



**The Society of Thoracic Surgeons
Congenital Cardiac Surgery Database
Data Collection Form
Version 2.30**

ADMINISTRATIVE

Participant ID:		Hospital Name:	
Operation ID:		SSN: - -	MRN: Patient ID: (software generated)
Last Name:		First Name:	
Address:		MI:	Country:
City:		State/Province:	Postal Code:
DOB: (mm/dd/yyyy) / /		Age (in days):	
		Gender (check one): <input type="checkbox"/> M <input type="checkbox"/> F <input type="checkbox"/> Ambiguous	
Race (check one): <input type="checkbox"/> Caucasian <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> Asian <input type="checkbox"/> Native American <input type="checkbox"/> Other			

HOSPITALIZATION

Admission date: (mm/dd/yyyy) / /		Surgery date: (mm/dd/yyyy) / /		Discharge date: (mm/dd/yyyy) / /	
Height (Cm):		Weight (Kg):			
Attending Cardiologist:			Attending Pediatrician/Physician:		
Clinic:			Clinic:		
Address:			Address:		
City:		State:	Zip:	City:	
		State:	Zip:		

Non-Cardiac Abnormalities	
<input type="checkbox"/>	None
Or check all that apply	
<input type="checkbox"/>	Asplenia
<input type="checkbox"/>	Polysplenia
<input type="checkbox"/>	Down syndrome
<input type="checkbox"/>	Turner syndrome
<input type="checkbox"/>	DiGeorge
<input type="checkbox"/>	Williams-Beuren syndrome
<input type="checkbox"/>	Alagille syndrome (intrahepatic biliary duct agenesis)
<input type="checkbox"/>	22q11 deletion
<input type="checkbox"/>	Other chromosomal/syndromic abnormality
<input type="checkbox"/>	Rubella
<input type="checkbox"/>	Marfan syndrome
<input type="checkbox"/>	Other noncardiac abnormality

Pre-Operative Risk Factors	
<input type="checkbox"/>	None
Or check all that apply	
<input type="checkbox"/>	Preoperative mechanical circulatory support (IABP, VAD, ECMO, or CPS)
<input type="checkbox"/>	Preoperative complete AV block
<input type="checkbox"/>	Preoperative arrhythmia
<input type="checkbox"/>	Preoperative shock
<input type="checkbox"/>	Preoperative acidosis
<input type="checkbox"/>	Preoperative pulmonary hypertension crises (PA pressure > systemic pressure)
<input type="checkbox"/>	Preoperative mechanical ventilatory support
<input type="checkbox"/>	Preoperative tracheostomy
<input type="checkbox"/>	Preoperative renal failure (creatinine >2)
<input type="checkbox"/>	Preoperative renal failure requiring dialysis
<input type="checkbox"/>	Preoperative bleeding disorder
<input type="checkbox"/>	Preoperative endocarditis
<input type="checkbox"/>	Preoperative septicemia
<input type="checkbox"/>	Preoperative neurological deficit
<input type="checkbox"/>	Preoperative seizures
<input type="checkbox"/>	Other preoperative risk factor

DIAGNOSIS (see page 2 for list of diagnosis)

Antenatal Diagnosis: <input type="checkbox"/> Yes <input type="checkbox"/> No

INTRA-OPERATIVE AND PROCEDURE (see page 4 for list of procedures)

Surgeon:		Resident:	
Assistant surgeon:		Consultant Attending:	
Is this operation a re-operation during this admission: <input type="checkbox"/> Yes <input type="checkbox"/> No (if yes →) <input type="checkbox"/> Planned <input type="checkbox"/> Unplanned			
Number of prior total cardiothoracic operations:		Number of prior open cardiothoracic operations:	
Operation type: <input type="checkbox"/> CPB <input type="checkbox"/> No CPB, Cardiovascular <input type="checkbox"/> ECMO <input type="checkbox"/> Thoracic <input type="checkbox"/> Interventional Cardiology <input type="checkbox"/> Other			
Cross Clamp time (minutes):		CPB time (minutes):	Circulatory Arrest time (minutes):

POST-OPERATIVE DATA AND COMPLICATIONS (see page 7 for list of complications)

Intubation date/time: (mm/dd/yyyy 00:00 – 23:59)		Extubation date/time: (mm/dd/yyyy 00:00 – 23:59)		Intubated and extubated in OR: <input type="checkbox"/> Yes <input type="checkbox"/> No	
/ / :		/ / :			
Reoperation after this operation during this admission: <input type="checkbox"/> Yes <input type="checkbox"/> No					
Discharge Location: <input type="checkbox"/> Home <input type="checkbox"/> Acute Care Center <input type="checkbox"/> Chronic Care Center					
Mortality Discharge Status: <input type="checkbox"/> Alive <input type="checkbox"/> Dead			Status at 30 days after surgery: <input type="checkbox"/> Alive <input type="checkbox"/> Dead		
(if dead →) Mortality Date: (mm/dd/yyyy) / /					
Operative Mortality: <input type="checkbox"/> Yes <input type="checkbox"/> No			Mortality Assigned to this Operation: <input type="checkbox"/> Yes <input type="checkbox"/> No		

DIAGNOSIS

Check all diagnosis that apply. CIRCLE the ONE PRIMARY diagnosis for this operation.

Septal Defects	ASD	PFO
		ASD, secundum
		ASD, sinus venosus
		ASD, coronary sinus
		ASD, common atrium (single atrium)
		ASD, NOS
	VSD	VSD, single
		VSD, multiple
		VSD, NOS
	AV Canal	AVC (AVSD), complete CAVSD
		AVC (AVSD), intermediate (transitional)
		AVC (AVSD), partial (incomplete) (PAVSD) (ASD, primum)
		AVC (AVSD), NOS
	AP Window	AP window (aortopulmonary window)
		Pulmonary artery origin from ascending aorta (hemitruncus)
Truncus Arteriosus	Truncus arteriosus	
	Truncal valve insufficiency	
Pulmonary Venous Anomalies	Partial Anomalous Pulm Venous	Partial anomalous pulmonary venous connection (PAPVC)
		Partial anomalous pulmonary venous connection (PAPVC), scimitar
	Total Anomalous Pulm Venous	Total anomalous pulmonary venous connection (TAPVC), type 1 (supracardiac)
		Total anomalous pulmonary venous connection (TAPVC), type 2 (cardiac)
		Total anomalous pulmonary venous connection (TAPVC), type 3 (infracardiac)
		Total anomalous pulmonary venous connection (TAPVC), type 4 (mixed)
Total anomalous pulmonary venous connection (TAPVC), NOS		
Cor Triatriatum	Cor triatriatum	
Pulmonary Venous Stenosis	Pulmonary venous stenosis	
Systemic Venous Anomalies	Anomalous Systemic Venous Connection	Systemic venous anomaly
		Systemic venous obstruction
Right Heart Lesions	Tetralogy	TOF
		TOF, AVC (AVSD)
		TOF, absent pulmonary valve
	Pulmonary Atresia	Pulmonary atresia
		Pulmonary atresia, IVS
		Pulmonary atresia, VSD (including TOF, PA)
		Pulmonary atresia, VSD-MAPCA (pseudotruncus)
		MAPCA(s) (major aortopulmonary collateral[s]) (without PA-VSD)
	Tricuspid Valve Disease and Ebstein's Anomaly	Ebstein's anomaly
		Tricuspid regurgitation, non-Ebstein's related
		Tricuspid stenosis
		Tricuspid regurgitation and tricuspid stenosis
		Tricuspid valve, other
	RVOT Obstruction, IVS Pulmonary Stenosis	Pulmonary stenosis, valvar
		Pulmonary artery stenosis (hypoplasia), main (trunk)
		Pulmonary artery stenosis, branch, central
		Pulmonary artery stenosis, branch, peripheral (beyond the hilar bifurcation)
		Pulmonary artery stenosis, NOS
		Pulmonary artery, discontinuous
		Pulmonary stenosis, NOS
		Pulmonary stenosis, subvalvar
		DCRV
	Pulmonary Valve Disease	Pulmonary valve, other
		Pulmonary insufficiency
		Pulmonary insufficiency and pulmonary stenosis
	Conduit failure	Conduit failure
Left Heart Lesions	Aortic Valve Disease	Aortic stenosis, subvalvar
		Aortic stenosis, valvar
		Aortic stenosis, supra-valvar
		Aortic stenosis, NOS
		Aortic valve atresia

Left Heart Lesions (continued)	Aortic Valve Disease (continued)	Aortic insufficiency
		Aortic insufficiency and aortic stenosis
		Aortic valve, other
	Sinus of Valsalva Fistula/Aneurysm	Sinus of Valsalva aneurysm
	LV to Aorta Tunnel	LV to aorta tunnel
	Mitral Valve Disease	Mitral stenosis, supravalvar mitral ring
		Mitral stenosis, valvar
		Mitral stenosis, subvalvar
		Mitral stenosis, subvalvar, parachute
		Mitral stenosis, NOS
		Mitral regurgitation and mitral stenosis
		Mitral regurgitation
	Mitral valve, other	
	Hypoplastic Left Heart Syndrome	Hypoplastic left heart syndrome (HLHS)
Cardiomyopathy	Cardiomyopathy	
	Cardiomyopathy, end stage congenital heart disease	
Pericardial Disease	Pericardial effusion	
	Pericarditis	
	Pericardial disease, other	
Single Ventricle	Single ventricle, DILV	
	Single ventricle, DIRV	
	Single ventricle, mitral atresia	
	Single ventricle, tricuspid atresia	
	Single ventricle, unbalanced AV canal	
	Single ventricle, heterotaxia syndrome	
	Single ventricle, other	
	Single ventricle, NOS	
Transposition of the Great Arteries	Congenitally Corrected TGA	Congenitally corrected TGA
	Transposition of the Great Arteries	TGA, IVS
		TGA, IVS-LVOTO
		TGA, VSD
		TGA, VSD-LVOTO
TGA, NOS		
DORV	DORV, VSD type	
	DORV, TOF type	
	DORV, TGA type	
	DORV, remote VSD (uncommitted VSD)	
	DORV, NOS	
DOLV	DOLV	
Thoracic Arteries and Veins	Coarctation of Aorta (all types)	Coarctation of aorta
		Aortic arch hypoplasia
	Coronary Artery Anomalies	Coronary artery anomaly, anomalous aortic origin
		Coronary artery anomaly, anomalous pulmonary origin (includes ALCAPA)
		Coronary artery anomaly, fistula
		Coronary artery anomaly, aneurysm
		Coronary artery anomaly, other
		Coronary artery anomaly, NOS
	Interrupted Arch	Interrupted aortic arch
	Patent Ductus Arteriosus	Patent ductus arteriosus
	Vascular rings and Slings	Vascular ring
Pulmonary artery sling		
Aortic Aneurysm	Aortic aneurysm (including pseudoaneurysm)	
Aortic Dissection	Aortic dissection	
Lung Disease	Lung Disease	Lung disease, benign
		Lung disease, malignant
	Pectus Excavatum, Carinatum	Pectus
	Tracheal Stenosis	Tracheal stenosis
Tracheal disease, other		
Electrophysiologic	Arrhythmia	
	Arrhythmia, heart block, acquired	
	Arrhythmia, heart block, congenital	

Electrophysiologic (continued)		Arrhythmia, heart block, NOS
		Arrhythmia, pacemaker, indication for replacement
Miscellaneous, Other		Atrial isomerism, left
		Atrial isomerism, right
		Aneurysm, ventricular, right
		Aneurysm, ventricular, left
		Aneurysm, pulmonary artery
		Aneurysm, other
		Hypoplastic RV
		Hypoplastic LV
		Mediastinitis
		Endocarditis
		Prosthetic valve failure
		Myocardial infarction
		Cardiac tumor
		Pulmonary AV fistula
		Pulmonary embolism
		Pulmonary vascular obstructive disease, NOS
		Pulmonary vascular obstructive disease (Eisenmenger's)
		Primary pulmonary hypertension
		Persistent fetal circulation
		Meconium aspiration
		Pleural disease, benign
		Pleural disease, malignant
		Pneumothorax
		Pleural effusion
		Chylothorax
		Empyema
		Esophageal disease, benign
		Esophageal disease, malignant
		Mediastinal disease, benign
		Mediastinal disease, malignant
		Mediastinal disease, NOS
		Diaphragm paralysis
		Diaphragm disease, other
		Cardiac, other
	Thoracic and/or mediastinal, other	
	Peripheral vascular, other	
	Normal heart	
	Miscellaneous, other	

PROCEDURES

Check all procedures that apply. CIRCLE the ONE PRIMARY procedure for this operation.

Septal Defects	ASD	PFO, primary closure
		ASD repair, primary closure
		ASD repair, patch
		ASD repair, device
		ASD, common atrium (single atrium), septation
		ASD creation/enlargement
		ASD partial closure
		Atrial septal fenestration
		ASD repair, NOS
	VSD	VSD repair, primary closure
		VSD repair, patch
		VSD repair, device
		VSD, multiple, repair
		VSD creation/enlargement
		Ventricular septal fenestration
	VSD repair, NOS	
	AV Canal	AVC (AVSD) repair, complete (CAVSD)
		AVC (AVSD) repair, intermediate (transitional)
		AVC (AVSD) repair, partial (incomplete) (PAVSD)
		AVC (AVSD) repair, NOS
AP Window	AP window repair	
	Pulmonary artery origin from ascending aorta (hemitruncus) repair	

Septal Defects (continued)	Truncus Arteriosus	Truncus arteriosus repair	
		Valvuloplasty, truncal valve	
		Valve replacement, truncal	
Pulmonary Venous Anomalies	Partial Anomalous Pulm Venous Conn	PAPVC repair	
		PAPVC, scimitar, repair	
	Total Anomalous Pulm Venous Conn	TAPVC repair	
Cor Triatriatum		Cor triatriatum repair	
Pulmonary Venous Stenosis		Pulmonary venous stenosis repair	
Systemic Venous Anomalies	Anomalous Systemic Venous Connection	Atrial baffle procedure (non-Mustard, non-Senning)	
		Atrial baffle procedure, NOS	
		Anomalous systemic venous connection repair	
		Systemic venous stenosis repair	
Right Heart Lesions	Tetralogy of Fallot	TOF repair, no ventriculotomy	
		TOF repair, ventriculotomy, nontransannular patch	
		TOF repair, ventriculotomy, transannular patch	
		TOF repair, RV-PA conduit	
		TOF, AVC (AVSD), repair	
		TOF, absent pulmonary valve, repair	
		TOF repair, NOS	
	Pulmonary Atresia	Pulmonary atresia-VSD (including TOF, PA), repair	
		Pulmonary atresia-VSD-MAPCA (pseudotruncus), repair	
		Unifocalization MAPCA(s)	
		Occlusion MAPCA(s)	
	Tricuspid Valve Disease and Ebstein's Anomaly	Valvuloplasty, tricuspid	
		Valve replacement, tricuspid (TVR)	
		Valve closure, tricuspid (exclusion, univentricular approach)	
		Valve excision, tricuspid (without replacement)	
		Valve surgery, other, tricuspid	
	RVOT Obstruction, IVS Pulmonary Stenosis	RVOT procedure	
		1 1/2 ventricular repair	
		PA, reconstruction (plasty), main (trunk)	
		PA, reconstruction (plasty), branch, central	
		PA, reconstruction (plasty), branch, peripheral (at or beyond the hilar bifurcation)	
		PA, reconstruction (plasty), NOS	
	Pulmonary Valve Disease	DCRV repair	
		Valvuloplasty, pulmonic	
		Valve replacement, pulmonic (PVR)	
		Valve excision, pulmonary (without replacement)	
		Valve closure, semilunar	
	Valve surgery, other, pulmonic		
	Conduit Stenosis / Insufficiency	Conduit, reoperation	
		Conduit, placement, RV to PA	
		Conduit, placement, LV to PA	
	Left Heart Lesions	Aortic Valve Disease	Valvuloplasty, aortic
			Valve replacement, aortic (AVR)
			Valve replacement, aortic (AVR), mechanical
			Valve replacement, aortic (AVR), bioprosthetic
			Valve replacement, aortic (AVR), homograft
			Aortic root replacement
			Aortic root replacement, mechanical
			Aortic root replacement, homograft
			Ross procedure
			Konno procedure
			Ross-Konno procedure
Other annular enlargement procedure			
Aortic stenosis, subvalvar, repair			
Aortic stenosis, supra-valvar, repair			
Valve surgery, other, aortic			
Sinus of Valsalva Aneurysm		Sinus of Valsalva, aneurysm repair	
LV to Aorta Tunnel		LV to aorta tunnel repair	
Mitral Valve Disease		Valvuloplasty, mitral	
		Mitral stenosis, supra-valvar mitral ring, repair	
		Valve replacement, mitral (MVR)	
	Valve surgery, other, mitral		

Left Heart Lesions (continued)	Hypoplastic Left Heart	Norwood procedure
		HLHS biventricular repair
	Cardiomyopathy	Transplant, heart
		Transplant, heart and lung
		Partial left ventriculectomy (LV volume reduction surgery) (Batista)
	Constrictive Pericarditis	Pericardial drainage procedure
		Pericardiectomy
		Pericardial procedure, other
	Single Ventricle	
Fontan, atrio-ventricular connection		
Fontan, TCPC, lateral tunnel, fenestrated		
Fontan, TCPC, lateral tunnel, nonfenestrated		
Fontan, TCPC, lateral tunnel, NOS		
Fontan, TCPC, external conduit, fenestrated		
Fontan, TCPC, external conduit, nonfenestrated		
Fontan, TCPC, external conduit, NOS		
Fontan, other		
Fontan, NOS		
Transposition of the Great Arteries	Congenitally Corrected TGA	Congenitally corrected TGA repair, atrial switch and ASO (double switch)
		Congenitally corrected TGA repair, atrial switch and Rastelli
		Congenitally corrected TGA repair, VSD closure
		Congenitally corrected TGA repair, VSD closure and LV to PA conduit
		Congenitally corrected TGA repair, other
		Congenitally corrected TGA repair, NOS
	Transposition of the Great Arteries	Arterial switch operation (ASO)
		Arterial switch operation (ASO) and VSD repair
		Senning
		Mustard
		Rastelli
		REV
		TGA, other procedures (Nikaidoh, Kawashima, LV-PA conduit, other)
DORV		DORV, intraventricular tunnel repair
		DORV repair, NOS
DOLV		DOLV repair
Thoracic Arteries and Veins	Coarctation of Aorta	Coarctation repair, end to end
		Coarctation repair, end to end, extended
		Coarctation repair, subclavian flap
		Coarctation repair, patch aortoplasty
		Coarctation repair, interposition graft
		Coarctation repair, other
		Coarctation repair, NOS
		Aortic arch repair
	Coronary Artery Anomalies	Coronary artery fistula ligation
		Anomalous origin of coronary artery repair
		Coronary artery bypass
		Coronary artery procedure, other
	Interrupted Arch	Interrupted aortic arch repair
	Patent Ductus Arteriosus	PDA closure, surgical
		PDA closure, device
PDA closure, NOS		
Vascular Rings and Slings	Vascular ring repair	
	Pulmonary artery sling repair	
Aortic Aneurysm	Aortic aneurysm repair	
Aortic Dissection	Aortic dissection repair	
Lung Disease	Lung Disease	Lung biopsy
		Transplant, lung(s)
		Lung procedure, other
	Pectus Excavatum, Carinatum	Pectus repair
	Tracheal Stenosis	Tracheal procedure
Electrophysiologic		Pacemaker implantation, permanent
		Pacemaker procedure
		ICD (AICD) implantation
		ICD (AICD) ([automatic] implantable cardioverter defibrillator) procedure
		Arrhythmia surgery-atrial, surgical ablation
		Arrhythmia surgery-ventricular, surgical ablation
		Arrhythmia surgery, NOS

Interventional Cardiology Procedures		ASD creation, balloon septostomy (BAS) (Rashkind)
		ASD creation, blade septostomy
		Balloon dilation
		Stent placement
		Device closure
		RF ablation
		Coil embolization
Palliative Procedures		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
		Shunt, systemic to pulmonary,NOS
		Shunt, ligation and takedown
		PA banding (PAB)
		PA debanding
		Damus-Kaye-Stansel procedure (DKS) (creation of AP anastomosis without arch reconstruction)
		Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn)
		Glenn (unidirectional cavopulmonary anastomosis) (unidirectional Glenn)
		Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (bilateral bidirectional Glenn)
		Hemifontan
		Palliation, other
Miscellaneous Procedures		Aneurysm, ventricular, right, repair
		Aneurysm, ventricular, left, repair
		Aneurysm, pulmonary artery, repair
		Atrial baffle procedure, NOS
		Cardiac tumor resection
		Conduit placement, NOS
		Pulmonary AV fistula repair/occlusion
		Ligation, pulmonary artery
		Pulmonary embolectomy
		Pleural drainage procedure
		Pleural procedure, other
		Ligation, thoracic duct
		Decortication
		Esophageal procedure
		Mediastinal procedure
		Bronchoscopy
		Diaphragm plication
		Diaphragm procedure, other
		Intraaortic balloon pump (IABP) insertion
		ECMO procedure
		Right/left heart assist device procedure
		VATS (video-assisted thoracoscopic surgery)
		Minimally invasive procedure
		Bypass for noncardiac lesion
		Delayed sternal closure
		Mediastinal exploration
		Sternotomy wound drainage
		Thoracotomy, other
		Cardiotomy, other
		Cardiac procedure, other
		Thoracic and/or mediastinal procedure, other
		Peripheral vascular procedure, other
		Miscellaneous procedure, other
		Organ procurement
	Other procedure	

COMPLICATIONS

		None
OR check all that apply:		
Operative		Reoperation during this admission (unplanned reoperation)
		Systemic vein obstruction
		Pulmonary vein obstruction
		Bleeding requiring reoperation
		Sternum left open
Renal		Acute renal failure requiring temporary dialysis
		Acute renal failure requiring permanent dialysis

Neurologic deficit persisting at discharge		Postoperative neurological deficit persisting at discharge
		Postoperative new onset seizures
Infection		Wound dehiscence
		Wound infection
		Postoperative septicemia
		Mediastinitis
		Postoperative endocarditis
Respiratory		Pneumothorax
		Pleural effusion requiring drainage
		Pneumonia
		Postoperative tracheostomy
		Phrenic nerve injury/paralyzed diaphragm
		Recurrent laryngeal nerve injury/paralyzed vocal cord
		Postoperative respiratory insufficiency requiring mechanical ventilatory support > 7 days
		Postoperative respiratory insufficiency requiring reintubation
Other		Postoperative cardiac arrest
		Postoperative mechanical circulatory support (IABP, VAD, ECMO, or CPS)
		Postoperative arrhythmia
		Postoperative complete AV block requiring temporary pacemaker
		Postoperative complete AV block requiring permanent pacemaker
		Postoperative low cardiac output
		Pericardial effusion requiring drainage
		Postoperative acidosis
		Postoperative pulmonary hypertension crises (PA pressure > systemic pressure)
		Chylothorax
		Other postoperative complication