



## PDI #5 Iatrogenic Pneumothorax

### Provider-Level Indicator

#### Numerator

Discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM code of iatrogenic pneumothorax in any secondary diagnosis field.

*ICD-9-CM Iatrogenic Pneumothorax diagnosis codes:*

5121 IATROGENIC PNEUMOTHORAX

#### Denominator

All surgical and medical discharges under age 18 defined by specific DRGs or MS-DRGs.

See *Pediatric Quality Indicators Appendices*:

- Appendix B – Surgical Discharge DRGs
- Appendix C – Surgical Discharge MS-DRGs
- Appendix D – Medical Discharge DRGs
- Appendix E – Medical Discharge MS-DRGs

Exclude cases:

- neonates with birth weight less than 500 grams (Birth Weight Category 1)
- with principal diagnosis of iatrogenic pneumothorax or secondary diagnosis present on admission
- with any diagnosis code of chest trauma or pleural effusion
- with an ICD-9-CM procedure code of thoracic surgery, lung or pleural biopsy diaphragmatic surgery repair, OR cardiac surgery
- normal newborn
- MDC 14 (pregnancy, childbirth, and puerperium)

See *Pediatric Quality Indicators Appendices*:

- Appendix I – Definitions of Neonate, Newborn, Normal Newborn, and Outborn

*Low Birth Weight categories:*

Less than 500 grams - Birth Weight Category 1	
76401	LIGHT-FOR-DATES <500G
76411	LT-FOR-DATE W/MAL <500G
76421	FETAL MALNUTRITION <500G
76491	FET GROWTH RETARD <500G
76501	EXTREME IMMATUR <500G

76511	PRETERM NEC <500G
V2131	LOW BIRTHWT STATUS <500G
500 to 999 grams - Birth Weight Category 2	
76402	LT-FOR-DATES 500-749G
76412	LT-DATE W/MAL 500-749G
76422	FETAL MALNUTR 500-749G

76492	FET GROWTH RET 500-749G
76502	EXTREME IMMATUR 500-749G
76512	PRETERM NEC 500-749G
76403	LT-FOR-DATES 750-999G
76413	LT-DATE W/MAL 750-999G
76423	FETAL MAL 750-999G
76493	FET GROWTH RET 750-999G
76503	EXTREME IMMATUR 750-999G
76513	PRETERM NEC 750-999G
V2132	LOW BIRTHWGT 500-999G
<b>1000 to 1499 grams - Birth Weight Category 3</b>	
76404	LT-FOR-DATES 1000-1249G
76414	LT-DATE W/MAL 1000-1249G
76424	FETAL MAL 1000-1249G
76494	FET GRWTH RET 1000-1249G
76504	EXTREME IMMAT 1000-1249G
76514	PRETERM NEC 1000-1249G
76405	LT-FOR-DATES 1250-1499G
76415	LT-DATE W/MAL 1250-1499G
76425	FETAL MAL 1250-1499G
76495	FET GRWTH RET 1250-1499G
76505	EXTREME IMMAT 1250-1499G
76515	PRETERM NEC 1250-1499G

V2133	LOW BIRTHWGT 1000-1499G
<b>1500 to 1999 grams - Birth Weight Category 4</b>	
76406	LT-FOR-DATES 1500-1749G
76416	LT-DATE W/MAL 1500-1749G
76426	FETAL MAL 1500-1749G
76496	FET GRWTH RET 1500-1749G
76506	EXTREME IMMAT 1500-1749G
76516	PRETERM NEC 1500-1749G
76407	LT-FOR-DATES 1750-1999G
76417	LT-DATE W/MAL 1750-1999G
76427	FETAL MALNUTR 1750-1999G
76497	FET GRWTH RET 1750-1999G
76507	EXTREME IMMAT 1750-1999G
76517	PRETERM NEC 1750-1999G
V2134	LOW BIRTHWGT 1500-1999G
<b>2000 to 2499 grams - Birth Weight Category 5</b>	
76408	LT-FOR-DATES 2000-2499G
76418	LT-DATE W/MAL 2000-2499G
76428	FETAL MALNUTR 2000-2499G
76498	FET GRWTH RET 2000-2499G
76508	EXTREME IMMAT 2000-2499G
76518	PRETERM NEC 2000-2499G
V2135	LOW BIRTHWGT 2000-2500G

*ICD-9-CM Chest Trauma diagnosis codes:*

80700	FRACTURE RIB NOS-CLOSED	8602	TRAUM HEMOTHORAX-CLOSED
80701	FRACTURE ONE RIB-CLOSED	8603	TRAUM HEMOTHORAX-OPEN
80702	FRACTURE TWO RIBS-CLOSED	8604	TRAUM PNEUMOHEMOTHOR-CL
80703	FRACTURE THREE RIBS-CLOS	8605	TRAUM PNEUMOHEMOTHOR-OPN
80704	FRACTURE FOUR RIBS-CLOSE	86100	HEART INJURY NOS-CLOSED
80705	FRACTURE FIVE RIBS-CLOSE	86101	HEART CONTUSION-CLOSED
80706	FRACTURE SIX RIBS-CLOSED	86102	HEART LACERATION-CLOSED
80707	FRACTURE SEVEN RIBS-CLOS	86103	HEART CHAMBER LACERAT-CL
80708	FX EIGHT/MORE RIB-CLOSED	86110	HEART INJURY NOS-OPEN
80709	FX MULT RIBS NOS-CLOSED	86111	HEART CONTUSION-OPEN
80710	FRACTURE RIB NOS-OPEN	86112	HEART LACERATION-OPEN
80711	FRACTURE ONE RIB-OPEN	86113	HEART CHAMBER LACER-OPN
80712	FRACTURE TWO RIBS-OPEN	86120	LUNG INJURY NOS-CLOSED
80713	FRACTURE THREE RIBS-OPEN	86121	LUNG CONTUSION-CLOSED
80714	FRACTURE FOUR RIBS-OPEN	86122	LUNG LACERATION-CLOSED
80715	FRACTURE FIVE RIBS-OPEN	86130	LUNG INJURY NOS-OPEN
80716	FRACTURE SIX RIBS-OPEN	86131	LUNG CONTUSION-OPEN
80717	FRACTURE SEVEN RIBS-OPEN	86132	LUNG LACERATION-OPEN
80718	FX EIGHT/MORE RIBS-OPEN	8620	DIAPHRAGM INJURY-CLOSED
80719	FX MULT RIBS NOS-OPEN	8621	DIAPHRAGM INJURY-OPEN
8072	FRACTURE OF STERNUM-CLOS	86221	BRONCHUS INJURY-CLOSED
8073	FRACTURE OF STERNUM-OPEN	86222	ESOPHAGUS INJURY-CLOSED
8074	FLAIL CHEST	86229	INTRATHORACIC INJ NEC-CL
8075	FX LARYNX/TRACHEA-CLOSED	86231	BRONCHUS INJURY-OPEN
8076	FX LARYNX/TRACHEA-OPEN	86232	ESOPHAGUS INJURY-OPEN
8090	FRACTURE TRUNK BONE-CLOS	86239	INTRATHORAC INJ NEC-OPEN
8091	FRACTURE TRUNK BONE-OPEN	8628	INTRATHORACIC INJ NOS-CL
8600	TRAUM PNEUMOTHORAX-CLOSE	8629	INTRATHORAC INJ NOS-OPEN
8601	TRAUM PNEUMOTHORAX-OPEN	8750	OPEN WOUND OF CHEST

8751	OPEN WOUND CHEST-COMPL	9220	CONTUSION OF BREAST
8760	OPEN WOUND OF BACK	9221	CONTUSION OF CHEST WALL
8761	OPEN WOUND BACK-COMPL	9223	BACK CONTUSION
9010	INJURY THORACIC AORTA	92231	BACK CONTUSION
9011	INJ INNOMIN/SUBCLAV ART	92233	INTERSCPLR REG CONTUSION
9012	INJ SUPERIOR VENA CAVA	9228	MULIPLE CONTUSION TRUNK
9013	INJ INNOMIN/SUBCLAV VEIN	9229	CONTUSION OF TRUNK
90140	INJ PULMONARY VESSEL NOS	92611	CRUSHING INJURY BACK
90141	INJURY PULMONARY ARTERY	92619	CRUSHING INJ TRUNK NEC
90142	INJURY PULMONARY VEIN	9268	MULT CRUSHING INJ TRUNK
90181	INJ INTERCOSTAL ART/VEIN	9269	CRUSHING INJ TRUNK NOS
90182	INJ INT MAMMARY ART/VEIN	9290	CRUSH INJ MULT SITE NEC
90183	INJ MULT THORACIC VESSEL	9299	CRUSHING INJURY NOS
90189	INJ THORACIC VESSEL NEC	9541	INJ SYMPA NERVE NEC
9019	INJ THORACIC VESSEL NOS	9548	INJURY TRUNK NERVE NEC
9110	ABRASION TRUNK	9549	INJURY TRUNK NERVE NOS
9111	ABRASION TRUNK-INFECTED	95911	INJURY OF CHEST WALL NEC
9118	SUPERFIC INJU TRUNK NEC	95919	TRUNK INJURY-SITES NEC
9119	SUPERFIC INJU TRUNK NEC-INF	9599	INJURY-SITE NOS

*ICD-9-CM Pleural Effusion diagnosis codes:*

0101	TUBERCULOUS PLEURISY IN PRIMARY PROGRESSIVE TUBERCULOSIS	01176	TPNEU, TUBERCLE BACILI NOT FOUND BY BACTERIOLOGICAL OR HISTOLOGICAL BUT CONFIRMED OTHER METHODS
01010	TUBERCULOUS PLEURISY IN PRIMARY PROGRESSIVE TUBERCULOSIS, UNSPECIFIED	0120	TUBERCULOUS PLEURISY
01011	TPIPPT, BACTERIAL OR HISTOLOGICAL EXAM NOT DONE	01200	TUBERCULOUS PLEURISY, UNSPECIFIED
01012	TPIPPT, BACTERIAL OR HISTOLOGICAL EXAM UNKNOWN	01201	TP, BACTERIAL OR HISTOLOGICAL EXAM NOT DONE
01013	TPIPPT, TUBERCLE BACILI FOUND BY MICROSCOPY	01202	TP, BACTERIAL OR HISTOLOGICAL EXAM UNKNOWN
01014	TPIPPT, TUBERCLE BACILI NOT FOUND BY MICROSCOPY BUT BY BACTERIAL CULTURE	01203	TP, TUBERCLE BACILI FOUND BY MICROSCOPY
01015	TPIPPT, TUBERCLE BACILI NOT FOUND BY BACTERIOLOGICAL BUT CONFIRMED HISTOLOGICALLY	01204	TP, TUBERCLE BACILI NOT FOUND BY MICROSCOPY BUT BY BACTERIAL CULTURE
01016	TPIPPT, TUBERCLE BACILI NOT FOUND BY BACTERIOLOGICAL OR HISTOLOGICAL BUT CONFIRMED OTHER METHODS	01205	TP, TUBERCLE BACILI NOT FOUND BY BACTERIOLOGICAL BUT CONFIRMED HISTOLOGICALLY
0117	TUBRCULOUS PNEUMOTHORAX	01206	TP, TUBERCLE BACILI NOT FOUND BY BACTERIOLOGICAL OR HISTOLOGICAL BUT CONFIRMED OTHER METHODS
01170	TUBRCULOUS PNEUMOTHORAX, UNSPECIFIED	1972	SECOND MALIG NEO PLEURA
01171	TPNEU, BACTERIAL OR HISTOLOGICAL EXAM NOT DONE	5111	WITH EFUSION, WITH MENTION OF A BACTERIAL CAUSE OTHER THAN TUBERCULOSIS
01172	TPNEU, BACTERIAL OR HISTOLOGICAL EXAM UNKNOWN	5118	OTHER SPECIFIED FORM OF EFFUSION, EXCEPT TUBERCULOUS
01173	TPNEU, TUBERCLE BACILI FOUND BY MICROSCOPY	51181	MALIGNANT PLEURAL EFFUSION
01174	TPNEU, TUBERCLE BACILI NOT FOUND BY MICROSCOPY BUT BY BACTERIAL CULTURE	51189	OCT08- OTHER SPECIFIED FORMS OF EFFUSION, EXCEPT TUBERCULOSIS
01175	TPNEU, TUBERCLE BACILI NOT FOUND BY BACTERIOLOGICAL BUT CONFIRMED HISTOLOGICALLY	5119	OCT08- UNSPECIFIED PLEURAL EFFUSION

*ICD-9-CM Thoracic Surgery procedure codes:*

0522	SYMPATHECTOMY CERVICAL	0523	SYMPATHECTOMY LUMBAR
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0529	OTHER SYMPATHECTOMY AND GANGLIONECTOMY	3341	SUTURE OF LACERATION OF BRONCHUS
0780	THYMECTOMY, NOT OTHERWISE SPECIFIED	3342	CLOSURE OF BRONCHIAL FISTULA
0781	OTHER PARTIAL EXCISION OF THYMUS	3343	CLOSURE OF LACERATION OF LUNG
0782	OTHER TOTAL EXCISION OF THYMUS	3348	OTHER REPAIR AND PLASTIC OPERATIONS ON BRONCHUS
0783	THORACOSCOPIC PARTIAL EXCISION OF THYMUS	3349	OTHER REPAIR AND PLASTIC OPERATIONS ON LUNG
0784	THORACOSCOPIC TOTAL EXCISION OF THYMUS	<hr/>	
3121	MEDIASTINAL TRACHEOSTOMY	Lung transplant	
3145	OPEN BIOPSY OF LARYNX OR TRACHEA	335	LUNG TRANSPLANTATION
3173	CLOSURE OF OTHER FISTULA OF TRACHEA	3350	LUNG TRANSPLANTATION, NOS
3179	OTHER REPAIR AND PLASTIC OPERATIONS ON TRACHEA	3351	UNILATERAL LUNG TRANSPLANTATION
3199	OTHER OPERATIONS ON TRACHEA	3352	BILATERAL LUNG TRANSPLANTATION
3209	OTHER LOCAL EXCISION OR DESTRUCTION OF LESION OR TISSUE OF BRONCHUS	336	COMBINED HEART-LUNG TRANSPLANTATION
321	OTHER EXCISION OF BRONCHUS	3392	LIGATION OF BRONCHUS
3220	THORAC EXC LUNG LESION	3393	PUNCTURE OF LUNG
<hr/>		3398	OTHER OPERATIONS ON BRONCHUS
Local excision or destruction of lesion or tissue of lung		3399	OTHER OPERATIONS ON LUNG
3221	PLICATION OF EMPHYSEMATIOUS BLEB	3329	OTHER DIAGNOSTIC PROCEDURE ON LUNG AND BRONCHUS
3222	LUNG VOLUME REDUCTION SURGERY	3333	PNEUMOPERITONEUM FOR COLLAPSE OF LUNG
3223	OPEN ABLTN LUNG LES/TISS OCT06-	3401	INCISION OF CHEST WALL
3224	PERC ABLTN LUNG LES/TISS OCT06-	3402	EXPLORATORY THORACOTOMY
3225	THOR ABLTN LUNG LES/TISS OCT06-	3403	REOPENING OF RECENT THORACOTOMY SITE
3226	ABLTN LUNG TISS NEC/NOS OCT06-	3405	CREATION OF PLEUROPERITONEAL SHUNT
3228	ENDOSCOPIC EXCISION OR DESTRUCTION OF LESION OR TISSUE OF LUNG	3409	OTHER INCISION OF PLEURA
3229	OTHER LOCAL EXCISION OR DESTRUCTION OF LESION OR TISSUE OF LUNG	341	INCISION OF MEDIASTINUM
323	SEGMENTAL RESECTION OF LUNG	<hr/>	
3230	THORAC SEG LUNG RESECT	Diagnostic procedures on chest wall, pleura, mediastinum, and diaphragm	
3239	OTH SEG LUNG RESECT NOS	3420	THORACOSCOPIC PLEURAL BX
324	LOBECTOMY OF LUNG	3421	TRANSPLEURAL THORACOSOCOPY
3241	THORAC LOBECTOMY LUNG	3422	MEDIASTINOSCOPY
3249	OTHER LOBECTOMY OF LUNG	3423	BIOPSY OF CHEST WALL
325	COMPLETE PNEUMONECTOMY	3425	CLOSED [PERCUTANEOUS][NEEDLE] BIOPSY OF MEDIASTINUM
3250	THORACOSPC PNEUMONECTOMY	3426	OPEN BIOPSY OF MEDIASTINUM
3259	OTHER PNEUMONECTOMY NOS	3427	BIOPSY OF DIAPHRAGM
326	RADICAL DISSECTION OF THORACIC STRUCTURES	3428	OTHER DIAGNOSTIC PROCEDURES ON CHEST WALL, PLEURA, AND DIAPHRAGM
329	OTHER EXCISION OF LUNG	3429	OTHER DIAGNOSTIC PROCEDURES ON MEDIASTINUM
330	INCISION OF BRONCHUS	343	EXCISION OR DESTRUCTION OF LESION OR TISSUE OF MEDIASTINUM
331	INCISION OF LUNG	344	EXCISION OR DESTRUCTION OF LESION OF CHEST WALL
3320	THORACOSCOPC LUNG BIOPSY	3451	DECORTICATION OF LUNG
3325	OPEN BIOPSY OF BRONCHUS	3452	THORACOSCOPC DECORT LUNG
3327	CLOSED ENDOSCOPIC BIOPSY OF LUNG	3459	OTHER EXCISION OF PLEURA
3328	OPEN BIOPSY OF LUNG	<hr/>	
3331	DESTRUCTION OF PHRENIC NERVE FOR COLLAPSE OF LUNG (NO LONGER PERFORMED)	Repair of chest wall	
3332	ARTIFICIAL PNEUMOTHORAX FOR COLLAPSE OF LUNG	3471	SUTURE OF LACERATION OF CHEST WALL
3334	THORACOPLASTY	3472	CLOSURE OF THORACOSTOMY
3339	OTHER SURGICAL COLLAPSE OF LUNG	3473	CLOSURE OF OTHER FISTULA OF THORAX
<hr/>		3474	REPAIR OF PECTUS DEFORMITY
Repair and plastic operation on lung and bronchus		3479	OTHER REPAIR OF CHEST WALL
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		Operations on diaphragm	

3481	EXCISION OF LESION OR TISSUE OF DIAPHRAGM	4255	INTRATHORACIC ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF COLON
3482	SUTURE OF LACERATION OF DIAPHRAGM	4256	OTHER INTRATHORACIC ESOPHAGOCOLOSTOMY
3483	CLOSURE OF FISTULA OF DIAPHRAGM	4258	INTRATHORACIC ESOPHAGEAL ANASTOMOSIS W/ OTHER INTERPOSITION
3484	OTHER REPAIR OF DIAPHRAGM	4259	OTHER INTRATHORACIC ANASTOMOSIS OF ESOPHAGUS
3485	IMPLANTATION OF DIAPHRAGMATIC PACEMAKER		
3489	OTHER OPERATIONS ON DIAPHRAGM		
3493	REPAIR OF PLEURA		
3499	OTHER OPERATIONS ON THORAX, OTHER		
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Operations on thoracic duct		Antesternal anastomosis	
4061	CANNULATION OF THORACIC DUCT	4261	ANTESTERNAL ESOPHAGUESOPHAGOSTOMY
4062	FISTULIZATION OF THORACIC DUCT	4262	ANTESTERNAL ESOPHAGOGASTROSTOMY
4063	CLOSURE OF FISTULA OF THORACIC DUCT	4263	ANTESTERNAL ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF SMALL BOWEL
4064	LIGATION OF THORACIC DUCT	4264	OTHER ANTESTERNAL ESOPHAGOENTEROSTOMY
4069	OTHER OPERATIONS ON THORACIC DUCT	4265	ANTESTERNAL ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF COLON
<hr/>		4266	OTHER ANTESTERNAL ESOPHAGOCOLOSTOMY
Esophagotomy		4268	OTHER ANTESTERNAL ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION
4201	INCISION OF ESOPHAGEAL WEB	4269	OTHER ANTESTERNAL ANASTOMOSIS OF ESOPHAGUS
4209	OTHER INCISION OF ESOPHAGUS		
4210	ESOPHAGOSTOMY, NOS		
4211	CERVICAL ESOPHAGOSTOMY		
4212	EXTERIORIZATION OF ESOPHAGEAL POUCH		
4219	OTHER EXTERNAL FISTULIZATION OF ESOPHAGUS		
4221	OPERATIVE ESOPHAGOSCOPY BY INCISION		
4225	OPEN BIOPSY OF ESOPHAGUS		
4231	LOCAL EXCISION OF ESOPHAGEAL DIVERTICULUM		
4232	LOCAL EXCISION OF OTHER LESION OR TISSUE OF ESOPHAGUS		
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Excision of esophagus		Other repair of esophagus	
4239	OTHER DESTRUCTION OF LESION OR TISSUE OF ESOPHAGUS	427	ESOPHAGOMYOTOMY
4240	ESOPHAGECTOMY, NOS	4281	INSERTION OF PERMANENT TUBE INTO ESOPHAGUS
4241	PARTIAL ESOPHAGECTOMY	4282	SUTURE OF LACERATION OF ESOPHAGUS
4242	TOTAL ESOPHAGECTOMY	4283	CLOSURE OF ESOPHAGOSTOMY
<hr/>		4284	REPAIR OF ESOPHAGEAL FISTULA, NEC
Intrathoracic anastomosis of exophagus		4285	REPAIR OF ESOPHAGEAL STRICTURE
4251	INTRATHORACIC ESOPHAGUESOPHAGOSTOMY	4286	PRODUCTION OF SUBCUTANEOUS TUNNEL W/O ESOPHAGEAL ANASTOMOSIS
4252	INTRATHORACIC ESOPHAGOGASTROSTOMY	4287	OTHER GRAFT OF ESOPHAGUS
4253	INTRATHORACIC ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF SMALL BOWEL	4289	OTHER REPAIR OF ESOPHAGUS
4254	OTHER INTRATHORACIC ESOPHAGOENTEROSTOMY	4465	ESOPHAGOGASTROPLASTY
		4466	OTHER PROCEDURES FOR CREATION OF ESOPHAGOGASTRIC SPHINCTERIC COMPETENCE
		8104	DORSAL AND DORSO-LUMBAR FUSION, ANTERIOR TECHNIQUE
		8134	REFUSION OF DORSAL AND DORSOLUMBAR SPINE, ANTERIOR TECHNIQUE

*ICD-9-CM Lung or Pleural Biopsy procedure codes:*

3326	CLOSED [PERCUTANEOUS] [NEEDLE] BIOPSY OF LUNG	3328	OPEN BIOPSY OF LUNG
		3424	PLEURAL BIOPSY

*ICD9-CM Diaphragmatic Surgery Repair codes:*

537	ABD REPAIR-DIAPHR HERNIA
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5371	LAPAROSCOPIC REPAIR OF DIAPHRAGMATIC HERNIA, ABDOMINAL APPROACH OCT08-	5382	PARASTERN HERNIA REPAIR
5372	OTHER AND OPEN REPAIR OF DIAPHRAGMATIC HERNIA, ABDOMINAL APPROACH OCT08-	5583	LAPAROSCOPIC REPAIR OF DIAPHRAGMATIC HERNIA, WITH THORACIC APPROACH OCT08-
5375	REPAIR OF DIAPHRAGMATIC HERNIA, ABDOMINAL APPROACH, NOS OCT08-	5584	OTHER AND OPEN REPAIR OF DIAPHRAGMATIC HERNIA, WITH THORACIC APPROACH OCT08-
5380	THOR REP-DIAPH HERN NOS		
5381	DIAPHRAGMATIC PPLICATION		

*ICD9-CM Cardiac Procedure codes:*

3510	OPEN HEART VALVULOPLASTY WITHOUT REPLACEMENT, UNSPECIFIED VALVE	3554	REPAIR OF ENDOCARDIAL CUSHION DEFECT WITH PROSTHESIS
3511	OPEN HEART VALVULOPLASTY OF AORTIC VALVE WITHOUT REPLACEMENT	3560	REPAIR OF UNSPECIFIED SEPTAL DEFECT OF HEART WITH TISSUE GRAFT
3512	OPEN HEART VALVULOPLASTY OF MITRAL VALVE WITHOUT REPLACEMENT	3561	REPAIR OF ATRIAL SEPTAL DEFECT WITH TISSUE GRAFT
3513	OPEN HEART VALVULOPLASTY OF PULMONARY VALVE WITHOUT REPLACEMENT	3562	REPAIR OF VENTRICULAR SEPTAL DEFECT WITH TISSUE GRAFT
3514	OPEN HEART VALVULOPLASTY OF TRICUSPID VALVE WITHOUT REPLACEMENT	3563	REPAIR OF ENDOCARDIAL CUSHION DEFECT WITH TISSUE GRAFT
3520	REPLACEMENT OF UNSPECIFIED HEART VALVE	3570	OTHER AND UNSPECIFIED REPAIR OF UNSPECIFIED SEPTAL DEFECT OF HEART
3521	REPLACEMENT OF AORTIC VALVE WITH TISSUE GRAFT	3571	OTHER AND UNSPECIFIED REPAIR OF ATRIAL SEPTAL DEFECT
3522	OTHER REPLACEMENT OF AORTIC VALVE	3572	OTHER AND UNSPECIFIED REPAIR OF VENTRICULAR SEPTAL DEFECT
3523	REPLACEMENT OF MITRAL VALVE WITH TISSUE GRAFT	3573	OTHER AND UNSPECIFIED REPAIR OF ENDOCARDIAL CUSHION DEFECT
3524	OTHER REPLACEMENT OF MITRAL VALVE	3581	TOTAL REPAIR OF TETRALOGY OF FALLOT
3525	REPLACEMENT OF PULMONARY VALVE WITH TISSUE GRAFT	3582	TOTAL REPAIR OF TOTAL ANOMALOUS PULMONARY VENOUS CONNECTION
3526	OTHER REPLACEMENT OF PULMONARY VALVE	3583	TOTAL REPAIR OF TRUNCUS ARTERIOSUS
3527	REPLACEMENT OF TRICUSPID VALVE WITH TISSUE GRAFT	3584	TOTAL CORRECTION OF TRANSPOSITION OF GREAT VESSELS, NOT ELSEWHERE CLASSIFIED
3528	OTHER REPLACEMENT OF TRICUSPID VALVE	3591	INTERATRIAL TRANSPOSITION OF VENOUS RETURN
3531	OPERATIONS ON PAPILLARY MUSCLE	3592	CREATION OF CONDUIT BETWEEN RIGHT VENTRICLE AND PULMONARY ARTERY
3532	OPERATIONS ON CHORDAE TENDINEAE	3593	CREATION OF CONDUIT BETWEEN LEFT VENTRICLE AND AORTA
3533	ANNULOPLASTY	3594	CREATION OF CONDUIT BETWEEN ATRIUM AND PULMONARY ARTERY
3534	INFUNDIBULECTOMY	3595	REVISION OF CORRECTIVE PROCEDURE ON HEART
3535	OPERATIONS ON TRABECULAE CARNEAE CORDIS	3598	OTHER OPERATIONS ON SEPTA OF HEART
3539	OPERATIONS ON OTHER STRUCTURES ADJACENT TO VALVES OF HEART	3599	OTHER OPERATIONS ON VALVES OF HEART
3550	REPAIR OF UNSPECIFIED SEPTAL DEFECT OF HEART WITH PROSTHESIS	3603	OPEN CHEST CORONARY ARTERY ANGIOPLASTY
3551	REPAIR OF ATRIAL SEPTAL DEFECT WITH PROSTHESIS, OPEN TECHNIQUE	3610	AORTOCORONARY BYPASS FOR HEART REVASCULARIZATION, NOT OTHERWISE SPECIFIED
3553	REPAIR OF VENTRICULAR SEPTAL DEFECT WITH PROSTHESIS, OPEN TECHNIQUE		

3611	(AORTO)CORONARY BYPASS OF ONE CORONARY ARTERY	3752	IMPLANTATION OF TOTAL REPLACEMENT HEART SYSTEM
3612	(AORTO)CORONARY BYPASS OF TWO CORONARY ARTERIES	3753	REPLACEMENT OF REPAIR OF THORACIC UNIT OF TOTAL REPLACEMENT HEART SYSTEM
3613	(AORTO)CORONARY BYPASS OF THREE CORONARY ARTERIES	3754	REPLACEMENT OR REPAIR OF OTHER IMPLANTABLE COMPONENT OF TOTAL REPLACEMENT HEART SYSTEM
3614	(AORTO)CORONARY BYPASS OF FOUR OR MORE CORONARY ARTERIES	3755	REMOVAL OF INTERNAL BIVENTRICULAR HEART REPLACEMENT SYSTEM OCT08-
3615	SINGLE INTERNAL MAMMARY-CORONARY ARTERY BYPASS	3760	IMPLANTATION OR INSERTION OF BIVENTRICULAR EXTERNAL HEART ASSIST SYSTEM OCT08-
3616	DOUBLE INTERNAL MAMMARY-CORONARY ARTERY BYPASS	3761	IMPLANT OF PULSATION BALLOON
3617	ABDOMINAL -CORONARY ARTERY BYPASS	3762	INSERTION OF NON-IMPLANTABLE HEART ASSIST SYSTEM
3619	OTHER BYPASS ANASTOMOSIS FOR HEART REVASCULARIZATION	3763	REPAIR OF HEART ASSIST SYSTEM
362	HEART REVASCULARIZATION BY ARTERIAL IMPLANT	3764	REMOVAL OF HEART ASSIST SYSTEM
3631	OPEN CHEST TRANSMYOCARDIAL REVASCULARIZATION	3765	IMPLANT OF EXTERNAL HEART ASSIST SYSTEM
3632	OTHER TRANSMYOCARDIAL REVASCULARIZATION	3766	INSERTION OF IMPLANTABLE HEART ASSIST SYSTEM
3639	OTHER HEART REVASCULARIZATION	3767	IMPLANTATION OF CARDIOMYOSTIMULATION SYSTEM
3691	REPAIR OF ANEURYSM OF CORONARY VESSEL	3791	OPEN CHEST CARDIAC MASSAGE
3699	OTHER OPERATIONS ON VESSELS OF HEART	3804	INCISION OF VESSEL, AORTA
370	PERICARDIOCENTESIS	3805	INCISION OF VESSEL, OTHER THORACIC
3710	INCISION OF HEART, NOT OTHERWISE SPECIFIED	3844	RESECTION OF ABDOMINAL AORTA WITH GRAFT REPLACEMENT
3711	CARDIOTOMY	3845	RESECTION OF THORACIC VESSEL WITH GRAFT REPLACEMENT
3712	PERICARDIOTOMY	3864	EXCISION OF LESION OF AORTA
3731	PERICARDIECTOMY	3865	EXCISION OF LESION OTHER THORACIC VESSEL
3732	EXCISION OF ANEURYSM OF HEART	3884	LIGATION , DIVISION OF AORTA
3733	EXCISION OR DESTRUCTION OF OTHER LESION OR TISSUE OF HEART, OPEN APPROACH	3885	LIGATION, DIVISION OF OTHER THORACIC VESSELS
3735	PARTIAL VENTRICULECTOMY	390	SYSTEMIC TO PULMONARY ARTERY SHUNT
3736	EXCISION OR DESTRUCTION OF LEFT ATRIAL APPENDAGE (LAA) OCT08-	3921	CAVAL-PULMONARY ARTERY ANASTOMOSIS
3741	IMPLANTATION OF PROSTHETIC CARDIAC SUPPORT DEVICE AROUND THE HEART	3922	AORTA-SUBCLAVIAN-CAROTID BYPASS
3749	OTHER REPAIR OF HEART AND PERICARDIUM	3923	OTHER INTRATHORACIC VASCULAR SHUNT OR BYPASS
3751	HEART TRANSPLANTATION		