## - Carpentier-Edwards Classic Tricuspid Annuloplasty Ring with Duraflo Treatment
248 4600## - Crosgrove-Edwards Mitral/Tricuspid Annuloplasty Ring
249 4625## - Crosgrove-Edwards Annuloplasty System with Duraflo Treatment
250 4900## - Edwards MC3 Tricuspid Annuloplasty System
251 5100## - Edwards DETlogix Mitral Annuloplasty Ring
252 5100M## - Edwards Myxomatous Annuloplasty Ring
253 5200## - Carpentier-Edwards Physio II Mitral Annuloplasty Ring
254 6625## - Carpentier-Edwards Porcine Mitral Bioprosthesis
255 6625-ESR-LP## - Carpentier- Edwards Duraflex Low Pressure Porcine Mitral Bioprosthesis with Extended Suture Ring
256 6625LP## - Carpentier-Edwards Duraflex Low Pressure Porcine Mitral Bioprosthesis
257 6900P## - Carpentier-Edwards Perimount Plus Mitral Pericardial Bioprosthesis
258 6900PTFX## - Carpentier-Edwards Perimount Theon Mitral Pericardial Bioprosthesis with ThermaFix Process
259 7000TFX## - Carpentier-Edwards Perimount Magna Mitral Pericardial Bioprosthesis
260 7200TFX## - Carpentier-Edwards Perimount Magna Mitral Ease Pericardial Bioprosthesis
261 7300TFX## - Carpentier-Edwards Perimount Magna Mitral Ease Pericardial Bioprosthesis with ThermaFix Process
262 9000## - Cribier-Edwards Aortic Bioprosthesis
263 9000PHV## - Cribier-Edwards Aortic Bioprosthesis
264 9000TFX## - Edwards Sapien Transcatheter Heart Valve
265 9120## - Edwards-Duromedics Bileaflet Prostheses
266 9600## - Edwards Mira Mechanical Valve
267 AAL - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Large
268 AAM - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Medium
269 AAS - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Small
270 DLHPA - LifeNet CardioGraft Decellularized Hemi-Pulmonary Artery with Matracell - Left
271 DRHPA - LifeNet CardioGraft Decellularized Hemi- Pulmonary Artery with Matracell - Right
272 HVAL - LifeNet CardioGraft Aortic Heart Valve - Large
273 HVAM - LifeNet CardioGraft Aortic Heart Valve - Medium
274 HVAS - LifeNet CardioGraft Aortic Heart Valve - Small
275 HVPL - LifeNet CardioGraft Pulmonary Heart Valve - Large
276 HVPM - LifeNet CardioGraft Pulmonary Heart Valve - Medium
277 HVPS - LifeNet CardioGraft Pulmonary Heart Valve - Small
278 LHPA - LifeNet CardioGraft Hemi-Pulmonary Artery - Left
279 PAL - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Large
280 PAM - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Medium
281 PAS - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Small
282 RHPA - LifeNet CardioGraft Hemi-Pulmonary Artery - Right
283 TAL - LifeNet CardioGraft Thoracic Aorta Non-valved - Large
284 TAM - LifeNet CardioGraft Thoracic Aorta Non-valved - Medium
286 174A - ## - Medtronic Hancock Apical Left Ventricle Connector

287 200## - Medtronic Contegra Unsupported Pulmonary Valve Conduit
288 200S## - Medtronic Contegra Supported Pulmonary Valve Conduit
289 305C2## - Medtronic Mosaic Standard Cinch - Aortic
290 305U2## - Medtronic Mosaic Ultra Cinch - Aortic
291 310## - Medtronic Mosaic Mitral
292 610B## - Medtronic Duran Band
293 610R## - Medtronic Duran Ring
294 620B## - Medtronic Duran AnCore Band
295 620BG## - Medtronic Duran AnCore Band With Chordal Guide
296 620R## - Medtronic Duran AnCore Ring
297 620RG## - Medtronic Duran Ancore Ring With Chordal Guide
298 638B## - Medtronic CG Future Band
299 638R## - Medtronic CG Future Composite Ring
300 670 - Medtronic Simplici-T Annuloplasty System
301 680R## - Medtronic Profile 3D Ring
302 995CS## - Medtronic Freestyle, Complete Subcoronary - CS
303 995MS## - Medtronic Freestyle, Modified Subcoronary - MS
304 FR995-## - Medtronic Freestyle, Full Root - FR
307 HC105-## - Medtronic Hancock Low-porosity Valved Conduit
308 HC150-## - Medtronic Hancock Modified Orifice Pulmonic Valved Conduit
309 T505C2## - Medtronic Hancock II Aortic Cinch
310 T505U2## - Medtronic Hancock II Ultra Cinch
311 T510C## - Medtronic Hancock II Mitral
312 ONXA## - On-X Aortic Valve with standard sewing ring
313 ONXAC## - On-X Aortic Valve with Conform-X Sewing Ring
314 ONXACE## - On-X Aortic Valve with Conform-X Sewing Ring, extended
315 ONXAE## - On-X Aortic Valve with standard sewing ring, extended
316 ONXM## - On-X Mitral Valve with standard sewing ring
317 ONXMC## - On-X Mitral Valve with Conform-X Sewing Ring
327 LXA## - Sorin Group Mitroflow Aortic Pericardial Heart Valve
328 A5-0## - Sorin Group: Carbomedics Standard Aortic Valve
329 AF-8## - Sorin Group: Carbomedics AnnuloFlex Annuloplasty System
330 AP-0## - Sorin Group: Carbomedics Carbo-Seal Ascending Aortic Prosthesis
331 AR-7## - Sorin Group: Carbomedics AnnuloFlo Annuloplasty System
332 CP-0## - Sorin Group: Carbomedics Carbo-Seal Valsalva Ascending Aortic Prosthesis
333 F7-0## - Sorin Group: Carbomedics OptiForm Mitral Valve
334 M7-0## - Sorin Group: Carbomedics Standard Mitral Valve
335 R5-0## - Sorin Group: Carbomedics Reduced Series Aortic Valve
336 S5-0## - Sorin Group: Carbomedics Top Hat Supra- Annular Aortic Valve
337 ##A-101 - St. Jude Medical Mechanical Aortic Heart Valve
338 ##AEC-102 - St. Jude Medical Mechanical Heart Valve
339 ##AECJ-502 - St. Jude Medical Masters Series Aortic Mechanical Valve, Expanded Cuff

340 ##AECS-602 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
341 ##AEHPJ-505 - St. Jude Medical Masters HP Mechanical Valve, Expanded Cuff
342 ##AEHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
343 ##AET-104 - St. Jude Medical Mechanical Heart Valve
344 ##AETJ-504 - St. Jude Medical Masters Series Mechanical Heart Valve
345 ##AFHPJ-505 - St. Jude Medical Masters HP Aortic Mechanical Valve, Flex Cuff
346 ##AG-701 - St. Jude Medical Regent Valve with Silzone Coating
347 ##AGF-706 - St. Jude Medical Regent Valve with Silzone Coating
348 ##AGFN-756 - St. Jude Medical Regent Aortic Mechanical Valve, Flex Cuff
349 ##AGN-751 - St. Jude Medical Regent Aortic Mechanical Valve, Standard Cuff
350 ##AHP-105 - St. Jude Medical Mechanical Heart Valve Hemodynamic Plus (HP) Series
351 ##AHPJ-505 - St. Jude Medical Masters HP Aortic Mechanical Heart Valve, Standard Cuff
352 ##AHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
353 ##AJ-501 - St. Jude Medical Masters Series Aortic Mechanical Valve, Standard Cuff
354 ##AS-601 - St. Jude Medical Masters Mechanical Heart Valve with Silzone Coating
355 ##AT-103 - St. Jude Medical Mechanical Heart Valve
356 ##ATJ-503 - St. Jude Medical Masters Series Aortic Mechanical Valve, PTFE Cuff
357 ##CAVG-404 - St. Jude Medical Coated Aortic Valved Graft Prosthesis
358 ##CAVGJ-514 - St. Jude Medical Masters Series Aortic Valved Graft
359 ##CAVGJ-514-00 - St. Jude Medical Masters Aortic Valved Graft, Hemashield Technology
360 ##M-101 - St. Jude Medical Mechanical Mitral Heart Valve
361 ##MEC-102 - St. Jude Medical Mechanical Heart Valve
362 ##MECJ-502 - St. Jude Medical Masters Series Mitral Mechanical Valve, Expanded Cuff
363 ##MECS-602 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
364 ##MEHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
365 ##MET-104 - St. Jude Medical Mechanical Heart Valve
366 ##METJ-504 - St. Jude Medical Masters Series Mitral Mechanical Valve, Expanded PTFE Cuff
367 ##MHP-105 - St. Jude Medical Mechanical Heart Valve Hemodynamic Plus (HP) Series
368 ##MHPJ-505 - St. Jude Medical Masters HP Mitral Mechanical Heart Valve, Standard Cuff
369 ##MHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
370 ##MJ-501 - St. Jude Medical Masters Series Mitral Mechanical Valve, Standard Cuff
371 ##MS-601 - St. Jude Medical Masters Mechanical Heart Valve with Silzone Coating
372 ##MT-103 - St. Jude Medical Mechanical Heart Valve
373 ##MTJ-503 - St. Jude Medical Masters Series Mitral Mechanical Valve, PTFE Cuff
374 ##VAVGJ-515 - St. Jude Medical Masters HP Aortic Valved Graft
375 AFR-## - St. Jude Medical Attune Flexible Adjustable Annuloplasty Ring
376 B10-##A - St. Jude Medical Biocor Aortic Valve
377 B10-##A-00 - St. Jude Medical Biocor Aortic Valve
378 B10-##M - St. Jude Medical Biocor Mitral Valve
379 B10-##M-00 - St. Jude Medical Biocor Mitral Valve
380 B100-##A-00 - St. Jude Medical Biocor Stented Aortic Tissue Valve
381 B100-##M-00 - St. Jude Medical Biocor Stented Mitral Tissue Valve

382 B10SP-## - St. Jude Medical Biocor Supra Stented Porcine Heart Valve
383 B20-0##A - St. Jude Medical Biocor Porcine Stentless Bioprosthetic Heart Valve
384 B30-##A - St. Jude Medical Biocor Valve
385 B30-##M - St. Jude Medical Biocor Valve
386 BSP100-## - St. Jude Medical Biocor Supra Aortic Stented Tissue Valve
387 E100-##A-00 - St. Jude Medical Epic Aortic Stented Tissue Valve
388 E100-##M-00 - St. Jude Medical Epic Mitral Stented Tissue Valve
389 EL-##A - St. Jude Medical Epic Aortic Valve
390 EL-##M - St. Jude Medical Epic Mitral Valve
391 ELS-##A - St. Jude Medical Epic Tissue Aortic Valve with Silzone Coating
392 ELS-##M - St. Jude Medical Epic Tissue Mitral Valve with Silzone Coating
393 ESP100-##-00 - St. Jude Medical Epic Supra Aortic Stented Tissue Valve
394 ESP100-##A-00 - St. Jude Medical Epic Stented Aortic Tissue Valve
395 ROOT-## - St. Jude Medical Toronto Root with BiLinx AC
396 RSAR-## - St. Jude Medical SJM Rigid Saddle Ring
397 SARP-## - St. Jude Medical SJM STguin Semi-Rigid Annuloplasty Ring
398 SARS-M## - St. Jude Medical STguin Annuloplasty Ring with Silzone Coating
399 SPA-101-## - St. Jude Medical Toronto SPV Valve
400 SPA-201-## - St. Jude Medical Toronto SPV II Bioprosthetic Heart Valve
401 TAB-## - St. Jude Medical Tailor Flexible Annuloplasty Band
402 TAR-## - St. Jude Medical Tailor Annuloplasty Ring with Silzone Coating
403 TARP-## - St. Jude Medical Tailor Flexible Annuloplasty Ring
404 PB10-## - Medtronic Melody Transcatheter Pulmonary Valve
405 700FF## - Medtronic Simulus FLX-O Ring
406 700FC## - Medtronic Simulus FLX-C Band
407 735AF## - Medtronic Simulus Adjustable Ring
408 800SR## - Medtronic Simulus Semi-rigid Ring
409 900SFC## - Medtronic TriAd Tricuspid Annuloplasty Ring
410 1000-## - Medtronic 3f Aortic Bioprosthesis
411 6200## - Carpentier-Edwards Physio Tricuspid Annuloplasty Ring
412 9300TFX## - Edwards Sapien Transcatheter Heart Valve
413 305## - Medtronic Mosaic Ultra Porcine Heart Valve
415 TF-##A - St. Jude Medical Trifecta Aortic Stented Tissue Valve
416 505DM## - Medtronic Open Pivot AP360 Series Mitral Heart Valve
417 800SC## - Medtronic Simulus Semi-rigid Mitral Annuloplasty Ring
418 6000-## - Medtronic 3f Enable Aortic Bioprosthesis
419 PH00 - Cryolife Pulmonary Hemi-Artery
420 SGPH00 - Cryolife SG Pulmonary Hemi-Artery
421 690R## - Medtronic Contour 3D Annuloplasty ring
422 735AC## - Medtronic Simulus Adjustable Band
423 9600TFX## - Edwards Sapien Transcatheter Heart Valve
425 H607 - Medtronic post Annuloplasty band (Split, Mayo)

428 ICV08## - Sorin Group Sovering Annuloplasty
429 ICV09## - Sorin Group MEMO 3D Semi-rigid Annuloplasty Ring
432 A1-0## - Sorin Group: Carbomedics Orbis Universal Aortic Valve
433 M2-0## - Sorin Group: Carbomedics Orbis Universal Mitral Valve
434 PF ## - Sorin Group PF ## - Sorin Group Stentless
435 PS ## - Sorin Group Pericarbon More Mitral
436 ART ## SOP - Sorin Group Soprano Armonia
437 ART ## SG - Sorin Group Freedom Solo
438 ART ## LFA- Sorin Group Bicarbon Fitline Aortic
439 MTR ## LFM- Sorin Group Bicarbon Fitline Mitral
440 ART ## LOV- Sorin Group Bicarbon Overline Aortic
441 ART ## LSA- Sorin Group Bicarbon Slimline Aortic
442 8300A## - Edwards Intuity Valve System (outside US)
443 8300AB## - Edwards Intuity Elite Valve System (outside US)
444 8300ACD## - Edwards Intuity Elite Valve System
445 9355NF## - Edwards Sapien XT Transcatheter Valve with NovaFlex System
446 9355ASP## - Edwards Sapien XT Transcatheter Valve with Ascendra System
447 S3TF1## - Edwards Sapien 3 Transcatheter Valve with Commander System
448 S3TA1## - Edwards Sapien 3 Transcatheter Valve with Certitude System
449 CRS-P3-640 – Medtronic CoreValve
450 CRS-P3-943 – Medtronic CoreValve
451 MCS-P3 – Medtronic CoreValve
452 MCS-P4 – Medtronic CoreValve Evolut
453 ONXAN## - On-X Aortic Heart Valve with Anatomic Sewing Ring
454 ONXANE## - On-X Valve with Anatomic Sewing ring and Extended Holder
455 ONXAAP## - On-X Ascending Aortic Prosthesis
456 ICV12## - Sorin Solo Smart Aortic Valve
457 ICV13## - Sorin Group MEMO 3D Rechord Annuloplasty Ring
458 DLA## - Sorin Group Mitroflow Aortic Pericardial Heart Valve with PRT
459 MVC0##- Sorin Group Mitroflow Valsalva Conduit
460 1260 ### - Starr-Edwards Silastic Ball Aortic Heart Valve Prosthesis
461 6120 ### - Starr Edwards Silastic Ball Mitral Heart Valve Prosthesis
462 73##1088 - Vascutek Gelweave Plexus Graft
463 7300##ADP - Vascutek Terumo Gelweave Vascular 45Prosthesis
464 7320## - Vascutek Gelweave Trifucate Arch Graft
465 7350##ST - Vascutek Gelweave Pre-curved Graft
466 8300AB### - Edwards Intuity Elite Valve
467 8300KITB### - Edwards Intuity Elite Valve System
468 9600CM## - Edward Sapien
469 ART##SMT - Sorin Solo Smart
470 CNA19 - Sorin Crown PRT Tissue Valve
471 CNA21 - Sorin Crown PRT Tissue Valve

472	CNA23 - Sorin Crown PRT Tissue Valve
473	CNA25 - Sorin Crown PRT Tissue Valve
474	CNA27 - Sorin Crown PRT Tissue Valve
475	DPPGK - LifeNet CardioGRAFT Thick Pulmonary Patch (decellularized)
476	DPPGN – LifeNet CardioGRAFT Thin Pulmonary Patch (decellularized)
477	EVOLUTR-##-US - Medtronic CoreValve Evolut R
478	H749LTV##0 - Boston Scientific Lotus Transcatheter Valve
479	ICV1208 - Sorin Perceval Tissue Valves
480	ICV1209 - Sorin Perceval Tissue Valves
481	ICV1210 - Sorin Perceval Tissue Valves
482	ICV1211 - Sorin Perceval Tissue Valves
483	ICV1248 - Solo Smart Aortic Tissue Valves
484	ICV1264 - Solo Smart Aortic Tissue Valves
485	ICV1265 - Solo Smart Aortic Tissue Valves
486	ICV1331 - Sorin MEMO 3D RECHORD Annuloplasty Ring
487	ICV1332 - Sorin MEMO 3D RECHORD Annuloplasty Ring
488	ICV1333 - Sorin MEMO 3D RECHORD Annuloplasty Ring
489	ICV1334 - Sorin MEMO 3D RECHORD Annuloplasty Ring
490	ICV1335 - Sorin MEMO 3D RECHORD Annuloplasty Ring
491	ICV1336 - Sorin MEMO 3D RECHORD Annuloplasty Ring
492	ICV1337 - Sorin MEMO 3D RECHORD Annuloplasty Ring
493	IVC1247 - Solo Smart Aortic Tissue Valves
494	LMCP - LifeNet CardioGRAFT Left Mono Cusp Patch
495	MCP - LifeNet CardioGRAFT Mono Cusp Patch
496	PPGK - LifeNet CardioGRAFT Thick Pulmonary Patch
497	PPGN - LifeNet CardioGRAFT Thin Pulmonary Patch
498	PRT-## - Portico Transcatheter Aortic Valve
499	RMCP - LifeNet CardioGRAFT Right Mono Cusp Patch
500	TAS - LifeNet CardioGraft Thoracic Aorta - Small 16mm and less
501	TFGT-##A - St. Jude Medical Trifecta with Glide Technology (GT) Aortic Stented Tissue Valve
502	Z65LOTUSKIT## - Lotus Valve Kit
503	11500AXX - Edwards Inspiris Resilia Aortic Valve
777	Other US FDA-Approved Device
778	Other Non-US FDA- Approved Device

Long Name:	Valve Implant Unique Device Identifier (UDI) - 3	*SeqNo:*	3381
Short Name:	**ValImpUDI3**	*Core:*	Yes
Section Name:	Valve Procedures	*Harvest:*	Yes
DBTableName:	Operations		

Definition: Indicate the Unique Device Identifier (UDI) of the third implanted valve device if available, otherwise leave blank.

Intent / Clarification:

Data Source: User
Format: Text

ParentLongName: Valve Implant Type #3
ParentShortName: **ValImpType3**
ParentHarvestCodes: 3|4
ParentValues: = "Commercially supplied device" or "Transcatheter device"

Long Name: Valve Implant Commercial Device Size #3 *SeqNo:* 3382
Short Name: **ValImpComSz3** *Core:* Yes
Section Name: Valve Procedures *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the size of the third implanted valve or device.
Low Value: 15
High Value: 33

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Valve Implant Type #3
ParentShortName: **ValImpType3**
ParentHarvestCodes: 3
Parent Value: = "Commercially supplied device"

Long Name: Fourth Valve Implant *SeqNo:* 3390
Short Name: **ValImp4** *Core:* Yes
Section Name: Valve Procedures *Harvest:* Yes
DBTableName: Operations
Definition: Indicate whether a fourth valve or device was implanted.

Intent / Clarification:

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

ParentLongName: Third Valve Implant

ParentShortName: **ValImp3**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Valve Implant Location #4
Short Name: **ValImpLoc4**
Section Name: Valve Procedures
DBTableName: Operations
Definition: Indicate the location of the fourth valve or device implanted.

SeqNo: 3400
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Fourth Valve Implant
ParentShortName: **ValImp4**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Aortic
2	Mitral
3	Tricuspid
4	Pulmonic
5	Common AV
6	Truncal

Long Name: Valve Implant Type #4
Short Name: **ValImpType4**
Section Name: Valve Procedures
DBTableName: Operations
Definition: Indicate the type of the fourth valve or device implanted.

SeqNo: 3410
Core: Yes
Harvest: Yes

Intent / Clarification: If a commercially supplied device is used at all, regardless of surgeon alterations, select commercially supplied device.

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

ParentLongName: Fourth Valve Implant
ParentShortName: **ValImp4**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Surgeon fashioned
2	Autograft
3	Commercially supplied device
4	Transcatheter device

Long Name: Valve Implant Surgeon Fashioned Material #4 *SeqNo:* 3420
Short Name: **ValImpSFMat4** *Core:* Yes
Section Name: Valve Procedures *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the material used to fashion the fourth valve or device.

Intent / Clarification:

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

ParentLongName: Valve Implant Type #4
ParentShortName: **ValImpType4**
ParentHarvestCodes: 1
ParentValues: = "Surgeon fashioned"

Harvest Codes:

Code:	Value:
1	PTFE (Gore-Tex)
2	Pericardium
9	Other

Long Name: Valve Implant Commercial Device Model Number #4 *SeqNo:* 3430
Short Name: **ValImpComMod4** *Core:* Yes
Section Name: Valve Procedures *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the name of the prosthesis implanted. The names provided include the manufacturer's model number with "xx" substituting for the device size.

Intent / Clarification:

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

ParentLongName: Valve Implant Type #4
ParentShortName: **ValImpType4**
ParentHarvestCodes: 3|4
ParentValues: = "Commercially supplied device" or "Transcatheter device"

Harvest Codes:

201 500DM## - Medtronic Open Pivot Standard Mitral Heart Valve
202 500FA## - Medtronic Open Pivot Standard Aortic Heart Valve
203 501DA## - Medtronic Open Pivot AP Series Aortic Heart Valve
204 501DM## - Medtronic Open Pivot AP Series Mitral Heart Valve
205 502AG## - Medtronic Open Pivot Aortic Valved Graft (AVG)
206 503DA## - Medtronic Open Pivot APex Series Heart Valve
207 505DA## - Medtronic Open Pivot AP360 Series Aortic Heart Valve
208 A010 - CryoLife Ascending Thoracic Aorta
209 A020 - CryoLife Descending Thoracic Aorta
210 A030 - CryoLife Pulmonary Artery
211 AV00 - CryoLife Aortic Valve and Conduit
212 AV10 - CryoLife Aortic Valve without Conduit
214 PV00 - CryoLife Pulmonary Valve & Conduit
215 PV10 - CryoLife Pulmonary Valve without Conduit
216 R010 - CryoLife Aortoiliac Grafts
217 R020 - CryoLife Femoral Popliteal Artery
218 SGPV00 - CryoLife SG Pulmonary Valve & Conduit
219 SGPV10 - CryoLife SG Pulmonary Valve without Conduit
220 V010 - CryoLife Saphenous Vein
221 V060 - CryoLife Femoral Vein
224 2500## - Edwards Prima Aortic Stentless Bioprosthesis
225 2500P## - Edwards Prima Plus Stentless Aortic Bioprosthesis
226 2625## - Carpentier-Edwards Porcine Aortic Bioprosthesis
227 2650## - Carpentier-Edwards S.A.V. Aortic Porcine Bioprosthesis
228 2700## - Carpentier-Edwards Perimount Pericardial Aortic Bioprosthesis
229 2700TFX## - Carpentier- Edwards Perimount Theon Pericardial Aortic Bioprosthesis with ThermaFix Process
230 2800## - Carpentier-Edwards Perimount RSR Pericardial Aortic Bioprosthesis
231 2800TFX## - Carpentier- Edwards Perimount Theon RSR Pericardial Aortic Bioprosthesis with ThermaFix Process
232 3000## - Carpentier-Edwards Perimount Magna Pericardial Aortic Bioprosthesis
233 3000TFX## - Carpentier- Edwards Perimount Magna Pericardial Aortic Bioprosthesis with ThermaFix Process

234 3160## - Edwards- Duromedics Bileaflet Prostheses
235 3300TFX## - Carpentier- Edwards Perimount Magna Ease Pericardial Aortic Bioprosthesis with ThermaFix Process
236 3600## - Edwards Mira Mechanical Valve
237 3600f## - Edwards Mira Mechanical Valve
238 3600u## - Edwards Mira Mechanical Valve
239 4100## - Carpentier- McCarthy-Adams IMR ETlogix Mitral Annuloplasty Ring
240 4200## - Edwards GeoForm Mitral Annuloplasty Ring
241 4300## - Carpentier-Edwards Bioprosthetic Valved Conduit
242 4400## - Carpentier-Edwards Classic Mitral Annuloplasty Ring
243 4425## - Carpentier-Edwards Classic Mitral Annuloplasty Ring with Duraflo Treatment
244 4450## - Carpentier-Edwards Physio Mitral Annuloplasty Ring
245 4475## - Carpentier-Edwards Physio Annuloplasty Ring with Duraflo Treatment
246 4500## - Carpentier-Edwards Classic Tricuspid Annuloplasty Ring
247 4525## - Carpentier-Edwards Classic Tricuspid Annuloplasty Ring with Duraflo Treatment
248 4600## - Crosgrove-Edwards Mitral/Tricuspid Annuloplasty Ring
249 4625## - Crosgrove-Edwards Annuloplasty System with Duraflo Treatment
250 4900## - Edwards MC3 Tricuspid Annuloplasty System
251 5100## - Edwards DETlogix Mitral Annuloplasty Ring
252 5100M## - Edwards Myxomatous Annuloplasty Ring
253 5200## - Carpentier-Edwards Physio II Mitral Annuloplasty Ring
254 6625## - Carpentier-Edwards Porcine Mitral Bioprosthesis
255 6625-ESR-LP## - Carpentier- Edwards Duraflex Low Pressure Porcine Mitral Bioprosthesis with Extended Suture Ring
256 6625LP## - Carpentier-Edwards Duraflex Low Pressure Porcine Mitral Bioprosthesis
257 6900P## - Carpentier-Edwards Perimount Plus Mitral Pericardial Bioprosthesis
258 6900PTFX## - Carpentier-Edwards Perimount Theon Mitral Pericardial Bioprosthesis with ThermaFix Process
259 7000TFX## - Carpentier-Edwards Perimount Magna Mitral Pericardial Bioprosthesis
260 7200TFX## - Carpentier-Edwards Perimount Magna Mitral Ease Pericardial Bioprosthesis
261 7300TFX## - Carpentier-Edwards Perimount Magna Mitral Ease Pericardial Bioprosthesis with ThermaFix Process
262 9000## - Cribier-Edwards Aortic Bioprosthesis
263 9000PHV## - Cribier-Edwards Aortic Bioprosthesis
264 9000TFX## - Edwards Sapien Transcatheter Heart Valve
265 9120## - Edwards-Duromedics Bileaflet Prostheses
266 9600## - Edwards Mira Mechanical Valve
267 AAL - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Large
268 AAM - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Medium
269 AAS - LifeNet CardioGraft Ascending Aorta (Non-Valved) - Small
270 DLHPA - LifeNet CardioGraft Decellularized Hemi-Pulmonary Artery with Matracell - Left
271 DRHPA - LifeNet CardioGraft Decellularized Hemi- Pulmonary Artery with Matracell - Right

272 HVAL - LifeNet CardioGraft Aortic Heart Valve - Large
273 HVAM - LifeNet CardioGraft Aortic Heart Valve - Medium
274 HVAS - LifeNet CardioGraft Aortic Heart Valve - Small
275 HVPL - LifeNet CardioGraft Pulmonary Heart Valve - Large
276 HVPM - LifeNet CardioGraft Pulmonary Heart Valve - Medium
277 HVPS - LifeNet CardioGraft Pulmonary Heart Valve - Small
278 LHPA - LifeNet CardioGraft Hemi-Pulmonary Artery - Left
279 PAL - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Large
280 PAM - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Medium
281 PAS - LifeNet CardioGraft Pulmonary Artery (Non-Valved) - Small
282 RHPA - LifeNet CardioGraft Hemi-Pulmonary Artery - Right
283 TAL - LifeNet CardioGraft Thoracic Aorta Non-valved - Large
284 TAM - LifeNet CardioGraft Thoracic Aorta Non-valved - Medium
286 174A - ## - Medtronic Hancock Apical Left Ventricle Connector
287 200## - Medtronic Contegra Unsupported Pulmonary Valve Conduit
288 200S## - Medtronic Contegra Supported Pulmonary Valve Conduit
289 305C2## - Medtronic Mosaic Standard Cinch - Aortic
290 305U2## - Medtronic Mosaic Ultra Cinch - Aortic
291 310## - Medtronic Mosaic Mitral
292 610B## - Medtronic Duran Band
293 610R## - Medtronic Duran Ring
294 620B## - Medtronic Duran AnCore Band
295 620BG## - Medtronic Duran AnCore Band With Chordal Guide
296 620R## - Medtronic Duran AnCore Ring
297 620RG## - Medtronic Duran Ancore Ring With Chordal Guide
298 638B## - Medtronic CG Future Band
299 638R## - Medtronic CG Future Composite Ring
300 670 - Medtronic Simplici-T Annuloplasty System
301 680R## - Medtronic Profile 3D Ring
302 995CS## - Medtronic Freestyle, Complete Subcoronary - CS
303 995MS## - Medtronic Freestyle, Modified Subcoronary - MS
304 FR995-## - Medtronic Freestyle, Full Root - FR
307 HC105-## - Medtronic Hancock Low-porosity Valved Conduit
308 HC150-## - Medtronic Hancock Modified Orifice Pulmonic Valved Conduit
309 T505C2## - Medtronic Hancock II Aortic Cinch
310 T505U2## - Medtronic Hancock II Ultra Cinch
311 T510C## - Medtronic Hancock II Mitral
312 ONXA## - On-X Aortic Valve with standard sewing ring
313 ONXAC## - On-X Aortic Valve with Conform-X Sewing Ring
314 ONXACE## - On-X Aortic Valve with Conform-X Sewing Ring, extended
315 ONXAE## - On-X Aortic Valve with standard sewing ring, extended
316 ONXM## - On-X Mitral Valve with standard sewing ring

317 ONXMC## - On-X Mitral Valve with Conform-X Sewing Ring
327 LXA## - Sorin Group Mitroflow Aortic Pericardial Heart Valve
328 A5-0## - Sorin Group: Carbomedics Standard Aortic Valve
329 AF-8## - Sorin Group: Carbomedics AnnuloFlex Annuloplasty System
330 AP-0## - Sorin Group: Carbomedics Carbo-Seal Ascending Aortic Prosthesis
331 AR-7## - Sorin Group: Carbomedics AnnuloFlo Annuloplasty System
332 CP-0## - Sorin Group: Carbomedics Carbo-Seal Valsalva Ascending Aortic Prosthesis
333 F7-0## - Sorin Group: Carbomedics OptiForm Mitral Valve
334 M7-0## - Sorin Group: Carbomedics Standard Mitral Valve
335 R5-0## - Sorin Group: Carbomedics Reduced Series Aortic Valve
336 S5-0## - Sorin Group: Carbomedics Top Hat Supra- Annular Aortic Valve
337 ##A-101 - St. Jude Medical Mechanical Aortic Heart Valve
338 ##AEC-102 - St. Jude Medical Mechanical Heart Valve
339 ##AECJ-502 - St. Jude Medical Masters Series Aortic Mechanical Valve, Expanded Cuff
340 ##AECS-602 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
341 ##AEHPJ-505 - St. Jude Medical Masters HP Mechanical Valve, Expanded Cuff
342 ##AEHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
343 ##AET-104 - St. Jude Medical Mechanical Heart Valve
344 ##AETJ-504 - St. Jude Medical Masters Series Mechanical Heart Valve
345 ##AFHPJ-505 - St. Jude Medical Masters HP Aortic Mechanical Valve, Flex Cuff
346 ##AG-701 - St. Jude Medical Regent Valve with Silzone Coating
347 ##AGF-706 - St. Jude Medical Regent Valve with Silzone Coating
348 ##AGFN-756 - St. Jude Medical Regent Aortic Mechanical Valve, Flex Cuff
349 ##AGN-751 - St. Jude Medical Regent Aortic Mechanical Valve, Standard Cuff
350 ##AHP-105 - St. Jude Medical Mechanical Heart Valve Hemodynamic Plus (HP) Series
351 ##AHPJ-505 - St. Jude Medical Masters HP Aortic Mechanical Heart Valve, Standard Cuff
352 ##AHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
353 ##AJ-501 - St. Jude Medical Masters Series Aortic Mechanical Valve, Standard Cuff
354 ##AS-601 - St. Jude Medical Masters Mechanical Heart Valve with Silzone Coating
355 ##AT-103 - St. Jude Medical Mechanical Heart Valve
356 ##ATJ-503 - St. Jude Medical Masters Series Aortic Mechanical Valve, PTFE Cuff
357 ##CAVG-404 - St. Jude Medical Coated Aortic Valved Graft Prosthesis
358 ##CAVGJ-514 - St. Jude Medical Masters Series Aortic Valved Graft
359 ##CAVGJ-514-00 - St. Jude Medical Masters Aortic Valved Graft, Hemashield Technology
360 ##M-101 - St. Jude Medical Mechanical Mitral Heart Valve
361 ##MEC-102 - St. Jude Medical Mechanical Heart Valve
362 ##MECJ-502 - St. Jude Medical Masters Series Mitral Mechanical Valve, Expanded Cuff
363 ##MECS-602 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
364 ##MEHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
365 ##MET-104 - St. Jude Medical Mechanical Heart Valve
366 ##METJ-504 - St. Jude Medical Masters Series Mitral Mechanical Valve, Expanded PTFE Cuff
367 ##MHP-105 - St. Jude Medical Mechanical Heart Valve Hemodynamic Plus (HP) Series

368 ##MHPJ-505 - St. Jude Medical Masters HP Mitral Mechanical Heart Valve, Standard Cuff
369 ##MHPS-605 - St. Jude Medical Masters Series Mechanical Heart Valve with Silzone Coating
370 ##MJ-501 - St. Jude Medical Masters Series Mitral Mechanical Valve, Standard Cuff
371 ##MS-601 - St. Jude Medical Masters Mechanical Heart Valve with Silzone Coating
372 ##MT-103 - St. Jude Medical Mechanical Heart Valve
373 ##MTJ-503 - St. Jude Medical Masters Series Mitral Mechanical Valve, PTFE Cuff
374 ##VAVGJ-515 - St. Jude Medical Masters HP Aortic Valved Graft
375 AFR-## - St. Jude Medical Attune Flexible Adjustable Annuloplasty Ring
376 B10-##A - St. Jude Medical Biocor Aortic Valve
377 B10-##A-00 - St. Jude Medical Biocor Aortic Valve
378 B10-##M - St. Jude Medical Biocor Mitral Valve
379 B10-##M-00 - St. Jude Medical Biocor Mitral Valve
380 B100-##A-00 - St. Jude Medical Biocor Stented Aortic Tissue Valve
381 B100-##M-00 - St. Jude Medical Biocor Stented Mitral Tissue Valve
382 B10SP-## - St. Jude Medical Biocor Supra Stented Porcine Heart Valve
383 B20-0##A - St. Jude Medical Biocor Porcine Stentless Bioprosthetic Heart Valve
384 B30-##A - St. Jude Medical Biocor Valve
385 B30-##M - St. Jude Medical Biocor Valve
386 BSP100-## - St. Jude Medical Biocor Supra Aortic Stented Tissue Valve
387 E100-##A-00 - St. Jude Medical Epic Aortic Stented Tissue Valve
388 E100-##M-00 - St. Jude Medical Epic Mitral Stented Tissue Valve
389 EL-##A - St. Jude Medical Epic Aortic Valve
390 EL-##M - St. Jude Medical Epic Mitral Valve
391 ELS-##A - St. Jude Medical Epic Tissue Aortic Valve with Silzone Coating
392 ELS-##M - St. Jude Medical Epic Tissue Mitral Valve with Silzone Coating
393 ESP100-##-00 - St. Jude Medical Epic Supra Aortic Stented Tissue Valve
394 ESP100-##A-00 - St. Jude Medical Epic Stented Aortic Tissue Valve
395 ROOT-## - St. Jude Medical Toronto Root with BiLinx AC
396 RSAR-## - St. Jude Medical SJM Rigid Saddle Ring
397 SARP-## - St. Jude Medical SJM STguin Semi-Rigid Annuloplasty Ring
398 SARS-M## - St. Jude Medical STguin Annuloplasty Ring with Silzone Coating
399 SPA-101-## - St. Jude Medical Toronto SPV Valve
400 SPA-201-## - St. Jude Medical Toronto SPV II Bioprosthetic Heart Valve
401 TAB-## - St. Jude Medical Tailor Flexible Annuloplasty Band
402 TAR-## - St. Jude Medical Tailor Annuloplasty Ring with Silzone Coating
403 TARP-## - St. Jude Medical Tailor Flexible Annuloplasty Ring
404 PB10-## - Medtronic Melody Transcatheter Pulmonary Valve
405 700FF## - Medtronic Simulus FLX-O Ring
406 700FC## - Medtronic Simulus FLX-C Band
407 735AF## - Medtronic Simulus Adjustable Ring
408 800SR## - Medtronic Simulus Semi-rigid Ring
409 900SFC## - Medtronic TriAd Tricuspid Annuloplasty Ring

410 1000-## - Medtronic 3f Aortic Bioprosthesis
411 6200## - Carpentier-Edwards Physio Tricuspid Annuloplasty Ring
412 9300TFX## - Edwards Sapien Transcatheter Heart Valve
413 305## - Medtronic Mosaic Ultra Porcine Heart Valve
415 TF-##A - St. Jude Medical Trifecta Aortic Stented Tissue Valve
416 505DM## - Medtronic Open Pivot AP360 Series Mitral Heart Valve
417 800SC## - Medtronic Simulus Semi-rigid Mitral Annuloplasty Ring
418 6000-## - Medtronic 3f Enable Aortic Bioprosthesis
419 PH00 - Cryolife Pulmonary Hemi-Artery
420 SGPH00 - Cryolife SG Pulmonary Hemi-Artery
421 690R## - Medtronic Contour 3D Annuloplasty ring
422 735AC## - Medtronic Simulus Adjustable Band
423 9600TFX## - Edwards Sapien Transcatheter Heart Valve
425 H607 - Medtronic post Annuloplasty band (Split, Mayo)
428 ICV08## - Sorin Group Sovering Annuloplasty
429 ICV09## - Sorin Group MEMO 3D Semi-rigid Annuloplasty Ring
432 A1-0## - Sorin Group: Carbomedics Orbis Universal Aortic Valve
433 M2-0## - Sorin Group: Carbomedics Orbis Universal Mitral Valve
434 PF ## - Sorin Group PF ## - Sorin Group Stentless
435 PS ## - Sorin Group Pericarbon More Mitral
436 ART ## SOP - Sorin Group Soprano Armonia
437 ART ## SG - Sorin Group Freedom Solo
438 ART ## LFA- Sorin Group Bicarbon Fitline Aortic
439 MTR ## LFM- Sorin Group Bicarbon Fitline Mitral
440 ART ## LOV- Sorin Group Bicarbon Overline Aortic
441 ART ## LSA- Sorin Group Bicarbon Slimline Aortic
442 8300A## - Edwards Intuity Valve System (outside US)
443 8300AB## - Edwards Intuity Elite Valve System (outside US)
444 8300ACD## - Edwards Intuity Elite Valve System
445 9355NF## - Edwards Sapien XT Transcatheter Valve with NovaFlex System
446 9355ASP## - Edwards Sapien XT Transcatheter Valve with Ascendra System
447 S3TF1## - Edwards Sapien 3 Transcatheter Valve with Commander System
448 S3TA1## - Edwards Sapien 3 Transcatheter Valve with Certitude System
449 CRS-P3-640 – Medtronic CoreValve
450 CRS-P3-943 – Medtronic CoreValve
451 MCS-P3 – Medtronic CoreValve
452 MCS-P4 – Medtronic CoreValve Evolut
453 ONXAN## - On-X Aortic Heart Valve with Anatomic Sewing Ring
454 ONXANE## - On-X Valve with Anatomic Sewing ring and Extended Holder
455 ONXAAP## - On-X Ascending Aortic Prosthesis
456 ICV12## - Sorin Solo Smart Aortic Valve
457 ICV13## - Sorin Group MEMO 3D Rechord Annuloplasty Ring

458 DLA## - Sorin Group Mitroflow Aortic Pericardial Heart Valve with PRT
459 MVC0##- Sorin Group Mitroflow Valsalva Conduit
460 1260 ### - Starr-Edwards Silastic Ball Aortic Heart Valve Prosthesis
461 6120 ### - Starr Edwards Silastic Ball Mitral Heart Valve Prosthesis
462 73##1088 - Vascutek Gelweave Plexus Graft
463 7300##ADP - Vascutek Terumo Gelweave Vascular 45Prosthesis
464 7320## - Vascutek Gelweave Trifucate Arch Graft
465 7350##ST - Vascutek Gelweave Pre-curved Graft
466 8300AB### - Edwards Intuity Elite Valve
467 8300KITB### - Edwards Intuity Elite Valve System
468 9600CM## - Edward Sapien
469 ART##SMT - Sorin Solo Smart
470 CNA19 - Sorin Crown PRT Tissue Valve
471 CNA21 - Sorin Crown PRT Tissue Valve
472 CNA23 - Sorin Crown PRT Tissue Valve
473 CNA25 - Sorin Crown PRT Tissue Valve
474 CNA27 - Sorin Crown PRT Tissue Valve
475 DPPGK - LifeNet CardioGRAFT Thick Pulmonary Patch (decellularized)
476 DPPGN – LifeNet CardioGRAFT Thin Pulmonary Patch (decellularized)
477 EVOLUTR-##-US - Medtronic CoreValve Evolut R
478 H749LTV##0 - Boston Scientific Lotus Transcatheter Valve
479 ICV1208 - Sorin Perceval Tissue Valves
480 ICV1209 - Sorin Perceval Tissue Valves
481 ICV1210 - Sorin Perceval Tissue Valves
482 ICV1211 - Sorin Perceval Tissue Valves
483 ICV1248 - Solo Smart Aortic Tissue Valves
484 ICV1264 - Solo Smart Aortic Tissue Valves
485 ICV1265 - Solo Smart Aortic Tissue Valves
486 ICV1331 - Sorin MEMO 3D RECHORD Annuloplasty Ring
487 ICV1332 - Sorin MEMO 3D RECHORD Annuloplasty Ring
488 ICV1333 - Sorin MEMO 3D RECHORD Annuloplasty Ring
489 ICV1334 - Sorin MEMO 3D RECHORD Annuloplasty Ring
490 ICV1335 - Sorin MEMO 3D RECHORD Annuloplasty Ring
491 ICV1336 - Sorin MEMO 3D RECHORD Annuloplasty Ring
492 ICV1337 - Sorin MEMO 3D RECHORD Annuloplasty Ring
493 IVC1247 - Solo Smart Aortic Tissue Valves
494 LMCP - LifeNet CardioGRAFT Left Mono Cusp Patch
495 MCP - LifeNet CardioGRAFT Mono Cusp Patch
496 PPGK - LifeNet CardioGRAFT Thick Pulmonary Patch
497 PPGN - LifeNet CardioGRAFT Thin Pulmonary Patch
498 PRT-## - Portico Transcatheter Aortic Valve

499	RMCP - LifeNet CardioGRAFT Right Mono Cusp Patch
500	TAS - LifeNet CardioGraft Thoracic Aorta - Small 16mm and less
501	TFGT-##A - St. Jude Medical Trifecta with Glide Technology (GT) Aortic Stented Tissue Valve
502	Z65LOTUSKIT## - Lotus Valve Kit
503	11500AXX - Edwards Inspiris Resilia Aortic Valve
777	Other US FDA-Approved Device
778	Other Non-US FDA- Approved Device

Long Name: Valve Implant Unique Device Identifier (UDI) - 4 *SeqNo:* 3441
Short Name: **ValImpUDI4** *Core:* Yes
Section Name: Valve Procedures *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the Unique Device Identifier (UDI) of the fourth implanted valve device if available, otherwise leave blank.

Intent / Clarification:

Data Source: User
Format: Text

ParentLongName: Valve Implant Type #4
ParentShortName: **ValImpType4**
ParentHarvestCodes: 3|4
Parent Value: = "Commercially supplied device" or "Transcatheter device"

Long Name: Valve Implant Commercial Device Size #4 *SeqNo:* 3442
Short Name: **ValImpComSz4** *Core:* Yes
Section Name: Valve Procedures *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the size of the fourth implanted valve or device.
Low Value: 15
High Value: 33

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Valve Implant Type #4
ParentShortName: **ValImpType4**
ParentHarvestCodes: 3
Parent Value: = "Commercially supplied device"

VAD Procedures

Long Name:	VAD Explanted And/Or Implanted	*SeqNo:*	3460
Short Name:	**VADExImp**	*Core:*	Yes
Section Name:	VAD Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether a ventricular assist device (VAD) was explanted and/or implanted during this procedure.		

Intent / Clarification:

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

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|2|9|3|4|6|7|777
ParentValues: = "CPB Cardiovascular", "No CPB Cardiovascular", "CPB Non-Cardiovascular", "ECMO", "Thoracic", "VAD Operation Done With CPB", "VAD Operation Done Without CPB." or "Other"

Harvest Codes:

Code:	Value:
1	No
2	Yes, explanted
3	Yes, implanted
4	Yes, explanted and implanted

Long Name:	VAD-Indication for VAD	*SeqNo:*	3500
Short Name:	**VADInd**	*Core:*	Yes
Section Name:	VAD Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the reason the patient is receiving the ventricular assist device (VAD).		

Intent / Clarification:

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

ParentLongName: VAD Explanted And/Or Implanted
ParentShortName: **VADExImp**
ParentHarvestCodes: 3|4

ParentValues: = "Yes, implanted" or "Yes, explanted and implanted"

Harvest Codes: and Value Definitions:

Code:	Value:	Definition:
1	Bridge to Transplantation	Includes those patients who are supported with a VAD until a heart transplant is possible.
2	Bridge to Recovery	Includes those patients who are expected to have ventricular recovery. (i.e. Myocarditis patients, postcardiotomy syndromes, viral cardiomyopathies, AMI w/ revascularization, and post-transplant reperfusion injury)
3	Destination	Includes those patients where a heart transplant is not an option. The VAD is placed for permanent life sustaining support.
4	Postcardiotomy Ventricular failure (separation from CPB)	Includes those postcardiotomy patients who receive a VAD because of failure to separate from the heart- lung machine. Postcardiotomy refers to those patients with the inability to wean from cardiopulmonary bypass secondary to left, right, or biventricular failure.
5	Device Malfunction	Includes those patients who are currently VAD supported and are experiencing device failure.
6	End of Life	Mechanical device pump has reached functional life expectancy and requires replacement.

Long Name: VAD-First Implant Type
Short Name: **VImpTy**
Section Name: VAD Procedures
DBTableName: Operations
Definition: Indicate the initial type of VAD implanted.

SeqNo: 3550
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: VAD Explanted And/Or Implanted
ParentShortName: **VADExImp**
ParentHarvestCodes: 3|4
ParentValues: = "Yes, implanted" or "Yes, explanted and implanted"

Harvest Codes and Value Definitions:

Code:	Value:
1	RVAD - Right Ventricular Assist Device
2	LVAD - Left Ventricular Assist Device
4	TAH - Total Artificial Heart

Long Name:	VAD Implant Unique Device Identifier (UDI)	*SeqNo:*	3565
Short Name:	**VADImpUDI**	*Core:*	Yes
Section Name:	VAD Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the Unique Device Identifier (UDI) of the implanted VAD if available, otherwise leave blank.		

Intent / Clarification:

Data Source: User
Format: Text

ParentLongName: VAD Explanted And/Or Implanted
ParentShortName: **VADExImp**
ParentHarvestCodes: 3|4
ParentValues: = "Yes, implanted" or "Yes, explanted and implanted"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	VAD-First Product Type	*SeqNo:*	3569
Short Name:	**VProdTy**	*Core:*	Yes
Section Name:	VAD Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the specific product implanted. Implant defined as physical placement of the VAD.		

Intent / Clarification:

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

ParentLongName: VAD Explanted And/Or Implanted
ParentShortName: **VADExImp**
ParentHarvestCodes: 3|4
ParentValues: = "Yes, implanted" or "Yes, explanted and implanted"

Harvest Codes:

Code:	Value:
101	Abiomed AB 5000
102	Abiomed Abiocor TAH
103	Abiomed BVS 5000
104	BerlinHeart EXCOR
105	BerlinHeart INCOR

106	CircuLite Synergy Endovascular Micro-Pump System
107	CircuLite Synergy MictoPump (Surgical System)
108	HeartWare HVAD
109	Impella (catheter based)
110	Jarvik 2000
111	Levitronix CentriMag
112	Levitronix PediMag
113	LifeBridge
114	Maquet ROTAFLOW Centrifugal Pump system
115	Medtronic Biomedicus (Biopump)
116	Micromed Heart Assist 5 (DeBakey)
117	pCAS
118	PediaFlow
119	PediPump
120	PennState PVAD
121	Sorin Revolution
122	Syncardia CardioWest TAH
123	Tandem Heart (catheter based)
124	Terumo Duraheart
125	Thoratec Centrimag
126	Thoratec Heart Mate II
127	Thoratec Heart Mate IP
128	Thoratec Heart Mate VE
129	Thoratec Heart Mate XVE
130	Thoratec IVAD
131	Thoratec PediMag/ PediVas
132	Thoratec PVAD
133	WorldHeart NovaCor
134	WorldHeart Pediaflow
135	WorldHeart MiFlow
136	Maquet CardioHelp model #70104-7999
137	Thoratec Heartmate lll MLP-002487

138	THORATEC HEARTMATE III IMPLANT KIT (VAD) 106524
999	Other

Long Name:	First Occurrence Involved Implantation of Two VAD Devices	*SeqNo:*	3571
Short Name:	**VADImp2**	*Core:*	Yes
Section Name:	VAD Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the first occurrence involved the implantation of two VAD devices.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	VAD-First Implant Type
ParentShortName:	**VImpTy**
ParentHarvestCodes:	1|2
ParentValues:	= "RVAD - Right Ventricular Assist Device" or "LVAD - Left Ventricular Assist Device"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Second VAD Implant Unique Device Identifier (UDI)	*SeqNo:*	3573
Short Name:	**VADImpUDI2**	*Core:*	Yes
Section Name:	VAD Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the UDI of the second VAD device.		

Intent / Clarification:

Data Source:	User
Format:	Text
ParentLongName:	First Occurrence Involved Implantation of Two VAD Devices
ParentShortName:	**VADImp2**
ParentHarvestCodes:	1
ParentValues:	= "Yes”

Long Name:	VAD-Second Product Type	*SeqNo:*	3574
Short Name:	**VProdTy2**	*Core:*	Yes
Section Name:	VAD Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the second VAD type.		

Intent / Clarification:

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

ParentLongName: First Occurrence Involved Implantation of Two VAD Devices
ParentShortName: **VADImp2**
ParentHarvestCodes: 1
ParentValues: = "Yes"
Harvest Codes:

Code:	Value:
101	Abiomed AB 5000
102	Abiomed Abiocor TAH
103	Abiomed BVS 5000
104	BerlinHeart EXCOR
105	BerlinHeart INCOR
106	CircuLite Synergy Endovascular Micro-Pump System
107	CircuLite Synergy MictoPump (Surgical System)
108	HeartWare HVAD
109	Impella (catheter based)
110	Jarvik 2000
111	Levitronix CentriMag
112	Levitronix PediMag
113	LifeBridge
114	Maquet ROTAFLOW Centrifugal Pump system
115	Medtronic Biomedicus (Biopump)
116	Micromed Heart Assist 5 (DeBakey)
117	pCAS
118	PediaFlow
119	PediPump

120	PennState PVAD
121	Sorin Revolution
122	Syncardia CardioWest TAH
123	Tandem Heart (catheter based)
124	Terumo Duraheart
125	Thoratec Centrimag
126	Thoratec Heart Mate II
127	Thoratec Heart Mate IP
128	Thoratec Heart Mate VE
129	Thoratec Heart Mate XVE
130	Thoratec IVAD
131	Thoratec PediMag/ PediVas
132	Thoratec PVAD
133	WorldHeart NovaCor
134	WorldHeart Pediaflow
135	WorldHeart MiFlow
136	Maquet CardioHelp model #70104-7999
137	Thoratec Heartmate lll MLP-002487
138	THORATEC HEARTMATE III IMPLANT KIT (VAD) 106524
999	Other

Long Name: VAD-Explant Reason
Short Name: **VExpRsn**
Section Name: VAD Procedures
DBTableName: Operations
Definition: Indicate the reason the VAD was explanted.

SeqNo: 3610
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Patient Remains Hospitalized During this Episode of Care
ParentShortName: **VADExImp**
ParentHarvestCodes: 2|4
ParentValues: = "Yes, explanted" or "Yes, explanted and implanted"

Harvest Codes and Value Definitions:

Code:	Value:	Definition:
1	Cardiac Transplant	The VAD was explanted for Cardiac Transplant.
2	Recovery	The VAD was removed after cardiac recovery.
3	Device Transfer	The VAD was explanted in order to implant another assist device.
4	Device-Related Infection	An infection within the pump pocket, driveline, VAD Endocarditis, or other infection requiring explanation of the VAD. The body of the VAD has an active infection requiring removal to eliminate the infection. "Device-related infections" are defined as positive culture in the presence of leukocytosis, and /or fever requiring medical or surgical intervention.
5	Device Malfunction	The VAD pump itself is not functioning properly causing hemodynamic compromise, and/or requiring immediate intervention or VAD replacement.
6	End of Life	Mechanical device pump has reached functional life expectancy and requires replacement.

Long Name: VAD Explant Unique Device Identifier (UDI) — *SeqNo:* 3611
Short Name: **VADExpUDI** — *Core:* *Yes*
Section Name: VAD Procedures — *Harvest:* *Yes*
DBTableName: Operations
Definition: Indicate the Unique Device Identifier (UDI) of the explanted VAD if available, otherwise leave blank.

Intent / Clarification:

Data Source: User
Format: Text

ParentLongName: VAD Explanted And/Or Implanted
ParentShortName: **VADExImp**
ParentHarvestCodes: 2|4
ParentValues: = "Yes, explanted" or "Yes, explanted and implanted"

Long Name: VAD-Primary VAD Comp-Intracranial Bleed — *SeqNo:* 3850
Short Name: **PVCmpBld** — *Core:* Yes
Section Name: VAD Procedures — *Harvest:* Yes
DBTableName: Operations
Definition: Indicate if the patient had an intracranial bleed, confirmed by CT scan or other diagnostic studies.

Intent / Clarification:

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

ParentLongName: VAD Explanted And/Or Implanted
ParentShortName: **VADExImp**
ParentHarvestCodes: 2|3|4
ParentValues: = "Yes, explanted", "Yes, implanted" or "Yes, explanted and implanted"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: VAD-Primary VAD Comp-Embolic Stroke
Short Name: **PVCmpESt**
Section Name: VAD Procedures
DBTableName: Operations
Definition: Indicate if the patient had embolic stroke caused by a blood clot, air embolus, or tissue, confirmed by CT scan or other diagnostic studies.

SeqNo: 3860
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: VAD Explanted And/Or Implanted
ParentShortName: **VADExImp**
ParentHarvestCodes: 2|3|4
ParentValues: = "Yes, explanted", "Yes, implanted" or "Yes, explanted and implanted"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: VAD-Primary VAD Comp-Driveline and/or cannula infection
Short Name: **PVCmpDCl**
Section Name: VAD Procedures
DBTableName: Operations
Definition: Indicate if the patient had a driveline and/or cannula infection. Driveline and/or cannula infection is defined as the presence of

SeqNo: 3870
Core: Yes
Harvest: Yes

erythema, drainage, or purulence at the VAD connection site whether entering or exiting the body in association with leukocytosis and in the presence of positive culture.

Intent / Clarification:

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

ParentLongName: VAD Explanted And/Or Implanted
ParentShortName: **VADExImp**
ParentHarvestCodes: 2|3|4
ParentValues: = "Yes, explanted", "Yes, implanted" or "Yes, explanted and implanted"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: VAD-Primary VAD Comp-Pump Pocket Infection
Short Name: **PVCmpPPI**
Section Name: VAD Procedures
DBTableName: Operations
Definition: Indicate if the patient had a pump pocket infection. A pump pocket infection is defined as a persistent drainage in the physical location of the pump, located preperitoneally or intra-abdominally with positive cultures from the pocket site.

SeqNo: 3880
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: VAD Explanted And/Or Implanted
ParentShortName: **VADExImp**
ParentHarvestCodes: 2|3|4
ParentValues: = "Yes, explanted", "Yes, implanted" or "Yes, explanted and implanted"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	VAD-Primary VAD Comp-VAD Endocarditis	*SeqNo:*	3890
Short Name:	**PVCmpEnd**	*Core:*	Yes
Section Name:	VAD Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate if the patient had VAD endocarditis. VAD endocarditis is defined as an infection of the blood contacting surface of the VAD device itself. This may include: - internal surfaces; - graft material; - inflow/outflow valves of the VAD		

Intent / Clarification:

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

ParentLongName: VAD Explanted And/Or Implanted
ParentShortName: **VADExImp**
ParentHarvestCodes: 2|3|4
ParentValues: = "Yes, explanted", "Yes, implanted" or "Yes, explanted and implanted"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	VAD-Primary VAD Comp-Device Malfunction	*SeqNo:*	3900
Short Name:	**PVCmpMal**	*Core:*	Yes
Section Name:	VAD Procedures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate if the pump itself is not functioning properly causing hemodynamic compromise, and/or requiring immediate intervention or VAD replacement.		

Intent / Clarification:

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

ParentLongName: VAD Explanted And/Or Implanted
ParentShortName: **VADExImp**
ParentHarvestCodes: 2|3|4
ParentValues: = "Yes, explanted", "Yes, implanted" or "Yes, explanted and implanted"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: VAD-Primary VAD Comp-Bowel Obstruction
SeqNo: 3910
Short Name: **PVCmpBO**
Core: Yes
Section Name: VAD Procedures
Harvest: Yes
DBTableName: Operations
Definition: Indicate if the patient was diagnosed with a bowel obstruction post VAD insertion by documentation in the medical record.

Intent / Clarification:

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

ParentLongName: VAD Explanted And/Or Implanted
ParentShortName: **VADExImp**
ParentHarvestCodes: 2|3|4
ParentValues: = "Yes, explanted", "Yes, implanted" or "Yes, explanted and implanted"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: VAD-Primary VAD Comp-Hemolysis
SeqNo: 3920
Short Name: **PVCmpHemo**
Core: Yes
Section Name: VAD Procedures
Harvest: Yes
DBTableName: Operations
Definition: Indicate if the patient was diagnosed with hemolysis post VAD insertion by documentation in the medical record.

Intent / Clarification:

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

ParentLongName: VAD Explanted And/Or Implanted
ParentShortName: **VADExImp**
ParentHarvestCodes: 2|3|4

ParentValues: = "Yes, explanted", "Yes, implanted" or "Yes, explanted and implanted"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Complications Table Unique Record Identifier
SeqNo: 4180
Short Name: **CompUniqueID**
Core: Yes
Section Name: Discharge/Readmission
Harvest: Yes
DBTableName: Complications
Definition: Unique identifier for the record in the Complications table.

Intent / Clarification:

Data Source: Automatic
Format: Text

Long Name: Complications Link to Operations Table
SeqNo: 4190
Short Name: **OperationID**
Core: Yes
Section Name: Discharge/Readmission
Harvest: Yes
DBTableName: Complications
Definition: An arbitrary, unique value generated by the software that permanently identifies each operation record in the participant's database. This field is the foreign key that links the Complications record with the associated record in the Operations table.

Intent / Clarification:

Data Source: Automatic
Format: Text

Complications

Long Name: Complication
SeqNo: 4200
Short Name: **Complication**
Core: Yes
Section Name: Discharge/Readmission
Harvest: Yes
DBTableName: Complications
Definition: Assign complication to the operation that is most closely associated with the complication. A complication is an event or occurrence that is associated with a disease or a healthcare

intervention, is a departure from the desired course of events, and may cause, or be associated with, suboptimal outcome. A complication does not necessarily represent a breech in the standard of care that constitutes medical negligence or medical malpractice. An operative or procedural complication is any complication, regardless of cause, occurring (1) within 30 days after surgery or intervention in or out of the hospital, or (2) after 30 days during the same hospitalization subsequent to the operation or intervention. Operative and procedural complications include both intraoperative/intraprocedural complications and postoperative/postprocedural complications in this time interval. An adverse event is a complication that is associated with a healthcare intervention and is associated with suboptimal outcome. Adverse events represent a subset of complications. Not all medical errors result in an adverse event; the administration of an incorrect dose of a medication is a medical error, but it does not always result in an adverse event. Similarly, not all adverse events are the result of medical error. A child may develop pneumonia after an atrial septal defect repair despite intra- and peri-operative management that is free of error. Complications of the underlying disease state, which are not related to a medical intervention, are not adverse events. For example, a patient who presents for medical care with metastatic lung cancer has already developed a complication (Metastatic spread) of the primary lung cancer without any healthcare intervention. Furthermore, complications not associated with suboptimal outcome or harm are not adverse events and are known as no harm events. The patient who receives an incorrect dose of a medication without harm has experienced a no harm event, but not an adverse event.

Intent / Clarification: Complications will overlap. List all complications e.g., for tracheostomy code both tracheostomy and unplanned noncardiac reoperation. Better to over report than underreport as this will help us learn and improve.
The purpose for collecting all complications is to find associations that we commonly see with specific procedures to determine if there are alternate ways of performing these procedures to avoid these complications.

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

Harvest Codes and Value Definitions:

Code:	Value:	Definition:
15	No complications	No complications occurred. A complication is an event or occurrence that is associated with a disease or a healthcare intervention, is a departure from the desired course of events, and may cause, or be associated with, suboptimal outcome. A complication does not necessarily represent a breach in the standard of care that constitutes medical

		negligence or medical malpractice.
16	No complications during the intraoperative and postoperative time periods (No complications prior to discharge and no complications within < or = 30 days of surgery)	No intraoperative/intraprocedural or postoperative/postprocedural complication occurred prior to hospital discharge or within < or = 30 days of surgery or intervention. A complication is an event or occurrence that is associated with a disease or a healthcare intervention, is a departure from the desired course of events, and may cause, or be associated with, suboptimal outcome. A complication does not necessarily represent a breach in the standard of care that constitutes medical negligence or medical malpractice.
350	Intraoperative death or intraprocedural death	Patient died in the operating room or procedure room (such as catheterization laboratory or hybrid suite) during the operation or procedure that is being analyzed.
360	Unplanned readmission to the hospital within 30 days of surgery or intervention	Any unplanned readmission to the hospital within 30 days of surgery or intervention. Code this if readmitted from home or transferred in from another acute care hospital or chronic care facility to which the patient had been transferred to during this episode of care.
370	Multi-System Organ Failure (MSOF) = Multi-Organ Dysfunction Syndrome (MODS)	Multi-System Organ Failure (MSOF) is a condition where more than one organ system has failed (for example, respiratory failure requiring mechanical ventilation combined with renal failure requiring dialysis). Please code the individual organ system failures as well. If MSOF is associated with sepsis as well, please also code: "Sepsis, Multi-system Organ Failure". Multi-System Organ Failure (MSOF) is synonymous with Multi-Organ Dysfunction Syndrome (MODS). Only code this complication if the patient has failure of two or more than two organs. Do not code MSOF if only failing organs are the heart and lungs.
30	Unexpected cardiac arrest, Timing = Cardiac arrest (MI) during or following procedure (Perioperative/Periprocedural = Intraoperative/Intraprocedural and/or Postoperative/Postprocedural)	A cardiac arrest is the cessation of effective cardiac mechanical function. This complication should be selected if the cardiac arrest developed after OR Entry Date and Time. Do not select this complication for patients under hospice care or DNR. Please code appropriate arrhythmia codes (codes 72, and/or 73 and/or 75 depending on if antiarrhythmic medication, defibrillation or temporary pacing was used during cardiac arrest.

80	Cardiac dysfunction resulting in low cardiac output	Low cardiac output state characterized by some of the following: tachycardia, oliguria, decreased skin perfusion, need for increased inotropic support (10% above baseline at admission), metabolic acidosis, widened Arterial - Venous oxygen saturation, need to open the chest. If the cardiac dysfunction is of a severity that results in inotrope dependence, mechanical circulatory support, or listing for cardiac transplantation, please also code as "Cardiac failure (severe cardiac dysfunction)." A patient will be considered to have "inotrope dependence" if they cannot be weaned from inotropic support (10% above baseline at admission) after any period of 48 consecutive hours that occurs after the time of OR Exit Date and Time, and either (1) within 30 days after surgery in or out of the hospital, and (2) after 30 days during the same hospitalization subsequent to the operation. If patient meets criteria for severe cardiac dysfunction, only code "severe."
384	Cardiac failure (severe cardiac dysfunction)	Low cardiac output state characterized by some of the following: tachycardia, oliguria, decreased skin perfusion, need for increased inotropic support (10% above baseline at admission), metabolic acidosis, widened Arterial - Venous oxygen saturation, need to open the chest, or need for mechanical support. Code if LCOS results in need for Mechanical Circulatory support. This complication should be selected if the cardiac dysfunction is of a severity that results in inotrope dependence, mechanical circulatory support, or listing for cardiac transplantation. A patient will be considered to have "inotrope dependence" if they cannot be weaned from inotropic support (10% above baseline at admission) after any period of 48 consecutive hours that occurs after the time of OR Exit Date and Time and either (1) within 30 days after surgery in or out of the hospital, and (2) after 30 days during the same hospitalization subsequent to the operation. If patient meets criteria for severe cardiac dysfunction, only code "severe".
280	Endocarditis-postprocedural infective endocarditis	Infective endocarditis in the setting of a heart which has been altered by surgery or intervention. Duke Criteria for the Diagnosis of Infective Endocarditis (IE): The definitive diagnosis of infective endocarditis requires one of the following four situations: 1) Histologic and/or microbiologic evidence of infection at surgery or autopsy such as positive valve culture or histology; 2) Two major criteria; 3) One major criterion and three minor criteria; 4) Five minor criteria. The two major criteria are: 1) Blood cultures positive for IE 2) Evidence of endocardial involvement. Blood cultures positive for IE requires: 1) Typical microorganism consistent with IE isolated from 2 separate blood cultures, as noted in number two below (viridans streptococci, Streptococcus bovis, Staphylococcus aureus, or HACEK group [HACEK, Haemophilus species {H. aprophilus and H. paraaphrophilus}, Actinobacillus actinoinycetemcomitans, Cardiobacterium hominis, Eikenella

		corrodens, and Kingella kingae.]) or (Community-acquired enterococci in the absence of a primary focus); 2) Microorganisms consistent with IE isolated from persistently positive blood cultures defined as: (At least 2 positive cultures of blood samples obtained > 12 hours apart) or (All of 3 or a majority of 4 or more separate cultures of blood, the first and the last sample obtained > 1 hr apart); 3) Single blood culture positive for Coxiella burnetii or an antiphase I IgG antibody titer of >1 :800. Evidence of endocardial involvement requires 1) Positive results of echocardiography for IE defined as: (Oscillating intracardiac mass on the valve or supporting structures in the path of regurgitant jets or on implanted material in the absence of an alternative anatomic explanation) or (Abscess) or (New partial dehiscence of a valvular prosthesis) or 2) New valvular regurgitation (worsening or changing or preexisting murmur not sufficient). The six minor criteria are: 1) Predisposing heart disease or injection drug use (IVDA); 2) Temperature of > 38C; 3) Vascular phenomenon (major arterial emboli, septic pulmonary infarcts, mycotic aneurysm, intracranial or conjunctival hemorrhage, Janeway's lesions); 4) Immunologic phenomenon (glomerulonephritis, Osler's nodes, Roth's spots, rheumatoid factor); 5) Microbiologic evidence (a positive blood culture that does not meet a major criterion as noted above) or serologic evidence of active infection with an organism consistent with IE; 6) Echocardiographic findings that are consistent with IE but do not meet a major criterion as noted above. References: 1) Dhawan VK Infectious Endocarditis in Elderly Patients. Clin. Infect. Dis. 2002;34:806-812. 2) Durack DT, Lukes AS, Bright DK. New criteria for diagnosis of infective endocarditis: utilization of specific echocardiographic findings. Duke Endocarditis Service. Am. J. Med. 1994;96:200-209. 3) Li IS, Sexton DJ, Mick N, et al. Proposed modifications to the Duke criteria for the diagnosis of infective endocarditis. Clin. Infect. Dis. 2000;30:633- 638. 4) htm, accessed July 5, 2006.
110	Pericardial effusion, Requiring drainage	Abnormal accumulation of fluid in the pericardial space, Requiring drainage, By any technique.
390	Pulmonary hypertension	Clinically significant elevation of pulmonary arterial pressure, requiring intervention such as nitric oxide, or other therapies. Typically the mean pulmonary arterial pressure is greater than 25mmHg in the presence of a normal pulmonary arterial occlusion pressure (wedge pressure). A “clinically significant” event or condition is an event or condition that necessitates a change in treatment. This does not include NO given for hypoxemia.
140	Pulmonary hypertensive crisis (PA pressure > systemic pressure)	An acute state of inadequate systemic perfusion associated with pulmonary hypertension, when the pulmonary arterial pressure is greater than the systemic arterial pressure. This should be coded based on direct measurement in OR, based

		on measurement from a PA line, or based on postoperative cardiac catheterization.
130	Pulmonary vein obstruction	Clinically significant stenosis or obstruction of pulmonary veins. Typically diagnosed by echocardiography or cardiac catheterization, this may present with or without symptoms. A “clinically significant” event or condition is an event or condition that necessitates a change in treatment. Can also be based on CT or MRI findings.
120	Systemic vein obstruction	Clinically significant stenosis or obstruction of any major systemic vein (e.g., superior vena cava, inferior vena cava, femoral veins, internal jugular veins, etc.). A “clinically significant” event or condition is an event or condition that necessitates a change in treatment. Based on Cath, ECHO, CT or MRI findings.
240	Bleeding, Requiring reoperation	Postoperative/postprocedural bleeding requiring reoperation. This includes any reexploration for bleeding whether chest is open or closed, also code if explored for bleeding following ECMO or VAD.
102	Sternum left open, Planned	Sternum was left open postoperatively with preoperative plans to leave the sternum open postoperatively (i.e., planned). The goal is for delayed sternotomy closure.
104	Sternum left open, Unplanned	Sternum was left open postoperatively without preoperative plans to leave the sternum open postoperatively (i.e., unplanned). The goal is for delayed sternotomy closure.
22	Unplanned cardiac reoperation during the postoperative or postprocedural time period, exclusive of reoperation for bleeding	Any additional unplanned cardiac operation occurring (1) within 30 days after surgery or intervention in or out of the hospital, or (2) after 30 days during the same hospitalization subsequent to the operation or intervention. A cardiac operation is defined as any operation that is of the operation type of "CPB" or "No CPB Cardiovascular". The following operations will always be coded as "Planned Reoperation": (1) Delayed Sternal Closure, (2) ECMO Decannulation, (3) VAD Decannulation, (4) Removal of Broviac catheter. The following operations will always be coded as "Unplanned Reoperation": (1) Mediastinal exploration for infection, (2) Mediastinal exploration for hemodynamic instability, (3) Emergent mediastinal exploration for initiation of ECMO or VAD, (4) Reoperation for residual or recurrent lesion. Mediastinal exploration for bleeding is always coded separately as "Bleeding, Requiring reoperation". This includes band tightening, shunt revisions (BTS, Sano, other systemic to PA shunts) e.g., shunt clipping, upsizing shunt, milking of shunt, conversion from RV-PA conduit to BTS or vice cersa, etc.

24	Unplanned interventional cardiovascular catheterization procedure during the postoperative or postprocedural time period	Any unplanned interventional cardiovascular catheterization procedure occurring (1) within 30 days after surgery or intervention in or out of the hospital, or (2) after 30 days during the same hospitalization subsequent to the operation or intervention. Includes interventional EP cath; e.g., arrhythmia ablation.
26	Unplanned non-cardiac operation during the postoperative or postprocedural time period	Any additional unplanned non-cardiac operation occurring (1) within 30 days after surgery or intervention in or out of the hospital, or (2) after 30 days during the same hospitalization subsequent to the operation or intervention. Examples: Gtube, Jtube, Tracheostomy, Diaphragm plication, Vocal cord medicalization, Nissen fundoplication, thoracic duct ligation, rigid bronchoscopy for clearing clots, exlap etc. Flexible bronchoscopy for clearance of secretion should not count as unplanned non cardiac operation.
40	Postoperative/Postprocedural mechanical circulatory support (IABP, VAD, ECMO, or CPS)	Utilization of postoperative/postprocedural mechanical support, of any type (IABP, VAD, ECMO, or CPS), for resuscitation/CPR or support, during the postoperative/postprocedural time period. Code this complication if it occurs (1) within 30 days after surgery or intervention regardless of the date of hospital discharge, or (2) after 30 days during the same hospitalization subsequent to the operation or intervention.
72	Arrhythmia requiring drug therapy	Arrhythmia (ROOT Definition) + An arrhythmia requiring drug therapy. Does not include electrolyte replacement, please also code if antiarrhythmic used during cardiac arrest. Do not code this complication for the use of drugs to treat arrhythmias that occur in the process of separating or preparing to separate from cardiopulmonary bypass but resolve prior to leaving the operating theatre.
73	Arrhythmia requiring electrical cardioversion or defibrillation	Arrhythmia (ROOT Definition) + An arrhythmia requiring electrical cardioversion or defibrillation. Please code if defibrillation performed during cardiac arrest. Do not code this complication for the use of cardioversion or defibrillation in the process of separating or preparing to separate from cardiopulmonary bypass.
74	Arrhythmia necessitating pacemaker, Permanent pacemaker	Implantation and utilization of a permanent pacemaker for treatment of any arrhythmia including heart block (atrioventricular [AV] heart block).
75	Arrhythmia necessitating pacemaker, Temporary pacemaker	Implantation and utilization of a temporary pacemaker for treatment of any arrhythmia including heart block (atrioventricular [AV] heart block). Please also code if temporary pacemaker used during cardiac arrest. Do not code this complication if the need for temporary pacing is no longer present by the time the patient leaves the operating theatre.

210	Chylothorax	Presence of lymphatic fluid in the pleural space, commonly secondary to leakage from the thoracic duct or one of its main tributaries. Thoracocentesis is the gold standard for diagnosis and generally reveals a predominance of lymphocytes and/or a triglyceride level greater than 110 mg/dL. In addition to biochemical confirmation should also require placement of a new chest tube, or high outputs >10 ml/kg/day for > 48 hours necessitating one or more of the following: chest tube to stay longer than 7 days, change in enteral diet to fat free diet for longer than 7 days, NPO and PN/IL for longer than 7 days, medications such as octreotide, Albumin or IVIG transfusions at any time, surgery for chyle leak.
200	Pleural effusion, Requiring drainage	Abnormal accumulation of fluid in the pleural space, Requiring drainage, By any technique. If the pleural effusion is known to be a chylothorax, please also code "Chylothorax". Interventions include chest tube insertion, needle aspiration or other invasive procedure. May include hemothorax.
180	Pneumonia	Pneumonia ROOT Definition = Pneumonia is defined as a “respiratory disease characterized by inflammation of the lung parenchyma (including alveolar spaces and interstitial tissue), most commonly caused by infection”. Pneumonia is diagnosed by appropriate clinical findings (such as fever, leukopenia or leukocytosis, and new onset of purulent sputum) and one or more of the following: positive cultures (of sputum or pulmonary secretions) and / or pulmonary infiltrate on chest x-ray. An endotracheal tube culture may or may not be positive. Patients commonly demonstrate an evolving area of focal lung consolidation accompanied by fever (>38.5). Pneumonia (pneumonitis) may affect an entire lobe (lobar pneumonia), a segment of a lobe (segmental or lobular pneumonia), alveoli contiguous to bronchi (bronchopneumonia), or interstitial tissue (interstitial pneumonia). These distinctions are generally based on x-ray observations.
190	Pneumothorax, Requiring drainage or evacuation	A collection of gas in the pleural space resulting in collapse of some or all of the lung on the affected side, requiring intervention. Interventions include chest tube insertion, needle aspiration or other invasive procedure. Do not capture a small pneumothorax followed with serial chest X-rays.
150	Postoperative/Postprocedural respiratory insufficiency requiring mechanical ventilatory support > 7 days	Respiratory insufficiency requiring mechanical ventilatory support from surgery or procedure to greater than 7 consecutive days postoperatively/postproceduraly. In other words, the inability of the patient to exchange oxygen and carbon dioxide in sufficient quantities to avoid unacceptable hypercarbia, hypoxemia, or both, without mechanical ventilatory support for greater than 7 consecutive days during the postoperative or postprocedural period. The patient therefore does utilize mechanical ventilatory support for greater than 7 consecutive days during the postoperative or postprocedural period.

160	Postoperative/Postprocedural respiratory insufficiency requiring reintubation	Reintubation required after initial extubation. In other words, the need to reinstitute postoperative or postprocedural mechanical ventilation after a planned extubation and prior to discharge, or after a planned extubation and after discharge but within 30 days of surgery. The intent of this field is to capture Postoperative/Postprocedural respiratory insufficiency requiring reintubation. It is not intended to capture situations where a patient may undergo elective intubations for other additional operations or procedures (including percutaneous endoscopic gastrostomy [PEG], tube insertions, catheter placement, cardiac catheterizations, etc.). However, these elective intubations and extubations are included and counted when determining “Final Extubation Date and Time”.
170	Respiratory failure, Requiring tracheostomy	Failure to wean from mechanical ventilation necessitating the creation of a surgical airway.
230	Renal failure - acute renal failure, Acute renal failure requiring dialysis at the time of hospital discharge	Renal failure - acute renal failure (ROOT Definition)+ With new postoperative/postprocedural requirement for dialysis, including peritoneal dialysis and/or hemodialysis. Code this complication if the patient requires dialysis at the time of hospital discharge or death in the hospital. (This complication should be chosen only if the dialysis was associated with acute renal failure.) {"Renal failure - acute renal failure" ROOT Definition = Acute renal failure is defined as new onset oliguria with sustained urine output < 0.5 cc/kg/hr for 24 hours and/or a rise in creatinine > 1.5 times upper limits of normal for age (or twice the most recent preoperative/preprocedural values if these are available), with eventual need for dialysis (including peritoneal dialysis and/or hemodialysis) or hemofiltration. Acute renal failure that will be counted as an operative or procedural complication must occur prior to hospital discharge or after hospital discharge but within 30 days of the procedure. (An operative or procedural complication is any complication, regardless of cause, occurring (1) within 30 days after surgery or intervention in or out of the hospital, or (2) after 30 days during the same hospitalization subsequent to the operation or intervention. Operative and procedural complications include both intraoperative/intraprocedural complications and postoperative/postprocedural complications in this time interval.) The complication is to be coded even if the patient required dialysis, but the treatment was not instituted due to patient or family refusal.} Do not include if a PD catheter is routinely placed postop and left open to drainage. Code if PD catheter was used for peritoneal dialysis.

223	Renal failure - acute renal failure, Acute renal failure requiring temporary dialysis with the need for dialysis not present at hospital discharge	Renal failure - acute renal failure (ROOT Definition)+ With new postoperative/postprocedural requirement for temporary dialysis, including peritoneal dialysis and/or hemodialysis. Code this complication if the patient does not require dialysis at the time of hospital discharge or death in the hospital. (This complication should be chosen only if the dialysis was associated with acute renal failure.) {"Renal failure - acute renal failure" ROOT Definition = Acute renal failure is defined as new onset oliguria with sustained urine output < 0.5 cc/kg/hr for 24 hours and/or a rise in creatinine > 1.5 times upper limits of normal for age (or twice the most recent preoperative/preprocedural values if these are available), with eventual need for dialysis (including peritoneal dialysis and/or hemodialysis) or hemofiltration. Acute renal failure that will be counted as an operative or procedural complication must occur prior to hospital discharge or after hospital discharge but within 30 days of the procedure. (An operative or procedural complication is any complication, regardless of cause, occurring (1) within 30 days after surgery or intervention in or out of the hospital, or (2) after 30 days during the same hospitalization subsequent to the operation or intervention. Operative and procedural complications include both intraoperative/intraprocedural complications and postoperative/postprocedural complications in this time interval.) The complication is to be coded even if the patient required dialysis, but the treatment was not instituted due to patient or family refusal.}

224	Renal failure - acute renal failure, Acute renal failure requiring temporary hemofiltration with the need for dialysis not present at hospital discharge.	Renal failure - acute renal failure (ROOT Definition)+ With new postoperative/postprocedural requirement for temporary hemofiltration. Code this complication if the patient does not require dialysis at the time of hospital discharge or death in the hospital. (This complication should be chosen only if the hemofiltration was associated with acute renal failure.) {"Renal failure - acute renal failure" ROOT Definition = Acute renal failure is defined as new onset oliguria with sustained urine output < 0.5 cc/kg/hr for 24 hours and/or a rise in creatinine > 1.5 times upper limits of normal for age (or twice the most recent preoperative/preprocedural values if these are available), with eventual need for dialysis (including peritoneal dialysis and/or hemodialysis) or hemofiltration. Acute renal failure that will be counted as an operative or procedural complication must occur prior to hospital discharge or after hospital discharge but within 30 days of the procedure. (An operative or procedural complication is any complication, regardless of cause, occurring (1) within 30 days after surgery or intervention in or out of the hospital, or (2) after 30 days during the same hospitalization subsequent to the operation or intervention. Operative and procedural complications include both intraoperative/intraprocedural complications and postoperative/postprocedural complications in this time interval.) The complication is to be coded even if the patient required dialysis, but the treatment was not instituted due to patient or family refusal.}
290	Sepsis	Sepsis ROOT Definition = Sepsis is defined as evidence of serious infection accompanied by a deleterious systemic response. In the time period of the first 48 postoperative or postprocedural hours, the diagnosis of sepsis requires the presence of a Systemic Inflammatory Response Syndrome (SIRS) resulting from a proven infection (such as bacteremia, fungemia or urinary tract infection). In the time period after the first 48 postoperative or postprocedural hours, sepsis may be diagnosed by the presence of a SIRS resulting from suspected or proven infection. During the first 48 hours, a SIRS may result from the stress associated with surgery and/or cardiopulmonary bypass. Thus, the clinical criteria for sepsis during this time period should be more stringent. A systemic inflammatory response syndrome (SIRS) is present when at least two of the following criteria are present: hypo- or hyperthermia (>38.5 or <36.0), tachycardia or bradycardia, tachypnea, leukocytosis or leukopenia, and thrombocytopenia. PC4 definition of: Temperature instability and abnormal WBC (leukopenia or leukocytosis) and hemodynamic instability requiring at least one of the following: (1) volume > 40 cc/kg; (2) new or increased inotropic support; or (3) new or increased mechanical ventilation support.
320	Neurological deficit, Neurological deficit persisting at discharge	Newly recognized and/or newly acquired deficit of neurologic function leading to inpatient referral, therapy, or intervention not otherwise practiced for a similar unaffected inpatient, With a persisting neurologic deficit

		present at hospital discharge. In other words, new (onset intraoperatively or postoperatively - or intraprocedurally or postprocedurally) neurological deficit persisting and present at discharge from hospital.
325	Neurological deficit, Transient neurological deficit not present at discharge	Newly recognized and/or newly acquired deficit of neurologic function leading to inpatient referral, therapy, or intervention not otherwise practiced for a similar unaffected inpatient, With no persisting neurologic deficit present at hospital discharge. In other words, new (onset intraoperatively or postoperatively - or intraprocedurally or postprocedurally) neurological deficit completely resolving prior to discharge from hospital.
300	Paralyzed diaphragm (possible phrenic nerve injury)	Presence of elevated hemi-diaphragm(s) on chest radiograph in conjunction with evidence of weak, immobile, or paradoxical movement assessed by ultrasound or fluoroscopy. Also code if diaphragm plication is performed to treat diaphragm paralysis.
400	Peripheral nerve injury, Neurological deficit persisting at discharge	Peripheral nerve injury (ROOT Definition) + With a persisting neurologic deficit present at hospital discharge. {"Peripheral nerve injury" ROOT Definition = Newly acquired or newly recognized deficit of unilateral or bilateral peripheral nerve function indicated by physical exam findings, imaging studies, or both.}
331	Seizure	Seizure ROOT Definition = A seizure is defined as the clinical and/or electroencephalographic recognition of epileptiform activityregardless of whether there is a history of seizure or not.
410	Spinal cord injury, Neurological deficit persisting at discharge	Spinal cord injury (ROOT Definition) + With a persisting neurologic deficit present at hospital discharge. {"Spinal cord injury" ROOT Definition = Newly acquired or newly recognized deficit of spinal cord function indicated by physical exam findings, imaging studies, or both.}
420	Stroke	Stroke ROOT Definition = A stroke is any confirmed neurological deficit of abrupt onset caused by a disturbance in blood flow to the brain, when the neurologic deficit does not resolve within 24 hours.
440	Subdural bleed	
450	Intraventricular Hemorrhage (IVH) > grade 2	
470	Thrombus, Intracardiac	Code only if newly diagnosed at this hospitalization. Thrombus, Intracardiac is defined as a mass of platelets, fibrin, other blood elements (and potentially additional matter) located in any of the 4 chambers of the heart.
480	Thrombus, Central vein	Code only if newly diagnosed at this hospitalization. Thrombus, Central Vein is defined as a mass of platelets, fibrin, other blood elements (and potentially additional matter) located in any of the major veins of the body within the space shared with the thoracic and abdominal organs
510	Thrombosis/thromboembolism, Pulmonary artery	Code only if newly diagnosed at this hospitalization. Thrombosis/thromboembolism of the pulmonary artery is defined as a mass of platelets, fibrin, other blood elements (and potentially additional matter) located at least partially within the main pulmonary trunk, right or left pulmonary artery, or their respective branches. The thrombus may have developed in this location (in situ) or may have embolized from another point of origin and lodged within the pulmonary arteries.
490	Thrombus, Peripheral deep vein	Code only if newly diagnosed at this hospitalization. Thrombus, Peripheral Deep Vein is defined as a mass of

		platelets, fibrin, other blood elements (and potentially additional matter) located in any of the major deep veins of the extremities (e.g. popliteal, femoral, cephalic, brachial, axillary, etc.) or the extra-thoracic portion of the internal jugular vein.
500	Thrombus, Systemic to pulmonary shunt	Code only if newly diagnosed at this hospitalization. Thrombus systemic to pulmonary artery shunt is defines as a mass of platelets, fibrin, other blood elements (and potentially additional matter) occupying the lumen of as systemic-to-pulmonary artery shunt – may obstructive, occlusive, or neither.
530	Thrombosis, Systemic artery, in situ (central)	Code only if newly diagnosed at this hospitalization. Thrombus, systemic artery in situ (central) defined as a mass of platelets, fibrin, other blood elements (and potentially additional matter) located in any of the major arteries of the body within the space shared with the thoracic and abdominal organs.
540	Thrombosis, Systemic artery, in situ (peripheral)	Code only if newly diagnosed at this hospitalization. Thrombosis, systemic artery peripheral is defined as a mass of platelets, fibrin, other blood elements (and potentially additional matter) located in any of the deep arteries of the extremities (e.g. popliteal, femoral, brachial, axillary, etc.) or the extra-thoracic portion of the common, external and internal carotid artery or vertebral artery.
550	Thrombosis, Systemic artery, embolic	Code only if newly diagnosed at this hospitalization. Thrombosis, systemic artery, embolic: occurs when a piece of a blood clot, foreign object, or other bodily substance has broken off from elsewhere (such as the heart) and becomes stuck in a systemic artery and may obstructs the flow of blood distally causing ischemia or infarct (e.g., embolic stroke, splenic infarct, bowel infarction, ischemia of extremities).
310	Vocal cord dysfunction (possible recurrent laryngeal nerve injury)	Presence of poor or no vocal cord movement assessed by endoscopy. Patient may or may not have stridor, hoarse voice or poor cry, in conjunction with endoscopic findings. Also code if vocal cord dysfunction requires vocal cord medialization procedure.
250	Wound dehiscence (sterile)	Wound dehiscence (sterile) ROOT Definition = Wound dehiscence (sterile) is defined as separation of the layers of a surgical wound. This separation can either be superficial or deep and can include the sternum in the case of a median sternotomy incision. When the sterile separation includes the skin and sternum, in the case of a median sternotomy incision, use this code (“Wound dehiscence (sterile)”). The code “Sternal instability (sterile)” should be used to record the complication when the superficial and deep layers of the incision remain intact but non-union of the sternal edges is present. Causes of wound dehiscence can include tissue ischemia, nutritional deficiencies, use of corticosteroids, vitamin C deficiency, and others. Wound dehiscence due to wound infection should be recorded as a wound infection.
255	Wound dehiscence (sterile), Median sternotomy	Wound dehiscence (sterile) (ROOT Definition) + Location = Median sternotomy
520	Sternal instability (sterile)	Sternal instability is defined as nonphysiologic or abnormal motion of the sternum after either bone fracture or disruption of the wires reuniting the surgically divided sternum. Code this complication in the presences of sternal instability with movement of the edges of sternum on palpation. Code this if sternal instability requires further

		wound manipulation or surgical intervention.
261	Wound infection	Wound infection ROOT Definition = Erythema, possible induration and possible fluctuance of a surgical wound (surgical site) with possible drainage and possible tissue separation. Though wound cultures may be positive, this is not an absolute requirement for establishing this clinical diagnosis.
262	Wound infection-Deep wound infection	Wound infection-Deep wound infection ROOT Definition = A deep wound infection involves the deep soft tissues (e.g., fascial and muscle layers) of the incision AND the patient has at least ONE of the following numbered features: 1) Purulent drainage from the deep portion of the incision (but not from the organ / space component of the surgical site and no evidence of sternal osteomyelitis), 2) The deep incision spontaneously dehisces or is deliberately opened by a surgeon when the patient has ONE of the following lettered signs or symptoms (unless the incision is culture negative): A) fever, B) localized pain, or C) tenderness, 3) An abscess or other evidence of infection involving the deep incision is found on direct examination, during reoperation, or by histopathologic or radiologic examination, or 4) A diagnosis of a deep wound infection by a surgeon or by an attending physician.
270	Wound infection-Mediastinitis	The diagnosis of mediastinitis must meet one of the following criteria: Criterion 1: Patient has organisms cultured from mediastinal tissue or fluid that is obtained during a surgical operation or by needle aspiration. Criterion 2: Patient has evidence of mediastinitis by histopathologic examination or visual evidence of mediastinitis seen during a surgical operation. Criterion 3: Patient has at least ONE of the following numbered signs or symptoms with no other recognized cause: 1) fever, 2) chest pain, or 3) sternal instability AND at least one of the following numbered features: 1) purulent mediastinal drainage, 2) organisms cultured from mediastinal blood, drainage or tissue, or 3) widening of the cardio-mediastinal silhouette. Criterion 4: Patient ≤ 1 year of age has at least one of the following numbered signs or symptoms with no other recognized cause: 1) fever, 2) hypothermia, 3) apnea, 4) bradycardia, or 5) sternal instability AND at least one of the following numbered features: 1) purulent mediastinal discharge, 2) organisms cultured from mediastinal blood, drainage or tissue, or 3) widening of the cardio-mediastinal silhouette. Infections of the sternum (sternal osteomyelitis) should be classified as mediastinitis. Sternal instability that is not associated with a wound infection or mediastinitis is documented as "Sternal instability".
263	Wound infection-Superficial wound infection	Wound infection-Superficial wound infection ROOT Definition = A superficial wound infection must meet the following numbered criteria: 1) The infection involves only the skin and the subcutaneous tissue of the incision and 2) The patient has at least ONE of the following lettered features: A) purulent drainage from the superficial portion of the incision, B) organisms isolated from an aseptically obtained culture of fluid or tissue from the superficial portion of the incision, C) at least ONE of the following numbered signs or symptoms: [1] pain or tenderness, [2] localized swelling, redness, or heat, and [3] the superficial portion of the incision is deliberately opened by a surgeon, unless the incision is culture negative, or D) a diagnosis of superficial

		wound infection by the surgeon or by the attending physician.
430	Anesthesia-related complication	Anesthesia-related complication independent of surgical procedure (e.g., cardiac arrest during induction or failed intubation).
460	Complication of cardiovascular catheterization procedure	Complication of cardiovascular catheterization procedure definition: Cardiovascular catheterization (diagnostic or interventional) related complications independent of but following the index surgical procedure but related to the catheterization procedure. The appropriate complications (from the STS-CHSD complication list) should also be coded e.g. unplanned interventional cardiac catheterization; or iliac thrombosis should be captured using the appropriate code.
902	Compartment Syndrome	Compartment syndrome definition: a condition resulting from increased pressure within a confined body space, especially of the leg or forearm, but may also include the abdomen and other body spaces. This results in compromised tissue perfusion and ultimate dysfunction of neural and muscular and organ structures contained within that compartment. Compartment pressure measurement is employed in the assessment of potential compartment syndrome, an absolute pressure measurement of 30 mm Hg in the compartment should be the “critical pressure” for recommending therapy. If any sequelae please capture appropriate STS-CHSD complication e.g., foot drop- code as peripheral neurologic deficit persistent at discharge; foot amputation capture unplanned non cardiac operation.
900	Other complication	Any complication not otherwise specified in this list. An operative or procedural complication is any complication, regardless of cause, occurring (1) within 30 days after surgery or intervention in or out of the hospital, or (2) after 30 days during the same hospitalization subsequent to the operation or intervention. Operative and procedural complications include both intraoperative/intraprocedural complications and postoperative/postprocedural complications in this time interval. Please select this choice if a known complication occurred after the Operative time period.
901	Other operative/procedural complication	Any complication not otherwise specified in this list that occurs prior to discharge, or after discharge but within 30 days of surgery or intervention. (An operative or procedural complication is any complication, regardless of cause, occurring (1) within 30 days after surgery or intervention in or out of the hospital, or (2) after 30 days during the same hospitalization subsequent to the operation or intervention. Operative and procedural complications include both intraoperative/intraprocedural complications and postoperative/postprocedural complications in this time interval.) Please select this choice if the complications occurred during the Operative time period.

March 2019: For postop complication #150: What constitutes mechanical ventilatory support? Our site captures this postop complication for CPAP, BPAP and the presence of an ET tube. Is there anything else that should be included? **Invasive mechanical ventilator support requires the presence of an ET tube or trach. If an ET tube or trach is not present then there is no complication of invasive mechanical ventilatory support.**

March 2019: This is a follow-up to a December 2017 question about when to code arrhythmia complications. My example was a patient with a pacemaker requiring temporary pacing and your answer was "Need more information, if this is a permanent pacemaker and required some intervention with a temporary pacer/wires, yes". This patient had a

MAZE and permanent pacemaker implantation, and required pacing from his pacing system post-op. Do I need to code his arrhythmia requiring temporary pacing, or no, since that's the whole reason he got a pacemaker implanted? Also, he was on a beta blocker for his arrhythmia prior to admission, was switched to another BB post-op and then resumed original BB. Do I need to code an arrhythmia requiring drug therapy? Another example is a patient with congenital heart block who went to the OR for an ASD repair and pacing wire implantation. He was temporarily paced prior to his pacemaker being implanted. Does this get coded as a complication of arrhythmia requiring temporary pacemaker, even though he was already in the OR planning to have pacing wires implanted? **Any arrhythmia being treated, outside of what the permanent pacemaker is treating, should be captured.**

March 2019: The medical record states "Removal of PICC line was attempted by VAT however the PICC broke off in the process with retained line in the patient. She was then taken by pediatric surgery to the OR and underwent removal of PICC via venotomy and venorrhaphy. Is this procedure considered a major complication "26 - unplanned non-cardiac operation"? Or would it be better to put it under "900 - other complication"? **Unplanned non-cardiac operation**

March 2019: I have a patient who was discharged POD 13, readmitted POD 22 then had a permanent pacemaker implanted on POD 24. I know I code unplanned readmission, arrhythmia requiring ppm, and unplanned cardiac re-op, but do the complications that occur after the pacemaker procedure but within 30 days of the original surgery get logged onto the original index case or the index case of the new admission? This patient developed sepsis and a wound infection POD 25 from original surgery, POD 3 from reoperation that required an I&D on POD 26 from original surgery, POD 4 from reoperation. His deep wound infection subsequently developed into mediastinitis, but more than 30 days out from original surgery. Do I code the sepsis and wound infection on the original index op or the index op from the readmission? **The complications that occur after the permanent pacemaker get coded to the original surgery since they occurred within 30 days of the original surgery. The mediastinitis gets coded to the second index operation since it occurred more than 30 days after the first surgery.**

April 2019: This question is similar to a question asked in May 2016 on page 152 in the December 2018 v3.3 Training Manual. I have a patient that has had several complications s/p VAD placement. This was the first operation of the episode of care and coded as Op Type = "VAD Operation Done with CPB". The patient has since had a heart transplant. My understanding is that the transplant will be considered the index operation of the episode of care as it is the first operation with an Op Type of "CPB Cardiovascular" and as such all complications will be attributed to this operation. The specs say to assign the complication to the operation that is most closely associated with. However, if we do this, will the VAD complications then be attributed to the transplant? What is the best way to capture the complications related to the VAD procedure? **The transplant is considered the index operation of the episode of care. Upon analysis, all complications are assigned to the index operation, even if they occur on a case prior to the index operation. To prevent this from happening in the analysis, the decision was made to not collect complications on the non-index operations that occur prior to the index operation. These complications can be included as preoperative factors where applicable (i.e. stroke or seizure).**

April 2019: I know from prior FAQs that STS expects an unplanned g tube placement is counted as "unplanned non-cardiac reoperation during post op period" - my question - for neonates - is in the spectrum of whether we can call a g tube planned or not when it is very clearly anticipated based on clinician "common sense". i.e. in the case of a trisomy 18, cleft palate patient with poor feeding at 42-44 weeks gestational age - our neonatologists have said every provider expects them to have a g tube, though we may not state that exact surgical plan prior to heart surgery. Is it adequate to have documentation of high g tube *likelihood* - though not a clear schedule and definite g tube surgical plan, to omit this as an UNplanned reop? **For the purposes of the database, if the GT is placed following cardiac surgery and was not included in the surgical plan, it is considered an unplanned non-cardiac reoperation.**

April 2019: When a patient returns to the OR for a mediastinal exploration and clots, hematomas, or "bleeders" are removed / cauterized, is this considered a reoperation for bleeding? Should the diagnosis be postoperative bleeding, mediastinal bleeding and the procedure be mediastinal exploration, post-operative hemorrhage (even if the bleeding is minimal but did result in a return to OR to "washout" the mediastinum)? Thank you for the clarification. **Yes, these represent reoperations for bleeding. The diagnoses and procedures listed are correct.**

May 2019: Does a Pericardiocentisis performed in the Cath lab count as an 'unplanned interventional cath'? **No, a pericardiocentesis is not a vessel intervention/cath based intervention. Unplanned interventional cath procedures are for interventional (transcatheter into a blood vessel) procedures. This represents a pericardial effusion requiring drainage (that happened to occur in the cath lab). This should be captured as the appropriate complication (e.g. pericardial effusion).**

May 2019: For consistencies sake, how should we be capturing 'other complication'? In the previous version, I would have used this once for any or multiple "other" complications. With the new version, now asking for a descriptor, should we enter this once for each "other" complication? **In this database version, select 'Other complication' once and then list all of the other complications separated by a semicolon.**

May 2019: Patient scenario: Major events overnight: Arrived intubated and sedated with mild HTN on Nipride and Milrinone. Lactates <2.0. NSR. Developed labile BP and required volume and began EPI gtt (0.01). Run Non sustained VT noted, no further episodes. Developed expected LCOS 0500, Responded to Volume and increase EPI gtt (0.02). PRVC mode with good lung compliance. Am ABG 7.42/34/147/22/-2. Lactates Peaked 2.7 and are now 2.3. CXR - reviewed. Chest tube output tapering off. Hematocrit noted 34. UO after lasix bolus and now maintained on lasix gtt- improving. NPO. MIVF 2 x maintenance for preload. 3/27 @ 1707 - the patient returned from OR to CI on Milrinone 0.7 3/28 @ 0134 - Epi 0.01 added, increased to 0.02 @ 0139. 3/29 @ 1030 - Epi was discontinued. 3/30 @ 0700 - Milrinone was discontinued. Should Cardiac Dysfunction/LCOS be coded as a complication? (and why?) (This scenario has been presented too many well respected centers, and still I don't feel comfortable either way. The various centers had different answers to how they would handle this case. The LCOS/inotropic dependence definition needs clarification.) **Yes, this would be coded as Cardiac Dysfunction resulting in low cardiac output as it fits the definition (increased inotropes and volume).**

May 2019: I cannot find any of the old FAQ's. I think that at one time I read one that said.....Even if the pacemaker placement was the index operation, if a patient was coming in for a permanent pacemaker placement, we would use arrhythmia necessitating pacemaker, permanent pacemaker as a complication. We would not put unplanned cardiac re-operation or unplanned interventional. **Do not code the complication Arrhythmia necessitating pacemaker, permanent pacemaker as a complication of the index operation of Pacemaker, implantation.**

May 2019: Would a thrombus in the Internal Jugular be considered a 'Systemic vein obstruction' or a 'Peripheral deep vein thrombus'? According to the FAQ document for v3.3, it is listed as both and I wanted to clarify this. **The definitions can overlap, in this scenario the thrombus in the internal jugular vein does represent a peripheral deep vein thrombus and if it is causing obstruction, it would also represent Systemic vein obstruction.**

June 2019: If a patient has an unplanned postoperative HYBRID procedure in which CH surgery opens the chest and places direct access and then cardiology performs an intervention, should both unplanned cardiac surgery and unplanned interventional cardiology procedure be selected? **Assume that HYBRID does not refer to a Stage 1 hybrid for HLHS. If the surgeon opened the chest for the cardiologists to have access, then I suggest coding for the interventional cath as the postop complication.**

June 2019: Are bronchoscopies done in CVICU after surgery to evaluate the airway considered an unplanned noncardiac reoperation? They are not planned prior to the index operation but are scheduled, if necessary while in the hospital. **We have not coded this type of a *diagnostic* bronchoscopy as an unplanned non-cardiac reoperation. This is a procedure, not an operation.**

June 2019: For the Complication "Unplanned cardiac reoperation during the postoperative or postprocedural time period, exclusive of reoperation for bleeding" the definition says that the op type must be CPB or No CPB. It later says: "Emergent mediastinal exploration for initiation of ECMO or VAD" should be counted. So does there have to be a mediastinal exploration prior to the ECMO for this to count as a complication? If they are just put on ECMO, op type is ECMO and this would not count? **The Core Group suggests that the complication prompting the re-exploration be coded, eg. "cardiac dysfunction resulting in low cardiac output" Comp code 80, or cardiac failure Comp code 384. Then coding complication 40 (Post operative mechanical circulatory support) as an additional complication. The only thing that "counts" is the index operation, not whether you code the ECMO requirement as an ECMO or a non-CPB cardiovascular procedure.**
Also, if the mediastinum is explored and the patient s cannulated for ECMO or VAD, then code: 40= Postoperative/Postprocedural mechanical circulatory support (IABP, VAD, ECMO, or CPS) and also the complication prompting the re-exploration.

July 2019: Looking to clarify the definition for Renal Failure for dialysis as a complication. We have a patient who has a preop. Creat of 0.5 which is already higher than the "upper limit of normal" for age. Post op creatinine increased to 0.7 which is beyond 1.5x ULN. Does the "1.5x ULN and/or 2x baseline" mean that we can rule this OUT as not meeting criteria? **Did the patient receive dialysis for renal failure? If the patient went on dialysis, then code the complication of renal failure for dialysis. If the patient didn't need dialysis then other parts of the definition do not apply.**

July 2019: Does an intraparenchymal bleed count for a subdural bleed? **No, an intraparenchymal bleed is not a subdural bleed. It potentially could be classified as a stroke if the patient meets that criteria.**

Long Name:	Other Complication – Specify	*SeqNo:*	4201
Short Name:	**CompOthSpecify**	*Core:*	Yes
Section Name:	Discharge/Readmission	*Harvest:*	Yes
DBTableName:	Complications		
Definition:	Indicate any other complications.		

Intent / Clarification:

Data Source:	User
Format:	Text

ParentLongName:	Complication
ParentShortName:	**Complication**
ParentHarvestCodes:	900
Parent Value:	= "Other complication"

Long Name:	Other Operative/procedural Complication - Specify	*SeqNo:*	4202
Short Name:	**CompOthOpSpecify**	*Core:*	Yes
Section Name:	Discharge/Readmission	*Harvest:*	Yes
DBTableName:	Complications		
Definition:	Indicate other operative/procedural complications.		

Intent / Clarification:

Data Source:	User
Format:	Text

ParentLongName:	Complication
ParentShortName:	**Complication**
ParentHarvestCodes:	901
Parent Value:	= "Other operative/procedural complication"

Discharge / Readmission

Long Name:	Patient Remains Hospitalized During this Episode of Care	*SeqNo:*	4210
Short Name:	**EpisodeCarePatInHosp**	*Core:*	Yes
Section Name:	Anesthesia Administrative	*Harvest:*	Yes
DBTableName:	Operations		

Definition: Indicate whether the patient remains in the acute care setting for this admission / episode of care.

Intent / Clarification: At time of harvest, this indicates that the patient remains in the acute care setting.
This field was added to assist the data manager in identifying which patients remain in the hospital at the time of harvest.

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

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Date of Hospital Discharge
Short Name: **HospDischDt**
Section Name: Discharge/Readmission
DBTableName: Operations
Definition: Indicate the date that the patient is discharged from the hospital where the surgery took place. In rare instances, the "Date of Hospital Discharge" differs from the "Date of Database Discharge". In situations where the patient is discharged to another acute care facility or to a chronic care facility, the "Date of Hospital Discharge" is the date the patient is transferred from the hospital where the surgery took place to another facility. This field is intended to capture the total length of stay in your hospital regardless of the medical service managing the patient.

SeqNo: 4220
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Date - mm/dd/yyyy

ParentLongName: : Patient Remains Hospitalized During this Episode of Care
ParentShortName: **EpisodeCarePatInHosp**
ParentHarvestCodes: 2
ParentValues: = "No"

Long Name: Mortality Status At Hospital Discharge
Short Name: **MtHospDisStat**
Section Name: Discharge/Readmission
DBTableName: Operations
Definition: Indicate whether the patient was Alive or Dead at date and time of "Date of Hospital Discharge" for this operation.

SeqNo: 4230
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Patient Remains Hospitalized During this Episode of Care
ParentShortName: **EpisodeCarePatInHosp**
ParentHarvestCodes: 2
ParentValues: = "No"

Harvest Codes:

Code:	Value:
1	Alive
2	Dead

Long Name: Discharge Location
Short Name: **DisLoctn**
Section Name: Discharge/Readmission
DBTableName: Operations
Definition: Indicate the location to where the patient was discharged at the Date of Hospital Discharge.

SeqNo: 4240
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Mortality Status At Hospital Discharge
ParentShortName: **MtHospDisStat**
ParentHarvestCodes: 1
ParentValues: = "Alive"

Harvest Codes:

Code:	Value:
1	Home
2	Other acute care center
3	Other chronic care center

Long Name: VAD-Discharge Status
Short Name: **VADDiscS**
Section Name: Discharge/Readmission
DBTableName: Operations

SeqNo: 4245
Core: Yes
Harvest: Yes

Definition: Indicate whether the patient had a VAD in place at discharge from the hospital.

Intent / Clarification: If the patient had a VAD inserted indicate whether the VAD was in place at the time of discharge.

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

ParentLongName: Patient Remains Hospitalized During this Episode of Care
ParentShortName: **EpisodeCarePatInHosp**
ParentHarvestCodes: 2
ParentValues: = "No"

Harvest Codes:

Code:	Value:
5	No VAD used during this admission
1	Discharged with a VAD
4	VAD removed prior to discharge
3	Expired in Hospital

Long Name: Discharged with Nasoenteric Tube
Short Name: **NasoTubeDisc**
Section Name: Discharge/Readmission
DBTableName: Operations
Definition: Indicate whether the patient was discharged from the hospital with a nasoentereric tube.

SeqNo: 4246
Core: Yes
Harvest: Yes

Intent / Clarification: Code if any nasoenteric tube is present at hospital discharge, regardless of how it is being used.

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

ParentLongName: Patient Remains Hospitalized During this Episode of Care
ParentShortName: **EpisodeCarePatInHosp**
ParentHarvestCodes: 2
ParentValues: = "No"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Discharged with Transabdominal Gastrostomy or Jejunostomy Tube	*SeqNo:*	4247
Short Name:	**TransGasDisc**	*Core:*	Yes
Section Name:	Discharge/Readmission	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the patient was discharged from the hospital with a transabdominal gastrostomy or jejunostomy tube.		
Intent / Clarification:	Code if any gastrostomy or jejunostomy tube is present at hospital discharge, regardless of how it is being used.		
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Patient Remains Hospitalized During this Episode of Care		
ParentShortName:	**EpisodeCarePatInHosp**		
ParentHarvestCodes:	2		
ParentValues:	= "No"		

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Date of Database Discharge	*SeqNo:*	4250
Short Name:	**DBDischDt**	*Core:*	Yes
Section Name:	Discharge/Readmission	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the “Date of Database Discharge”. The “Date of Database Discharge” is defined as a date that is determined by three rules (presented below as Rule A, Rule B, and Rule C), which specify how to complete the field “Date of Database Discharge”. [Rule A]: If a patient was admitted from their home, they must be either dead or discharged to home prior to completing the field “Date of Database Discharge”. Their “Date of Database Discharge” is the date they are discharged to home or their date of mortality. If a patient was admitted from their home, the field “Date of Database Discharge” cannot be completed if the patient is transferred to another acute care facility or chronic care facility until they are either dead or discharged to home. However, if this patient survives in a chronic care facility for 6 postoperative months (i.e., 183 postoperative days in the chronic care facility), the patient can then be assigned a “Date of Database Discharge” that is the date when the patient is in the chronic care facility for 183 days. (Some institutions may not have a mechanism that allows		

transfer to a chronic care facility and instead utilizes their own institution as the chronic care facility. If an institution does not utilize a chronic care facility and instead keeps these chronic patients in-house, this institution can apply to this Rule [Rule A] whenever one of their patients survives for 6 postoperative months (i.e., 183 postoperative days) on “chronic care status” within their institution.) [Rule B]: If a patient was admitted from (i.e., transferred from) a chronic care facility where they chronically reside, they must be either dead or discharged either to home or to a chronic care facility prior to completing the field “Date of Database Discharge”. Their “Date of Database Discharge” is the date they are discharged either to home or to a chronic care facility, or their date of mortality. [Rule C]: If a patient was admitted from (i.e., transferred from) another acute care facility, Rule A as previously stated applies if they lived at home prior to their admission to the transferring acute care facility. If a patient was transferred from another acute care facility, Rule B as previously stated applies if they lived in a chronic care facility prior to their admission to the transferring acute care facility. These three rules are consistent with previously published rules defining Operative Mortality [1] and Operative Morbidity [2] in the following published manuscripts [1, 2]. [1]. Jacobs JP, Mavroudis C, Jacobs ML, Maruszewski B, Tchervenkov CI, Lacour-Gayet FG, Clarke DR, Yeh T, Walters HL 3rd, Kurosawa H, Stellin G, Ebels T, Elliott MJ. What is Operative Mortality? Defining Death in a Surgical Registry Database: A Report from the STS Congenital Database Task Force and the Joint EACTS-STS Congenital Database Committee. The Annals of Thoracic Surgery, 81(5):1937-41, May 2006. [2]. Jacobs JP, Jacobs ML, Mavroudis C, Maruszewski B, Tchervenkov CI, Lacour-Gayet FG, Clarke DR, Yeh T, Walters HL 3rd, Kurosawa H, Stellin G, Ebels T, Elliott MJ, Vener DF, Barach P, Benavidez OJ, Bacha EA.. What is Operative Morbidity? Defining Complications in a Surgical Registry Database: A Report from the STS Congenital Database Task Force and the Joint EACTS-STS Congenital Database Committee. The Annals of Thoracic Surgery; 84:1416-1421, October 2007.

Intent / Clarification:

Acute care, acute rehabilitation, or step down units are not considered places where a patient would receive chronic care or be on chronic care status. To be considered a chronic care unit, the unit should serve chronic care to all patients housed within the unit, not a few of the patients. The reason the patient is sent to chronic care (social or medical) is not considered when determining the Database discharge date. The patient must remain on chronic care status for 183 days, discharge to home, or expire before the database discharge date can be completed. In the event a patient discharges from the hospital to a chronic care facility, is subsequently readmitted to an acute care facility, and then returns to the chronic care facility, the 183 day timeframe restarts when the patient returns to the chronic care facility.

Data Source: User
Format: Date - mm/dd/yyyy

ParentLongName: Patient Remains Hospitalized During this Episode of Care
ParentShortName: **EpisodeCarePatInHosp**
ParentHarvestCodes: 2
ParentValues: = "No"

Long Name: Mortality Status At Database Discharge
Short Name: **MtDBDisStat**
Section Name: Discharge/Readmission
DBTableName: Operations
Definition: Indicate whether the patient was Alive or Dead at the date and time of "Date of Database Discharge" for this operation.

SeqNo: 4260
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Patient Remains Hospitalized During this Episode of Care
ParentShortName: **EpisodeCarePatInHosp**
ParentHarvestCodes: 2
ParentValues: = "No"

Harvest Codes:

Code:	Value:
1	Alive
2	Dead
3	Unknown

Long Name: Readmission Within 30 Days
Short Name: **Readmit30**
Section Name: Discharge/Readmission
DBTableName: Operations
Definition: Indicate whether the patient was readmitted within thirty days of discharge.

SeqNo: 4270
Core: Yes
Harvest: Yes

Intent / Clarification: Indicate whether the patient was readmitted to any acute care facility within thirty days of discharge. Do not include patients who were 'readmitted' on observation status and remained on observation status for the entirety of their 'readmission'.

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Mortality Status At Hospital Discharge
ParentShortName:	**MtHospDisStat**
ParentHarvestCodes:	1
ParentValues:	= "Alive"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Readmission Date	*SeqNo:*	4280
Short Name:	**ReadmitDt**	*Core:*	Yes
Section Name:	Discharge/Readmission	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the date on which the patient was readmitted.		
Intent / Clarification:	Indicate the date the patient was readmitted to any acute care facility within 30 days of discharge.		
Data Source:	User		
Format:	Date - mm/dd/yyyy		
ParentLongName:	Readmission Within 30 Days		
ParentShortName:	**Readmit30**		
ParentHarvestCodes:	1		
ParentValues:	= "Yes"		

January 2019: Patient originally discharged on 10/4/18. Reported to local ED for desaturations on 10/13/18. Transferred and direct admit to our facility at that time. Kept overnight, as inpatient, then discharged the following morning. 10/22 patient admitted for incisional infection, DC'd again on 10/25. I can only code one readmission. How should I code this readmission? **You can only code the first readmission closest to the surgery.**

Long Name:	Primary Readmission Reason	*SeqNo:*	4290
Short Name:	**ReadmitRsn**	*Core:*	Yes
Section Name:	Discharge/Readmission	*Harvest:*	Yes
DBTableName:	Operations		

Definition: Indicate the primary reason for readmission. Whenever possible, use the most appropriate specific organ system and/or lesion based choice from the list to document the reason for admission. Please only use one of the three choices beginning with the word “Other”’ when no other choice is appropriate. If the readmission is for the patient to undergo a procedure related to the index operation (the first operation of the given hospitalization that has an Operation Type of "CPB" or "No CPB Cardiovascular"), please document the cause of this readmission to be assigned to the specific organ system and/or lesion based choice if possible. If no specific organ system and/or lesion based choice is appropriate and the readmission is for the patient to undergo a procedure related to the index operation, please choose “Other Cardiovascular Complication” if the planned procedure is cardiac, and “Other - Readmission related to this index operation" if the planned procedure is noncardiac.

Intent / Clarification:

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

ParentLongName: Readmission Within 30 Days
ParentShortName: **Readmit30**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes and Value Definitions:

Code:	Value:	Definition:
26	Thrombotic Complication	Complication involving development of a blood clot possibly leading to vascular obstruction
27	Embolic Complication	Complication involving migration of blood clot or other matter possibly leading to vascular obstruction
28	Hemorrhagic Complication	Complication involving life threatening bleeding
29	Stenotic Complication	Complication involving narrowing of lumen resulting in flow disruption
2	Arrhythmia	
3	Congestive Heart Failure	Physician documentation or report of insufficient cardiac output leading to fluid retention, rales, jugular venous distention, hepatic congestion or pulmonary edema. Low ejection fraction without clinical evidence of heart failure does not qualify as heart failure.
	Embolic Complication	
30	Cardiac Transplant Rejection	Rejection refers to the organ recipient's immune system recognizing a transplanted organ as foreign and mounting a response to it via cellular and/or humoral (antibody-mediated) mechanisms. Routine endomyocardial biopsy remains the criterion standard for monitoring for such rejection.
31	Myocardial Ischemia	Insufficient oxygen delivery to meet the demand of myocardial tissue may result in pain, wall motion abnormality and EKG changes. Untreated ischemia may progress to infarction.

14	Renal Failure	Renal Failure is defined as the oliguria with sustained urine output < 0.5 cc/kg/hr for 24 hours and/or a rise in creatinine >1.5 times upper limits of normal for age.
6	Pericardial Effusion and/or Tamponade	Abnormal accumulation of fluid in the pericardial space requiring drainage
32	Pleural Effusion	Abnormal accumulation of fluide in the pleural space.
33	Neurologic Complication	Newly recognized and/or newly acquired deficit of neurologic function leading to inpatient referral, therapy, or intervention not otherwise practiced for a similar unaffected patient
7	Respiratory Complication/Airway Complication	Complication related to the respiratory system, includes airway issues
34	Septic/Infectious Complication	Complication related to infection, includes infection of wound(s), bloodstream infection or other infectious conditions
35	Cardiovascular Device Complications	Complication related to a device
36	Residual/Recurrent Cardiovascular Defects	Complication related to residual or recurrent cardiac abnormality
37	Failure to Thrive	Current weight or rate of weight gain is significantly lower than that of other children of similar age and gender
25	VAD Complications	Complication related to ventricular assist device
39	Gastrointestinal Complication	Gastrointestinal complication (Includes readmission for percutaneous endoscopic tube [PEG tube] and readmission for Nissen fundoplication, as well as readmission for nausea, vomiting, GI bleed, GERD or diarrhea)
38	Other Cardiovascular Complication	Unlisted complication related to the cardiovascular system
998	Other - Readmission related to this index operation	Example: Shunt thrombosis in a patient who has had a Norwood procedure.
999	Other - Readmission not related to this index operation	Example: Orthopedic procedure in a patient who has had a Norwood procedure.

Long Name:	Mortality - 30-Day Status	*SeqNo:*	4300
Short Name:	**Mt30Stat**	*Core:*	Yes
Section Name:	Discharge/Readmission	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the patient was alive or dead on the 30th day post-surgical procedure whether in hospital or not.		

Intent / Clarification:

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

Harvest Codes:

Code:	Value:
1	Alive

2	Dead
3	Unknown

Long Name:	Mortality - 30-Day Status - Method Of Verification	*SeqNo:*	4310
Short Name:	**Mt30StatMeth**	*Core:*	Yes
Section Name:	Discharge/Readmission	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the primary method used to verify the patient's 30-day mortality status.		

Intent / Clarification:

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

Harvest Codes:

Code:	Value:
1	Evidence of life or death in medical record
2	Contact with patient or family
3	Contact with medical provider
4	Office visit to provider greater than or equal to 365 days post op
5	SSDMF
9	Other

Long Name:	Status at 365 days after Surgery	*SeqNo:*	4311
Short Name:	**Mt365Stat**	*Core:*	Yes
Section Name:	Discharge/Readmission	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the mortality status for the patient at 365 days following the index operation for this hospitalization.		

Intent / Clarification:

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

ParentLongName: Mortality - 30-Day Status
ParentShortName: **Mt30Stat**

ParentHarvestCodes: 1
ParentValues: = "Alive"

Harvest Codes:

Code:	Value:
1	Alive
2	Dead
3	Unknown

Long Name: 365 Day Status Method Verification
Short Name: **Mt365StatMeth**
Section Name: Discharge/Readmission
DBTableName: Operations
Definition: Indicate the source of information for the patient's status at 365 days following the index operation for this hospitalization.

SeqNo: 4312
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Mortality - 30-Day Status
ParentShortName: **Mt30Stat**
ParentHarvestCodes: 1
ParentValues: = "Alive"

Harvest Codes:

Code:	Value:
1	Evidence of life or death in medical record
2	Contact with patient or family
3	Contact with medical provider
4	Office visit to provider greater than or equal to 365 days post op
5	SSDMF
9	Other

Long Name: Mortality - Operative Death
Short Name: **MtOpD**
Section Name: Discharge/Readmission
DBTableName: Operations

SeqNo: 4330
Core: Yes
Harvest: Yes

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 or death at < 183 days if transferred to a chronic care facility); and (2) all deaths, regardless of cause, occurring after discharge from the hospital, but before the end of the thirtieth postoperative day.

Intent / Clarification:

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

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

January 2019: Patient has a cath lab procedure for an ablation due to ventricular tachycardia. During the procedure the catheter caused a linear tear in the posterior aspect of the right atrium just anterior and medial to the inferior vena cava. This was repaired (off bypass) by the cardiac surgeon. This is the first and only cardiothoracic procedure performed by the surgeon. The patient died the next day. The diagnosis would be 'Complication of cardiovascular catheterization procedure', and the operative type No CPB cardiovascular, correct? Would the procedure be coded as 'cardiac, other'? This will be an operative mortality, correct? This will be included in the STS Harvest report mortality analysis even though it will not have a STAT mortality category, correct? **This is an operative mortality and should be included as the database, however will not be included in the risk adjusted mortality analysis as there is no associated STAT score.**

July 2019: I would like a little clarification about operative mortality. A patient has an index procedure and survives greater than 30 days and then has another procedure after 30 days during the same hospitalization. The patient is discharged to home shortly after. Unfortunately, the patient dies at home a few days after the last operation so the status at 30 days after surgery would be "dead" for the last operation during the admission. Would I check yes for an operative mortality for the last surgery since the patient died within 30 days of the last operation or does this only pertain to the index? Would this then count as an operative mortality for the index procedure? The patient had a mortality status at database discharge as alive. **If the last procedure is operation type CPB Cardiovascular or No CPB Cardiovascular, this will count as an operative mortality for the index procedure. This information is in Report Overview in the Operative Mortality section:**

Determination of episode of care-based Operative Mortality is based on:

1) **Status (alive/dead) at Date of Database Discharge, and**
2) **Status (alive/dead) at 30 days after the last cardiovascular surgical operation of the episode of care.**

Long Name: Eligibility For CHSS Study
Short Name: **CHSSElig**
Section Name: Discharge/Readmission
DBTableName: Operations

SeqNo: 4331
Core: Yes
Harvest: Yes

Definition: Indicate patient's eligibility for the Congenital Heart Surgeon Society (CHSS)

study.

Intent / Clarification: Refer to the CHSS study website for enrollment criteria for each individual study. The study availability and enrollment criteria do periodically change periodically. http://www.chssdc.org/studies

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

Code:	Value:
1	Patient is eligible and enrolled
2	Patient is eligible, but declined enrollment
3	Patient is eligible, but not invited to participate
4	Patient is eligible, but institution is not a CHSS participant
5	Patient is eligible, but not enrolled for other reason
6	Patient is not eligible for CHSS study

Long Name: Patient's care discussed at preoperative multidisciplinary planning conference
SeqNo: 4340
Short Name: **CareDiscussed**
Core: Yes
Section Name: Patient Process Measures
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether this patient's care was discussed at a preoperative multidisciplinary planning conference to plan pediatric and congenital heart surgery cases. A preoperative multidisciplinary planning conference involves attendance by multiple members of the healthcare team, with recommended participation including but not limited to: cardiology, cardiac surgery, anesthesia, and critical care.

Intent / Clarification: This is collected once for the episode of care, on the index operation. This categorization includes all reoperations (cardiac and non-cardiac) as well as interventional catheterization procedures. The codes included in these 6 major complications are:

a.New postoperative renal failure requiring dialysis (230, 223, 224)
b.New postoperative neurological deficit persisting at discharge (320, 400, 410)
c.Arrhythmia necessitating permanent pacemaker insertion (74)
d.Paralyzed diaphragm (300)
e.Need for postoperative mechanical circulatory support (40)
f.Unplanned reoperation and/or interventional cardiovascular catheterization procedure (22, 24, 26, 240)

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

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|2|9
ParentValues: = "CPB Cardiovascular", "No CPB Cardiovascular" or "CPB Non-Cardiovascular"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Patient Process Measures

Long Name: Reason why patient's care was not discussed
Short Name: **CareDiscussedRsn**
Section Name: Patient Process Measures
DBTableName: Operations
Definition: Indicate the reason why the patient's case was not discussed at a preoperative multidisciplinary planning conference.

SeqNo: 4350
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Patient's care discussed at preoperative multidisciplinary planning conference
ParentShortName: **CareDiscussed**
ParentHarvestCodes: 2
ParentValues: = "No"

Harvest Codes and Value Definitions:

Code:	Value:	Definition:
1	Urgent / emergent / salvage case	This case was an urgent / emergent /salvage case and the patient went to surgery prior to the next scheduled conference.
2	Patient admitted between conferences	This patient who was admitted after the previous conference and went to surgery prior to the next scheduled conference.

3	Program does not routinely discuss all cases	This case was not discussed at conference because program does not routinely discuss all cases at a pre-operative multidisciplinary planning conference.
4	Program does not have regular conferences	Program does not have a regularly scheduled pre-operative multidisciplinary planning conference to plan pediatric and congenital heart surgery cases.
5	Other	Reason not listed

Long Name:	Transesophageal Echocardiography (TEE) available for case	*SeqNo:*	4370
Short Name:	**TEEAvail**	*Core:*	Yes
Section Name:	Patient Process Measures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether intraoperative transesophageal echocardiography (TEE) was available for this case (or epicardial echocardiography if TEE contraindicated or not informative). Availability is defined as the presence and availability of equipment and staff to perform the study. Reporting of compliance will be as the fraction of all Cardiac Operations with availability (as opposed to use) of TEE and/or epicardial echocardiography.		
Intent / Clarification:			
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Operation Type		
ParentShortName:	**OpType**		
ParentHarvestCodes:	1|2|9		
ParentValues:	= "CPB Cardiovascular", "No CPB Cardiovascular" or "CPB Non-Cardiovascular"		

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Intraoperative transesophageal echocardiography (TEE) performance	*SeqNo:*	4380
Short Name:	**TEEEpicEchoPerf**	*Core:*	Yes
Section Name:	Patient Process Measures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether TEE / epicardial echocardiography was performed for this case. If available, TEE may not be performed due to surgeon preference, size of patient, not indicated, etc.		

Intent / Clarification:

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

ParentLongName: Transesophageal Echocardiography (TEE) available for case
ParentShortName: **TEEAvail**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Preoperative antibiotic prophylaxis given	*SeqNo:*	4400
Short Name:	**PreopAntiProph**	*Core:*	Yes
Section Name:	Patient Process Measures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether a preoperative antibiotic prophylaxis was given to this patient. Measure is satisfied for each Cardiac Operation, when there is documentation that the patient has received prophylactic antibiotic(s) within the hour immediately preceding surgical incision (two hours if receiving vancomycin). To satisfy this measure, the field named “Skin Incision Start Time” must be completed.		

Intent / Clarification:

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

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|2|9
ParentValues: = "CPB Cardiovascular", "No CPB Cardiovascular" or "CPB Non-Cardiovascular"

Harvest Codes:

Code:	Value:
1	Yes
2	No
3	Patient on ongoing antibiotic

Long Name:	Preoperative antibiotic prophylaxis - Cephalosporin	*SeqNo:*	4410
Short Name:	**PreopAntiProphCeph**	*Core:*	Yes
Section Name:	Patient Process Measures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the preoperative antibiotic prophylaxis included Cephalosporin.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Preoperative antibiotic prophylaxis given
ParentShortName:	**PreopAntiProph**
ParentHarvestCodes:	1
ParentValues:	= "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Preoperative antibiotic prophylaxis - Penicillin or related medication	*SeqNo:*	4420
Short Name:	**PreopAntiProphPen**	*Core:*	Yes
Section Name:	Patient Process Measures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the preoperative antibiotic prophylaxis included penicillin or related medications (i.e., Oxacillin, Nafcillin, Ampicillin, etc.)		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Preoperative antibiotic prophylaxis given
ParentShortName:	**PreopAntiProph**

ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Preoperative antibiotic prophylaxis - Aminoglycoside
SeqNo: 4430
Short Name: **PreopAntiProphAmino**
Core: Yes
Section Name: Patient Process Measures
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether the preoperative antibiotic prophylaxis included Aminoglycoside.

Intent / Clarification:

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

ParentLongName: Preoperative antibiotic prophylaxis given
ParentShortName: **PreopAntiProph**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Preoperative antibiotic prophylaxis - Vancomycin
SeqNo: 4440
Short Name: **PreopAntiProphVan**
Core: Yes
Section Name: Patient Process Measures
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether the preoperative antibiotic prophylaxis included Vancomycin.

Intent / Clarification:

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

ParentLongName: Preoperative antibiotic prophylaxis given

ParentShortName: **PreopAntiProph**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Preoperative antibiotic prophylaxis - Other
Short Name: **PreopAntiProphOth**
Section Name: Patient Process Measures
DBTableName: Operations
Definition: Indicate whether the preoperative antibiotic prophylaxis included any other class of antibiotic.

SeqNo: 4450
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Preoperative antibiotic prophylaxis given
ParentShortName: **PreopAntiProph**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Preoperative antibiotic prophylaxis - Time started
Short Name: **PreopAntiProphTime**
Section Name: Patient Process Measures
DBTableName: Operations
Definition: Indicate the time when the antibiotic infusion started.

SeqNo: 4470
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Time - hh:mm (24-hour clock)

ParentLongName: Preoperative antibiotic prophylaxis given
ParentShortName: **PreopAntiProph**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Long Name: Conventional preprocedure time-out
Short Name: **ConvTimeOut**
Section Name: Patient Process Measures
DBTableName: Operations
Definition: Indicate whether a conventional preprocedural "time-out", which includes identification of patient, operative site, procedure, and history of any allergies, was performed.

SeqNo: 4480
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|2|9
ParentValues: = "CPB Cardiovascular", "No CPB Cardiovascular" or "CPB Non-Cardiovascular"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Surgeon shares essential elements of operative plan
Short Name: **PostProcBrief**
Section Name: Patient Process Measures
DBTableName: Operations
Definition: Indicate whether a preprocedural briefing was performed wherein the surgeon shares with all members of the operating room team the essential elements of the operative plan; including diagnosis, planned procedure, outline of essentials of anesthesia and bypass strategies, antibiotic prophylaxis, availability of blood products, anticipated or planned implants or device applications, and anticipated challenges.

SeqNo: 4490
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User

Format: Text (categorical values specified by user)

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|2|9
ParentValues: = "CPB Cardiovascular", "No CPB Cardiovascular" or "CPB Non-Cardiovascular"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Postprocedure debriefing
Short Name: **PostProcDebrief**
Section Name: Patient Process Measures
DBTableName: Operations
Definition: Indicate whether a postprocedural debriefing was performed wherein the surgeon succinctly reviews with all members of the operating room team the essential elements of the operative plan, identifying both the successful components and the opportunities for improvement. This debriefing should take place prior to the patient leaving the operating room or its equivalent, and may be followed by a more in-depth dialogue involving team members at a later time. (The actual debriefing in the operating room is intentionally and importantly brief, in recognition of the fact that periods of transition may be times of instability or vulnerability for the patient.)

SeqNo: 4500
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Operation Type
ParentShortName: **OpType**
ParentHarvestCodes: 1|2|9
ParentValues: = "CPB Cardiovascular", "No CPB Cardiovascular" or "CPB Non-Cardiovascular"

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name:	Hand-off protocol at the time of transfer to the Intensive Care Unit	*SeqNo:*	4510
Short Name:	**HandoffProtocol**	*Core:*	Yes
Section Name:	Patient Process Measures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether a briefing and execution of a hand-off protocol (checklist) was performed at the time of transfer (arrival) to the Intensive Care Unit at the end of the operation, involving ALL of the following: the anesthesiologist, surgeon, physician staff of the Intensive Care Unit (including critical care and cardiology) and nursing.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by user)
ParentLongName:	Operation Type
ParentShortName:	**OpType**
ParentHarvestCodes:	1|2|9
ParentValues:	= "CPB Cardiovascular", "No CPB Cardiovascular" or "CPB Non-Cardiovascular"

Harvest Codes:

Code:	Value:
1	Yes - All required team members present
2	Yes - Not all required team members present
3	No

Long Name:	Hand-off protocol - Anesthesiologist	*SeqNo:*	4520
Short Name:	**HandoffAnesth**	*Core:*	Yes
Section Name:	Patient Process Measures	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the anesthesiologist or designee attended the hand-off protocol at the time of transfer to the Intensive Care Unit at the end of the operation.		

Intent / Clarification:

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

ParentLongName: Hand-off protocol at the time of transfer to the Intensive Care Unit
ParentShortName: **HandoffProtocol**
ParentHarvestCodes: 2
ParentValues: = "Yes – Not all required team members present"

Harvest Codes:

Code:	Value:
1	Attended hand-off protocol
2	Did not attend hand-off protocol

Long Name: Hand-off protocol - Surgeon
Short Name: **HandoffSurg**
Section Name: Patient Process Measures
DBTableName: Operations
Definition: Indicate whether the surgeon or designee attended the hand-off protocol at the time of transfer to the Intensive Care Unit at the end of the operation.

SeqNo: 4530
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Hand-off protocol at the time of transfer to the Intensive Care Unit
ParentShortName: **HandoffProtocol**
ParentHarvestCodes: 2
ParentValues: = "Yes – Not all required team members present"

Harvest Codes:

Code:	Value:
1	Attended hand-off protocol
2	Did not attend hand-off protocol

Long Name: Hand-off protocol - Physician staff of the Intensive Care Unit
Short Name: **HandoffPhysStaff**
Section Name: Patient Process Measures
DBTableName: Operations
Definition: Indicate whether the physician staff of the Intensive Care Unit or designee attended the hand-off protocol at the time of transfer to the Intensive Care Unit at the end of the operation.

SeqNo: 4540
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Hand-off protocol at the time of transfer to the Intensive Care Unit
ParentShortName: **HandoffProtocol**
ParentHarvestCodes: 2
ParentValues: = "Yes – Not all required team members present"

Harvest Codes:

Code:	Value:
1	Attended hand-off protocol
2	Did not attend hand-off protocol

Long Name: Hand-off protocol - Nursing
Short Name: **HandoffNursing**
Section Name: Patient Process Measures
DBTableName: Operations
Definition: Indicate whether a nurse or designee attended the hand-off protocol at the time of transfer to the Intensive Care Unit at the end of the operation.

SeqNo: 4550
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Hand-off protocol at the time of transfer to the Intensive Care Unit
ParentShortName: **HandoffProtocol**
ParentHarvestCodes: 2
ParentValues: = "Yes – Not all required team members present"

Harvest Codes:

Code:	Value:
1	Attended hand-off protocol
2	Did not attend hand-off protocol

Long Name: Patient died or had major postoperative complication(s)
Short Name: **PostOpComp**
Section Name: Patient Process Measures

SeqNo: 4560
Core: Yes
Harvest: Yes

DBTableName: Operations

Definition: Indicate whether the patient died before hospital discharge and/or had any of these major postoperative complication(s):

a. New postoperative renal failure requiring dialysis (230, 223, 224)
b. New postoperative neurological deficit persisting at discharge (320, 400, 410)
c. Arrhythmia necessitating permanent pacemaker insertion (74)
d. Paralyzed diaphragm (300)
e. Need for postoperative mechanical circulatory support (40)
f. Unplanned reoperation and/or interventional cardiovascular catheterization procedure (22, 24, 26, 240)

The detailed definitions for the six postoperative complications are the definitions used in the current version of the STS Congenital Heart Surgery Database. These detailed definitions for these six postoperative complications may be found in the following manuscript:

Jacobs JP et al. Quality measures for congenital and pediatric cardiac surgery. World Journal for Pediatric and Congenital Heart Surgery 2012;3:32-47

Intent / Clarification: This is collected once for the episode of care, on the index operation. This categorization includes all reoperations (cardiac and non-cardiac) as well as interventional catheterization procedures.

Data Source: User

Format: Text (categorical values specified by STS)

Harvest Codes:

Code:	Value:
1	Yes
2	No

Long Name: Patient management and outcomes reviewed

Short Name: **PostOpReview**

Section Name: Patient Process Measures

DBTableName: Operations

Definition: Indicate whether the patient's management and outcomes were reviewed as a part of a regularly scheduled Quality Assurance and Quality Improvement Cardiac Care Conference (i.e., Morbidity and Mortality conference).

SeqNo: 4570

Core: Yes

Harvest: Yes

Intent / Clarification:

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

ParentLongName: Patient died or had major postoperative complication(s)
ParentShortName: **PostOpComp**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:	Definition:
1	Reviewed at conference	This patient's management and outcome were reviewed as a part of a regularly scheduled Quality Assurance and Quality Improvement Cardiac Care Conference (i.e., Morbidity and Mortality Conference).
2	Scheduled to be reviewed at next conference	This patient is on the schedule to be discussed at an upcoming Quality Assurance and Quality Improvement Cardiac Care Conference (i.e., Morbidity and Mortality Conference). (Please log back in to the Quality Module and change this answer to "Reviewed at conference" after the patient has been discussed in Quality Assurance and Quality Improvement Cardiac Care Conference).
3	Not reviewed and not scheduled to be reviewed	This patient's management and outcome were NOT reviewed as a part of a regularly scheduled Quality Assurance and Quality Improvement Cardiac Care Conference (i.e., Morbidity and Mortality Conference) and is not currently on the schedule to be discussed at an upcoming Quality Assurance and Quality Improvement Cardiac Care Conference.
4	Program does not have regularly scheduled conferences	Program does not have a regularly scheduled Quality Assurance and Quality Improvement Cardiac Care Conference (i.e., Morbidity and Mortality Conference).

Long Name: Patient management and outcomes reviewed – date
Short Name: **PostOpReviewDate**
Section Name: Patient Process Measures
DBTableName: Operations
Definition: Indicate the date this patient's management and outcome was reviewed as a part of a regularly scheduled Quality Assurance and Quality

SeqNo: 4580
Core: Yes
Harvest: Yes

Improvement Cardiac Care Conference (i.e., Morbidity and Mortality conference).

Intent / Clarification:

Data Source: User
Format: Date - mm/dd/yyyy

ParentLongName: Patient management and outcomes reviewed
ParentShortName: **PostOpReview**
ParentHarvestCodes: 1
ParentValues: = "Reviewed at conference"

Anesthesia

Anesthesia Administrative

Long Name: Anesthesiology Data Collected
Short Name: **Anesthesia**
Section Name: Anesthesia Administrative
DBTableName: Operations
Definition: Indicate whether anesthesia data is being collected.

SeqNo: 4581
Core: Yes
Harvest: Yes

Intent / Clarification:

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

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Anesthesiologist Present
Short Name: **AnesPresent**
Section Name: Anesthesia Administrative
DBTableName: Operations
Definition: Indicate whether an anesthesiologist was present for the procedure.

SeqNo: 4585
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Primary Anesthesiologist Attending Name
Short Name: **PrimAnesName**
Section Name: Anesthesia Administrative
DBTableName: Operations
Definition: Indicate the name of the primary anesthesiologist (attending physician present at induction of anesthesia). The name, NPI and signature of all anesthesiologists contributing data to the database must be on file with the STS for data files to be accepted.

SeqNo: 4590
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiologist Present
ParentShortName: **AnesPresent**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes

Long Name: Primary Anesthesiologist National Provider Identifier
Short Name: **PrimAnesNPI**
Section Name: Anesthesia Administrative
DBTableName: Operations
Definition: Indicate the individual-level National Provider Identifier (NPI) of the anesthesiologist performing the procedure.

SeqNo: 4600
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: Lookup
Format: Text

ParentLongName: Anesthesiologist Present
ParentShortName: **AnesPresent**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Long Name: Secondary Anesthesiologist Attending
Short Name: **SecAnes**
Section Name: Anesthesia Administrative
DBTableName: Operations
Definition: Indicate whether a relieving anesthesiologist and/or second anesthesiology attending was present during this procedure.

SeqNo: 4610
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiologist Present
ParentShortName: **AnesPresent**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Fellow or Resident Present
Short Name: **FelRes**
Section Name: Anesthesia Administrative
DBTableName: Operations
Definition: Indicate whether a Fellow or Resident was present during this procedure.

SeqNo: 4630
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Mid-Level Provider (CRNA, AA) Present
Short Name: **CRNA**
Section Name: Anesthesia Administrative
DBTableName: Operations
Definition: Indicate whether a Certified Registered Nurse Anesthetist (CRNA) or Anesthesia Assistant (AA) participated in the patient care during all or part of this procedure.

SeqNo: 4640
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Preoperative Medications Table Unique Record Identifier
Short Name: **PMUniqueID**
Section Name: Anesthesia Preoperative
DBTableName: PreopMeds
Definition: Unique identifier for the record in the Preoperative Medications table.

SeqNo: 4670
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: Automatic
Format: Text

ParentLongName: : Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Long Name: Preoperative Medication Link to Operations Table
Short Name: **OperationID**
Section Name: Anesthesia Preoperative
DBTableName: PreopMeds
Definition: An arbitrary, unique value generated by the software that permanently identifies each operation record in the participant's database. This field is the foreign key that links the Preoperative Medications record with the associated record in the Operations table.

SeqNo: 4680
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: Automatic
Format: Text

ParentLongName: : Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Anesthesia Pre-operative

Long Name: Preoperative Medication Category
Short Name: **PreopMedCat**
Section Name: Anesthesia Preoperative
DBTableName: PreopMeds
Definition: Indicate the categories of preoperative medication(s) given to the patient within 24 hours (unless noted otherwise) prior to the period of anesthetic care.

SeqNo: 4700
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = “Yes”

Harvest Codes:

Code:	Value:
5	None
10	Amiodarone
20	Angiotensin Converting Enzyme (ACE) Inhibitors
760	Angiotensin Receptor Blockers (ARB)
700	Anti-arrhythmics Not Otherwise Listed
770	Anticoagulents Not Otherwise Listed
30	Anti-reflux Medications (H2 antagonists, PPI, propulsives)
40	Anti-seizure Medications
50	Aspirin (within 5 days)
60	Benzodiazepines
70	Beta blockers
80	Birth Control (Oral, Intramuscular)
200	Bronchodilators, Inhaled
90	Calcium Channel Blockers
100	Calcium Chloride Infusion
750	Clonidine
110	Coumadin
740	Dexmedetomidine
120	Digoxin
130	Direct Thrombin Inhibitors (e.g., argatroban)
140	Diuretics
150	Dobutamine
160	Dopamine
170	Endothelin Antagonist (e.g., Bosentan)
180	Epinephrine
190	Heparin
220	Heparin, Low Molecular Weight
710	Inotropes Not Otherwise Listed
210	Insulin
230	Milrinone
240	Narcotics
250	Nitric Oxide
260	Nitroglycerin
270	Nitroprusside
280	Norepinephrine
290	PDE-5 Inhibitors (e.g., Sildenafil)
300	Platelet Inhibitors other than Aspirin (e.g., Plavix) (within 5 days)
310	Prostacyclin (e.g., Flolan, Remodulin)
320	Prostaglandin
330	Psychiatric Medications (including ADHD and antidepressants)
340	Statins
350	Steroids (oral/intravenous)
360	Thyroid Hormone
370	Transplant Rejection Inhibition Meds (other than steroids)
720	Vasoconstrictors Not Otherwise Listed
730	Vasodilators Not Otherwise Listed
380	Vasopressin
900	Other

Long Name:	Preoperative Sedation	*SeqNo:*	4710
Short Name:	**PreopSed**	*Core:*	Yes
Section Name:	Anesthesia Preoperative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the patient received preoperative sedation.		
Intent / Clarification:	Preop sedation refers to medication given by the anesthesiologists prior to induction of anesthesia, regardless of location		
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Anesthesiology Data Collected		
ParentShortName:	**Anesthesia**		
ParentHarvestCodes:	1		
ParentValues:	= "Yes"		

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

May 2019: The definition states indicate whether the patient received preoperative sedation. My question is is this section asking if the patient received any medication on the unit prior to entering the OR? **Preop sedation refers to medication given by the anesthesiologists prior to induction of anesthesia, regardless of location.**

Long Name:	Preoperative Sedation Route	*SeqNo:*	4720
Short Name:	**PreopSedRte**	*Core:*	Yes
Section Name:	Anesthesia Preoperative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the route used for preoperative sedation.		
Intent / Clarification:			
Data Source:	User		
Format:	Text (categorical values specified by STS)		
ParentLongName:	Preoperative Sedation		
ParentShortName:	**PreopSed**		
ParentHarvestCodes:	1		
ParentValues:	= "Yes"		

Harvest Codes and Value Definitions:

Code:	Value:	Definition:

1	IM	
2	IV	
3	Nasal	
4	PO/GT	Indicate if preoperative sedation given either by mouth or via G-Tube.
5	Rectal	

Long Name:	Preoperative Sedation Drug - Atropine	*SeqNo:*	4730
Short Name:	**PreopSedDrugAtro**	*Core:*	Yes
Section Name:	Anesthesia Preoperative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the patient received Atropine for preoperative sedation.		

Intent / Clarification:

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

ParentLongName:	Preoperative Sedation
ParentShortName:	**PreopSed**
ParentHarvestCodes:	1
ParentValues:	= "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Preoperative Sedation Drug - Demerol	*SeqNo:*	4740
Short Name:	**PreopSedDrugDem**	*Core:*	Yes
Section Name:	Anesthesia Preoperative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the patient received Demerol for preoperative sedation.		

Intent / Clarification:

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

ParentLongName:	Preoperative Sedation
ParentShortName:	**PreopSed**
ParentHarvestCodes:	1
ParentValues:	= "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Preoperative Sedation Drug - Dexmedetomidine	*SeqNo:*	4741
Short Name:	**PreopSedDrugDex**	*Core:*	Yes
Section Name:	Anesthesia Preoperative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the patient received Dexmedetomidine for preoperative sedation.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Preoperative Sedation
ParentShortName:	**PreopSed**
ParentHarvestCodes:	1
ParentValues:	= “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Preoperative Sedation Drug - Diazepam	*SeqNo:*	4750
Short Name:	**PreopSedDrugDiaz**	*Core:*	Yes
Section Name:	Anesthesia Preoperative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the patient received Diazepam for preoperative sedation.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Preoperative Sedation
ParentShortName:	**PreopSed**
ParentHarvestCodes:	1
ParentValues:	= “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Preoperative Sedation Drug - Fentanyl	*SeqNo:*	4751
Short Name:	**PreopSedDrugFent**	*Core:*	Yes
Section Name:	Anesthesia Preoperative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the patient received Fentanyl for preoperative sedation.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Preoperative Sedation
ParentShortName:	**PreopSed**
ParentHarvestCodes:	1
ParentValues:	= “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Preoperative Sedation Drug – Glycopyrrolate	*SeqNo:*	4760
Short Name:	**PreopSedDrugGlyco**	*Core:*	Yes
Section Name:	Anesthesia Preoperative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the patient received Glycopyrrolate for preoperative sedation.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Preoperative Sedation
ParentShortName:	**PreopSed**
ParentHarvestCodes:	1
ParentValues:	= “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Preoperative Sedation Drug – Ketamine
Short Name: **PreopSedDrugKet**
Section Name: Anesthesia Preoperative
DBTableName: Operations
Definition: Indicate whether the patient received Ketamine for preoperative sedation.

SeqNo: 4770
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Preoperative Sedation
ParentShortName: **PreopSed**
ParentHarvestCodes: 1
ParentValues: = “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Preoperative Sedation Drug - Lorazepam
Short Name: **PreopSedDrugLoraz**
Section Name: Anesthesia Preoperative
DBTableName: Operations
Definition: Indicate whether the patient received Lorazepam for preoperative sedation.

SeqNo: 4780
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Preoperative Sedation
ParentShortName: **PreopSed**
ParentHarvestCodes: 1
ParentValues: = “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Preoperative Sedation Drug - Midazolam	*SeqNo:*	4790
Short Name:	**PreopSedDrugMidaz**	*Core:*	Yes
Section Name:	Anesthesia Preoperative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the patient received Midazolam for preoperative sedation.		

Intent / Clarification:

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

ParentLongName: Preoperative Sedation
ParentShortName: **PreopSed**
ParentHarvestCodes: 1
ParentValues: = “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Preoperative Sedation Drug - Morphine	*SeqNo:*	4800
Short Name:	**PreopSedDrugMorph**	*Core:*	Yes
Section Name:	Anesthesia Preoperative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the patient received Morphine for preoperative sedation.		

Intent / Clarification:

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

ParentLongName: Preoperative Sedation
ParentShortName: **PreopSed**
ParentHarvestCodes: 1
ParentValues: = “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Preoperative Sedation Drug - Pentobarbital	*SeqNo:*	4810
Short Name:	**PreopSedDrugPent**	*Core:*	Yes
Section Name:	Anesthesia Preoperative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the patient received Pentobarbital for preoperative sedation.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Preoperative Sedation
ParentShortName:	**PreopSed**
ParentHarvestCodes:	1
ParentValues:	= “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Preoperative Baseline Oxygen Saturation	*SeqNo:*	4820
Short Name:	**PreopO2Sat**	*Core:*	Yes
Section Name:	Anesthesia Monitoring	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the preoperative resting pulse oximeter saturation (%) recorded either in the clinic or immediately prior to the procedure.		
Low Value:	1.0		
High Value:	100.0		

Intent / Clarification:

Data Source:	User
Format:	Real
ParentLongName:	Anesthesiology Data Collected
ParentShortName:	**Anesthesia**
ParentHarvestCodes:	1
Parent Value:	= “Yes”

Long Name:	Preoperative Oxygen Supplementation	*SeqNo:*	4830

Short Name:	**PreopOxygen**	*Core:*	Yes
Section Name:	Anesthesia Preoperative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the patient received preoperative oxygen supplementation.		

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Transport to Procedure Location Date and Time	*SeqNo:*	4840
Short Name:	**PLocTransDT**	*Core:*	Yes
Section Name:	Anesthesia Preoperative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the date (mm/dd/yyyy) and time (hh:mm 24-hour clock) of day when the patient was transferred to the procedure location or when anesthesia started.		

Intent / Clarification:

Data Source: User
Format: Date/Time - mm/dd/yyyy hh:mm

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Anesthesia Monitoring

Long Name:	Arterial Line	*SeqNo:*	4850
Short Name:	**ArtLine**	*Core:*	Yes
Section Name:	Anesthesia Monitoring	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether an arterial line was used during this procedure.		

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Arterial Line Type - Radial	*SeqNo:*	4860
Short Name:	**ArtLineTypeRad**	*Core:*	Yes
Section Name:	Anesthesia Monitoring	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether a radial arterial line type during this procedure.		

Intent / Clarification:

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

ParentLongName: Arterial Line
ParentShortName: **ArtLine**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Arterial Line Type - Brachial	*SeqNo:*	4870
Short Name:	**ArtLineTypeBrach**	*Core:*	Yes
Section Name:	Anesthesia Monitoring	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether a brachial arterial line type was used during this procedure.		

Intent / Clarification:

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

ParentLongName: Arterial Line
ParentShortName: **ArtLine**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Arterial Line Type - Axillary	*SeqNo:*	4880
Short Name:	**ArtLineTypeAx**	*Core:*	Yes
Section Name:	Anesthesia Monitoring	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether an axillary arterial line type was used during this procedure.		

Intent / Clarification:

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

ParentLongName: Arterial Line
ParentShortName: **ArtLine**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Arterial Line Type - Femoral	*SeqNo:*	4890
Short Name:	**ArtLineTypeFem**	*Core:*	Yes
Section Name:	Anesthesia Monitoring	*Harvest:*	Yes

DBTableName: Operations
Definition: Indicate whether a femoral arterial line type was used during this procedure.

Intent / Clarification:

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

ParentLongName: Arterial Line
ParentShortName: **ArtLine**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Arterial Line Type - Ulnar
Short Name: **ArtLineTypeUlnar**
Section Name: Anesthesia Monitoring
DBTableName: Operations
Definition: Indicate whether an ulnar arterial line type was used during this procedure.

SeqNo: 4900
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Arterial Line
ParentShortName: **ArtLine**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Arterial Line Type - Dorsalis Pedis
Short Name: **ArtLineTypeDors**
Section Name: Anesthesia Monitoring
DBTableName: Operations

SeqNo: 4910
Core: Yes
Harvest: Yes

Definition: Indicate whether a dorsalis pedis arterial line type was used during this procedure.

Intent / Clarification:

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

ParentLongName: Arterial Line
ParentShortName: **ArtLine**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Arterial Line Type – Posterior Tibial
Short Name: **ArtLineTypePost**
Section Name: Anesthesia Monitoring
DBTableName: Operations
Definition: Indicate whether a posterior tibial arterial line type was used during this procedure.

SeqNo: 4920
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Arterial Line
ParentShortName: **ArtLine**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Arterial Line Type - Umbilical
Short Name: **ArtLineTypeCent**
Section Name: Anesthesia Monitoring
DBTableName: Operations
Definition: Indicate whether an umbilical arterial line type was used during this procedure.

SeqNo: 4930
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Arterial Line
ParentShortName: **ArtLine**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Arterial Line In-Situ Pre-Procedure
SeqNo: 4931
Short Name: **ArtLinePreProc**
Core: Yes
Section Name: Anesthesia Monitoring
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether the arterial line was in-situ pre-procedure.

Intent / Clarification:

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

ParentLongName: Arterial Line
ParentShortName: **ArtLine**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Cutdown
SeqNo: 4940
Short Name: **Cutdown**
Core: Yes
Section Name: Anesthesia Monitoring
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether a cutdown was used during this procedure.

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Cutdown Type - Radial
Short Name: **CutdownRad**
Section Name: Anesthesia Monitoring
DBTableName: Operations
Definition: Indicate whether a radial cutdown was used.

SeqNo: 4950
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Cutdown
ParentShortName: **Cutdown**
ParentHarvestCodes: n1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Cutdown Type - Femoral
Short Name: **CutdownFem**
Section Name: Anesthesia Monitoring
DBTableName: Operations
Definition: Indicate whether a femoral cutdown was used.

SeqNo: 4960
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Cutdown
ParentShortName: **Cutdown**
ParentHarvestCodes: n1

ParentValues: = “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Cutdown Type - Ulnar
Short Name: **CutdownUln**
Section Name: Anesthesia Monitoring
DBTableName: Operations
Definition: Indicate whether an ulnar cutdown was used.

SeqNo: 4970
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Cutdown
ParentShortName: **Cutdown**
ParentHarvestCodes: n1
ParentValues: = “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Cutdown Type - Other
Short Name: **CutdownOth**
Section Name: Anesthesia Monitoring
DBTableName: Operations
Definition: Indicate whether any other type of cutdown was used.

SeqNo: 4980
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Cutdown
ParentShortName: **Cutdown**
ParentHarvestCodes: n1
ParentValues: = “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Percutaneous Central Pressure	*SeqNo:*	4990
Short Name:	**PercCentPress**	*Core:*	Yes
Section Name:	Anesthesia Monitoring	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the percutaneous central pressure was used during this procedure.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Anesthesiology Data Collected
ParentShortName:	**Anesthesia**
ParentHarvestCodes:	1
ParentValues:	= “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Percutaneous Central Pressure Location – Right Internal Jugular	*SeqNo:*	5000
Short Name:	**PCPLocRJug**	*Core:*	Yes
Section Name:	Anesthesia Monitoring	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the percutaneous central pressure was used in the right internal jugular.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Percutaneous Central Pressure
ParentShortName:	**PercCentPress**
ParentHarvestCodes:	1
ParentValues:	= “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Percutaneous Central Pressure Location – Left Internal Jugular	*SeqNo:*	5010
Short Name:	**PCPLocLJug**	*Core:*	Yes
Section Name:	Anesthesia Monitoring	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the percutaneous central pressure was used in the left internal jugular.		

Intent / Clarification:

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

ParentLongName: Percutaneous Central Pressure
ParentShortName: **PercCentPress**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Percutaneous Central Pressure Location – Right Subclavian	*SeqNo:*	5020
Short Name:	**PCPLobRSub**	*Core:*	Yes
Section Name:	Anesthesia Monitoring	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the percutaneous central pressure was used in the right subclavian.		

Intent / Clarification:

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

ParentLongName: Percutaneous Central Pressure
ParentShortName: **PercCentPress**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Percutaneous Central Pressure Location – Left Subclavian	*SeqNo:*	5030

Short Name:	**PCPLobLSub**	*Core:*	Yes
Section Name:	Anesthesia Monitoring	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the percutaneous central pressure was used in the left subclavian.		

Intent / Clarification:

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

ParentLongName: Percutaneous Central Pressure
ParentShortName: **PercCentPress**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Percutaneous Central Pressure Location – Right Femoral Vein	*SeqNo:*	5040
Short Name:	**PCPLocRFem**	*Core:*	Yes
Section Name:	Anesthesia Monitoring	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the percutaneous central pressure was used in the right femoral vein.		

Intent / Clarification:

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

ParentLongName: Percutaneous Central Pressure
ParentShortName: **PercCentPress**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Percutaneous Central Pressure Location – Left Femoral Vein	*SeqNo:*	5050
Short Name:	**PCPLocLFem**	*Core:*	Yes
Section Name:	Anesthesia Monitoring	*Harvest:*	Yes
DBTableName:	Operations		

Definition: Indicate whether the percutaneous central pressure was used in the left femoral vein.

Intent / Clarification:

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

ParentLongName: Percutaneous Central Pressure
ParentShortName: **PercCentPress**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Percutaneous Central Pressure Location - PICC
Short Name: **PCPLocPICC**
Section Name: Anesthesia Monitoring
DBTableName: Operations
Definition: Indicate whether the percutaneous central pressure was used in the PICC.

SeqNo: 5051
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Percutaneous Central Pressure
ParentShortName: **PercCentPress**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Percutaneous Central Pressure Location - Other
Short Name: **PCPLocOth**
Section Name: Anesthesia Monitoring
DBTableName: Operations
Definition: Indicate whether the percutaneous central pressure was used in any other location.

SeqNo: 5060
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Percutaneous Central Pressure
ParentShortName: **PercCentPress**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: CVP, PICC, LA or RA Line(s) In-Situ Pre-Procedure
Short Name: **CVPPICCPreProc**
Section Name: Anesthesia Monitoring
DBTableName: Operations
Definition: Indicate whether a CVP, PICC, LA or RA line(s) were in place prior to entering the OR.

SeqNo: 5062
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Percutaneous Central Pressure
ParentShortName: **PercCentPress**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: CVP Placed By Anesthesia
Short Name: **CVPPlaced**
Section Name: Anesthesia Monitoring
DBTableName: Operations
Definition: Indicate whether a CVP was placed by anesthesia during this procedure.

SeqNo: 5070
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected

ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Surgeon Placed Lines INSTEAD of Anesthesia Placed Central Lines
SeqNo: 5071
Short Name: **SurgMonLines**
Core: Yes
Section Name: Anesthesia Monitoring
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether the surgeon placed one or more central monitoring / medication lines directly in the Right, Left or Common Atria during the procedure INSTEAD of pre-incision placement of a central line by anesthesia or the use of existence percutaneous CVL or PICC. This does not include monitoring lines placed during the procedure in addition to the anesthesia or in-situ catheters.

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Swan-Ganz Catheter
SeqNo: 5080
Short Name: **SGCath**
Core: Yes
Section Name: Anesthesia Monitoring
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether a Swan-Ganz catheter was inserted or utilized by anesthesia during this procedure.

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Oximetric Central Line
Short Name: **ScVO2**
Section Name: Anesthesia Monitoring
DBTableName: Operations
Definition: Indicate whether an oximetric central line was inserted or utilized by anesthesia during this procedure.

SeqNo: 5090
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Ultrasound Guidance Used For Line Placement
Short Name: **UltraGuide**
Section Name: Anesthesia Monitoring
DBTableName: Operations
Definition: Indicate whether real-time ultrasound imaging was used for line placement (i.e., Sonosite or equivalent).

SeqNo: 5100
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**

ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	None
2	Yes – arterial line only
3	Yes – central venous line only
4	Yes – arterial and central venous lines

Long Name: Neurologic Monitoring
Short Name: **NeuroMonitor**
Section Name: Anesthesia Monitoring
DBTableName: Operations
Definition: Indicate whether the patient received neurologic monitoring during this procedure.

SeqNo: 5110
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Neurologic Monitoring – Bispectral Index
Short Name: **NeuroMonBIS**
Section Name: Anesthesia Monitoring
DBTableName: Operations
Definition: Indicate whether the neurologic monitoring performed during this procedure included Bispectral Index (BIS).

SeqNo: 5130
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Neurologic Monitoring

ParentShortName: **NeuroMonitor**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Neurologic Monitoring – Transcranial Doppler
SeqNo: 5140
Short Name: **NeuroMonTCD**
Core: Yes
Section Name: Anesthesia Monitoring
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether the neurologic monitoring performed during this procedure included Transcranial Doppler (TCD).

Intent / Clarification:

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

ParentLongName: Neurologic Monitoring
ParentShortName: **NeuroMonitor**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Neurologic Monitoring – NIRS (Cerebral)
SeqNo: 5141
Short Name: **NeuroMonNIRS**
Core: Yes
Section Name: Anesthesia Monitoring
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether the neurologic (cerebral) monitoring performed during the procedure included Near Infrared Spectroscopy (NIRS).

Intent / Clarification:

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

ParentLongName: Neurologic Monitoring
ParentShortName: **NeuroMonitor**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Neurologic Monitoring - Other	*SeqNo:*	5150
Short Name:	**NeuroMonOth**	*Core:*	Yes
Section Name:	Anesthesia Monitoring	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the neurologic monitoring performed during this procedure included some other method.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Neurologic Monitoring
ParentShortName:	**NeuroMonitor**
ParentHarvestCodes:	1
ParentValues:	= “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Lowest Recorded Intraoperative Temperature	*SeqNo:*	5160
Short Name:	**LowIntraopTemp**	*Core:*	Yes
Section Name:	Anesthesia Monitoring	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the patient’s lowest temperature (in degrees Centigrade) recorded during the intraoperative period.		
Low Value:	0.1		
High Value:	40.9		

Intent / Clarification:

Data Source:	User
Format:	Real
ParentLongName:	Anesthesiology Data Collected
ParentShortName:	**Anesthesia**

ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Lowest Intraoperative Temperature Monitoring Site
SeqNo: 5170
Short Name: **IntraopTempSite**
Core: Yes
Section Name: Anesthesia Monitoring
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether the site where the patient's lowest temperature was being recorded intraoperatively.

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
1	Nasal
2	Esophageal
3	Bladder
4	Rectal
5	Axillary
6	Skin
7	Tympanic
9	Other

Long Name: Transesophageal Echocardiography
SeqNo: 5180
Short Name: **TEE**
Core: Yes
Section Name: Anesthesia Monitoring
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether a transesophageal echocardiography probe was placed or attempted during this procedure.

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Anesthesia Anesthetic Techique

Long Name: Induction Date and Time
Short Name: **InductionDT**
Section Name: Anesthesia Anesthetic Technique
DBTableName: Operations
Definition: Indicate the date (mm/dd/yyyy) and time (hh:mm 24-hour clock) of day when the patient was first induced.

SeqNo: 5190
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Date/Time - mm/dd/yyyy hh:mm

ParentLongName: : Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Long Name: Induction Type - Inhalation
Short Name: **IndTypeInh**
Section Name: Anesthesia Anesthetic Technique
DBTableName: Operations
Definition: Indicate whether an inhalation drug was used as an induction agent.

SeqNo: 5200
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Induction Agent – Inhalation - Sevoflurane	*SeqNo:*	5220
Short Name:	**IndAgentInhalSevo**	*Core:*	Yes
Section Name:	Anesthesia Anesthetic Technique	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether sevoflurane was used for induction of anesthesia.		

Intent / Clarification:

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

ParentLongName: Induction Type – Inhalation
ParentShortName: **IndTypeInh**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Induction Agent – Inhalation - Isoflurane	*SeqNo:*	5230
Short Name:	**IndAgentInhalIso**	*Core:*	Yes
Section Name:	Anesthesia Anesthetic Technique	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether isoflurane was used for induction of anesthesia.		

Intent / Clarification:

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

ParentLongName: Induction Type – Inhalation
ParentShortName: **IndTypeInh**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Induction Agent – Intravenous	*SeqNo:*	5240

Short Name:	**IndTypeIV**	*Core:*	Yes
Section Name:	Anesthesia Anesthetic Technique	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether an intravenous drug was used as an induction agent.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Anesthesiology Data Collected
ParentShortName:	**Anethesia**
ParentHarvestCodes:	1
ParentValues:	= "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Induction Agent – Intravenous – Sodium Thiopental	*SeqNo:*	5260
Short Name:	**IndAgentIVSodT**	*Core:*	Yes
Section Name:	Anesthesia Anesthetic Technique	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether sodium thiopental was used for induction of anesthesia.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Induction Type – Intravenous
ParentShortName:	**IndTypeIV**
ParentHarvestCodes:	1
ParentValues:	= "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Induction Agent – Intravenous – Ketamine	*SeqNo:*	5270
Short Name:	**IndAgentIVKet**	*Core:*	Yes
Section Name:	Anesthesia Anesthetic Technique	*Harvest:*	Yes
DBTableName:	Operations		

Definition: Indicate whether ketamine was used for induction of anesthesia.

Intent / Clarification:

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

ParentLongName: Induction Type – Intravenous
ParentShortName: **IndTypeIV**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Induction Agent – Intravenous – Etomidate
Short Name: **IndAgentIVEtom**
Section Name: Anesthesia Anesthetic Technique
DBTableName: Operations
Definition: Indicate whether etomidate was used for induction of anesthesia.

SeqNo: 5280
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Induction Type – Intravenous
ParentShortName: **IndTypeIV**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Induction Agent – Intravenous – Propfol
Short Name: **IndAgentIVProp**
Section Name: Anesthesia Anesthetic Technique
DBTableName: Operations
Definition: Indicate whether propofol was used for induction of anesthesia.

SeqNo: 5290
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Induction Type – Intravenous
ParentShortName: **IndTypeIV**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Induction Agent – Intravenous – Fentanyl
Short Name: **IndAgentIVFent**
Section Name: Anesthesia Anesthetic Technique
DBTableName: Operations
Definition: Indicate whether fentanyl was used for induction of anesthesia.

SeqNo: 5300
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Induction Type – Intravenous
ParentShortName: **IndTypeIV**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Induction Agent – Intravenous – Midazolam
Short Name: **IndAgentIVMid**
Section Name: Anesthesia Anesthetic Technique
DBTableName: Operations
Definition: Indicate whether midazolam was used for induction of anesthesia.

SeqNo: 5310
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Induction Type – Intravenous

ParentShortName: **IndTypeIV**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Induction Agent – Intravenous – Dexmedetomidine
Short Name: **IndAgentIVDex**
Section Name: Anesthesia Anesthetic Technique
DBTableName: Operations
Definition: Indicate whether dexmedetomidine was used for induction of anesthesia.

SeqNo: 5320
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Induction Type – Intravenous
ParentShortName: **IndTypeIV**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Induction Agent – Intravenous - Sufentanil
Short Name: **IndAgentIVSuf**
Section Name: Anesthesia Anesthetic Technique
DBTableName: Operations
Definition: Indicate whether intramuscular sufentanil was used for induction of anesthesia.

SeqNo: 5330
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Induction Type – Intravenous
ParentShortName: **IndTypeIV**

ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Induction Agent – Intravenous - Remifentanil
SeqNo: 5340
Short Name: **IndAgentIVRem**
Core: Yes
Section Name: Anesthesia Anesthetic Technique
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether remifentanil drug was used for induction of anesthesia.

Intent / Clarification:

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

ParentLongName: Induction Type – Intravenous
ParentShortName: **IndTypeIV**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Induction Type – Intramuscular
SeqNo: 5350
Short Name: **IndTypeIM**
Core: Yes
Section Name: Anesthesia Anesthetic Technique
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether an intramuscular drug was used for induction.

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Induction Agent – Intramuscular - Ketamine	*SeqNo:*	5370
Short Name:	**IndAgentIMKet**	*Core:*	Yes
Section Name:	Anesthesia Anesthetic Technique	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether intramuscular ketamine was used for induction of anesthesia.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Induction Type - Intramuscular
ParentShortName:	**IndTypeIM**
ParentHarvestCodes:	1
ParentValues:	= “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Induction Agent – Intramuscular - Midazolam	*SeqNo:*	5380
Short Name:	**IndAgentIMMid**	*Core:*	Yes
Section Name:	Anesthesia Anesthetic Technique	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether intramuscular midazolam was used for induction of anesthesia.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Induction Type - Intramuscular
ParentShortName:	**IndTypeIM**
ParentHarvestCodes:	1
ParentValues:	= “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Regional Anesthetic	*SeqNo:*	5400
Short Name:	**RegionalAnes**	*Core:*	Yes
Section Name:	Anesthesia Anesthetic Technique	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether a regional anesthetic was used during this operation.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Anesthesiology Data Collected
ParentShortName:	**Anesthesia**
ParentHarvestCodes:	1
ParentValues:	= “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Regional Anesthetic Site	*SeqNo:*	5410
Short Name:	**RegAnesSite**	*Core:*	Yes
Section Name:	Anesthesia Anesthetic Technique	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the technique used for the regional anesthetic.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName: :	Regional Anesthetic
ParentShortName:	**RegionalAnes**
ParentHarvestCodes:	1
ParentValues:	= "Yes"

Harvest Codes:

Code:	Value:
1	Thoracic Epidural Catheter
2	Lumbar Epidural Catheter
3	Caudal Epidural Catheter
4	Lumbar Epidural – Single shot
5	Caudal Epidural – Single shot

6	Lumbar Intrathecal – Single shot
7	Paravertebral Block – Single shot
8	Paravertebral Block – Catheter
9	Other

Long Name:	Regional Anesthetic Drug – Bupivicaine	*SeqNo:*	5420
Short Name:	**RegAnesDrugBup**	*Core:*	Yes
Section Name:	Anesthesia Anesthetic Technique	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the regional anesthetic drug Bupivicaine was used during this procedure.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Regional Anesthetic
ParentShortName:	**RegionalAnes**
ParentHarvestCodes:	1
ParentValues:	= “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Regional Anesthetic Drug – Bupivicaine/Fentanyl	*SeqNo:*	5430
Short Name:	**RegAnesDrugBupFen**	*Core:*	Yes
Section Name:	Anesthesia Anesthetic Technique	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the regional anesthetic drug Bupivicaine/Fentanyl was used during this procedure.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Regional Anesthetic
ParentShortName:	**RegionalAnes**
ParentHarvestCodes:	1
ParentValues:	= “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Regional Anesthetic Drug – Clonidine
Short Name: **RegAnesDrugClon**
Section Name: Anesthesia Anesthetic Technique
DBTableName: Operations
Definition: Indicate whether the regional anesthetic drug Fentanyl was used during this procedure.

SeqNo: 5440
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Regional Anesthetic
ParentShortName: **RegionalAnes**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Regional Anesthetic Drug – Fentanyl
Short Name: **RegAnesDrugFen**
Section Name: Anesthesia Anesthetic Technique
DBTableName: Operations
Definition: Indicate whether the regional anesthetic drug Fentanyl was used during this procedure.

SeqNo: 5450
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Regional Anesthetic
ParentShortName: **RegionalAnes**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Regional Anesthetic Drug – Hydromorphone	*SeqNo:*	5460
Short Name:	**RegAnesDrugHydro**	*Core:*	Yes
Section Name:	Anesthesia Anesthetic Technique	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the regional anesthetic drug Hydromorphone was used during this procedure.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Regional Anesthetic
ParentShortName:	**RegionalAnes**
ParentHarvestCodes:	1
ParentValues:	= "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Regional Anesthetic Drug – Lidocaine	*SeqNo:*	5470
Short Name:	**RegAnesDrugLido**	*Core:*	Yes
Section Name:	Anesthesia Anesthetic Technique	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the regional anesthetic drug Lidocaine was used during this procedure.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Regional Anesthetic
ParentShortName:	**RegionalAnes**
ParentHarvestCodes:	1
ParentValues:	= "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Regional Anesthetic Drug – Morphine	*SeqNo:*	5480
Short Name:	**RegAnesDrugMorph**	*Core:*	Yes
Section Name:	Anesthesia Anesthetic Technique	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the regional anesthetic drug Morphine was used during this procedure.		

Intent / Clarification:

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

ParentLongName: Regional Anesthetic
ParentShortName: **RegionalAnes**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Regional Anesthetic Drug – Ropivicaine	*SeqNo:*	5490
Short Name:	**RegAnesDrugRop**	*Core:*	Yes
Section Name:	Anesthesia Anesthetic Technique	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the regional anesthetic drug Ropivicaine was used during this procedure.		

Intent / Clarification:

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

ParentLongName: Regional Anesthetic
ParentShortName: **RegionalAnes**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Regional Anesthetic Drug – Ropivicaine/Fentanyl	*SeqNo:*	5500
Short Name:	**RegAnesDrugRopFen**	*Core:*	Yes
Section Name:	Anesthesia Anesthetic Technique	*Harvest:*	Yes

DBTableName: Operations
Definition: Indicate whether the regional anesthetic drug Ropivicaine/Fentanyl was used during this procedure.

Intent / Clarification:

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

ParentLongName: Regional Anesthetic
ParentShortName: **RegionalAnes**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Regional Anesthetic Drug – Tetracaine
Short Name: **RegAnesDrugTetra**
Section Name: Anesthesia Anesthetic Technique
DBTableName: Operations
Definition: Indicate whether the regional anesthetic drug Tetracaine was used during this procedure.

SeqNo: 5510
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Regional Anesthetic
ParentShortName: **RegionalAnes**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Regional Anesthetic Drug – Other
Short Name: **RegAnesDrugOth**
Section Name: Anesthesia Anesthetic Technique
DBTableName: Operations
Definition: Indicate whether any other regional anesthetic drug was used during this procedure.

SeqNo: 5520
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Regional Anesthetic
ParentShortName: **RegionalAnes**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Intercostal Nerve Infiltration By Surgeon or Anesthesia
Short Name: **IntNerveInf**
Section Name: Anesthesia Anesthetic Technique
DBTableName: Operations
Definition: Indicate whether intercostal nerve infiltration was performed by the surgeon or anesthesiologist.

SeqNo: 5530
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Regional Field Block by Surgeon or Anesthesia
Short Name: **RegFieldBlock**
Section Name: Anesthesia Anesthetic Technique
DBTableName: Operations
Definition: Indicate whether a regional field block was performed by the surgeon or anesthesiologist.

SeqNo: 5540
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Anesthesia Airway

Long Name: Airway In-situ (ETT or Tracheostomy)
Short Name: **AirwayInsitu**
Section Name: Anesthesia Airway
DBTableName: Operations
Definition: Indicate whether an Endotracheal Tube (ETT) or tracheostomy was in place prior to arrival in the procedure area.

SeqNo: 5550
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: ETT or Tracheostomy Replaced For Procedure
Short Name: **AirwayReplaced**
Section Name: Anesthesia Airway
DBTableName: Operations
Definition: Indicate whether the Endotracheal Tube or tracheostomy was electively replaced prior to the procedure. For example, oral to nasal ETT, tracheostomy to ETT, uncuffed to cuffed ETT.

SeqNo: 5551
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Airway In-situ (ETT or Tracheostomy)
ParentShortName: **AirwayInsitu**
ParentHarvestCodes: 1
ParentValues: = “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Airway Type
Short Name: **AirwayType**
Section Name: Anesthesia Airway
DBTableName: Operations
Definition: Indicate the type of airway support that was used during this procedure.

SeqNo: 5560
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: Anesthesia
ParentValue: 1
ParentHarvestCodes: = "Yes"

Harvest Codes:

Code:	Value:
1	No airway support
7	Simple face mask
2	Bag-mask
3	Nasal cannulae
4	Laryngeal Mask Airway (LMA)
5	Endotracheal intubation
6	Tracheostomy

Long Name: Airway Size – Laryngeal Size Mask Airway
Short Name: **AirwaySizeLMA**
Section Name: Anesthesia Airway

SeqNo: 5570
Core: Yes
Harvest: Yes

DBTableName: Operations
Definition: Indicate the size of the laryngeal mask airway used during this operation.

Intent / Clarification:

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

ParentLongName: Airway Type
ParentShortName: **AirwayType**
ParentHarvestCodes: 4
ParentValues: = "Laryngeal Mask Airway (LMA)"

Harvest Codes:

Code:	*Value:*
10	1.0
15	1.5
20	2.0
25	2.5
30	3.0
40	4.0
50	5.0

Long Name: Airway Size - Endotracheal Intubation
Short Name: **AirwaySizeIntub**
Section Name: Anesthesia Airway
DBTableName: Operations
Definition: Indicate the size of the endotracheal intubation airway used during this procedure. Measurement should be the inner diameter (ID) size measured in millimeters (mm).

SeqNo: 5580
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Airway Type
ParentShortName: **AirwayType**
ParentHarvestCodes: 5
ParentValues: = "Endotracheal intubation"

Harvest Codes:

Code:	*Value:*
25	2.5
30	3.0
35	3.5
40	4.0
45	4.5

50	5.0
55	5.5
60	6.0
65	6.5
70	7.0
75	7.5
80	8.0
95	Other
96	Airway size not listed (DLETT, Tracheotomy)

Long Name:	Cuffed	*SeqNo:*	5590
Short Name:	**AirwaySiteICuffed**	*Core:*	Yes
Section Name:	Anesthesia Airway	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the endotracheal tube was cuffed.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Airway Type
ParentShortName:	**AirwayType**
ParentHarvestCodes:	5
ParentValues:	= “Endotracheal intubation”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Airway Site	*SeqNo:*	5600
Short Name:	**AirwaySite**	*Core:*	Yes
Section Name:	Anesthesia Airway	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the endotracheal intubation site.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Airway Type
ParentShortName:	**AirwayType**
ParentHarvestCodes:	5|6

ParentValues: = “Endotracheal intubation” or “Tracheostomy”

Harvest Codes:

Code:	*Value:*
1	Oral
2	Nasal
3	Tracheostomy

Long Name: Endobronchial Isolation (DLETT, Bronchial Blocker)
Short Name: **EndobronchIso**
Section Name: Anesthesia Airway
DBTableName: Operations
Definition: Indicate whether endobronchial isolation was employed using a double lumen ETT or bronchial blocker.

SeqNo: 5610
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Endobronchial Isolation Method
Short Name: **EndobronchIsoMeth**
Section Name: Anesthesia Airway
DBTableName: Operations
Definition: Indicate the method used to isolate lung.

SeqNo: 5611
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Endobronchial Isolation (DLETT, Bronchial Blocker)
ParentShortName: **EndobronchIso**
ParentHarvestCodes: 1
ParentValues: = “Yes”

Harvest Codes:

Code:	*Value:*
1	Double Lumen ETT
2	Arndt Bronchial Blocker
3	Fogarty Catheter
4	Intentional Mainstem ETT
5	Univent ETT
6	Other

Long Name:	ICU-Type Ventilator Used Intraop	*SeqNo:*	5620
Short Name:	**ICUTypeVent**	*Core:*	Yes
Section Name:	Anesthesia Airway	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether an ICU-type ventilator was used during the procedure.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Anesthesiology Data Collected
ParentShortName:	**Anesthesia**
ParentHarvestCodes:	1
ParentValues:	= “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Anesthesia Ready / End of Induction	*SeqNo:*	5621
Short Name:	**EndOfInductDT**	*Core:*	Yes
Section Name:	Anesthesia Airway	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the date and time at which anesthesia preparations for surgery, such as placement of desired airway and vascular access, have been completed.		

Intent / Clarification:

Data Source:	User
Format:	Date/Time - mm/dd/yyyy hh:mm
ParentLongName: :	Anesthesiology Data Collected
ParentShortName:	Anesthesia
ParentHarvestCodes:	1

ParentValues: = "Yes"

Long Name: Intraoperative Pharmacology Table Unique Record Identifier
Short Name: **IPUniqueID**
Section Name: Anesthesia Pharmacology On Arrival To ICU/PACU
DBTableName: IntraopPharm
Definition: Unique identifier for the record in the Intraoperative Pharmacology table.

SeqNo: 6120
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: Automatic
Format: Text

ParentLongName: : Anesthesiology Data Collected
ParentShortName: Anesthesia
ParentHarvestCodes: 1
ParentValues: = "Yes"

Long Name: Intraoperative Pharmacology Link to operations Table
Short Name: **OperationID**
Section Name: Anesthesia Pharmacology On Arrival To ICU/PACU
DBTableName: IntraopPharm
Definition: An arbitrary, unique value generated by the software that permanently identifies each operation record in the participant's database. This field is the foreign key that links the Intraoperative Pharmacology records with the associated record in the Operations table.

SeqNo: 6130
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: Automatic
Format: Text

ParentLongName: : Anesthesiology Data Collected
ParentShortName: Anesthesia
ParentHarvestCodes: 1
ParentValues: = "Yes"

Anesthesia Intra-operative Pharmacology (including CPB)

Long Name: IntraOperative Pharmacology (Including CPB)
Short Name: **IntraopPharm**
Section Name: Anesthesia Pharmacology On Arrival To ICU/PACU
DBTableName: IntraopPharm

SeqNo: 6140
Core: Yes
Harvest: Yes

Definition: Indicate the medications that were given during the intraoperative time period.

Intent / Clarification:

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

ParentLongName: : Anesthesiology Data Collected
ParentShortName: Anesthesia
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
10	None
450	5-HT3 Agents (e.g., Ondansetron)
520	Acetaminophen
20	Adenosine bolus
50	Amiodarone
440	Benzodiazepine
420	Bronchodilators - Inhaled
70	Calcium Chloride infusion
75	Calcium Gluconate infusion
480	Desflurane
80	Dexmetetomidine (Precedex)
90	Dobutamine infusion
100	Dopamine infusion
110	Epinephrine (Adrenalin) infusion
120	Esmolol
510	Fenoldopam Infusion
140	Furosemide
370	Inotrope, Other
150	Insulin
460	Isoflurane
170	Isoproterenol infusion
490	Ketamine
530	Ketorolac
540	Levosimendan
190	Magnesium Sulfate
210	Milrinone
430	Narcotic
230	Nesiritide Infusion
240	Nicardipine Infusion
250	Nitric Oxide Inhalation
260	Nitroglycerin (Tridil) Infusion
270	Nitroprusside (Nipride)
180	Norepinephrine (Levophed) infusion
280	Phenoxybenzamine bolus
290	Phentolamine (Regitine)
300	Phenylephrine infusion
500	Procainamide
310	Propofol (Diprivan) infusion

320	Prostaglandin infusion
470	Sevoflurane
400	Sodium Bicarbonate bolus
160	Steroids IV / CPB (Hydrocortisone/Methylprednisolone/Dexamethasone)
340	Thyroid Hormone
410	Tromethamine (THAM) bolus
390	Vasoconstrictor, Other
380	Vasodilator, Other
360	Vasopressin infusion

April 2019: I would like some clarification as to what to include in the anesthesia intraop pharmacology section. Are we only to include Calcium continuous drips or should we include 1 time doses of Calcium? This would be when it is not given as a code drug or continuous drip. There seems to be several drugs that are given as infusions on the list but don't have infusions behind their name like Milrinone. The data collection form says Dopamine Infusion but then it just says Milrinone. Should we include epi given as code drugs or only when it is an infusion? How long does the drip have to be on to be considered an infusion? Also, in the preop pharmacology section, Calcium Gluconate is not an option. So we should only capture Calcium Chloride, and again, only when it is continuous or when they have received replacement doses? Some more clarification would definitely be appreciated. **Boluses are not included; definition of an infusion is any dosage where it is listed as mg/kg/HR or the equivalent rather than a series of boluses. Calcium Gluconate is not listed as premedication; no particular reason why, just never bothered listing it. Probably could change the wording to Calcium infusion, but that might also be confusing as a lot of TPN mixtures have some calcium in them so technically that might count.**

Long Name:	AT III Measured Preoperatively	*SeqNo:*	6141
Short Name:	**ATMeasPreop**	*Core:*	Yes
Section Name:	Anesthesia Intraoperative Pharmacology (including CPB)	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether antithrombin III level was measured prior to arrival in the operating room.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Anesthesiology Data Collected
ParentShortName:	**Anesthesia**
ParentHarvestCodes:	1
ParentValues:	= “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Fibrinogen Checked During CPB	*SeqNo:*	6142
Short Name:	**CPBLabFib**	*Core:*	Yes
Section Name:	Anesthesia Intraoperative Pharmacology (including CPB)	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether fibrinogen was checked during CPB.		

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Fibrinogen Value - mg/dL	*SeqNo:*	6143
Short Name:	**CPBLabFibVal**	*Core:*	Yes
Section Name:	Anesthesia ICU/PACU Care	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the fibrinogen value in mg/dl.		
Low Value:	1		
High Value:	500		

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Fibrinogen Checked During CPB
ParentShortName: **CPBLabFib**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name:	Platelet Count Checked During CPB	*SeqNo:*	6144
Short Name:	**CPBLabPlatelet**	*Core:*	Yes
Section Name:	Anesthesia Intraoperative Pharmacology (including CPB)	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the platelet count was checked during CPB.		

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Platelet Count Value
Short Name: **CPBLabPlateletVal**
Section Name: Anesthesia ICU/PACU Care
DBTableName: Operations
Definition: Indicate the platelet count value.
Low Value: 1
High Value: 500

SeqNo: 6145
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Platelet Count Checked During CPB
ParentShortName: **CPBLabPlatelet**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: TEG Checked During CPB
Short Name: **CBPLabTEG**
Section Name: Anesthesia Intraoperative Pharmacology (including CPB)
DBTableName: Operations
Definition: Indicate whether TEG was checked during CPB.

SeqNo: 6146
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: TEG-FF Checked During CPB
SeqNo: 6147
Short Name: **CPBLabTEGFF**
Core: Yes
Section Name: Anesthesia Intraoperative Pharmacology (including CPB)
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether TEG-FF was checked during CPB.

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: ROTEM Checked During CPB
SeqNo: 6148
Short Name: **CPBLabROTEM**
Core: Yes
Section Name: Anesthesia Intraoperative Pharmacology (including CPB)
Harvest: Yes
DBTableName: Operations
Definition: Indicate whether ROTEM was checked during CPB.

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*

1	Yes
2	No

Long Name: FIBTEM Checked During CPB
Short Name: **CPBLabFIBTEM**
Section Name: Anesthesia Intraoperative Pharmacology (including CPB)
DBTableName: Operations
Definition: Indicate whether FIBTEM was checked during CPB.

SeqNo: 6149
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: SONOCLOT Checked During CPB
Short Name: **CPBLabSONO**
Section Name: Anesthesia Intraoperative Pharmacology (including CPB)
DBTableName: Operations
Definition: Indicate whether SONOCLOT was checked during CPB.

SeqNo: 6150
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Post CPB - Fibrinogen Checked	*SeqNo:*	6151
Short Name:	**PostCPBLabFib**	*Core:*	Yes
Section Name:	Anesthesia Intraoperative Pharmacology (including CPB)	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether fibrinogen was checked in the operating room after CPB was completed.		

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Post CPB - Fibrinogen Value - mg/dL	*SeqNo:*	6152
Short Name:	**PostCPBLabFibVal**	*Core:*	Yes
Section Name:	Anesthesia ICU/PACU Care	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the fibrinogen value.		
Low Value:	1		
High Value:	500		

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Post CPB – Fibrinogen Checked
ParentShortName: **PostCPBLabFib**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name:	Post CPB - Platelet Count Checked	*SeqNo:*	6153
Short Name:	**PostCPBLabPlatelet**	*Core:*	Yes
Section Name:	Anesthesia Intraoperative Pharmacology (including CPB)	*Harvest:*	Yes
DBTableName:	Operations		

Definition: Indicate whether platelet count was checked in the operating room after CPB was completed.

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Post CPB - Platelet Count Value
Short Name: **PostCPBLabPlateletVal**
Section Name: Anesthesia ICU/PACU Care
DBTableName: Operations
Definition: Indicate the platelet count value.
Low Value: 1
High Value: 500

SeqNo: 6154
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: Post CPB - Platelet Count Checked
ParentShortName: **PostCPBLabPlatelet**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Post CPB – TEG Checked
Short Name: **PostCPBLabTEG**
Section Name: Anesthesia Intraoperative Pharmacology (including CPB)
DBTableName: Operations
Definition: Indicate whether TEG was checked in the operating room after CPB was completed.

SeqNo: 6155
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentShortName: Anesthesiology Data Collected
ParentLongName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Post CPB – TEG-FF Checked
Short Name: **PostCPBLabTEGFF**
Section Name: Anesthesia Intraoperative Pharmacology (including CPB)
DBTableName: Operations
Definition: Indicate whether TEG-FF was checked in the operating room after CPB was completed.

SeqNo: 6156
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Post CPB - ROTEM Checked
Short Name: **PostCPBLabROTEM**
Section Name: Anesthesia Intraoperative Pharmacology (including CPB)
DBTableName: Operations
Definition: Indicate whether ROTEM was checked in the operating room after CPB was completed.

SeqNo: 6157
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected

ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Post CPB - FIBTEM Checked
Short Name: **PostCPBLabFIBTEM**
Section Name: Anesthesia Intraoperative Pharmacology (including CPB)
DBTableName: Operations
Definition: Indicate whether FIBTEM was checked in the operating room after CPB was completed.

SeqNo: 6158
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Post CPB - SONOCLOT Checked
Short Name: **PostCPBLabSONO**
Section Name: Anesthesia Intraoperative Pharmacology (including CPB)
DBTableName: Operations
Definition: Indicate whether SONOCLOT was checked in the operating room after CPB was completed.

SeqNo: 6159
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**

ParentHarvestCodes: 1
ParentValues: = “Yes”

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: ICU Pharmacology Table Unique Record Identifier
Short Name: **ICUPUniqueID**
Section Name: Anesthesia Pharmacology On Arrival To ICU/PACU
DBTableName: ICUPharm
Definition: Unique identifier for the record in the ICU Pharmacology table.

SeqNo: 6165
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: Automatic
Format: Text

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Long Name: ICU Pharmacology Link to Operations Table
Short Name: **OperationID**
Section Name: Anesthesia Pharmacology On Arrival To ICU/PACU
DBTableName: ICUPharm
Definition: An arbitrary, unique value generated by the software that permanently identifies each operation record in the participant's database. This field is the foreign key that links the ICU Pharmacology record with the associated record in the Operations table.

SeqNo: 6166
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: Automatic
Format: Text

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Anesthesia Pharmacology on Arrival to ICU/PACU

Long Name:	ICU/PACU Arrival Pharmacology	*SeqNo:*	6170
Short Name:	**ICUPharm**	*Core:*	Yes
Section Name:	Anesthesia Pharmacology On Arrival To ICU/PACU	*Harvest:*	Yes
DBTableName:	ICUPharm		
Definition:	Indicate the medications that were given to the patient on arrival to ICU (Intensive Care Unit) / PACU (Post Anesthesia Care Unit).		

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	Value:
5	None
20	Aminocaproic Acid (Amicar) infusion
30	Amiodarone infusion
40	Aprotinin (Trasylol) infusion
370	Benzodiazepine infusion
50	Calcium Chloride infusion
60	Calcium Gluconate infusion
70	Dexmetetomidine (Precedex) infusion
80	Dobutamine infusion
90	Dopamine infusion
100	Epinephrine (Adrenalin) infusion
340	Esmolol infusion
390	Fenoldopam infusion
310	Inotrope, Other
120	Insulin infusion
130	Isoproterenol infusion
410	Ketamine infusion
400	Levosimendan
350	Local anesthetic infusion via catheter (On-Q, pleural catheters)
150	Milrinone infusion
170	Muscle Relaxant infusion
360	Narcotic infusion
180	Nesiritide infusion
190	Nicardipine infusion
200	Nitric Oxide inhalation
210	Nitroglycerin (Tridil) infusion
220	Nitroprusside (Nipride) infusion
230	Norepinephrine (Levophed) infusion
240	Phentolamine (Regitine)Infusion
250	Phenylephrine infusion
380	Procainamide bolus/infusion

260	Propofol (Diprivan) infusion
270	Prostaglandin infusion
280	Thyroid Hormone infusion
290	Tranexamic Acid infusion
330	Vasoconstrictor, Other
320	Vasodilator, Other
300	Vasopressin infusion

Anesthesia ICU / PACU Care

Long Name: ICU/PACU Arrival Date and Time
Short Name: **ICUArrDT**
Section Name: Anesthesia ICU/PACU Care
DBTableName: Operations
Definition: Indicate the date (mm/dd/yyyy) and time (hh:mm 24-hour clock) the patient arrived to the ICU / PACU.

SeqNo: 6180
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Date/Time - mm/dd/yyyy hh:mm

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Long Name: Initial FiO2
Short Name: **InitialFiO2**
Section Name: Anesthesia ICU/PACU Care
DBTableName: Operations
Definition: Indicate the initial FiO2 (closest to the patient's arrival).
Low Value: 0.17
High Value: 1.0

SeqNo: 6190
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Real

ParentShortName: Anesthesiology Data Collected
ParentLongName: **Anesthesia**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Mechanical Circulatory Support (ECMO/VAD)

SeqNo: 6200

Short Name:	**MechCircSup**	*Core:*	Yes
Section Name:	Anesthesia ICU/PACU Care	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the patient was on extracorporeal membrane oxygenation (ECMO) or on Ventricular Assist Device (VAD) on arrival.		

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	ICU/PACU Arrival Labs	*SeqNo:*	6211
Short Name:	**ICUPACULabs**	*Core:*	Yes
Section Name:	Anesthesia ICU/PACU Care	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether lab tests were drawn upon arrival to PACU or ICU.		

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
ParentValues: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

May 2019: The definition states to document labs that are done upon arrival to the ICU. I would like to clarify how many minutes are acceptable to document labs that have been completed? There are many patients that have labs drawn 20 to 30 minutes after arriving on the unit and I know that it can take a few minutes to settle the patient in their room, gather orders and draw labs. Or can we document up to 1 hour after they arrive on the unit? **Up to an hour is fine.**

Long Name:	pH	*SeqNo:*	6220
Short Name:	**pH**	*Core:*	Yes
Section Name:	Anesthesia ICU/PACU Care	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the pH level from the first ABG obtained.		
Low Value:	6.00		
High Value:	8.00		

Intent / Clarification:

Data Source:	User
Format:	Real
ParentLongName:	ICU/PACU Arrival Labs
ParentShortName:	**ICUPACULabs**
ParentHarvestCodes:	1
Parent Value:	= "Yes"

Long Name:	pCO2	*SeqNo:*	6230
Short Name:	**pCO2**	*Core:*	Yes
Section Name:	Anesthesia ICU/PACU Care	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the pCO2 level from the first ABG obtained.		
Low Value:	20		
High Value:	150		

Intent / Clarification:

Data Source:	User
Format:	Integer
ParentLongName:	ICU/PACU Arrival Labs
ParentShortName:	**ICUPACULabs**
ParentHarvestCodes:	1
Parent Value:	= "Yes"

Long Name:	pO2	*SeqNo:*	6240
Short Name:	**pO2**	*Core:*	Yes
Section Name:	Anesthesia ICU/PACU Care	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the pO2 level from the first ABG obtained.		
Low Value:	15		

High Value: 650

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: ICU/PACU Arrival Labs
ParentShortName: **ICUPACULabs**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Base Excess
Short Name: **BaseExcess**
Section Name: Anesthesia ICU/PACU Care
DBTableName: Operations
Definition: Indicate the Base Excess level from the first ABG obtained.
Low Value: -30
High Value: 30

SeqNo: 6250
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Integer

ParentLongName: ICU/PACU Arrival Labs
ParentShortName: **ICUPACULabs**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Lactate
Short Name: **Lactate**
Section Name: Anesthesia ICU/PACU Care
DBTableName: Operations
Definition: Indicate the Lactate level from the first ABG obtained.
Low Value: 0.1
High Value: 30.0

SeqNo: 6260
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Real

ParentLongName: ICU/PACU Arrival Labs

ParentShortName: **ICUPACULabs**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Hematocrit *SeqNo:* 6270
Short Name: **Hematocrit** *Core:* Yes
Section Name: Anesthesia ICU/PACU Care *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the hematocrit level from the first ABG obtained.
Low Value: 5.0
High Value: 70.0

Intent / Clarification:

Data Source: User
Format: Real

ParentLongName: ICU/PACU Arrival Labs
ParentShortName: **ICUPACULabs**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Initial Pulse Oximeter *SeqNo:* 6280
Short Name: **InitPulseOx** *Core:* Yes
Section Name: Anesthesia ICU/PACU Care *Harvest:* Yes
DBTableName: Operations
Definition: Indicate the first pulse oximeter measurement after arrival to ICU / PACU.
Low Value: 50.0
High Value: 100.0

Intent / Clarification:

Data Source: User
Format: Real

ParentLongName: Anesthesiology Data Collected
ParentShortName: **Anesthesia**
ParentHarvestCodes: 1
Parent Value: = "Yes"

Long Name: Temperature ICU/PACU Arrival *SeqNo:* 6290

Short Name:	**TempICUArr**	*Core:*	Yes
Section Name:	Anesthesia ICU/PACU Care	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the patient's temperature in degrees centigrade on arrival to the ICU/PACU.		
Low Value:	30.0		
High Value:	43.0		

Intent / Clarification:

Data Source:	User
Format:	Real
ParentLongName:	Anesthesiology Data Collected
ParentShortName:	**Anesthesia**
ParentHarvestCodes:	1
Parent Value:	= "Yes"

Long Name:	Temperature Measurement Site	*SeqNo:*	6300
Short Name:	**TempSite**	*Core:*	Yes
Section Name:	Anesthesia ICU/PACU Care	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate the location where the patient's temperature was measured.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)
ParentLongName:	Temperature ICU/PACU Arrival
ParentShortName:	**TempICUArr**
ParentHarvestCodes:	Is Not Missing
ParentValues:	Is Not Missing

Harvest Codes:

Code:	*Value:*
1	Forehead scan
2	Tympanic membrane
3	Skin
4	Rectal
5	Bladder
6	Oral
7	Axillary
9	Other

Long Name:	Temporary Pacemaker on Arrival In ICU/PACU	*SeqNo:*	6310
Short Name:	**TempPace**	*Core:*	Yes

Section Name: Anesthesia ICU/PACU Care
Harvest: Yes
DBTableName: Operations
Definition: Indicate the need for a temporary pacemaker on arrival to the ICU/PACU.

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: Anesthesia
ParentValue: 1
ParentHarvestCodes: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name: Temporary Pacemaker Site
SeqNo: 6320
Short Name: **TempPaceSite**
Core: Yes
Section Name: Anesthesia ICU/PACU Care
Harvest: Yes
DBTableName: Operations
Definition: Indicate the site of the temporary pacemaker.

Intent / Clarification:

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

ParentLongName: Temporary Pacemaker on Arrival In ICU/PACU
ParentShortName: **TempPace**
ParentHarvestCodes: 1
ParentValue: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Epicardial
2	Transvenous

Long Name: Type of Temporary Pacing
SeqNo: 6330
Short Name: **TempPaceType**
Core: Yes
Section Name: Anesthesia ICU/PACU Care
Harvest: Yes
DBTableName: Operations

Definition: Indicate the type of temporary pacing.

Intent / Clarification:

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

ParentLongName: Temporary Pacemaker on Arrival In ICU/PACU
ParentShortName: **TempPace**
ParentHarvestCodes: 1
ParentValue: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Atrial
2	Atrio-ventricular
3	Ventricular
9	Other

Long Name: Disposition Under Anesthesia
Short Name: **DispUnderAnes**
Section Name: Anesthesia ICU/PACU Care
DBTableName: Operations
Definition: Indicate patient disposition after completion of anesthetic management.

SeqNo: 6340
Core: Yes
Harvest: Yes

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: Anesthesia
ParentValue: 1
ParentHarvestCodes: = “Yes”

Harvest Codes:

Code:	*Value:*
1	Discharge home as planned after PACU/Recovery
2	Admit to hospital floor as planned
3	Admit to ICU as planned
4	Unplanned admission to hospital or ICU
8	Other location not listed above
9	Patient expired while under anesthetic management

Long Name:	Peri-Anesthetic Demise (Within 24 Hours of Last Anesthesia End Time)	*SeqNo:*	6350
Short Name:	**PeriAnesDemise**	*Core:*	Yes
Section Name:	Anesthesia ICU/PACU Care	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether the patient died within 24 hours of end of anesthesia.		

Intent / Clarification:

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

ParentLongName: Anesthesiology Data Collected
ParentShortName: Anesthesia
ParentValue: 1
ParentHarvestCodes: = "Yes"

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Anesthesia Adverse Events Unique Record Identifier	*SeqNo:*	6360
Short Name:	**AAEUniqueID**	*Core:*	Yes
Section Name:	Anesthesia Adverse Events	*Harvest:*	Yes
DBTableName:	AAdvEvents		
Definition:	Unique identifier for the record in the Anesthesia Adverse Events table.		

Intent / Clarification:

Data Source: Automatic
Format: Text

ParentLongName: Anesthesiology Data Collected
ParentShortName: Anesthesia
ParentValue: 1
ParentHarvestCodes: = "Yes"

Long Name:	Anesthesia Adverse Events Link to Operation Table	*SeqNo:*	6370
Short Name:	**OperationID**	*Core:*	Yes
Section Name:	Anesthesia Adverse Events	*Harvest:*	Yes
DBTableName:	AAdvEvents		
Definition:	An arbitrary, unique value generated by the software that permanently		

identifies each operation record in the participant's database. This field is the foreign key that links the Anesthesia Adverse Events record with the associated record in the Operations table.

Intent / Clarification:

Data Source: Automatic
Format: Text

ParentLongName: Anesthesiology Data Collected
ParentShortName: Anesthesia
ParentValue: 1
ParentHarvestCodes: = "Yes"

Anesthesia Adverse Events

Long Name: Anesthesia Adverse Event
Short Name: **AnesAdvEvent**
Section Name: Anesthesia Adverse Events
DBTableName: AAdvEvents
Definition: Indicate the anesthesia-related adverse events that occurred.

SeqNo: 6380
Core: Yes
Harvest: Yes

Intent / Clarification:

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

Harvest Codes and Value Definitions:

Code:	Value:	Definition:
10	None	No adverse events recognized.
20	Oral/Nasal Injury-Bleeding	Indicate whether the patient experienced an oral or nasal injury such as lip or gum laceration or injury or epistaxis.
30	Respiratory Arrest	Indicate whether the patient experienced preoperative, intraop or post-op respiratory arrest requiring UNANTICIPATED airway support such as placement of an LMA or ETT where NOT part of the original anesthetic plan.
40	Difficult Intubation/Reintubation	Indicate whether the patient experienced an UNANTICIPATED difficult intubation or re-intubation (not for a KNOWN difficult intubation that was planned for).
50	Stridor / Sub-glottic stenosis	Indicate whether the patient experienced post-extubation stridor or sub-glottic stenosis requiring therapy such as racemic epinephrine, steroids or HeliOx therapy.
60	Extubation	Indicate whether the patient experienced an extubation in the OR (or procedure location) or during patient transfer that was NOT PART of anesthetic plan.

70	Endotracheal Tube Migration	Indicate whether the patient's ETT required repositioning after initial intubation and securing (either too deep or too high). I.e. Mainstem Intubation recognized only in ICU after CXR.
80	Airway Injury	Indicate whether the patient experienced an airway injury RELATED TO VENTILATION such as barotrauma or pneumothorax.
410	Hemoptysis	Blood or blood-stained sputum expectorated or suctioned from the bronchi, trachea, larynx or lungs. This MIGHT NOT be due to anesthesia (i.e. after balloon dilation of pulmonary arteries).
450	Laryngospasm requiring medication	An uncontrolled/involuntary spasm of vocal cords REQUIRING MEDICATION to treat (i.e. NOT positive pressure alone).
400	Bronchospasm	A sudden constriction of the muscles in the walls of the bronchioles presenting with expiratory wheeze, prolonged exhalation or complete silence on auscultation associated with high airway pressures.
470	Unplanned need to remain intubated post-procedure due to anesthesia factors	Examples might include excessive sedation at end of procedure or muscle weakness due to residual paralysis or muscle weakness due to residual paralysis.
90	Arrythmia – CVL Placement	Indicate whether the patient experienced an arrhythmia during CVL placement REQUIRING TX OTHER THAN WITHDRAWAL OF WIRE.
100	Myocardial Injury – CVL Placement	Indicate whether the patient experienced a myocardial perforation or injury during CVL placement. This might only be recognized by finding bloody pericardial fluid or effusion after sternotomy or may cause tamponade physiology.
110	Vascular Compromise – CVL Placement	Indicate whether the patient experienced a vascular compromise (e.d. ischemic leg, venous obstruction) SECONDARY TO CVL placement.
120	Pneumothorax – CVL Placement	Indicate whether the patient experienced a pneumontorax during CVL placement.
130	VASCULAR ACCESS	Indicate whether the anesthesiologist had difficulty with vascular access requiring MORE THAN ONE HOUR OF ATTEMPTED IV/CVL/ARTERIAL access time.
140	Hematoma requiring relocation of catheter placement	Indicate whether the patient experienced a hematoma requiring cacellation of procedure, an additional surgical exploration or relocation of a catheter due to hematoma at the original attempt site.
150	Arterial Puncture	Indicate whether the patient experienced an arterial puncture with hematoma formation, hemodynamic consequence or neurolgic injury.
160	IV/IA Air Embolism	Indicate whether the patient experienced an intravenous or intraarterial AIR EMBOLUS causing hemodynamic, local or systemic injury.
350	Arterial Line Placement – Extremity Ischemia	Impaired perfusion or ischemia distal to arterial line insertion site or attempted insterion site.
380	Intravenous Infiltration	Extravasation of fluid, blood or medication into tissue surrounding IV access site.
170	Bleeding – Regional Anesthesia site	Indicate whether the patient experienced bleeding at the regional anesthetic site or with aspiration or recognized post-operatively such as epidural hematoma.

180	Intrathecal Puncture – Regional	Indicate if during placement of an epidural injection an intrathecal puncture occurred (wet tap) that was not part of the anesthetic plan.
190	Local Anesthetic Toxicity – Regional	Indicate whether the patient experienced signs or symptoms of local anesthetic toxicity during administration of regional anesthesia.
200	Neurologic Injury – Regional	Indicate if a neurologic injury occurred potentially associated with regional anesthetic (i.e. epidural hematoma leading to neurologic symptoms).
210	Anaphylaxis/Anaphylactoid Reaction	Indicate whether the patient experienced an anaphylaxis/anaphylactoid type reaction temporally associated with the administration of a medication OTHER THAN PROTAMINE. May manifest as bronchospasm or hypotension or cutaneous changes.
220	Non-Allergic Drug Reaction	Indicate whether the patient experienced a non-allergic response to a medication (i.e. “Red Man” syndrome with vancomycin or hemodynamic changes associated with speed of administration).
230	Medication Administration	Indicate if a medication was administered that was NOT part of the anesthetic plan at the time of administration.
240	Medication Dosage	Indicate if a medication that WAS part of the anesthetic plan was given at the WRONG DOSE or WRONG TIME.
250	Intraoperative Recall	Indicate whether the patient experienced any recall of intra-procedural events.
260	Malignant Hyperthermia	Indicate whether patient experienced either a SUSPECTED or CONFIRMED MH episode REQUIRING DANTROLENE ADMINISTRATION.
270	Protamine Reaction	Indicate whether the patient experienced a SIGNIFICANT reaction requiring additional intervention other than slowing the rate of administration.
280	Cardiac Arrest related to anesthesia care	Indicate whether the patient experienced a cardiac arrest REQUIRING CPR related to anesthesia care.
490	Cardiac Arrest UNRELATED to anesthesia care	Indicate whether the patient experienced an event requiring CPR that was NOT DIRECTLY RELATED TO ANESTHESIA (i.e. during surgical or cardiac cath manipulations).
510	Hypercyanotic Episode (“Tet spell”) UNRELATED to surgical manipulation	Indicate whether the patient experienced a hypercyanotic episode (desaturation MORE THAN 20% from baseline) NOT related to surgical or catheter manipulation.
500	Pulmonary Hypertensive Crisis unrelated to surgical manipulation	A suspected or proven rise in pulmonary artery resistance/pressure that was NOT related to surgical manipulation.
290	TEE-Related esophageal bleeding/rupture	Indicate whether the patient experienced esophageal bleeding or rupture during TEE placement or manipulation.
300	TEE-related Esophageal Chemical Burn	Indicate whether the patient experienced esophageal injury due to the TEE probe cleaning solution.
310	TEE-Related AIRWAY COMPROMISE	Indicate whether the patient experience an airway compromise during TEE placement or manipulation REQUIRING REMOVAL OF TEE.
315	TEE-Related	Indicate whether the patient experienced hemodynamic.
320	TEE-Related EXTUBATION	Indicate if the ETT was displaced from the trachea

		during TEE placement/manipulation/removal
330	Complications during patient transfer	Indicate if the patient experienced any trauma related to transfers from the bed to procedure table or bed to stretcher or similar transfers. Might include inadvertent removal of lines or patient falls. Inadvertent extubation is coded under EXTUBATION.
340	Peripheral Nerve Injury due to positioning	Indicate if the patient experience a neurologic deficit (permanent or temporary) due to patient positioning during anesthesia.
370	Anesthesia Equipment Malfunction/Failure	Mechanical equipment failure or malfunction impacting delivery of anesthesia care (such as delaying surgery for repair or changing planned room)
390	Integument Injury (skin breakdown or dehiscence)	Integument injury such as skin breakdown, dehiscence of wound, pressure ulcer or alopecia caused by positioning during anesthesia or adhesive tape or monitors (such as NIRS probes)
480	Ocular Injury (corneal abrasion or injury)	Injury to the eyes during anesthetic management
420	Post-operative Nausea/Vomiting requiring Medication	Sustained period of Nausea/Vomiting REQUIRING UNPLANNED ADMISSION OR READMISSION OR DELAYED DISCHARGE and intervention
430	Vomiting or Aspiration on Induction/Emergence	Vomiting, with OR without aspiration, during induction of anesthesia or emergence from anesthesia
440	Emergence Delirium requiring Medication	A dissociated state of consciousness following general anesthesia with inconsolable crying, irritability or uncooperation REQUIRING MEDICATION ADMINISTRATION OTHER THAN FOR PAIN
900	Other	Unlisted adverse event related to anesthesia care

Long Name: Anesthesia Adverse Event – Additional Intervention Required
SeqNo: 6381
Short Name: **AnesAdEventInt**
Core: Yes
Section Name: Anesthesia Adverse Events
Harvest: Yes
DBTableName: AAdvEvents
Definition: Indicate whether additional intervention was required as a result of this adverse event.

Intent / Clarification:

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

ParentLongName: Anesthesia Adverse Event
ParentShortName: **AnesAdvEvent**
ParentHarvestCodes: <>10 And Is Not Missing
ParentValue: Is Not "None" And Is Not Missing
Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Temporary Yes/No Field #1	*SeqNo:*	6721
Short Name:	**TempYN1**	*Core:*	Yes
Section Name:	STS Temporary Fields	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	This is a temporary field that should not be used for data collection until expressly instructed to by the STS.		

Intent / Clarification:

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

Harvest Codes:

Code:	*Value:*
1	Yes
2	No

Long Name:	Temporary Yes/No Field #2	*SeqNo:*	6722
Short Name:	**TempYN2**	*Core:*	Yes
Section Name:	STS Temporary Fields	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	This is a temporary field that should not be used for data collection until expressly instructed to by the STS.		

Intent / Clarification:

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

Harvest Codes:

Code:	Value:
1	Yes
2	No
3	Not Applicable

Long Name:	Temporary Date Field	*SeqNo:*	6723
Short Name:	**TempDt**	*Core:*	Yes
Section Name:	STS Temporary Fields	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	This is a temporary field that should not be used for data collection until expressly instructed to by the STS.		

Intent / Clarification:

Data Source: User
Format: Date - mm/dd/yyyy

Long Name: Temporary Coded Field
Short Name: **TempCode**
Section Name: STS Temporary Fields
DBTableName: Operations
Definition: This is a temporary field that should not be used for data collection until expressly instructed to by the STS.

SeqNo: 6724
Core: Yes
Harvest: Yes

Intent / Clarification:

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

Harvest Codes:

Code:	*Value:*
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20

Long Name: Temporary Text Field
Short Name: **TempText**
Section Name: STS Temporary Fields
DBTableName: Operations
Definition: This is a temporary field that should not be used for data collection until expressly instructed to by the STS.

SeqNo: 6725
Core: Yes
Harvest: Yes

Intent / Clarification:

Data Source: User
Format: Text