

STS/EACTS Short List mapping to European Paediatric Cardiac Code Short List with ICD-9 & ICD-10 crossmapping

Boxed items = codes where 2 or 3 EPCC items required for single STS/EACTS item

STS / EACTS term	EPCC term	EPCC code	ICD-9	ICD-10	ICD-10 additional
Appendix IIIA - Noncardiac Abnormalities Short List					
None	Hereditary/ non-cardiac abnormality not apparent,	10.23.00	nc		nc
Asplenia	Spleen absent (asplenia),	03.07.03	759.0		Q20.6
Polysplenia	Multiple spleens (polysplenia),	03.07.04	759.0		Q20.6
Down Syndrome	Trisomy 21 - Down's syndrome,	14.01.02	758.0		Q90.9
Turner Syndrome	45XO - Turner's syndrome,	14.01.05	758.6		Q96
DiGeorge	DiGeorge sequence,	14.02.06	279.1		D82.1
Williams Beuren syndrome	Williams syndrome (infantile hypercalcaemia),	14.02.30	275.4	747.2	Q93.8
Alagille syndrome (intrahepatic biliary duct agenesis)	Alagille syndrome: arteriohepatic dysplasia,	14.02.66	751.6		Q44.7
22q11 deletion	22q11 microdeletion - CATCH 22,	14.01.21	758.3		Q93.8
Other chromosomal/syndromic abnormality	No exact equivalent		759.9		Q87.8
Rubella	Fetal rubella syndrome,	14.02.32	771.0		P35.0
Marfan syndrome	Marfan syndrome,	14.02.17	759.8		Q87.4
Other preoperative noncardiac abnormality	No exact equivalent				

Appendix IIIB - General Preoperative Risk Factor Short List

None	No pre-procedural risk factors,	10.20.00	nc		nc
Preoperative mechanical circulatory support (IABP, VAD, ECMO, or CPS)	Pre-procedural mechanical circulatory support,	10.20.15	V46.8		Z99.8
Preoperative complete AV block	Pre-procedural complete AV block,	11.06.35	426.0		I44.2
Preoperative arrhythmia	Pre-procedural arrhythmia,	10.20.03	427.9		I49.9
Preoperative shock	Pre-procedural shock,	10.20.02	785.5		R57.0
Preoperative acidosis	Pre-procedural blood gas/acid-base derangement,	10.20.05	276.9		E87.8
Preoperative pulmonary hypertension (PA pressure > systemic pressure)	Pre-procedural pulmonary hypertension,	10.20.16	518.5		J95.8
Preoperative mechanical ventilatory support	Pre-procedural mechanical ventilatory support,	10.20.14	V46.1		Z99.1
Preoperative tracheostomy	Pre-procedural tracheostomy,	10.20.17	V44.0		Z93.0
Preoperative renal failure (creatinine > 2)	Pre-procedural renal failure,	10.20.07	584.9		N17.9
Preoperative renal failure requiring dialysis	Pre-procedural renal failure requiring dialysis,	10.20.08	V45.1		Z99.2
Preoperative bleeding disorder	Pre-procedural coagulation disorder,	10.20.06	286.9		D68.9
Preoperative endocarditis	Pre-procedural endocarditis,	10.06.65	421.0		I33.0
Preoperative septicemia	Pre-procedural septicemia,	10.20.09	038.9		A41.9
Preoperative neurological deficit	Pre-procedural neurological impairment,	10.20.12	348.9		G93.9
Preoperative seizures	Pre-procedural seizures,	10.20.18	345.9		R56.8
Other preoperative risk factor	No exact equivalent				

Appendix IV - Diagnoses Short List

Septal Defects

PFO	Patent foramen ovale (PFO),	05.03.01	745.5	Q21.1
ASD	ASD,	05.04.01	745.5	Q21.1
ASD, Secundum	ASD within oval fossa (secundum),	05.04.02	745.5	Q21.1
ASD, Sinus venosus	Sinus venosus ASD,	05.05.00	745.5	Q21.1
ASD, Coronary sinus	Interatrial communication (ASD) through coronary sinus orifice,	05.05.03	745.5	Q21.1
ASD, Common atrium (Single atrium)	Common atrium (virtual absence of atrial septum),	05.06.01	745.6	Q21.2
VSD	VSD,	07.10.00	745.4	Q21.0
VSD, Single	Single VSD,	07.15.05	745.4	Q21.0
VSD, Multiple	Multiple VSDs,	07.15.04	745.4	Q21.0
VSD, Type 1 (Subarterial) (Supracristal) (Conal septal defect) (Infundibular)	Subarterial VSD,	07.12.00	745.4	Q21.0
VSD, Type 2 (Perimembranous) (Paramembranous) (Conoventricular)	Perimembranous VSD,	07.10.01	745.4	Q21.0
VSD, Type 3 (Inlet), (AV Canal type)	Inlet VSD,	07.14.05	745.4	Q21.0
VSD, Type 4 (Muscular)	Muscular VSD,	07.11.01	745.4	Q21.0
VSD, Type: Gerbode type (LV-RA communication)	Communication between LV-RA (Gerbode defect),	07.14.02	745.4	Q21.0
AVC (AVSD)	Atrioventricular septal defect,	06.06.00	745.6	Q21.2
AVC (AVSD), Complete (CAVSD)	AVSD: atrial & ventricular components (complete),	06.06.09	745.6	Q21.2
AVC (AVSD), Intermediate (transitional)	AVSD: atrial & ventricular components + separate AV valves ('intermediate'),	06.06.10	745.6	Q21.2
AVC (AVSD), Partial (incomplete) (PAVSD) (ASD, Primum)	AVSD: isolated atrial component (primum ASD),	06.06.01	745.6	Q21.2
AP window (aortopulmonary window)	Aortopulmonary window,	09.04.01	745.0	Q21.4
Pulmonary artery origin from ascending aorta (hemitruncus)	Pulmonary artery from ascending aorta (hemitruncus),	09.09.08	747.3	Q25.7
Truncus arteriosus	Common arterial trunk,	09.01.01	745.0	Q20.0
Truncal valve insufficiency	Truncal valvar regurgitation,	09.02.03	746.9	Q24.8

Pulmonary venous anomalies

Partial anomalous pulmonary venous connection (PAPVC)	Partially anomalous pulmonary venous connection(s),	04.07.01	747.4	Q26.3
Partial anomalous pulmonary venous connection (PAPVC), Scimitar	Partially anomalous pulmonary venous connections: Scimitar syndrome,	01.01.16	747.4	Q26.8
Total anomalous pulmonary venous connection (TAPVC)	Totally anomalous pulmonary venous connection,	04.08.05	747.4	Q26.2
Total anomalous pulmonary venous connection (TAPVC), Type 1 (supracardiac)	Totally anomalous pulmonary venous connection - supracardiac,	04.06.00	747.4	Q26.2
Total anomalous pulmonary venous connection (TAPVC), Type 2 (cardiac)	Totally anomalous pulmonary venous connection - intracardiac,	04.08.10	747.4	Q26.2
Total anomalous pulmonary venous connection (TAPVC), Type 3 (infracardiac)	Totally anomalous pulmonary venous connection - infracardiac,	04.08.20	747.4	Q26.2
Total anomalous pulmonary venous connection (TAPVC), Type 4 (mixed)	Totally anomalous pulmonary venous connection - mixed,	04.08.30	747.4	Q26.2
Cor triatriatum	Cor triatriatum (divided left atrium),	05.02.01	746.8	Q24.2
Pulmonary venous stenosis	Pulmonary vein stenosis,	04.08.91	747.4	Q26.8

Systemic venous anomalies

Systemic venous anomaly	Systemic vein abnormality - congenital,	04.05.00	747.4	Q26.9
Systemic venous obstruction	Systemic vein obstruction,	10.30.09	459.2	I87.1

Right heart lesions

TOF	Tetralogy of Fallot,	01.01.01	745.2	Q21.3		
TOF, AVC (AVSD)	AV septal defect and Tetralogy of Fallot,	01.01.20	745.6	745.2	Q21.2	Q21.3
TOF, Absent Pulmonary Valve	Absent pulmonary valve syndrome - Fallot-type,	09.05.25	746.8	746.0	Q24.8	Q22.3
Pulmonary atresia	Pulmonary atresia,	09.05.11	746.0	Q22.0		
Pulmonary atresia, IVS	Pulmonary atresia + intact ventricular septum,	01.01.07	746.0	Q22.0		

Pulmonary atresia, IVS + Coronary artery anomalies	Pulmonary atresia + intact ventricular septum,	01.01.07	746.0		Q22.0	
	Coronary arterial abnormality,	09.46.00	746.8		Q24.5	
Pulmonary atresia, VSD (including TOF, PA)	Pulmonary atresia + VSD (including Fallot type),	01.01.06	745.2		Q21.3	
Pulmonary atresia - VSD - MAPCA (pseudotruncus)	Pulmonary atresia + VSD + 'MAPCA'(s),	01.01.25	745.2	747.9	Q21.3	Q27.8
MAPCA(s) (major aortopulmonary collateral[s]) (without PA-VSD)	Systemic to pulmonary collateral artery (MAPCA),	09.08.01	747.9		Q27.8	
Ebstein's anomaly	Ebstein's malformation of tricuspid valve,	06.01.34	746.2		Q22.5	
Tricuspid regurgitation, non-Ebstein's related	Tricuspid regurgitation,	06.01.91	746.8		Q22.8	
Tricuspid stenosis	Tricuspid stenosis,	06.01.92	746.1		Q22.4	
Tricuspid regurgitation and tricuspid stenosis	Tricuspid regurgitation,	06.01.91	746.8		Q22.8	
	Tricuspid stenosis,	06.01.92	746.1		Q22.4	
Tricuspid valve, Other	No exact equivalent		746.9		Q22.9	

Pulmonary stenosis	Pulmonary stenosis,	09.05.92	746.0	Q22.3
Pulmonary stenosis, Subvalvar	Subpulmonary stenosis,	07.05.30	746.8	Q24.3
Pulmonary stenosis, Valvar	Pulmonary valvar stenosis,	09.05.01	746.0	Q22.1
Pulmonary artery stenosis	Pulmonary arterial stenosis,	09.10.01	747.3	Q25.7
Pulmonary artery stenosis (Hypoplasia), Main (Trunk)	Pulmonary trunk stenosis,	09.07.13	747.3	Q25.6
	Pulmonary trunk hypoplasia,	09.07.11	747.3	Q25.7
Pulmonary artery stenosis, Branch, Central (within the hilar bifurcation)	Central pulmonary arterial stenosis - proximal to hilar bifurcation,	09.10.07	747.3	Q25.6
Pulmonary artery stenosis, Branch, Peripheral (at or beyond the hilar bifurcation)	Peripheral pulmonary arterial stenoses - at/beyond hilar bifurcation,	09.10.06	747.3	Q25.6
Pulmonary artery, Discontinuous	Discontinuous (non-confluent) pulmonary arteries,	09.10.10	747.3	Q25.7
DCRV	Double chambered RV,	07.03.01	746.8	Q24.8
Pulmonary valve, Other	No exact equivalent		746.0	Q22.3
Conduit failure	Cardiac conduit failure,	15.55.16	996.0	T82.5
Pulmonary insufficiency	Pulmonary regurgitation,	09.05.91	746.0	Q22.2
Pulmonary insufficiency and pulmonary stenosis	Pulmonary stenosis,	09.05.92	746.0	Q22.1
	Pulmonary regurgitation,	09.05.91	746.0	Q22.2

Left heart lesions

Aortic stenosis	Aortic stenosis,	09.15.92	746.3	Q23.0
Aortic stenosis, Subvalvar	Subaortic stenosis,	07.09.00	746.8	Q24.4
Aortic stenosis, Valvar	Aortic valvar stenosis,	09.15.13	746.3	Q23.0
Aortic stenosis, Supravalvar	Supravalvar aortic stenosis,	09.16.00	747.2	Q25.3
Aortic valve atresia	Aortic valvar atresia,	09.15.03	746.7	Q23.0
Aortic insufficiency	Aortic regurgitation,	09.15.91	746.4	Q23.1
Aortic insufficiency + aortic stenosis	Aortic regurgitation,	09.15.91	746.4	Q23.1
	Aortic stenosis,	09.15.92	746.3	Q23.0
Aortic valve, Other	No exact equivalent		746.9	Q23.9
Aortic insufficiency + mitral regurgitation	Aortic regurgitation,	09.15.91	746.4	Q23.1
	Mitral regurgitation,	06.02.91	746.6	Q23.3
Aortic insufficiency + Mitral regurgitation and mitral stenosis	Aortic regurgitation,	09.15.91	746.4	Q23.1
	Mitral regurgitation,	06.02.91	746.6	Q23.3
	Mitral stenosis,	06.02.92	746.5	Q23.2
Aortic insufficiency + mitral stenosis	Aortic regurgitation,	09.15.91	746.4	Q23.1
	Mitral stenosis,	06.02.92	746.5	Q23.2
Aortic insufficiency and aortic stenosis + mitral regurgitation	Aortic regurgitation,	09.15.91	746.4	Q23.1
	Aortic stenosis,	09.15.92	746.3	Q23.0
	Mitral regurgitation,	06.02.91	746.6	Q23.3
Aortic insufficiency and aortic stenosis + Mitral regurgitation and mitral stenosis	Aortic regurgitation,	09.15.91	746.4	Q23.1
	Aortic stenosis,	09.15.92	746.3	Q23.0
	Mitral regurgitation,	06.02.91	746.6	Q23.3
	Mitral stenosis,	06.02.92	746.5	Q23.2
Aortic insufficiency and aortic stenosis + mitral stenosis	Aortic regurgitation,	09.15.91	746.4	Q23.1
	Aortic stenosis,	09.15.92	746.3	Q23.0
	Mitral stenosis,	06.02.92	746.5	Q23.2
Aortic stenosis and mitral regurgitation	Aortic stenosis,	09.15.92	746.3	Q23.0
	Mitral regurgitation,	06.02.91	746.6	Q23.3
Aortic stenosis + Mitral regurgitation and mitral stenosis	Aortic stenosis,	09.15.92	746.3	Q23.0
	Mitral regurgitation,	06.02.91	746.6	Q23.3
	Mitral stenosis,	06.02.92	746.5	Q23.2
Aortic stenosis + mitral stenosis	Aortic stenosis,	09.15.92	746.3	Q23.0
	Mitral stenosis,	06.02.92	746.5	Q23.2
Aortic valve, Other + Mitral valve, Other	Aortic valvar abnormality,	09.15.00	746.9	Q23.9
	Mitral valvar abnormality,	06.02.00	746.9	Q23.9
Sinus of Valsalva aneurysm	Aortic sinus of Valsalva aneurysm,	09.18.01	747.2	Q25.4
LV to aorta tunnel	Aorto-LV tunnel,	09.17.02	747.2	Q25.4

Mitral stenosis	Mitral stenosis,	06.02.92	746.5		Q23.2
Mitral stenosis, Supravalvar mitral ring	Supravalvar mitral ring,	05.02.02	746.8		Q20.8
Mitral stenosis, Valvar	Mitral valvar stenosis,	06.02.93	746.5		Q23.2
Mitral stenosis, Subvalvar	Mitral subvalvar stenosis,	06.02.13	746.8		Q23.8
Mitral stenosis, Subvalvar, Parachute	Parachute malformation of mitral valve,	06.02.56	746.9		Q23.8
Mitral regurgitation and stenosis	Mitral regurgitation,	06.02.91	746.6		Q23.3
	Mitral stenosis,	06.02.92	746.5		Q23.2
Mitral regurgitation	Mitral regurgitation,	06.02.91	746.6		Q23.3
Mitral valve, Other	No exact equivalent		746.9		Q23.9
Hypoplastic left heart syndrome (HLHS)	Hypoplastic left heart syndrome,	01.01.09	746.7		Q23.4
Cardiomyopathy	Cardiomyopathy,	10.10.01	425.4		I42.9
Cardiomyopathy, End-stage congenital heart disease	Myocardial failure in end stage congenital heart disease,	10.07.40	428.9	746.9	I50.9 Q24.9
Pericardial effusion	Pericardial effusion,	10.08.31	423.9		I31.3
Pericarditis	Pericarditis,	10.08.00	420.9		I30.9
Pericardial disease, Other	No exact equivalent		423.9		I31.9
Single Ventricle					
Single ventricle	Functionally univentricular heart,	01.01.22	746.9		Q20.9
Single ventricle, DILV	Double inlet LV,	01.04.04	745.3		Q20.4
Single ventricle, DIRV	Double inlet RV,	01.04.03	745.3		Q20.4
Single ventricle, Mitral atresia	Mitral atresia,	06.02.01	746.8		Q23.2
	Functionally univentricular heart,	01.01.22	746.9		Q20.9
Single ventricle, Tricuspid atresia	Tricuspid atresia,	06.01.01	746.1		Q22.4
	Functionally univentricular heart,	01.01.22	746.9		Q20.9
Single ventricle, Unbalanced AV Canal	AVSD with ventricular imbalance,	06.07.26	745.6		Q21.2
	Functionally univentricular heart,	01.01.22	746.9		Q20.9
Single ventricle, Heterotaxia syndrome	Functionally univentricular heart,	01.01.22	746.9		Q20.9
	Abnormal atrial arrangement,	01.03.06	746.9		Q20.9
Single ventricle, Other	No exact equivalent		746.9		Q20.9

Transposition of the great arteries

Congenitally corrected TGA	Congenitally corrected transposition of great arteries,	01.01.03	745.1	Q20.5
TGA	Discordant VA connections (TGA),	01.05.01	745.1	Q20.3
TGA, IVS	Complete transposition of great arteries (IVS),	01.01.02	745.1	Q20.3
TGA, IVS - LVOTO	Complete transposition of great arteries (IVS), LV outflow tract obstruction,	01.01.02	745.1	Q20.3
		07.09.01	746.8	Q24.8
TGA, VSD	Discordant VA connections (TGA), VSD,	01.05.01	745.1	Q20.3
		07.10.00	745.4	Q21.0
TGA, VSD - LVOTO	Discordant VA connections (TGA), VSD, LV outflow tract obstruction,	01.05.01	745.1	Q20.3
		07.10.00	745.4	Q21.0
		07.09.01	746.8	Q24.8

DORV

DORV	Double outlet RV, No exact equivalent	01.01.04	746.8	Q20.1
DORV, VSD type	Double outlet RV - Fallot type,	01.01.17	746.8	Q20.1
DORV, TOF type	Double outlet RV - transposition type,	01.01.18	746.8	Q20.1
DORV, TGA type	Double outlet RV - with non-committed VSD,	01.01.19	746.8	Q20.1
DORV, Remote VSD (uncommitted VSD)				

DOLV

DOLV	Double outlet LV,	01.05.03	746.8	Q20.2
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Thoracic arteries and veins

Coarctation of aorta	Aortic coarctation,	09.29.01	747.1	Q25.1
Aortic arch hypoplasia	Aortic arch hypoplasia (tubular),	09.29.11	747.2	Q25.4
Coronary artery anomaly	Coronary arterial abnormality,	09.46.00	746.8	Q24.5
Coronary artery anomaly, Anomalous aortic origin	Coronary arterial origin from aorta abnormal,	09.42.00	746.8	Q24.5
Coronary artery anomaly, Anomalous pulmonary origin (includes ALCAPA)	Anomalous origin of coronary artery from pulmonary artery,	09.41.01	746.8	Q24.5
Coronary artery anomaly, Fistula	Coronary fistula,	09.45.01	746.8	Q24.5
Coronary artery anomaly, Aneurysm	Coronary arterial aneurysm(s),	09.46.01	746.8	Q24.5
Coronary artery anomaly, Other	No exact equivalent		746.8	Q24.5
Interrupted aortic arch	Interrupted aortic arch,	09.29.31	747.1	Q25.4
Patent ductus arteriosus	Patent arterial duct (PDA),	09.27.21	747.0	Q25.0
Vascular ring	Vascular ring,	09.31.00	747.2	Q25.4
Pulmonary artery sling	Pulmonary arterial sling,	09.09.06	747.3	Q25.7
Aortic aneurysm (including pseudoaneurysm)	Aortic aneurysm,	10.14.50	441.2	I71.2
Aortic dissection	Aortic dissection,	10.14.51	441.0	I71.0

Lung disease

Lung disease, Benign	Lung disease - benign,	16.03.01	212.3	D14.3
Lung disease, Malignant	Lung disease - malignant,	16.03.21	162.9	C34.9
Pneumothorax	Pneumothorax,	14.03.20	512	J93.9
Pectus	Pectus carinatum,	14.04.04	754.8	Q67.7
	Pectus excavatum,	14.04.05	754.8	Q67.6
Tracheal stenosis	Tracheal stenosis,	16.10.01	519.1	J39.8
Tracheal disease, Other	No exact equivalent		519.1	J39.8

Electrophysiologic

Arrhythmia	Arrhythmia,	11.00.00	427.9	I49.9
Arrhythmia, Atrial	No exact equivalent		427.0	I49.8
Arrhythmia, Ventricular	No exact equivalent		427.8	I49.8
Arrhythmia, Heart block, Acquired	Acquired complete AV block,	11.06.10	426.0	I44.2
Arrhythmia, Heart block, Congenital	Congenital complete heart block,	11.06.16	746.8	Q24.6
Arrhythmia, Heart block	No exact equivalent		426.9	I45.9
Arrhythmia, Pacemaker, Indication for replacement	Pacemaker dysfunction / complication necessitating replacement,	11.11.00	996.0	T82.1

Miscellaneous

Atrial isomerism, Left	Left isomerism ('polysplenia'),	03.01.05	746.8	Q20.6
Atrial isomerism, Right	Right isomerism ('asplenia'),	03.01.04	746.8	Q20.6
Aneurysm, Ventricular, Right	RV aneurysm,	07.01.14	746.8	Q24.8
Aneurysm, Ventricular, Left	LV aneurysm,	07.06.13	746.8	Q24.8
Aneurysm, Pulmonary artery	Pulmonary arterial aneurysm,	09.10.44	747.3	Q25.7
Aneurysm, Other	No exact equivalent		747.6	Q27.8
Hypoplastic RV	RV hypoplasia,	07.02.00	746.9	Q20.8
Hypoplastic LV	LV hypoplasia,	07.07.00	746.9	Q20.8
Mediastinitis	Mediastinitis,	15.03.52	519.2	J98.5
Endocarditis	Infective endocarditis,	10.06.01	421.0	I33.0
Prosthetic valve failure	Prosthetic valve failure,	10.33.00	996	T82.0
Myocardial infarction	Myocardial infarction,	10.18.00	410	I21.9
Cardiac tumor	Heart tumour,	10.03.01	239.8	D48.7
Pulmonary AV fistula	Pulmonary arteriovenous fistula,	09.15.05	747.3	Q25.7
Pulmonary embolism	Pulmonary embolism,	10.13.51	415.1	I26.9
Pulmonary vascular obstructive disease	Pulmonary vascular disease,	10.13.06	416.8	I27.8
Pulmonary vascular obstructive disease (Eisenmenger's)	Irreversible pulmonary vascular disease (Eisenmenger),	10.13.08	416.8	I27.8
Primary pulmonary hypertension	Primary pulmonary hypertension,	10.13.02	416.0	I27.0
Persistent fetal circulation	Persistent pulmonary hypertension of the newborn (PFC),	10.15.01	747.9	P29.3
Meconium aspiration	Meconium aspiration,	10.15.12	770.1	P24.0
Pleural disease, Benign	Pleural disease - benign,	16.01.21	212.4	D15.7
Pleural disease, Malignant	Pleural disease - malignant,	16.01.22	163.9	C38.4
Pneumothorax	Pneumothorax,	16.01.01	512	J93.9
Pleural effusion	Pleural effusion,	16.01.04	511.9	J90
Chylothorax	Chylothorax,	16.01.07	457.8	J94.0
Empyema	Empyema,	16.01.11	510.9	J86
Esophageal disease, Benign	Oesophageal disease - benign,	16.20.01	211.0	D13.0
Esophageal disease, Malignant	Oesophageal disease - malignant,	16.20.02	150.9	C15.9
Mediastinal disease, Benign	Mediastinal disease - benign,	16.05.11	212.5	D15.2
Mediastinal disease, Malignant	Mediastinal disease - malignant,	16.05.12	164.9	C38.3
Diaphragm paralysis	Phrenic nerve palsy,	15.80.90	519.4	J98.6
Diaphragm disease, Other	No exact equivalent	16.15.09	519.4	J98.6
Cardiac, Other	No exact equivalent		746.8	Q24.8
Thoracic and / or mediastinal, Other	No exact equivalent		759.8	Q89.8
Peripheral vasculature, Other	No exact equivalent		747.9	Q27.8
Miscellaneous, Other	No exact equivalent			
Normal heart	Normal heart,	01.01.00	nc	nc

Appendix V - Procedures short list

Septal defects

PFO, Primary closure	Patent foramen ovale (PFO) direct closure,	12.01.53
ASD repair	ASD closure,	12.01.01
ASD repair, Primary closure	ASD closure with direct suture,	12.01.02
ASD repair, Patch	ASD closure with patch,	12.01.03
ASD repair, Device	ASD closure with transluminal prosthesis,	12.01.06
ASD, Common atrium (single atrium), Septation	Atrial septation procedure,	12.01.22
ASD creation/ enlargement	Interatrial communication creation/ enlargement,	12.01.90
ASD partial closure	ASD closure - partial,	12.01.08
Atrial septal fenestration	Fenestration of atrial septum,	12.30.20
VSD repair	VSD closure,	12.08.01
VSD repair, Primary closure	VSD closure by direct suture,	12.08.02
VSD repair, Patch	VSD closure using patch,	12.08.03
VSD repair, Device	VSD closure with transluminal prosthesis,	12.08.07
VSD multiple repair	Closure of multiple VSDs,	12.08.16
VSD creation / enlargement	VSD enlargement/ creation,	12.08.35
Ventricular septal fenestration	Open fenestration of VSD patch,	12.08.19
VSD repair + ASD repair	VSD closure,	12.08.01
	ASD closure,	12.01.01
	VSD closure,	12.08.01
	Pulmonary trunk band removal (de-band),	12.14.03
VSD repair + PA debanding		
AVC (AVSD) repair	AV septal defect procedure,	12.04.00
AVC (AVSD) repair, Complete (CAVSD)	AVSD: complete (common valve orifice) repair,	12.05.01
AVC (AVSD) repair, Intermediate (Transitional)	AVSD: 'intermediate' repair,	12.05.10
AVC (AVSD) repair, Partial (Incomplete) (PAVSD)	AVSD: partial (primum ASD) repair,	12.04.01
AP window repair	Aortopulmonary window closure,	12.12.01
Pulmonary artery origin from ascending aorta (hemitruncus) repair	Pulmonary artery origin from ascending aorta (hemitruncus) repair,	12.14.30
Truncus Arteriosus repair	Common arterial trunk (truncus) repair,	12.11.00
Valvuloplasty, truncal valve	Repair of truncal valve cusp(s) (valvoplasty),	12.11.34
Valve replacement, Truncal valve	Truncal valve replacement,	12.11.41
Pulmonary venous anomalies		
PAPVC repair	Partially APVC repair,	12.00.02
PAPVC, Scimitar, Repair	Scimitar syndrome (PAPVC) repair,	12.00.17
TAPVC repair	TAPVC repair,	12.00.00
Cor triatriatum repair	Cor triatriatum (divided LA) repair,	12.01.31
Pulmonary venous stenosis repair	Pulmonary vein stenosis repair,	12.00.03
Systemic venous anomalies		
Atrial baffle procedure (non-Mustard, non-Senning)	Atrial baffle procedure,	12.01.57
Anomalous systemic venous connection repair	Anomalous systemic venous connection repair,	12.00.81
Systemic venous stenosis repair	Systemic venous stenosis repair,	12.00.83
Right heart lesions		
TOF repair	Tetralogy of Fallot repair,	12.26.01
TOF repair, No ventriculotomy	Tetralogy of Fallot repair,	12.26.01

TOF repair, Ventriculotomy, Nontransannular patch	Transatrial approach,	12.08.11
	Tetralogy of Fallot repair without transannular patch,	12.26.20
	Trans-RV approach,	12.08.12
TOF repair, Ventriculotomy, Transannular patch	Tetralogy of Fallot repair with transannular patch,	12.26.13
	Trans-RV approach,	12.08.12
TOF repair, RV-PA conduit	Tetralogy of Fallot repair,	12.26.01
	RV to pulmonary artery conduit construction,	12.36.01
TOF- AVC (AVSD) repair	AVSD & Tetralogy of Fallot repair,	12.05.11
TOF- Absent pulmonary valve repair	Absent pulmonary valve syndrome (Fallot type) repair,	12.26.21
Pulmonary atresia - VSD (including TOF, PA) repair	Pulmonary atresia & VSD (including Fallot-type) repair,	12.28.01
Pulmonary atresia - VSD - MAPCA (pseudotruncus) repair	Pulmonary atresia, VSD & MAPCAs repair,	12.28.11
Unifocalization MAPCA(s)	Unifocalisation procedure,	12.25.00
Occlusion MAPCA(s)	Major systemic-to-pulmonary collateral artery (MAPCA) occlusion,	12.25.18

Valvuloplasty, Tricuspid	Tricuspid leaflet (valvoplasty) procedure,	12.02.02
Valve replacement, Tricuspid (TVR)	Tricuspid valvar replacement,	12.02.11
Valve closure, Tricuspid (exclusion, univentricular approach)	Tricuspid valvar closure,	12.02.70
Valve excision, Tricuspid (without replacement)	Tricuspid valvectomy,	12.02.22
Valve surgery, Other, Tricuspid	No exact equivalent	
RVOT procedure	RV outflow tract procedure,	12.06.00
1 1/2 ventricular repair	1.5 ventricle repair: RV outflow tract reconstruction + Glenn anastomosis,	12.06.19
PA reconstruction (plasty)	Pulmonary arterioplasty / reconstruction,	12.14.20
PA reconstruction (plasty), Main (trunk)	Pulmonary trunk arterioplasty,	12.14.01
PA reconstruction (plasty), Branch, Central (within the hilar bifurcation)	Pulmonary arterioplasty / reconstruction - central (proximal to hilar bifurcation),	12.14.21
PA reconstruction (plasty), Branch, Peripheral (at or beyond the hilar bifurcation)	Pulmonary arterioplasty / reconstruction - peripheral (at/beyond hilar bifurcation),	12.14.22
DCRV repair	Repair of double chambered RV,	12.06.35
Conduit reoperation	Procedure involving constructed cardiac conduit / shunt,	12.36.40
Conduit placement	Conduit construction procedure,	12.36.00
Valvuloplasty, Pulmonic	Pulmonary valvotomy - open,	12.13.02
Valve replacement, Pulmonic (PVR)	Pulmonary valvar replacement (not conduit),	12.13.21
Conduit placement, RV to PA	RV to pulmonary artery conduit construction,	12.36.01
Conduit placement, LV to PA	LV to pulmonary artery conduit construction,	12.36.02
Valve excision, Pulmonary (without replacement)	Open pulmonary valvectomy,	12.13.12
Valve closure, Semilunar	Pulmonary valve closure/oversewing,	12.13.15
Valve surgery, Other, Pulmonic	No exact equivalent	
Left heart lesions		
Valvuloplasty, Aortic	Aortic valvoplasty,	12.16.11
Valve replacement, Aortic (AVR)	Aortic valvar replacement,	12.16.21
Valve replacement, Aortic (AVR), Mechanical	Aortic valvar replacement using mechanical prosthesis,	12.16.29
Valve replacement, Aortic (AVR), Bioprosthetic	Aortic valvar replacement using heterograft bioprosthesis,	12.16.28
Valve replacement, Aortic (AVR), Homograft	Aortic valvar replacement using homograft,	12.16.22
Aortic root replacement	Aortic root replacement (not Ross),	12.16.50
Aortic root replacement, Mechanical	Aortic root replacement using mechanical prosthesis,	12.16.64
Aortic root replacement, Homograft	Aortic root replacement using homograft,	12.16.63
Ross procedure	Ross procedure (Ao root replacement with pulm autograft),	12.16.30
Konno procedure	LV outflow tract obstruction relief - complex (Konno etc),	12.07.12
Ross - Konno procedure	Ross-Konno procedure,	12.16.62
Other annular enlargement procedure	No exact equivalent	
Aortic stenosis, Subvalvar, Repair	Subaortic obstruction relief,	12.08.22
Aortic stenosis, Supravalvar, Repair	Supravalvar aortic stenosis repair,	12.16.40
Valve closure, Semilunar	Aortic valve closure/oversewing,	12.16.61
Valve surgery, Other, Aortic	No exact equivalent	
Sinus of Valsalva , Aneurysm repair	Aortic sinus of Valsalva aneurysm repair,	12.16.85
LV to aorta tunnel repair	Aorto-LV tunnel closure,	12.16.90
Valvuloplasty, Mitral	Mitral leaflet (valvoplasty) procedure,	12.03.03
Mitral stenosis, Supravalvar mitral ring repair	Supra-mitral valvar LA-ring excision,	12.01.32
Valve replacement, Mitral (MVR)	Mitral valvar replacement,	12.03.11
Valve surgery, Other, Mitral	No exact equivalent	
Valve replacement, Mitral (MVR) + Valve replacement, Aortic (AVR)	Mitral valvar replacement,	12.03.11
	Aortic valvar replacement,	12.16.21
Norwood procedure	Norwood type procedure,	12.10.00
HLHS biventricular repair	Hypoplastic left heart biventricular repair,	12.10.05
Transplant, Heart	Heart transplant,	12.37.01
Transplant, Heart and lung(s)	Transplantation of heart and lungs,	12.32.13
Partial left ventriculectomy (LV volume reduction surgery) (Batista)	Partial left ventriculectomy / volume reduction (Batista),	12.07.38
Rodney Franklin - short codes		

Pericardial drainage procedure
Pericardiectomy
Pericardial procedure, Other

Pericardiocentesis,
Pericardiectomy,
No exact equivalent

12.32.40
12.32.09

Single ventricle

Fontan	Fontan type procedure,	12.30.01
Fontan, Atrio-pulmonary connection	Fontan procedure with direct atrio-pulmonary anastomosis,	12.30.32
Fontan, Atrio-ventricular connection	Fontan procedure with atrio-ventricular connection,	12.30.13
Fontan, TCPC, Lateral tunnel, Fenestrated	Total cavopulmonary conn (TCPC) with lateral atrial tunnel,	12.30.51
	Fenestration of Fontan type connection,	12.30.27
Fontan, TCPC, Lateral tunnel, Non-fenestrated	Total cavopulmonary conn (TCPC) with lateral atrial tunnel,	12.30.51
	Fontan-type connection without fenestration,	12.30.28
Fontan, TCPC, Lateral tunnel	Total cavopulmonary conn (TCPC) with lateral atrial tunnel,	12.30.51
Fontan, TCPC, External conduit, Fenestrated	Total cavopulmonary conn (TCPC) using extracardiac IVC-PA conduit,	12.30.54
	Fenestration of Fontan type connection,	12.30.27
Fontan, TCPC, External conduit, Non-fenestrated	Total cavopulmonary conn (TCPC) using extracardiac IVC-PA conduit,	12.30.54
	Fontan-type connection without fenestration,	12.30.28
Fontan, TCPC, External conduit	Total cavopulmonary conn (TCPC) using extracardiac IVC-PA conduit,	12.30.54
Fontan, Other	No exact equivalent	

Transposition of the great arteries

Congenitally corrected TGA repair	Congenitally corrected TGA repair,	12.27.46
Congenitally corrected TGA repair, Atrial Switch and ASO (Double switch)	Congenitally corrected TGA repair,	12.27.46
	Arterial and atrial switch procedures (double switch),	12.29.25
Congenitally corrected TGA repair, Atrial Switch and Rastelli	Congenitally corrected TGA repair,	12.27.46
	Arterial switch and Rastelli procedures,	12.29.26
Congenitally corrected TGA repair, VSD closure	Congenitally corrected TGA repair,	12.27.46
	VSD closure,	12.08.01
Congenitally corrected TGA repair, VSD closure and LV to PA conduit	Congenitally corrected TGA repair,	12.27.46
	VSD closure,	12.08.01
	LV to pulmonary artery conduit construction,	12.36.02
Congenitally corrected TGA repair, Other	No exact equivalent	
Arterial switch operation (ASO)	Arterial switch procedure,	12.29.21
Arterial switch operation (ASO) and VSD repair	Arterial switch procedure,	12.29.21
	VSD closure,	12.08.01
Senning	Senning procedure (atrial inversion),	12.29.01
Senning + PA debanding	Senning procedure (atrial inversion),	12.29.01
	Pulmonary trunk band removal (de-band),	12.14.03
Senning + VSD repair	Senning procedure (atrial inversion),	12.29.01
	VSD closure,	12.08.01
Mustard	Mustard procedure (atrial inversion),	12.29.02
Mustard + PA debanding	Mustard procedure (atrial inversion),	12.29.02
	Pulmonary trunk band removal (de-band),	12.14.03
Mustard + VSD repair	Mustard procedure (atrial inversion),	12.29.02
	VSD closure,	12.08.01
Rastelli	Rastelli procedure: LV to Ao via VSD & RV to pulm trunk conduit,	12.29.11
Rastelli + VSD creation/enlargement	Rastelli procedure: LV to Ao via VSD & RV to pulm trunk conduit,	12.29.11
	VSD enlargement/ creation,	12.08.35
REV	REV procedure: LV to Ao via VSD & direct RV-PA anast (Lecompte),	12.27.45
REV + VSD creation/enlargement	REV procedure: LV to Ao via VSD & direct RV-PA anast (Lecompte),	12.27.45
	VSD enlargement/ creation,	12.08.35
TGA, Other procedures (Nikaido, Kawashima, LV-PA conduit, other)	No exact equivalent	

DORV

DORV repair	Double outlet RV repair,	12.29.20
DORV, Intraventricular tunnel repair	Double outlet RV repair with intraventricular tunnel,	12.27.02

DOLV

DOLV repair	Double outlet LV repair,	12.27.50
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Thoracic arteries and veins

Coarctation repair	Coarctation / hypoplasia of aorta repair,	12.18.00
Coarctation repair, End to end	Aortic coarct/hypoplasia repair: resection & end/end anast,	12.18.01
Coarctation repair, End to end, Extended	Aortic coarct/hypoplasia repair: extended resection & end/end anast,	12.18.10
Coarctation repair, Subclavian flap	Aortic coarct/hypoplasia repair: subclavian flap aortoplasty,	12.18.03
Coarctation repair, Patch aortoplasty	Aortic coarct/hypoplasia repair: patch aortoplasty,	12.18.02
Coarctation repair, Interposition graft	Aortic coarct/hypoplasia repair: resection + insertion tube graft,	12.18.15
Coarctation repair, Other	No exact equivalent	
Aortic arch repair	Aortic arch repair,	12.18.30
Anomalous origin of coronary artery from pulmonary artery repair	Anomalous coronary artery (eg ALCAPA) repair,	12.23.00
Coronary artery fistula ligation	Ligation of coronary fistula,	12.23.11
Coronary artery bypass	Coronary arterial bypass graft (CABG) procedure,	12.23.08
Coronary artery bypass + Valve replacement, Aortic (AVR)	Coronary arterial bypass graft (CABG) procedure, Aortic valvar replacement,	12.23.08 12.16.21
Coronary artery bypass + Valve replacement, Aortic (AVR) + Valve replacement, Mitral (MVR)	Coronary arterial bypass graft (CABG) procedure, Aortic valvar replacement, Mitral valvar replacement,	12.23.08 12.16.21 12.03.11
Coronary artery bypass + Valve replacement, Aortic (AVR) + Valvuloplasty, Mitral	Coronary arterial bypass graft (CABG) procedure, Aortic valvar replacement, Mitral leaflet (valvoplasty) procedure,	12.23.08 12.16.21 12.03.03
Coronary artery bypass + Valve replacement, Mitral (MVR)	Coronary arterial bypass graft (CABG) procedure, Mitral valvar replacement,	12.23.08 12.03.11
Coronary artery bypass + Valvuloplasty, Mitral	Coronary arterial bypass graft (CABG) procedure, Mitral leaflet (valvoplasty) procedure,	12.23.08 12.03.03
Coronary artery procedure, Other	No exact equivalent	
Interrupted aortic arch repair	Interrupted aortic arch repair,	12.21.00
Interrupted aortic arch repair + AP window repair	Interrupted aortic arch repair, Aortopulmonary window closure,	12.21.00 12.12.01
PDA closure	Arterial duct (PDA) closure,	12.24.10
PDA closure, Surgical	Patent arterial duct (PDA) closure - surgical,	12.24.20
PDA closure, Device	Arterial duct (PDA) closure with transluminal prosthesis,	12.24.04
Vascular ring repair	Vascular ring procedure,	12.17.11
Pulmonary artery sling repair	Pulmonary arterial sling repair,	12.17.32
Aortic aneurysm repair	Aorta aneurysm repair,	12.16.42
Aortic dissection repair	Aortic dissection repair,	12.16.59
Lung disease		
Lung biopsy	Lung biopsy procedure,	12.32.06
Transplant, Lung(s)	No exact equivalent	
Lung procedure, Other	No exact equivalent	
Pectus repair	Anterior chest wall (pectus) repair,	12.65.23
Tracheal procedure	Tracheal procedure (DESCRIBE),	12.64.20
Electrophysiologic		
Pacemaker Implantation, Permanent	Pacemaker system placement: permanent,	12.34.67
Pacemaker procedure	Pacemaker procedure,	12.34.68

ICD (AICD) Implantation	Automatic cardioverter & defibrillator (AICD) implantation,	12.42.31
ICD (AICD) ([Automatic] implantable cardioverter defibrillator) procedure	Automatic cardioverter & defibrillator (AICD) procedure (DESCRIBE),	12.42.39
Arrhythmia surgery	Arrhythmia surgical procedure,	12.35.40
Arrhythmia surgery - atrial, Surgical ablation	Open ablation procedure for atrial arrhythmia,	12.35.80
Arrhythmia surgery - ventricular, Surgical ablation	Open ablation procedure for ventricular arrhythmia,	12.35.81

Interventional cardiology procedures

ASD creation, Balloon septostomy (BAS) (Rashkind)	Balloon atrial septostomy by pull back (Rashkind),	12.01.41
ASD creation, Blade septostomy	Blade atrial septostomy,	12.01.44
Balloon dilation	No exact equivalent	
Stent placement	No exact equivalent	
Device closure	No exact equivalent	
RF ablation	Transluminal radiofrequency procedure for arrhythmia,	12.35.48
Coil embolization	No exact equivalent	

Palliative procedures

Shunt, Systemic to pulmonary
 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, Ligation and takedown
 PA banding (PAB)
 PA debanding
 PA Banding (PAB) + Shunt, Systemic to pulmonary

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 (BBD CPA) (bilateral bidirectional Glenn)
 Hemifontan
 Palliation, Other

Miscellaneous

Aneurysm, Ventricular, Right, Repair
 Aneurysm, Ventricular, Left, Repair
 Aneurysm, Pulmonary artery, Repair
 Atrial baffle procedure
 Cardiac tumor resection
 Pulmonary AV fistula repair / occlusion
 Ligation, Pulmonary artery
 Pulmonary embolectomy
 Pleural drainage procedure
 Pleural procedure, Other
 Ligation, Thoracic duct
 Decortication
 Esophageal procedure
 Bronchoscopy
 Diaphragm plication
 Diaphragm procedure, Other
 Intra-aortic balloon pump (IABP) insertion
 ECMO procedure
 Right / Left heart assist device procedure
 VATS (video assisted thoracoscopic surgery)
 Minimally invasive procedure
 Bypass for non-cardiac lesion
 Delayed sternal closure
 Mediastinal exploration
 Mediastinal procedure
 Sternotomy wound drainage
 Organ procurement
 Thoracotomy, Other
 Cardiotomy, Other
 Cardiac procedure, Other
 Thoracic and / or mediastinal procedure, Other
 Peripheral vascular procedure, Other
 Miscellaneous procedure, Other
 Other

Systemic-to-pulmonary arterial shunt procedure, 12.31.30
 Modified Blalock interposition shunt, 12.31.46
 Central systemic-PA interposition shunt, 12.31.06
 No exact equivalent
 Closure of systemic-to-PA shunt, 12.31.31
 Pulmonary trunk band (PA band), 12.14.02
 Pulmonary trunk band removal (de-band), 12.14.03
 Pulmonary trunk band (PA band), 12.14.02
 Systemic-to-pulmonary arterial shunt procedure, 12.31.30
 Damus-Kaye-Stansel type procedure: pulm trunk to aorta end/side anastomosis, 12.09.03
 Bidirectional superior cavopulmonary (Glenn) anastomosis, 12.31.11
 Unidirectional superior cavopulmonary (Glenn) anastomosis, 12.31.45
 Bilateral bidirectional superior cavopulmonary (Glenn) anastomoses, 12.31.44
 Hemi-Fontan procedure, 12.31.15
 No equivalent

RV aneurysm repair, 12.06.38
 LV aneurysm repair, 12.07.37
 Pulmonary aneurysm repair, 12.15.24
 Atrial baffle procedure, 12.01.52
 Heart tumour resection, 12.32.10
 Pulmonary arteriovenous fistula closure, 12.25.07
 Pulmonary artery ligation, 12.14.31
 Pulmonary embolectomy, 12.15.48
 Insertion of pleural tube drain, 12.32.80
 No exact equivalent
 Thoracic duct occlusion, 12.32.28
 Lung decortication, 12.66.01
 No exact equivalent
 Bronchoscopy, 12.64.00
 Plication of hemidiaphragm, 12.32.70
 No exact equivalent
 Intra-aortic balloon pump (IABP) insertion, 12.87.10
 Cardiac support using ECMO circuitry, 12.87.25
 Ventricular assist device implantation, 12.87.21
 Thoracoscopic approach (VATS), 12.40.06
 Minimally invasive procedure, 12.40.13
 Cardiopulmonary bypass for non-cardiac lesion, 12.00.92
 Delayed closure of sternum, 12.65.60
 Mediastinal exploration, 12.65.05
 Mediastinal procedure, 12.65.06
 Sternotomy wound drainage, 12.65.56
 No exact equivalent
 No exact equivalent
 No exact equivalent
 No exact equivalent
 No exact equivalent
 No exact equivalent
 No exact equivalent
 No exact equivalent
 No exact equivalent
 No exact equivalent

Appendix VI - Complications Short List

None	No post-procedural complications,	15.90.03				
Reoperation during this admission (unplanned reoperation)	Unplanned reoperation during current admission,	15.43.06				
Postoperative cardiac arrest	Cardiac arrest following procedure,	15.00.02	997.1		I97.8	
Postoperative mechanical circulatory support (IABP, VAD, ECMO, or CPS)	Post-procedural requirement for mechanical circulatory support,	15.00.09	997.1		I97.8	
Postoperative complete AV block requiring temporary pacemaker	Post-procedural complete AV block - requiring temporary pacemaker,	11.06.32	997.1		I44.2	Y83.8
Postoperative complete AV block requiring permanent pacemaker	Post-procedural complete AV block - requiring permanent pacemaker,	11.06.33	997.1		I44.2	Y83.8
Postoperative arrhythmia	Arrhythmia following procedure,	15.60.02	997.1		I97.8	I49.9
Postoperative low cardiac output	Post-procedural low cardiac output,	15.00.03	997.1		I97.1	
Postoperative acidosis	Post-procedural acidosis,	15.80.15	276.2	E878.8	E87.2	Y83.8
Sternum left open	Delayed closure of sternum,	12.65.60				
Pericardial effusion requiring drainage	Pericardial effusion requiring drainage,	15.83.00	423.9	E878.8	I31.3	Y83.8
Systemic vein obstruction	Systemic vein obstruction,	10.30.09	459.2		I87.1	
Pulmonary vein obstruction	Pulmonary vein obstruction,	15.05.03	459.2	E878.8	I28.8	Y83.8
Postoperative pulmonary hypertension crises (PA pressure > systemic pressure)	Post-procedural pulmonary hypertensive crises,	15.80.22	518.5	E878.8	J95.8	
Postoperative respiratory insufficiency requiring mechanical ventilatory support > 7 days	Post-procedural requirement for mechanical respiratory support > 7 days,	15.80.32	518.5		J95.3	
Postoperative respiratory insufficiency requiring reintubation	Post-procedural requirement for reintubation,	15.80.33	518.5		J95.1	
Postoperative tracheostomy	Post-procedural requirement for tracheostomy,	15.80.86	997.3		J95.3	
Pneumonia	Post-procedural pulmonary infection,	15.80.21	997.3		J95.8	J22
Pneumothorax	Post-procedural pneumothorax,	15.80.62	512	E878.8	J93.9	Y83.8
Pleural effusion requiring drainage	Pleural effusion requiring drainage,	15.80.61	511.9	E878.8	J90	Y83.8
Chylothorax	Post-procedural chylothorax,	15.80.55	457.8	E878.8	J94.0	Y83.8
Acute renal failure requiring temporary dialysis	Renal failure requiring temporary dialysis,	15.82.06	997.5		N99.0	
Acute renal failure requiring permanent dialysis	Renal failure requiring permanent dialysis,	15.82.06	997.5		N99.0	
Bleeding requiring reoperation	Post-procedural haemorrhage requiring reoperation,	15.02.65	998.1		T81.0	
Wound dehiscence	Wound dehiscence,	15.03.51	998.3		T81.3	
Wound infection	Wound infection,	15.03.50	998.9		T81.9	
Mediastinitis	Mediastinitis,	15.03.52	519.2		J98.5	
Postoperative endocarditis	Post-procedural endocarditis,	10.06.64	421.0	E878.8	I33.0	Y83.8
Postoperative septicemia	Post-procedural septicaemia,	15.80.05	998.5		T81.4	
Phrenic nerve injury/paralyzed diaphragm	Post-procedural phrenic nerve palsy,	15.80.90	519.4	998.2	J98.6	T81.2
Recurrent laryngeal nerve injury/paralyzed vocal cord	Post-procedural recurrent laryngeal nerve palsy,	15.80.93	352.3	998.2	G52.2	T81.2
Postoperative neurological deficit persisting at discharge	Post-procedural neurological impairment persisting at discharge,	15.82.65	997.0		G97.8	
Postoperative new onset seizures	Post-procedural new onset seizures,	15.82.67	345.9	997.0	G40.9	Y83.8
Other postoperative complication	No exact equivalent		998.9		T81.8	