

Administrative

Field Name Software Vendor Name

Short Name VendorID

Definition Name (assigned by STS) given to identify software vendor (up to 8 characters).

Field Name Software Version

Short Name SoftVrsn

Definition Vendor's software product name and version number identifying the software which created this record (assigned by vendor).

Field Name STS Data Version

Short Name DataVrsn

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. It will likely be the version implemented in the software at the time the data was collected and the record was created. This should be entered into the record automatically by software.

A. Administrative

Participant ID: |_|_|_|_|_|_|_|_|_|_| Cost Link Field: |_____| Optional STS Trial Link Number: |_|_|_|_|_|_|_|_|_|_| Optional

Field Name Participant ID

Short Name ParticID

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.

Field Name Record ID

Short Name RecordID

Definition Unique number that permanently identifies each record in the database. This number can never be changed or reused. Note: Record ID is not, and should not be, the patient's medical record number at site.

Field Name Cost Link

Short Name CostLink

Definition Participant specified Cost link id that does NOT include the patient's medical record number as part of the

Field Name STS Trial Link Number

Short Name STSTLink

Definition STS Trial Link Number is a unique number assigned to each STS supported clinical trial. This ID is controlled by assignment of the STS.

Field Name Patient ID

Short Name PatID

Definition This is an arbitrary number (not a recognizable ID like SSN or Medical Record Number) that uniquely and permanently identifies each patient. Once assigned to a patient, this can never be changed or reused. This field is only necessary if the software uses a separate patient table.

Field Name Record Complete?

Short Name RecComp

Definition Indicates whether the record data is complete or not. This entry is made by the software data quality check process. This field does not impact a procedure's harvest status.

Demographics

B. Demographics	
Patient Medical Record Number:	_____ not harvested
Last Name:	_____ First: _____ MI: _____ not harvested Date of Birth: __/__/____ optional harvest
Age:	_____ system calculation
Gender:	(Male) (Female)
Race:	(Caucasian) (Black) (Hispanic) (Asian) (Native American) (Other)
Social Security (or National ID) Number:	_____ not harvested
ZIP or Postal Code:	_____ optional harvest
Referring Cardiologist's Name:	_____ not harvested
Referring Physician's Name:	_____ not harvested

Field Name Patient Medical Record Number

Definition Patient assigned hospital medical record number

Field Name Patient Last Name

Short Name PatLName

Definition Patient Last Name

Field Name Patient First Name

Short Name PatFName

Definition Patient First Name

Field Name Patient M.I.

Short Name PatMInit

Definition Patient Middle Initial

Field Name Date of Birth

Short Name DOB

Definition Patient Date of Birth

Field Name Patient Age

Short Name Age

Definition Patient age in years, at time of surgery. This should be calculated from the date of birth and the date of surgery, according to the convention used in the USA (the number of birthdate anniversaries reached by the date of surgery).

Field Name Gender

Short Name Gender

Definition Patient Gender

Field Name Social Security #

Short Name SSN

Definition 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.

Field Name Medical Record Number

Short Name MedRecN

Definition Patient medical record number at the hospital where surgery occurred.

Field Name Patient ZIP Code

Short Name PatZIP

Definition The ZIP Code of the patient's residence. Outside the USA, this data may be known by other names such as Postal Code.

Field Name Race

Short Name Race

Definition Patient Race

Field Name Referring Card-Cardiologist

Short Name RefCard

Definition Referring Cardiologist's Name

Field Name Referring Physician

Short Name RefPhys

Definition Referring Physician's Name

Hospitalization

C. Hospitalization	
Hospital Name: _____	controlled list Primary Payor: _____ not harvested
Date of Admission: __/__/_____	Date of Surgery: __/__/_____ Date of Discharge: __/__/_____
Same Day Elective Admission: No Yes	
Initial ICU Hours: _____	Readmn to ICU: No Yes if yes, Additional ICU Hours _____ Total Hours in ICU: _____calculated

Field Name Hospital Name

Short Name HospName

Definition The full name of the facility where the procedure was performed.

Field Name Hospital ZIP Code

Short Name HospZIP

Definition The ZIP Code of the hospital. Outside the USA, this data may be known by other names such as Postal

Field Name Hospital State

Short Name HospStat

Definition The State in which the hospital is located.

Field Name Payor

Short Name Payor

Definition Primary Payor

Field Name Date of Admission

Short Name AdmitDt

Definition Date of Admission

Field Name Date of Surgery

Short Name SurgDt

Definition Date of Surgery

Field Name Date of Discharge

Short Name DischDt

Definition Date of Discharge

Field Name Same Day Elective Admit

Short Name SameDay

Definition Patient admitted for scheduled elective procedure on same day as procedure.

Field Name Initial ICU hours

Short Name ICUInHrs

Definition Indicate the number of hours the patient was initially in the ICU post operation. Leave blank if the patient expired in the OR.

Field Name Readmission to ICU

Short Name ICUReadm

Definition Was the patient readmitted to the Intensive Care Unit after an initial stay. The patient must have been transferred to a step-down or intermediate care ward and then returned to Intensive Care Unit.

Field Name Additional ICU Hours

Short Name ICUAdHrs

Definition Indicate the number of additional hours spent in the Intensive Care Unit.

Field Name Total Hrs ICU

Short Name TotHrICU

Definition Indicate the total number of hours post operation for which the patient was in the ICU. Leave blank if the patient expired in the OR.

Pre-Operative Risk Factors

D. Pre-Operative Risk Factors									
Weight:	_____	(kg)	Height:	_____	(cm)				
Smoker:	No	Yes	→ if yes,	Current Smoker:	No	Yes			
Family History of CAD:	No	Yes							
Diabetes:	No	Yes	→ if yes, select one:	Diabetes Control:	(None)	(Diet)	(Oral)	(Insulin)	Hypercholesterolemia:
	No	Yes							
Last Creatinine Preop:	_____								
Renal Failure:	No	Yes	→ if yes,	Dialysis:	No	Yes			
Hypertension:	No	Yes							
Cerebrovascular Accident:	No	Yes	→ if yes,	When:	(Recent <= 2 weeks)	(Remote > 2 weeks)			
Infectious Endocarditis:	No	Yes	→ if yes,	Infectious Endocarditis Type:	(Treated)	(Active)			
Chronic Lung Disease:	(No)	(Mild)	(Moderate)	(Severe)					
Immunosuppressive Trtment:	No	Yes							
Peripheral Vascular Disease:	No	Yes							
Cerebrovascular Disease:	No	Yes	→ if yes,	CVD Type:	(Coma)	(CVA)	(RIND)	(TIA)	(Non Invasive > 75%)
	(Previous Carotid Surgery)								

Field Name Weight (kg)

Short Name WeightKg

Definition Indicate the weight of the patient in kilograms.

Field Name Height (cm)

Short Name HeightCm

Definition Indicate the height of the patient in centimeters.

Field Name RF-Smoker

Short Name Smoker

Definition A history confirming any form of tobacco use in the past (cigarettes, cigar, tobacco chew, etc.).

Field Name RF-Smoker-Current

Short Name SmokCurr

Definition Patients with a use of tobacco (cigarettes, cigar, tobacco chew etc.) within one month of surgery are considered to be current smokers.

Field Name RF-Family History CAD

Short Name FHCAD

Definition Whether any direct blood relatives (parents, siblings, children) have had any of the following at age <55:
a. Angina
b. myocardial infarction (MI)
c. sudden cardiac death without obvious cause.

Field Name RF-Diabetes

Short Name Diabetes

Definition A history of diabetes, regardless of duration of disease or need for anti-diabetic agents.

Field Name RF-Diabetes-Control

Short Name DiabCtrl

Definition Method of diabetic control, at time of intervention. Code the control method patient presented with on admission. Patients placed on a pre-operative diabetic pathway of Insulin drip but at admission were controlled with diet or oral method are not coded as insulin dependent. Choices are:
None = No treatment for diabetes.
Diet = Diet treatment only.
Oral = Oral agent treatment.
Insulin = Insulin treatment (includes any combination with insulin).

Field Name RF-Hyperchol

Short Name Hyprchol

Definition Whether the patient has a history of hypercholesterolemia diagnosed and or treated by a physician. Criteria can include documentation of:
a. TC > 200
b. LDL >= 130
c. HDL < 30
d. Admission cholesterol > 200 mg/dl.

Field Name RF-Last Creat Lvl

Short Name CreatLst

Definition Most recent prior to day of surgery. A creatinine level should be collected on all patients for consistency, even if they have not prior history. A creatinine value is a high predictor of a patient's outcome and used in the Predicted Risk Models.

Field Name RF-Renal Fail

Short Name RenFail

Definition Is there a documented history of renal failure? Does the patient have a history of a creatinine > 2.0? Prior renal transplant patients are not included as pre-op renal failure unless since transplantation their creatinine has been or currently is > 2.0.

Field Name RF-Renal Fail-Dialysis

Short Name Dialysis

Definition Is the patient on dialysis preoperatively?

Field Name RF-Hypertension

Short Name Hypertn

Definition Does the patient have a diagnosis of hypertension, documented by one of the following:
a. Documented history of hypertension diagnosed and treated with medication, diet and/or exercise.
b. Blood pressure >140 systolic or >90 diastolic on at least 2 occasions.
c. Currently on antihypertensive medication.

Field Name RF-CVA

Short Name CVA

Definition A central neurologic deficit persisting more than 72 hours. (i.e. extremity weakness or loss of motion, loss of consciousness, loss of speech, field cuts).

Field Name RF-CVA-When

Short Name CVAWhen

Definition Those events occurring within two weeks of the surgical procedure are considered recent, while all others are considered remote.

Field Name RF-Infect Endocard

Short Name InfEndo

Definition A patient presenting with valvular disease of infectious etiology with positive blood culture.

Field Name RF-Infect Endocard Type

Short Name InfEndTy

Definition If the patient is currently being treated for endocarditis, the disease is considered active. If no antibiotic medication (other than prophylactic medication) is being given at the time of surgery, then the infection is considered treated.

Field Name RF-Chronic Lung Dis

Short Name ChrLungD

Definition Specify if the patient has chronic lung disease, and the severity level according to the following classification:
No;
Mild: FEV1 60% to 75% of predicted, and/or on chronic inhaled or oral bronchodilator therapy.
Moderate: FEV1 50% to 59% of predicted, and/or on chronic steroid therapy aimed at lung disease.

Field Name RF-Immunosuppressive Rx

Short Name ImmSupp

Definition Use of any form of immunosuppressive therapy (i.e. systemic steroid therapy) within 30 days preceding the operative procedure. Does not include topical applications and inhalers

Field Name RF-Periph Vasc Dis

Short Name PVD

Definition Whether the patient has Peripheral Vascular Disease, as indicated by claudication either with exertion or rest; amputation for arterial insufficiency; aorto-iliac occlusive disease reconstruction; peripheral vascular bypass surgery, angioplasty, or stent; documented AAA, AAA repair, or stent; positive non-invasive testing documented. Choose one of the following:
Yes
No

Field Name RF-Cerebrovascular Dis

Short Name CVD

Definition Whether the patient has Cerebro-Vascular Disease, documented by any one of the following: Unresponsive coma > 24 hrs; CVA (symptoms > 72 hrs after onset); RIND (recovery within 72 hrs); TIA (recovery within 24 hrs); Non-invasive carotid test with > 75% occlusion.; or Prior carotid surgery.
Choose one of the following:
Yes
No

Field Name RF-Cerebrovascular Dis Type

Short Name CVType

Definition What type of Cerebro-Vascular Disease does the patient have? Choose one of the following:
Unresponsive coma > 24 hrs.
CVA (symptoms > 72 hrs after onset).
RIND (recovery within 72 hrs).
TIA (recovery within 24 hrs).
Non-invasive carotid test with > 75% occlusion.
Prior Carotid Surgery.

Previous Interventions

D.	Previous Interventions	Previous CV Interventions:	No	Yes	if yes, complete this section
# of Prior Cardiac Operations Requiring Cardiopulmonary Bypass: _____		# of Prior Cardiac Operations Without Cardiopulmonary Bypass: _____			
Previous Surgery:					
Coronary Artery Bypass:	No	Yes	Valve:	No	Yes
Prior PTCA including Balloon and/or Atherectomy:	No	Yes	→ if yes,	Interval: <= 6 hours	> 6 hours
Previous non-surgical Stent Placement:	No	Yes	→ if yes,	Interval: <= 6 hours	> 6 hours
Thrombolysis:	No	Yes	→ if yes,	Interval: <= 6 hours	> 6 hours
Previous non-surgical Balloon Valvuloplasty:	No	Yes			

Field Name Prev CV Intervent

Short Name PrCVInt

Definition Has the patient undergone any previous cardiovascular intervention, either surgical or non-surgical, which may include those done during the current admission. This includes thrombolytic therapy for cardiac

Field Name Prior Card Op Req Bypass-#

Short Name PrCBNum

Definition Prior to this operation, how many cardiac surgical operations were performed on this patient utilizing cardiopulmonary bypass.

Field Name Prior Card Op No Bypass-#

Short Name PrCNum

Definition Prior to this operation, how many cardiac surgical operations were performed on this patient without cardiopulmonary bypass.

Field Name Prev CAB

Short Name PrCAB

Definition Previous Coronary Artery Bypass surgery by any approach.

Field Name Prev Valve

Short Name PrValve

Definition Previous surgical replacement and/or repair of a cardiac valve, by any approach.

Field Name Prev Oth Card

Short Name PrOthCar

Definition Any other previous cardiac surgery which traversed the anterior mediastinum, including surgery on the ascending aorta and/or arch.

Field Name PTCA/Ather

Short Name PrPTCA

Definition Was Percutaneous Transluminal Coronary Angioplasty and/or Coronary Atherectomy done at any time prior to this surgical procedure (which may include during the current admission).

Field Name PTCA/Ather Intvl(PTCA-Surg)

Short Name PrPTIntv

Definition The time between PTCA/Atherectomy and surgical repair of coronary occlusion:
<= 6 hours
> 6 hours

Field Name Prev Non Surg-Stent

Short Name PrNSStnt

Definition Did the patient previously have insertion of an intra-coronary stent at any time prior to this surgical procedure (which may include during the current admission)?

Field Name Stent Intvl

Short Name StntIntv

Definition The time between Stent and surgical repair of coronary occlusion:
<=6 hours
>6 Hours.

Field Name Thrombolysis

Short Name Thrmblys

Definition Was Thrombolytic treatment given for cardiac indications at any time prior to this surgical procedure, which may include during the current admission?

Field Name Thrombolysis-Intvl

Short Name ThrIntvl

Definition The time between thrombolysis treatment and surgical repair of coronary occlusion:
<= 6 hours
> 6 hours.

Field Name Prev Non Surg-Balloon Valv

Short Name PrNSBall

Definition Was a previous Non surgical Balloon Valvuloplasty performed.

Pre Operative Cardiac Status

F. Pre Operative Cardiac Status											
Myocardial Infarction:	No	Yes	→ if yes, When:	(≤ 6 hours)	(> 6 hours but <24 hours)	(1 - 7 days)	(8 - 21 days)	(> 21 days)			
Congestive Heart Failure:	No	Yes									
Angina:	No	Yes	→ if yes, Type:	Stable	Unstable ↓ if unstable						
			Unstable Type:	(Rest Angina)	(New Class 3)	(Recent Accel)	(Variant Angina)	(Non-Q MI)	(Post- Infarct Angina)		
Cardiogenic Shock:	No	Yes	→ if yes Type:	(Refractory Shock)	(Hemodynamic Instability)						
Resuscitation:	No	Yes									
Arrhythmia:	No	Yes	→ if yes, Type:	(Sust VT/VF)	(Heart Block)	(AFib/Flutter)					
Classification:	CCS:	0	I	II	III	IV	NYHA	I	II	III	IV

Field Name MI

Short Name MI

Definition Patient hospitalized with an MI documented in the medical record. Two of the following four criteria are necessary:

- Prolonged (> 20 min) typical chest pain not relieved by rest and/or nitrates.
- Enzyme level elevation: either (1) CK-MB > 5% of total CPK; (2) CK greater than 2x normal; (3) LDH subtype 1 > LDH subtype 2; or (4) troponin > 0.2 micrograms / ml.
- Any wall motion abnormalities as documented by LV Gram, Echo, Muga Scan and or EF<45%.
- Serial ECG (at least two) showing changes from baseline or serially in ST-T and/or Q waves that are 0.03 seconds in width and/or > or + one third of the total QRS complex in two or more contiguous leads.

Field Name MI-When

Short Name MIWhen

Definition Time period between the last documented myocardial infarction and surgery.

Field Name Congestive Heart Failure

Short Name CHF

Definition If patient has symptoms, have they occurred within 2 weeks prior to surgery? This does not include patients with chronic or stable non-symptomatic compensated CHF. Does the patient have one or more of the following:

- * Paroxysmal nocturnal dyspnea (PND)
- * Dyspnea on exertion (DOE) due to heart failure
- * Chest X-Ray (CXR) showing pulmonary congestion.

Field Name Angina

Short Name Angina

Definition Whether the patient has angina pectoris present leading up to or during the hospitalization within 24 hours prior to surgical intervention.

Field Name Angina-Type

Short Name AngType

Definition Indicate the type of angina present within 24 hours of the surgical procedure:

Stable: Angina which is controlled by oral or transcutaneous medication.

Unstable: The presence of on-going refractory (difficult, complicated, and/or unmanageable) ischemia which necessitates the increase or initiation of angina control therapies that may include: nitroglycerin drip, heparin drip, IABP placement.

Field Name Angina Unstable Type

Short Name AngUnstT

Definition If the patient has Unstable Angina, which presentation?

- * Rest Angina.
- * New onset exertional angina of at least Canadian Cardiovascular Society Class (CCSC) III in severity.
- * Recent acceleration in pattern and increase of one CCSC class to at least CCSC Class III.
- * Variant angina.
- * Non-Q wave Myocardial Infarction.
- * Post-infarction angina.

Field Name Cardiogenic Shock

Short Name CarShock

Definition Is the patient, at the time of procedure, in a clinical state of hypoperfusion according to either of the following criteria:

1. Systolic BP < 80 and/or Cardiac Index < 1.8 despite maximal treatment;
 2. IV inotropes and/or IABP necessary to maintain Systolic BP > 80 and/or CI > 1.8.
- Choose Yes or No.

Field Name Cardiogenic Shock Type

Short Name CarShTyp

Definition Which of the following types of cardiogenic shock is present? Select one:

- Refractory Shock: Systolic BP < 80 and/or Cardiac Index < 1.8 despite maximal treatment
Hemodynamic Instability: IV inotropes and/or IABP necessary to maintain Systolic BP > 80 and CI > 1.8.

Field Name Resuscitation

Short Name Resusc

Definition The patient required cardiopulmonary resuscitation within one hour before the start of the operative procedure.

Field Name Arrhythmia

Short Name Arrhyth

Definition Is there a preoperative arrhythmia present within two weeks of the procedure, by clinical documentation of any one of the following:

- Atrial fibrillation/flutter requiring Rx; Heart block; Sustained Ventricular Tachycardia or Ventricular Fibrillation requiring cardioversion and/or IV amiodarone.
Choose one of the following:
Yes
No

Field Name Arrhythmia Type

Short Name ArrhyTyp

Definition Which arrhythmia is present within two weeks of the procedure; choose one:

- Sustained Ventricular Tachycardia or Ventricular Fibrillation requiring cardioversion and/or IV amiodarone.
Heart block.
Atrial fibrillation/flutter requiring Rx.

Field Name Classification-CCS

Short Name ClassCCS

Definition Canadian Cardiovascular Society Classification. This classification represents level of functional status related to frequency and intensity of angina. The CCS may not be the same as the NYHA classification for same evaluation time period. Code the highest class leading to episode of hospitalization and/or intervention:
0 = No angina.

I = Ordinary physical activity, such as walking or climbing the stairs does not cause angina. Angina may occur with strenuous, rapid or prolonged exertion at work or recreation.
 II = There is slight limitation of ordinary activity. Angina may occur with moderate activity such as walking or climbing stairs rapidly, walking uphill, walking or stair climbing after meals or in the cold, in the wind, or under emotional stress, or walking more than two blocks on the level, and climbing more than one flight of stairs at normal pace under normal conditions.
 III = There is marked limitation of ordinary physical activity. Angina may occur after walking one or two blocks on the level or climbing one flight of stairs under normal conditions at a normal pace.
 IV = There is inability to carry on any physical activity without discomfort; angina may be present at rest.

Field Name Classification-NYHA

Short Name ClassNYH

Definition NYHA: New York Heart Association Class. NYHA classification represents the overall functional status of the patient in relationship to both congestive heart failure and angina. The NYHA may not be the same as the CCS classification for the same evaluation period. Code the highest level leading to episode of hospitalization and/or procedure.
 I = Patients with cardiac disease but without resulting limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, dyspnea, or anginal pain.
 II = Patients with cardiac disease resulting in slight limitation of physical activity. They are comfortable at rest. Ordinary physical activity results in fatigue, palpitations, dyspnea, or anginal pain.
 III = Patients with cardiac disease resulting in marked limitation of physical activity. They are comfortable at rest. Less than ordinary physical activity results in fatigue, palpitations, dyspnea, or anginal pain.
 IV = Patients with cardiac disease resulting in inability to carry on any physical activity without discomfort. Symptoms of cardiac insufficiency or of the anginal syndrome may be present even at rest. If any physical activity is undertaken, discomfort is increased.

Pre Operative Medications

G. Pre Operative Medications														
Digitalis:	No	Yes	Beta Blockers:	No	Yes	Nitrates – I.V.:	No	Yes	Anticoagulants:	No	Yes	Diuretics:	No	Yes
Inotropic Agents:	No	Yes	Steroids:	No	Yes	Aspirin:	No	Yes	Ace Inhibitors:	No	Yes	Oth Anti-Platelets:	No	Yes

Field Name Meds-Digitalis

Short Name MedDig

Definition Has the Patient received Digitalis within 24 hours preceding surgery?

Field Name Meds-Beta Blockers

Short Name MedBeta

Definition Has the Patient received Beta Blockers within 24 hours preceding surgery?

Field Name Meds-ACE Inhibitors

Short Name MedACEI

Definition Has the patient received ACE-inhibitors within 24 hours preceding surgery?

Field Name Meds-Nitrates-I.V.

Short Name MedNitIV

Definition Has the Patient received Nitrates within 24 hours preceding surgery?

Field Name Meds-Antiplatelets
Short Name MedAPlt
Definition Has the Patient received any other Anti-platelets within 24 hours preceding surgery?

Field Name Meds-Anticoagulants
Short Name MedACoag
Definition Has the Patient received Anticoagulants (incl. IIA, IIIB inhibitors) within 48 hours preceding surgery?

Field Name Meds-Diuretics
Short Name MedDiur
Definition Has the Patient received Diuretics within 24 hours preceding surgery?

Field Name Meds-Inotropes
Short Name MedInotr
Definition Has the Patient received Inotropic Agents within 48 hours preceding surgery?

Field Name Meds-Steroids
Short Name MedSter
Definition Patient taking within 24 hours of surgery and does not include a one time dose related to prophylaxis therapy (i.e. IV dye exposure for cath procedure or surgery pre-induction period) Non-systemic medications are not included in this category (i.e. nasal sprays, topical creams)

Field Name Meds-Aspirin
Short Name MedASA
Definition Has the Patient received Aspirin within 5 days preceding surgery?

Pre Operative Hemodynamics & Cath

H. Pre Operative Hemodynamics and Cath												
Number of Diseased Coronary Vessels: (None) (One) (Two) (Three)												
Left Main Disease > 50%: No Yes												
Ejection Fraction Done? No Yes if yes, Ejection Fraction: _____ → Method: (LV gram) (Radionucleotide) (Estimate) (ECHO)												
Pulmonary Artery Mean Pressure Done? No Yes if yes, Pulmonary Artery Mean Pressure: _____												
Aortic Stenosis:		No	Yes	If yes, Gradient: _____		Aortic Insufficiency:		0=None	1=Trivial	2=Mild	3= Moderate	4= Severe
Mitral Stenosis:		No	Yes			Mitral Insufficiency:		0=None	1=Trivial	2=Mild	3= Moderate	4= Severe
Tricuspid Stenosis:		No	Yes			Tricuspid Insufficiency:		0=None	1=Trivial	2=Mild	3= Moderate	4= Severe
Pulmonic Stenosis:		No	Yes			Pulmonic Insufficiency:		0=None	1=Trivial	2=Mild	3= Moderate	4= Severe

Field Name Num Dis Vessels
Short Name NumDisV
Definition The number of major coronary vessel systems (LAD system, Circumflex system, and/or Right system) with > 50% narrowing in any angiographic view. NOTE: Left main disease (>50%) is counted as TWO vessels (LAD and Circumflex). For example, left main and RCA would count as three total. Select from the following:
 None (no significant coronary obstructive disease)
 One
 Two
 Three

Field Name Left Main Dis > 50%

Short Name LMainDis

Definition Left Main Coronary Disease is present when there is > 50% compromise of vessel diameter in any angiographic view.

Field Name Hemo Data-EF Done

Short Name HDEFD

Definition Was the Ejection Fraction measured pre-operatively?

Field Name Hemo Data-EF

Short Name HDEF

Definition The percentage of the blood emptied from the ventricle at the end of the contraction. Use the most recent determination prior to intervention. Enter a percentage in the range of 5 - 90.

Field Name Hemo Data-EF Method

Short Name HDEFMeth

Definition How was the Ejection Fraction measurement information obtained?
LV Gram: Left Ventriculogram
Radionuclide: MUGA Scan
Estimate: From other calculations, based upon available clinical data.
ECHO: Echocardiogram

Field Name Hemo Data - HDPA Mean Done

Short Name HDPAD

Definition Was the mean pulmonary artery pressure measured?

Field Name Hemo Data-PA Mean

Short Name HDPAMean

Definition Mean pulmonary artery pressure in mm Hg, recorded from catheterization data or Swan-Ganz catheter BEFORE the induction of anesthesia.

Field Name VD-Stenosis-Aortic

Short Name VDStenA

Definition Is Aortic Stenosis present?

Field Name VD-Gradient-Aortic

Short Name VDGradA

Definition Indicate the mean gradient across the aortic valve obtained from an echocardiogram or angiogram.

Field Name VD-Stenosis-Mitral

Short Name VDStenM

Definition Is Mitral Stenosis present?

Field Name VD-Stenosis-Tricuspid

Short Name VDStenT

Definition Is Tricuspid Stenosis present?

Field Name VD-Stenosis-Pulmonic

Short Name VDStenP

Definition Is Pulmonic Stenosis present?

Field Name VD-Insuff-Aortic

Short Name VDInsufA

Definition Is there evidence of Aortic valve regurgitation:
0 = None
1 = Trivial
2 = Mild
3 = Moderate
4 = Severe

Field Name VD-Insuff-Mitral

Short Name VDInsufM

Definition Is there evidence of Mitral valve regurgitation:
0 = None
1 = Trivial
2 = Mild
3 = Moderate
4 = Severe

Field Name VD-Insuff-Tricuspid

Short Name VDInsufT

Definition Is there evidence of Tricuspid valve regurgitation:
0 = None
1 = Trivial
2 = Mild
3 = Moderate
4 = Severe

Field Name VD-Insuff-Pulmonic

Short Name VDInsufP

Definition Is there evidence of Pulmonic valve regurgitation:
0 = None
1 = Trivial
2 = Mild
3 = Moderate
4 = Severe

Operative

J. Operative			
Surgeon's Name: _____		controlled list	Surgeon Group: _____
			controlled list
Status of the procedure:			
Emergent Salvage Emergent → Reason: (Shock Circ Supp) (Shock No Circ Supp) (Pulm Edema) (AEMI) (Ongoing Ischemia) (Valve Dysfnctn) (Aortic Dissection)			
Urgent → Reason: (AMI) (IABP) (Worsening CP) (CHF) (Anatomy) (USA) (Rest Angina) (Valve Dysfunction)			
(Aortic Dissection) Elective			
Coronary Artery Bypass:		No	Yes (if yes, complete Section K)
<u>Aortic:</u>	<u>Mitral:</u>	<u>Tricuspid:</u>	<u>Pulmonic:</u>
No	No	No	No
Replacement	Annuloplasty only	Annuloplasty Only	Replacement
Repair/Reconstruction	Replacement	Replacement	Reconstruction
Root Reconstruction Valve Conduit	Reconstruction w/ Annuloplasty	Reconstruction w/ Annuloplasty	
Reconstruction w/ Valve Sparing	Reconstruction w/out Annuloplasty	Reconstruction w/out Annuloplasty	
Resuspension Aortic Valve		Valvectomy	
Resection Sub-Aortic Stenosis			
Other Cardiac Procedure: No Yes ↓ (if yes, complete Section N)		Other Non-Cardiac Procedure: No Yes ↓ (if yes, complete Section O)	

Field Name Surgeon
Short Name Surgeon
Definition Surgeon's Name

Field Name Surgeon Group
Short Name SurgGrp
Definition The name of the Surgeon's practice group. If the surgeon is not a member of a group (solo practice) and has no group name, then use the surgeon's name.

Field Name Status
Short Name Status
Definition Select one of the status that best describes the clinical status of the patient at the time of surgery

Emergent Salvage:
 Definition: The patient is undergoing CPR en route to the OR or prior to anesthesia induction.

Emergent:
 Definition: The patient's clinical status includes any of the following:
 a. Ischemic dysfunction (any of the following): (1) Ongoing ischemia including rest angina despite maximal medical therapy (medical and/or IABP); (2) Acute Evolving Myocardial Infarction within 24 hours before surgery; or (3) pulmonary edema requiring intubation.
 b.. Mechanical dysfunction (either of the following): (1) shock with circulatory support; or (2) shock without circulatory support.

Urgent:
 Definition: ALL of the following conditions are met:
 a. Not elective status.
 b. Not emergent status.
 c. Procedure required during same hospitalization in order to minimize chance of further clinical deterioration.
 d. Worsening, sudden chest pain, CHF, acute myocardial infarction (AMI), anatomy, IABP, unstable angina (USA) with intravenous (IV) nitroglycerin (TNG) or rest angina may be included.

Elective:

Definition: The patients cardiac function has been stable in the days or weeks prior to the operation. The procedure could be deferred without increased risk of compromised cardiac outcome.

Field Name Urgent Reason

Short Name UrgntRsn

Definition Delay in the operation is necessitated only by attempts to improve the patient's condition, availability of a spouse or parent for informed consent, availability of blood products, or the availability of results of essential laboratory procedures or tests.
Which one of the following applies as the reason why the patient had Urgent Status? (Select one)
Acute myocardial infarction (AMI).
IntraAortic Balloon Pump (IABP).
Worsening, sudden chest pain.
Congestive Heart Failure (CHF).
Coronary Anatomy.
Unstable angina (USA) with intravenous (IV) nitroglycerin (NTG).
Rest angina.
Valve Dysfunction
Aortic Dissection

Field Name Emergent Reason

Short Name EmergRsn

Definition Patients requiring emergency operations will have ongoing, refractory (difficult, complicated, and/or unmanageable) unrelenting cardiac compromise, with or without hemodynamic instability, and 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.
Which one of the following applies as the reason why the patient had Emergent Status? (Select one):
Shock with circulatory support.
Shock without circulatory support.
Pulmonary edema requiring intubation.
Acute Evolving Myocardial Infarction within 24 hours before surgery.
Ongoing ischemia including rest angina despite maximal medical therapy (medical and/or IABP).
Valve Dysfunction
Aortic Dissection

Field Name CAB

Short Name OpCAB

Definition Was coronary artery bypass grafting done?

Field Name VS-Aortic Proc-Procedure

Short Name OpAortic

Definition Was a surgical procedure done on the Aortic Valve, and if so what? Select one of the following:
No;
Replacement;
Repair/Reconstruction;
Root Reconstruction with Valve Conduit;
Root Reconstruction with Valve Sparing;
Resuspension Aortic Valve;
Resection Sub-Aortic Stenosis.

Field Name VS-Mitral Proc-Procedure

Short Name OpMitral

Definition Was a surgical procedure done on the Mitral Valve, and if so what? Select one of the following:
No;
Annuloplasty Only;
Replacement;

Reconstruction with Annuloplasty;
 Reconstruction without Annuloplasty .

Field Name VS-Tricuspid Proc-Procedure

Short Name OpTricus

Definition Was a surgical procedure done on the Tricuspid Valve, and if so what? Select one of the following:
 No;
 Annuloplasty Only;
 Replacement;
 Reconstruction with Annuloplasty;
 Reconstruction without Annuloplasty;
 Valvectomy

Field Name VS-Pulmonic Proc-Procedure

Short Name OpPulm

Definition Was a surgical procedure done on the Pulmonic Valve, and if so what? Select one of the following:
 No;
 Replacement;
 Reconstruction.

Field Name Other Card

Short Name OpOCard

Definition Was another type of cardiac procedure done (other than CABG and/or Valve procedures)?

Field Name Other Non Card

Short Name OpONCard

Definition Was a non-cardiac procedure done?

Coronary Surgery

K. Coronary Surgery	
Unplanned CABG:	No Yes
Number of Distal Anastomoses with Arterial Conduits: _____	Number of Distal Anastomoses with Vein Grafts: _____
IMAs Used as Grafts: (Left IMA) (Right IMA) (Both IMAs) (No IMA)	Number of IMA Distal Anastomoses: _____
Radial Artery(ies) Used as Grafts: (No Radial) (Left Radial) (Right Radial) (Both Radials)	
Number of Radial Artery Distal Anastomoses: _____	
Number of Gastro-Epiploic Artery Distal Anastomoses: _____	

Field Name Unplanned CABG

Short Name CABUnpln

Definition The patient required unplanned CABG after catheterization or an interventional procedure such as PTCA, stent, or atherectomy. In the opinion of the operator or the responsible physician, the patient needed to be moved directly to surgery from the cath lab or hospital ward, typically due to indications such as ongoing ischemia, rest angina despite maximal treatment, pulmonary edema requiring intubation, or shock.

Field Name Dist Anast - Art #

Short Name DistArt

Definition The total number of distal anastomoses with arterial conduits, whether IMA, GEPA, radial artery, etc.

Field Name Dist Anast - Vein #

Short Name DistVein

Definition The total number of distal anastomoses with venous conduits, e.g. saphenous veins.

Field Name IMA Artery Used

Short Name IMAArtUs

Definition Specify which, if any, Internal Mammary Artery(ies) were used for grafts.

Field Name IMA Dist Anast #

Short Name NumIMADA

Definition Total number of distal anastomoses done using internal mammary artery grafts.

Field Name Radial Artery Used

Short Name RadArtUs

Definition Indicate which radial artery(ies) was/were used for grafts:
No Radial artery.
Left Radial artery.
Right Radial artery.
Both Radial arteries.

Field Name Radial Dist Anast #

Short Name NumRadDA

Definition Total number of distal anastomoses done using radial artery grafts.

Field Name GEPA Dist Anast #

Short Name NumGEPDA

Definition Total number of distal anastomoses done using gastro-epiploic artery grafts.

Field Name VS-Aortic Proc-Imp-Type

Short Name VSAoImTy

Definition Indicate the type of implant; choose one:
None
M = Mechanical
B = Bioprosthesis
H = Homograft
A = Autograft
R = Ring/Annuloplasty

Valve Surgery

L. Valve Surgery		↓ Key M = Mechanical, B = Bioprosthesis, H = Homograft, A = Autograft, R = Ring			
Aortic Prosthesis -	Implant Type:	None M B H A R	Implant:	_____	Size: ____ (mm)
	Explant Type:	None M B H A R	Explant:	_____	Size: ____ (mm)
Mitral Prosthesis -	Implant Type:	None M B H A R	Implant:	_____	Size: ____ (mm)
	Explant Type:	None M B H A R	Explant:	_____	Size: ____ (mm)
Tricuspid Prosthesis -	Implant Type:	None M B H A R	Implant:	_____	Size: ____ (mm)
	Explant Type:	None M B H A R	Explant:	_____	Size: ____ (mm)
Pulmonic Prosthesis -	Implant Type:	None M B H A R	Implant:	_____	Size: ____ (mm)
	Explant Type:	None M B H A R	Explant:	_____	Size: ____ (mm)

<p><u>Valve Key</u></p> <p><u>Mechanical</u> M1= ATS Mechanical Prosthesis M2= Björk-Shiley Convex-Concave Mechanical Prosthesis M3= Björk-Shiley Monostrut Mechanical Prosthesis M4= CarboMedics Mechanical Prosthesis M5= Edwards Tekna Mechanical Prosthesis M6= Lillehei-Kaster Mechanical Prosthesis M7= Medtronic-Hall Mechanical Prosthesis M8= OmniCarbon Mechanical Prosthesis M9= OmniScience Mechanical Prosthesis M10= On-X Mechanical Prosthesis M11= Sorin Bicarbon (Baxter Mira) Mechanical Prosthesis M12= Sorin Monoleaflet Allcarbon Mechanical Prosthesis M13= St. Jude Medical Mechanical Prosthesis M14= Starr-Edwards Caged-Ball Prosthesis M15= Ultracor Mechanical Prosthesis</p> <p><u>Bioprosthetic</u> B1= Baxter Prima Plus Stentless Porcine Bioprosthesis B2= Baxter Prima Stentless Porcine Bioprosthesis B3= Biocor Porcine Bioprosthesis B4= Biocor Stentless Porcine Bioprosthesis B5= CarboMedics PhotoFix Pericardial Bioprosthesis B6= Carpentier-Edwards Pericardial Bioprosthesis B7= Carpentier-Edwards Standard Porcine Bioprosthesis B8= Carpentier-Edwards Supra-Annular Porcine Bioprosthesis B9= Cryolife O'Brien Stentless Porcine Bioprosthesis B10= Hancock Standard Porcine Bioprosthesis B11= Hancock II Porcine Bioprosthesis</p>	<p>B12= Hancock Modified Orifice Porcine Bioprosthesis B13= Ionescu-Shiley Pericardial Bioprosthesis B14= Labcor Stented Porcine Bioprosthesis B15= Labcor Stentless Porcine Bioprosthesis B16= Medtronic Freestyle Stentless Porcine Bioprosthesis B17= Medtronic Intact Porcine Bioprosthesis B18= Medtronic Mosaic Porcine Bioprosthesis B19= Mitroflow Pericardial Bioprosthesis B20= Sorin Pericarbon Stentless Pericardial Bioprosthesis B21= St. Jude Medical - Toronto SPV Stentless Porcine Bioprosthesis B22= St. Jude Medical-Bioimplant Porcine Bioprosthesis</p> <p><u>Homograft</u> H1= Homograft Aortic – Subcoronary H2= Homograft Aortic Root/Cylinder H3= Homograft Mitral H4= Homograft Pulmonic Root H5= Cryolife Homograft</p> <p><u>Autograft</u> A1= Autograft Pulmonic Root</p> <p><u>Ring</u> R1= Carpentier-Edwards Classic Ring R2= Carpentier-Edwards Physio Ring R3= Cosgrove-Edwards Ring R4= Medtronic Sculptor Ring R5= Medtronic-Duran Ring R6= Sorin-Puig-Messana Ring R7= St. Jude Medical Sequin Ring</p> <p>777= Other</p>
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Field Name VS-Aortic Proc-Imp
Short Name VSAoIm
Definition Select the name of the prosthesis implanted.

Field Name VS-Aortic Proc-Imp-Size
Short Name VSAoImSz
Definition Valve Surgery - Aortic Procedure - Implant Size

Field Name VS-Aortic Proc-Exp-Type

Short Name VSAoExTy

Definition Indicate the type of explant; choose one:
None
M = Mechanical
B = Bioprosthesis
H = Homograft
A = Autograft
R = Ring/Annuloplasty

Field Name VS-Aortic Proc-Exp

Short Name VSAoEx

Definition Select the name of the prosthesis explanted.

Field Name VS-Aortic Proc-Exp-Size

Short Name VSAoExSz

Definition Valve Surgery - Aortic Procedure - Explant Size

Field Name VS-Mitral Proc-Imp-Type

Short Name VSMilmTy

Definition Indicate the type of implant; choose one:
None
M = Mechanical
B = Bioprosthesis
H = Homograft
A = Autograft
R = Ring/Annuloplasty

Field Name VS-Mitral Proc-Imp

Short Name VSMilm

Definition Select the name of the prosthesis implanted.

Field Name VS-Mitral Proc-Imp-Size

Short Name VSMilmSz

Definition Valve Surgery - Mitral Procedure - Implant Size

Field Name VS-Mitral Proc-Exp-Type

Short Name VSMiExTy

Definition Indicate the type of explant; choose one:
None
M = Mechanical
B = Bioprosthesis
H = Homograft
A = Autograft
R = Ring/Annuloplasty

Field Name VS-Mitral Proc-Exp
Short Name VSMiEx
Definition Select the name of the prosthesis explanted.

Field Name VS-Mitral Proc-Exp-Size
Short Name VSMiExSz
Definition Valve Surgery - Mitral Procedure - Explant Size

Field Name VS-Tricuspid Proc-Imp-Type
Short Name VSTrlmTy
Definition Indicate the type of implant; choose one:
None
M = Mechanical
B = Bioprosthesis
H = Homograft
A = Autograft
R = Ring/Annuloplasty

Field Name VS-Tricuspid Proc-Imp
Short Name VSTrlm
Definition Select the name of the prosthesis implanted.

Field Name VS-Tricuspid Proc-Imp-Size
Short Name VSTrlmSz
Definition Valve Surgery - Tricuspid Procedure - Implant Size

Field Name VS-Tricuspid Proc-Exp-Type
Short Name VSTrExTy
Definition Indicate the type of explant; choose one:
None
M = Mechanical
B = Bioprosthesis
H = Homograft
A = Autograft
R = Ring/Annuloplasty

Field Name VS-Tricuspid Proc-Exp
Short Name VSTrEx
Definition Select the name of the prosthesis explanted.

Field Name VS-Tricuspid Proc-Exp-Size
Short Name VSTrExSz
Definition Valve Surgery - Tricuspid Procedure - Explant Size

Field Name VS-Pulmonic Proc-Imp-Type
Short Name VSPulmTy
Definition Indicate the type of implant; choose one:

None
M = Mechanical
B = Bioprosthesis
H = Homograft
A = Autograft
R = Ring/Annuloplasty

Field Name VS-Pulmonic Proc-Imp

Short Name VSPulm

Definition Select the name of the prosthesis implanted.

Field Name VS-Pulmonic Proc-Imp-Size

Short Name VSPulmSz

Definition Valve Surgery - Pulmonic Procedure - Implant Size

Field Name VS-Pulmonic Proc-Exp-Type

Short Name VSPuExTy

Definition Indicate the type of explant; choose one:

None
M = Mechanical
B = Bioprosthesis
H = Homograft
A = Autograft
R = Ring/Annuloplasty

Field Name VS-Pulmonic Proc-Exp

Short Name VSPuEx

Definition Select the name of the prosthesis explanted.

Field Name VS-Pulmonic Proc-Exp-Size

Short Name VSPuExSz

Definition Valve Surgery - Pulmonic Procedure - Explant Size

Operative Techniques

M. Operative Techniques						
Cardiopulmonary Bypass Used: No Yes → if yes, Conversion to CPB: No Yes						
Primary Indication for minimally Invasive approach: (not minimally invasive) (Surg/Pat Choice) (ContraindicatedStd Approach)						
(Comb Cath Intervention)						
Primary Incision:						
Full Sternotomy	Partial Sternotomy	Transverse Sternotomy	Right Vertical Parasternal	Left Vertical Parasternal		
Right Anterior Thoracotomy	Left Anterior Thoracotomy	Posterolateral Thoracotomy	Xiphoid	Epigastric	Subcostal	
Total # of Incisions: _____ Conversion to Std Incision: No Yes → if yes, Indication: (not minimally invasive) (Exposure) (Bleeding) (Rhythm)						
(Hypotension) (Conduit)						
Cannulation Meth: (Aorta and Fem/Jug Vein) (Fem Art and Fem/Jug Vein) (Aorta and Atrial/Caval) (Fem Art and Atrial/Caval) (Other)						
Aortic Occlusion Method: (None) (Cross-clamp) (Balloon Occlusion)						
Intracoronary Shunt used during distal anastomoses: No Yes						
Suture Technique: (Running) (Interrupted) (Stapler) (Combination)						
Vessel Stabilization Technique: (None) (Suture Snare) (Suction Device) (Compression) (Other)						
IMA Harvest Technique: (None) (Direct Vision) (Thoracoscopy) (Combination)						
Acute Flow Patency Assess of Grafts (Periop): (None) (IntraOp Doppler) (IntraOp Angio) (Postop Angio) (Postop Doppler)						

Field Name Cardiopulmonary Bypass Used

Short Name CPBUsed

Definition Indicate if Cardiopulmonary Bypass was used at anytime during the procedure

Field Name Conversion to CPB

Short Name ConvCPB

Definition Indicate whether the patient needed to be placed on cardiopulmonary bypass after the off-pump procedure was attempted.

Field Name Indication

Short Name IndMnlInv

Definition Select the primary indication why the minimally invasive approach was chosen:
 Not minimally invasive.
 Surgeon and/or patient choice.
 Contraindication to standard approach.
 Combined with Catheter Intervention.

Field Name Primary Incision

Short Name PrimInc

Definition Select the primary incision used as the initial intention for treatment:
 Full Sternotomy
 Partial Sternotomy
 Transverse Sternotomy
 Right Vertical Parasternal
 Left Vertical Parasternal
 Right Ant Thoracotomy
 Left Ant Thoracotomy
 Posterolateral Thoracotomy
 Xiphoid
 Epigastric
 Subcostal

Field Name Total Number of Incisions

Short Name NumIncis

Definition Total number of incisions, including portholes in chest and other locations such as groin or neck, for cannulation or instrumentation access.

Field Name Conversion to Std Incision

Short Name CnvStdIn

Definition Indicate whether the minimally invasive incision was converted to a full median sternotomy.

Field Name Conversion Indication

Short Name CnvIndic

Definition If a minimally invasive incision was made but then converted to a standard median sternotomy, select the primary indication for the conversion to full median sternotomy:
Not minimally invasive
Inadequate Exposure
Bleeding
Rhythm Problems
Hypotension
Conduit Trauma or Quality.

Field Name Cannulation Method

Short Name Cannulat

Definition Indicate the method of cannulation used for cardiopulmonary bypass (select one):
None (no CPB).
Aorta and Femoral/Jugular Vein.
Femoral Artery and Femoral/Jugular Vein.
Aorta and Atrial/Caval.
Femoral Artery and Atrial/Caval.
Other.

Field Name Aortic Occlusion

Short Name AortOccl

Definition Indicate if aortic occlusion was used, and if so, by which method:
None
Aortic Crossclamp
Balloon Occlusion.

Field Name Intracoronary Shunt Used

Short Name CorShunt

Definition Intracoronary Shunt was used during distal anastomoses.

Field Name Suture Technique

Short Name SutrTech

Definition Primary suture technique used for distal anastomoses.

Field Name Vessel Stabilization

Short Name VslStblz

Definition Indicate if any technique was used for coronary artery stabilization during the anastomoses, and which one:
 None
 Suture Snare
 Suction Device
 Compression
 Other

Field Name IMA Harvest Technique

Short Name IMATechn

Definition Technique of IMA Harvest

Field Name Flow/Patency Check

Short Name FlowPtcy

Definition Indicate if any flow/patency study was done in the acute perioperative period, and what type. (Do not include any late followup studies). Select one:
 None;
 IntraOperative Doppler study;
 IntraOperative Angiogram;
 Postoperative Angiogram;
 Postoperative Doppler study.

Other Cardiac Procedures

N.	Other Cardiac Procedures							
No	Yes	Left Ventricular Aneurysm Repair	No	Yes	Vent Septal Defect Repair	No	Yes	Atrial Septal Defect Repair
No	Yes	Batista	No	Yes	SVR	No	Yes	Congenital Defect Repair
No	Yes	Transmyocard Laser Revasc	No	Yes	Cardiac Trauma	No	Yes	Cardiac Transplant
No	Yes	Permanent Pacemaker	No	Yes	AICD	No	Yes	Other

Field Name Other Card-LVA

Short Name OCarLVA

Definition Other Cardiac Procedure - Left Ventricular Aneurysm Repair

Field Name Other Card-VSD

Short Name OCarVSD

Definition Other Cardiac Procedure - Ventricular Septal Defect Repair

Field Name Other Card-ASD

Short Name OCarASD

Definition Other Cardiac Procedure - Atrial Septal Defect Repair

Field Name Other Card-Batista

Short Name OCarBati

Definition (Left Ventricular Reduction Myoplasty)
 A Procedure whereby left ventricular myocardium is excised to reduce left ventricular volume in patients with a dilated cardiomyopathy, with or without mitral valve replacement or repair. If a concomitant valve procedure is

performed, please check that category also.

Field Name Other Card-Surgical Ventricular Restoration

Short Name OCarSVR

Definition Surgical Ventricular Restoration includes procedures that restore the geometry of the heart after an anterior MI. They include the Dor procedure or the SAVER procedure. This SVR procedure is distinct from an anterior left ventricular aneurysmectomy (LVA) and from a Batista procedure (left ventricular volume reduction procedure).

Field Name Other Card-Congenital

Short Name OCarCong

Definition Other Cardiac Procedure - Congenital defect repair

Field Name Other Card-Transmyocardial

Short Name OCarLasr

Definition Creation of multiple channels in left ventricular myocardium with a laser fiber.

Field Name Other Card-Cardiac Trauma

Short Name OCarTrma

Definition Other Cardiac Procedure - Cardiac Trauma

Field Name Other Card-Card Tx

Short Name OCarCrTx

Definition Cardiac Transplant: Heterotopic or Orthotopic heart transplantation

Field Name Other Card-Pacemaker

Short Name OCarPace

Definition Other Cardiac Procedure - Permanent Pacemaker

Field Name Other Card-AICD

Short Name OCarAICD

Definition Other Cardiac Procedure - Automatic Implanted Cardioverter Defibrillator

Field Name Other Card-Other

Short Name OCarOthr

Definition Other Cardiac Procedure - Other

Other Non Cardiac Procedures

O. Other Non Cardiac Procedures											
No	Yes	Aortic Aneurysm	No	Yes	Carotid Endarterectomy	No	Yes	Other Vascular	No	Yes	Other Thoracic

Field Name Other Non Card-Ao Aneur
Short Name ONCAoAn
Definition Aortic Aneurysm/Dissection repair.

Field Name Other Non Card-Caro Endart
Short Name ONCCarEn
Definition Surgical removal of stenotic atheromatous plaque.

Field Name Other Non Card-Other Vasc
Short Name ONCOVasc
Definition Procedures correcting peripheral vascular occlusion.

Field Name Other Non Card-Other Thor
Short Name ONCOTHor
Definition Procedures involving Thorax/Pleura.

CPB and Support

P. CPB and Support									
Skin Incision Start Time: _____			24 hour clock		Skin Incision Stop Time: _____			24 hour clock	
Cross Clamp Time (min): _____			Perfusion Time (min): _____			Cardioplegia: No Yes			
IABP	No	Yes	→ if yes, When Inserted:	(Preop)	(Intraop)	(Postop)			
	If yes,		Indication:	(Hemodynamic Instab)	(PTCA Support)	(Unst. Angina)	(CPB Wean)	(Prophylatic)	
Ventricular Assist Device:			No	Yes					

Field Name Skin Incision Start Time
Short Name SISStartT
Definition Document to the nearest minute (using 24 hour clock) the time the skin incision was made.

Field Name Skin Incision Stop Time
Short Name SISStopT
Definition Document to the nearest half hour (using 24 hour clock) the time the skin incision was closed, if the patient leaves the OR with an open chest, collect the time the dressings are applied to the incisions.

Field Name Cross Clamp Time (min)
Short Name XClampTm
Definition Total number of minutes the aorta is completely cross-clamped during bypass. Leave Blank if no cross-clamp was used.

Field Name Perfusion Time (min)
Short Name PerfusTm
Definition Total number of minutes on cardiopulmonary bypass. Leave Blank if no cardiopulmonary bypass was used.

Field Name Cardioplegia

Short Name Cplegia

Definition Was Cardioplegia used?

Field Name IABP

Short Name IABP

Definition Was the patient placed on Intra-Aortic Balloon Pump (IABP)?

Field Name IABP-When Inserted

Short Name IABPWhen

Definition What was the time of earliest IABP insertion? Choose one of the following:
Preoperatively.
Intraoperatively.
Postoperatively.

Field Name IABP-Indication

Short Name IABPInd

Definition What was the PRIMARY reason for inserting the IABP? Choose one of the following:
Hemodynamic Instability.
PTCA Support.
Unstable Angina.
Cardiopulmonary bypass (CPB) weaning failure.
Prophylactic.

Field Name VAD

Short Name VAD

Definition Ventricular Assist Device
Was a VAD used at the time the patient left the operating room?

Post Operative

Q.	Post Operative
Blood Products Used:	No Yes
Initial # of Hrs Ventilated Postop:	_____ Re-intubated During Hosp Stay: No Yes if yes, Addl Hours Ventilated Postop: _____
Total Hours Ventilated Postop:	_____

Field Name Blood Prod

Short Name BldProd

Definition Were Blood Products transfused postoperatively?
Do not include:
1. Pre-donated Blood
2. Cellsaver Blood
3. Pump Residual Blood
4. Chest Tube Recirculated Blood

Field Name Initial Hours Ventilated

Short Name VentHrsI

Definition Indicate the number of initial hours post operation for which the patient was ventilated before any reintubation. Number of hours includes hours ventilated post-operatively till removal of the endotracheal tube or if patient has tracheostomy tube, till no longer ventilator dependent. Leave blank if the patient was extubated on the

operating table. Any patient ventilated > 24 hours is coded as a Pulmonary Complication of "Prolonged Ventilation"

Field Name Re-intubated During Hospital Stay

Short Name Relntub

Definition Was the patient re-intubated during the hospital stay after the initial/planned extubation?

Field Name Additional Hours Ventilated

Short Name VentHrsA

Definition How many additional hours was the patient ventilated postoperatively?

Field Name Postop Vent Hours - Total

Short Name VentHrs

Definition Total number of hours including any re-intubation hours. Any patient ventilated > 24 hours is coded as a Pulmonary Complication of "Prolonged Ventilation"

Complications

R.	Complications	In hospital Complications:	No	Yes	if yes, at least one complication below must be selected
Operative	No	Yes	ReOp for Bleeding/Tamponade		Infection
	No	Yes	ReOp for Valvular Dysfunction		No
	No	Yes	ReOp for Graft Occlusion		Yes
	No	Yes	ReOp for Other Cardiac Problem		Sternum – Deep
	No	Yes	ReOp for Other Non Cardiac Problem		No
	No	Yes	Perioperative Myocardial Infarction		Yes
Neurologic	No	Yes	Stroke		Pulmonary
	No	Yes	Transient		No
	No	Yes	Continuous Coma >=24Hrs		Yes
Renal	No	Yes	Renal Failure		Vascular
	No	Yes	Dialysis		No
	No	Yes			Yes
Other	No	Yes	Heart Block		No
	No	Yes	Cardiac Arrest		Yes
	No	Yes	Anticoagulant Complication		Gastro-Intestinal Complication
	No	Yes	Tamponade		No
					Yes
					Multi-System Failure
					No
					Yes
					Atrial Fibrillation

Field Name Comps-Complications

Short Name Complics

Definition Did a postoperative complication occur during the hospitalization for surgery? This includes the entire postoperative period up to discharge, even if over 30 days.

Field Name Comps-Op-ReOp Bleed/Tamponade

Short Name COpReBld

Definition Operative re-intervention was required for bleeding/tamponade.

Field Name Comps-Op-ReOp Vlv Dys

Short Name COpReVlv

Definition Operative re-intervention was required for valve dysfunction.

Field Name Comps-Op-ReOp Gft Occl

Short Name COpReGft

Definition Operative re-intervention was required for coronary graft occlusion.

Field Name Comps-Op-ReOp Other Card

Short Name COpReOth

Definition Operative re-intervention was required for other cardiac reasons.

Field Name Comps-Op-ReOp Other Non Card

Short Name COpReNon

Definition Operative re-intervention was required for other non-cardiac reasons. It does include minor procedures that do require a return to the operating room but does not include procedures performed outside the OR (i.e. GI Lab for peg tube, shunts for dialysis etc), but may include procedures such as tracheostomy, hematoma evacuation).

Field Name Comps-Op-Perioperative MI

Short Name COpPerMI

Definition A perioperative Myocardial Infarction (MI) is diagnosed by finding at least two of the following four criteria:
a. Prolonged (> 20 min) typical chest pain not relieved by rest and/or nitrates.
b. Enzyme level elevation: either (1) CK-MB > 5% of total CPK; (2) CK greater than 2x normal; (3) LDH subtype 1 > LDH subtype 2; or (4) troponin > 0.2 micrograms / ml.
c. New wall motion abnormalities.
d. Serial ECG (at least two) showing changes from baseline or serially in ST-T and/or Q waves that are 0.03 seconds in width and/or > or + one third of the total QRS complex in two or more contiguous leads.

Field Name Comps-Infect-Stern Deep

Short Name CIsTDeep

Definition A deep sternal infection involves muscle, bone, and/or mediastinum.
Must have one of the following conditions:
1. Wound opened with excision of tissue (I&D)
2. Positive culture
3. Treatment with antibiotics

Field Name Comps-Infect-Thoracotomy

Short Name CITHor

Definition An infection involving a thoracotomy or parasternal site.
Must have one of the following conditions:
1. Wound opened with excision of tissue (I&D)
2. Positive culture
3. Treatment with antibiotics

Field Name Comps-Infect-Leg

Short Name CILeg

Definition An infection involving a leg vein harvest site.
Must have one of the following conditions:
1. Wound opened with excision of tissue (I&D)
2. Positive culture

3. Treatment with antibiotics

Field Name Comps-Infect-Septicemia

Short Name CISeptic

Definition Septicemia (Requires Positive Blood Cultures) postoperatively.

Field Name Comps-Infect-UTI

Short Name CIUTI

Definition UTI-Urinary Tract Infection (Positive Urine Cultures) postoperatively.

Field Name Comps-Neuro-Stroke Perm

Short Name CNStrokP

Definition A central neurologic deficit persisting for > 72 hours.

Field Name Comps-Neuro-Stroke Trans

Short Name CNStrokT

Definition A transient neurologic deficit (TIA recovery within 24 hours; RIND recovery within 72 hours)

Field Name Comps-Neuro-Cont Coma >=24Hrs

Short Name CNComa

Definition New postoperative coma that persists for at least 24 hours.

Field Name Comps-Pulm-Vent Prolonged

Short Name CPVntLng

Definition Pulmonary Insufficiency requiring ventilatory support - includes (but not limited to) causes such as ARDS and pulmonary edema and/or any patient ventilated > 24 hours postoperatively.

Field Name Comps-Pulm-Pulm Embolism

Short Name CPPulEmb

Definition Pulmonary Embolism diagnosed by study such as V/Q scan or angiogram.

Field Name Comps-Pulm-Pneumonia

Short Name CPPneum

Definition Pneumonia diagnosed by one of the following: Positive cultures of sputum, blood, pleural fluid, empyema fluid, transtracheal fluid or transthoracic fluid; consistent with the diagnosis and clinical findings of pneumonia. May include chest X-ray diagnostic of pulmonary infiltrates.

Field Name Comps-Renal-Renal Failure

Short Name CRenFail

Definition Acute or worsening renal failure resulting in one or more of the following:
a. increase of serum creatinine to > 2.0 & 2x the baseline creatinine level
b. A new requirement for dialysis.

Field Name Comps-Renal-Dialysis Req

Short Name CRenDial

Definition Requirement for dialysis post procedure?

Field Name Comps-Vasc-Ao Dissect

Short Name CVaAoDis

Definition Dissection occurring in any part of the aorta.

Field Name Comps-Vasc-Iliac/Fem Dissect

Short Name CVallFem

Definition Dissection occurring in the iliac or femoral arteries.

Field Name Comps-Vasc-Acute Limb Isch

Short Name CVaLblsc

Definition Any complication producing limb ischemia.

Field Name Comps-Other-Heart Block

Short Name COtHtBlk

Definition New heart block requiring the implantation of a permanent pacemaker prior to discharge.

Field Name Comps-Other-Card Arrest

Short Name COtArrst

Definition A cardiac arrest documented by one of the following:
a. ventricular fibrillation
b. rapid ventricular tachycardia with hemodynamic instability
c. asystole.

Field Name Comps-Other-Anticoag Comps

Short Name COtCoag

Definition Bleeding, hemorrhage, and/or embolic events related to anticoagulant therapy.

Field Name Comps-Other-Tamponade

Short Name COtTamp

Definition Fluid in the pericardial space compromising cardiac filling, and requiring intervention. This should be documented by either:
a. echo showing pericardial fluid and signs of tamponade such as right heart compromise, or
b. systemic hypotension due to pericardial fluid compromising cardiac function.

Field Name Comps-Other-GI Comps

Short Name COtGI

Definition Postoperative occurrence of any GI complication including:
a. GI bleeding requiring transfusion
b. pancreatitis with abnormal amylase/lipase requiring nasogastric (NG) suction therapy
c. cholecystitis requiring cholecystectomy or drainage
d. mesenteric ischemia requiring exploration

e. other GI complication.

Field Name Comps-Other-Multi Sys Fail

Short Name COtMSF

Definition Two or more major organ systems suffer compromised functions.

Field Name Comps-Other-A Fib

Short Name COtAFib

Definition New onset of atrial fibrillation/flutter (AF) requiring treatment. Does not include recurrence of AF which had been present preoperatively.

Discharge

S. Discharge (Note: this section is blank if patient dies during initial hospital stay)																			
Aspirin:	No	Yes		Ace-Inhibitors:	No	Yes		Beta Blockers:	No	Yes		Lipid Lowering:	No	Yes		Other Anti-Platelets:	No	Yes	
Discharge Location:	Home			(Extended Care/TCU)				(Other Hospital)				(Nursing Home)				(Other)			

Field Name DC Meds-Aspirin

Short Name DCASA

Definition Indicate whether or not the patient was discharged from facility on ASA.

Field Name Ace-Inhibitors - Discharge

Short Name DCACE

Definition Indicate whether or not the patient was discharged from facility on ACE- Inhibitors.

Field Name Beta Blockers - Discharge

Short Name DCBeta

Definition Indicate whether or not the patient was discharged on beta blockers.

Field Name Lipid Lowering - Discharge

Short Name DCLipid

Definition Indicate whether or not the patient was discharged from facility on any lipid lowering medication.

Field Name Other Antiplatelets - Discharge

Short Name DCAntPlt

Definition Indicate whether or not the patient was discharged from facility on Other Anti-platelets.

Field Name Discharge Location

Short Name DisLoctn

Definition Location to where the patient was discharged.

Mortality

T.	Mortality
Mortality - Mortality:	No Yes Discharge Status: Alive Dead Status at 30 days after surgery: Alive Dead
Mortality - Operative Death:	No Yes Mortality - Date ___/___/___ (mm/dd/yyyy)
Location of Death:	(OR) (Hospital) (Home) (Other Facility)
Primary Cause of Death (select only <u>one</u>):	(Cardiac) (Neurological) (Renal) (Vascular) (Infection) (Pulmonary) (Valvular) (Other)

Field Name Mort-Mortality

Short Name Mortalty

Definition Patient death, either in hospital or long-term.

Field Name Mort-DC Status

Short Name MtDCStat

Definition Specify whether the patient was alive or dead at discharge from the hospitalization in which surgery occurred.

Field Name Mort-30d Status

Short Name Mt30Stat

Definition Specify whether the patient was alive or dead at 30 days post surgery (whether in hospital or not).

Field Name Mort-Op Death

Short Name MtOpD

Definition Operative Mortality: Includes both (1) all deaths occurring during the hospitalization in which the operation was performed, even if after 30 days; and (2) those deaths occurring after discharge from the hospital, but within 30 days of the procedure unless the cause of death is clearly unrelated to the operation.

Field Name Mort-Date

Short Name MtDate

Definition What was the date of death?

Field Name Mort-Location

Short Name MtLocatn

Definition Specify the patient location at time of death:
 Operating Room (OR).
 Hospital (Other than Operating Room).
 Home.
 Other Care Facility.

Field Name Mort-Prim Cause

Short Name MtCause

Definition Specify the PRIMARY cause of death, i.e. the first significant abnormal event which ultimately led to death; choose one of the following:
 Cardiac
 Neurologic
 Renal
 Vascular
 Infection

Pulmonary
Valvular
Other

Readmission

U. Readmission (Note: this section is blank if patient dies during initial hospital stay)		
Readmit <=30 Days from Date of Procedure: No Yes↓ if yes, select the most <u>predominate</u> reason		
Readmission Reason:		
(Anticoagulant Complications)	(Arrhythmias/Heart Block/Pacemaker Insertion/AICD)	(CHF)
(MI/Recurrent Angina)	(Pericardial Effusion/Tamponade)	(Pneumonia/ Respiratory Complication)
(Valve Dysfunction)	(Infection Deep Sternum)	(Infection Leg)
(Cardiac Cath)	(PTCA Stent)	(Renal Failure)
(TIA)	(Reop for Graft Occlusion)	(Reop for Bleeding)
(Permanent CVA)	(Acute Vascular Complication)	(Other)

Field Name Readmit <=30 Days from DOP

Short Name Readm30

Definition Patient was readmitted as an in-patient within 30 days from the date of surgery for ANY reason.

Field Name Readmit Reason

Short Name ReadmRsn

Definition Primary reason the patient was readmitted as an in-patient within 30 days from the date of surgery (select one):

- Anticoagulant Complication.
- Arrhythmias/Heart Block/Pacemaker Insertion/AICD
- Congestive Heart Failure (CHF).
- Myocardial Infarction (MI) and/or Recurrent Angina.
- Pericardial Effusion and/or Tamponade.
- Pneumonia or other Respiratory Complication.
- Valve Dysfunction.
- Infection - Deep sternum
- Infection - Leg
- Cardiac catheterization
- PTCA
- Stent
- Renal failure
- TIA
- Reop for Graft Occlusion
- Reop for Bleeding
- Permanent CVA
- Acute Vascular Complication
- Other Complication (e.g. hepatic, gi, etc).

Risk Scores

Field Name Predicted Risk of Mortality

Short Name PredMort

Definition Calculated from software.

Field Name Predicted Deep Sternal Wound Infx

Short Name PredDeep

Definition Calculated from software.

Field Name Predicted Reoperation

Short Name PredReop

Definition Calculated from software.

Field Name Predicted Permanent Stroke

Short Name PredStro

Definition Calculated from software.

Field Name Predicted Prolonged Ventilation

Short Name PredVent

Definition Calculated from software.

Field Name Predicted Renal Failure

Short Name PredRenF

Definition Calculated from software.

Field Name Predicted Morbidity or Mortality

Short Name PredMM

Definition Calculated from software.

Field Name Predicted Short Length of Stay

Short Name Pred6D

Definition Calculated from software.

Field Name Predicted Long Length of Stay

Short Name Pred14D

Definition Calculated from software.