



NQI #1 Iatrogenic Pneumothorax in Neonates

Provider-Level Indicator

Numerator

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

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

5121 IATROGENIC PNEUMOTHORAX

Denominator

All surgical and medical discharges of neonates 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
- Appendix I – Definitions of Neonate, Newborn, Normal Newborn, and Outborn

Include cases:

- neonates with birth weight less than 2500 grams

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 code of thoracic surgery, lung or pleural biopsy diaphragmatic surgery repair , OR cardiac surgery in any procedure field
- normal newborn
- MDC 14 (pregnancy, childbirth, and puerperium)

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 BIRTHWT 500-999G
1000 to 1499 grams - Birth Weight Category 3	
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 BIRTHWT 1000-1499G
1500 to 1999 grams - Birth Weight Category 4	
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 BIRTHWT 1500-1999G
2000 to 2499 grams - Birth Weight Category 5	
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 BIRTHWT 2000-2500G

ICD-9-CM Chest Trauma diagnosis codes:

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

8629	INTRATHORAC INJ NOS-OPEN	9119	SUPERFIC INJU TRUNK NEC-INF
8750	OPEN WOUND OF CHEST	9220	CONTUSION OF BREAST
8751	OPEN WOUND CHEST-COMPL	9221	CONTUSION OF CHEST WALL
8760	OPEN WOUND OF BACK	9223	BACK CONTUSION
8761	OPEN WOUND BACK-COMPL	92231	BACK CONTUSION
9010	INJURY THORACIC AORTA	92233	INTERSCPLR REG CONTUSION
9011	INJ INNOMIN/SUBCLAV ART	9228	MULIPLE CONTUSION TRUNK
9012	INJ SUPERIOR VENA CAVA	9229	CONTUSION OF TRUNK
9013	INJ INNOMIN/SUBCLAV VEIN	92611	CRUSHING INJURY BACK
90140	INJ PULMONARY VESSEL NOS	92619	CRUSHING INJ TRUNK NEC
90141	INJURY PULMONARY ARTERY	9268	MULT CRUSHING INJ TRUNK
90142	INJURY PULMONARY VEIN	9269	CRUSHING INJ TRUNK NOS
90181	INJ INTERCOSTAL ART/VEIN	9290	CRUSH INJ MULT SITE NEC
90182	INJ INT MAMMARY ART/VEIN	9299	CRUSHING INJURY NOS
90183	INJ MULT THORACIC VESSEL	9541	INJ SYMPA NERVE NEC
90189	INJ THORACIC VESSEL NEC	9548	INJURY TRUNK NERVE NEC
9019	INJ THORACIC VESSEL NOS	9549	INJURY TRUNK NERVE NOS
9110	ABRASION TRUNK	95911	INJURY OF CHEST WALL NEC
9111	ABRASION TRUNK-INFECTED	95919	TRUNK INJURY-SITES NEC
9118	SUPERFIC INJU TRUNK NEC	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 OCT08-
01174	TPNEU, TUBERCLE BACILI NOT FOUND BY MICROSCOPY BUT BY BACTERIAL CULTURE	51189	OTHER SPECIFIED FORMS OF EFFUSION, EXCEPT TUBERCULOSIS OCT08-
01175	TPNEU, TUBERCLE BACILI NOT FOUND BY BACTERIOLOGICAL BUT CONFIRMED HISTOLOGICALLY	5119	UNSPECIFIED PLEURAL EFFUSION

ICD-9-CM Thoracic Surgery procedure codes:

0522	SYMPATHECTOMY CERVICAL	3332	ARTIFICIAL PNEUMOTHORAX FOR COLLAPSE OF LUNG
0523	SYMPATHECTOMY LUMBAR	3334	THORACOPLASTY
0529	OTHER SYMPATHECTOMY AND GANGLIONECTOMY	3339	OTHER SURGICAL COLLAPSE OF LUNG
0780	THYMECTOMY, NOT OTHERWISE SPECIFIED	<hr/> Repair and plastic operation on lung and bronchus	
0781	OTHER PARTIAL EXCISION OF THYMUS	3341	SUTURE OF LACERATION OF BRONCHUS
0782	OTHER TOTAL EXCISION OF THYMUS	3342	CLOSURE OF BRONCHIAL FISTULA
0783	THORACOSCOPIC PARTIAL EXCISION OF THYMUS	3343	CLOSURE OF LACERATION OF LUNG
0784	THORACOSCOPIC TOTAL EXCISION OF THYMUS	3348	OTHER REPAIR AND PLASTIC OPERATIONS ON BRONCHUS
3121	MEDIASTINAL TRACHEOSTOMY	3349	OTHER REPAIR AND PLASTIC OPERATIONS ON LUNG
3145	OPEN BIOPSY OF LARYNX OR TRACHEA	<hr/> Lung transplant	
3173	CLOSURE OF OTHER FISTULA OF TRACHEA	335	LUNG TRANSPLANTATION
3179	OTHER REPAIR AND PLASTIC OPERATIONS ON TRACHEA	3350	LUNG TRANSPLANTATION, NOS
3199	OTHER OPERATIONS ON TRACHEA	3351	UNILATERAL LUNG TRANSPLANTATION
3209	OTHER LOCAL EXCISION OR DESTRUCTION OF LESION OR TISSUE OF BRONCHUS	3352	BILATERAL LUNG TRANSPLANTATION
321	OTHER EXCISION OF BRONCHUS	336	COMBINED HEART-LUNG TRANSPLANTATION
3220	THORAC EXC LUNG LESION	3392	LIGATION OF BRONCHUS
<hr/> Local excision or destruction of lesion or tissue of lung		3393	PUNCTURE OF LUNG
3221	PLICATION OF EMPHYSEMATIOUS BLEB	3398	OTHER OPERATIONS ON BRONCHUS
3222	LUNG VOLUME REDUCTION SURGERY	3399	OTHER OPERATIONS ON LUNG
3223	OPEN ABLTN LUNG LES/TISS OCT06-	3329	OTHER DIAGNOSTIC PROCEDURE ON LUNG AND BRONCHUS
3224	PERC ABLTN LUNG LES/TISS OCT06-	3333	PNEUMOPERITONEUM FOR COLLAPSE OF LUNG
3225	THOR ABLTN LUNG LES/TISS OCT06-	3401	INCISION OF CHEST WALL
3226	ABLTN LUNG TISS NEC/NOS OCT06-	3402	EXPLORATORY THORACOTOMY
3228	ENDOSCOPIC EXCISION OR DESTRUCTION OF LESION OR TISSUE OF LUNG	3403	REOPENING OF RECENT THORACOTOMY SITE
3229	OTHER LOCAL EXCISION OR DESTRUCTION OF LESION OR TISSUE OF LUNG	3405	CREATION OF PLEUROPERITONEAL SHUNT
323	SEGMENTAL RESECTION OF LUNG	3409	OTHER INCISION OF PLEURA
3230	THORAC SEG LUNG RESECT	341	INCISION OF MEDIASTINUM
3239	OTH SEG LUNG RESECT NOS	<hr/> Diagnostic procedures on chest wall, pleura, mediastinum, and diaphragm	
324	LOBECTOMY OF LUNG	3420	THORACOSCOPIC PLEURAL BX
3241	THORAC LOBECTOMY LUNG	3421	TRANSPLEURAL THORACOSOCOPY
3249	OTHER LOBECTOMY OF LUNG	3422	MEDIASTINOSCOPY
325	COMPLETE PNEUMONECTOMY	3423	BIOPSY OF CHEST WALL
3250	THORACOSPC PNEUMONECTOMY	3424	PLEURAL BIOPSY
3259	OTHER PNEUMONECTOMY NOS	3425	CLOSED [PERCUTANEOUS][NEEDLE] BIOPSY OF MEDIASTINUM
326	RADICAL DISSECTION OF THORACIC STRUCTURES	3426	OPEN BIOPSY OF MEDIASTINUM
329	OTHER EXCISION OF LUNG	3427	BIOPSY OF DIAPHRAGM
330	INCISION OF BRONCHUS	3428	OTHER DIAGNOSTIC PROCEDURES ON CHEST WALL, PLEURA, AND DIAPHRAGM
331	INCISION OF LUNG	3429	OTHER DIAGNOSTIC PROCEDURES ON MEDIASTINUM
3320	THORACOSCOPC LUNG BIOPSY	343	EXCISION OR DESTRUCTION OF LESION OR TISSUE OF MEDIASTINUM
3325	OPEN BIOPSY OF BRONCHUS	344	EXCISION OR DESTRUCTION OF LESION OF CHEST WALL
3326	CLOSE [PERCUTANEOUS][NEEDLE] BIOPSY OF LUNG	3451	DECORTICATION OF LUNG
3327	CLOSED ENDOSCOPIC BIOPSY OF LUNG	3452	THORACOSCOPC DECORT LUNG
3328	OPEN BIOPSY OF LUNG	3459	OTHER EXCISION OF PLEURA
3331	DESTRUCTION OF PHRENIC NERVE FOR COLLAPSE OF LUNG (NO LONGER PERFORMED)	<hr/> Repair of chest wall	
		3471	SUTURE OF LACERATION OF CHEST WALL

3472	CLOSURE OF THORACOSTOMY	4254	OTHER INTRATHORACIC
3473	CLOSURE OF OTHER FISTULA OF THORAX		ESOPHAGOENTEROSTOMY
3474	REPAIR OF PECTUS DEFORMITY	4255	INTRATHORACIC ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF COLON
3479	OTHER REPAIR OF CHEST WALL		
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Operations on diaphragm			
3481	EXCISION OF LESION OR TISSUE OF DIAPHRAGM	4256	OTHER INTRATHORACIC ESOPHAGOCOLOSTOMY
3482	SUTURE OF LACERATION OF DIAPHRAGM	4258	INTRATHORACIC ESOPHAGEAL ANASTOMOSIS W/ OTHER INTERPOSITION
3483	CLOSURE OF FISTULA OF DIAPHRAGM	4259	OTHER INTRATHORACIC ANASTOMOSIS OF ESOPHAGUS
3484	OTHER REPAIR OF DIAPHRAGM	<hr/>	
3485	IMPLANTATION OF DIAPHRAGMATIC PACEMAKER	Antesternal anastomosis	
3489	OTHER OPERATIONS ON DIAPHRAGM	4261	ANTESTERNAL ESOPHAGOESOPHAGOSTOMY
3493	REPAIR OF PLEURA	4262	ANTESTERNAL ESOPHAGOGASTROSTOMY
3499	OTHER OPERATIONS ON THORAX, OTHER	4263	ANTESTERNAL ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF SMALL BOWEL
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Operations on thoracic duct			
4061	CANNULATION OF THORACIC DUCT	4264	OTHER ANTESTERNAL ESOPHAGOENTEROSTOMY
4062	FISTULIZATION OF THORACIC DUCT	4265	ANTESTERNAL ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF COLON
4063	CLOSURE OF FISTULA OF THORACIC DUCT	4266	OTHER ANTESTERNAL ESOPHAGOCOLOSTOMY
4064	LIGATION OF THORACIC DUCT	4268	OTHER ANTESTERNAL ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION
4069	OTHER OPERATIONS ON THORACIC DUCT	4269	OTHER ANTESTERNAL ANASTOMOSIS OF ESOPHAGUS
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Esophagotomy			
4201	INCISION OF ESOPHAGEAL WEB	<hr/>	
4209	OTHER INCISION OF ESOPHAGUS	Other repair of esophagus	
4210	ESOPHAGOSTOMY, NOS	427	ESOPHAGOMYOTOMY
4211	CERVICAL ESOPHAGOSTOMY	4281	INSERTION OF PERMANENT TUBE INTO ESOPHAGUS
4212	EXTERIORIZATION OF ESOPHAGEAL POUCH	4282	SUTURE OF LACERATION OF ESOPHAGUS
4219	OTHER EXTERNAL FISTULIZATION OF ESOPHAGUS	4283	CLOSURE OF ESOPHAGOSTOMY
4221	OPERATIVE ESOPHAGOSCOPY BY INCISION	4284	REPAIR OF ESOPHAGEAL FISTULA, NEC
4225	OPEN BIOPSY OF ESOPHAGUS	4285	REPAIR OF ESOPHAGEAL STRICTURE
4231	LOCAL EXCISION OF ESOPHAGEAL DIVERTICULUM	4286	PRODUCTION OF SUBCUTANEOUS TUNNEL W/O ESOPHAGEAL ANASTOMOSIS
4232	LOCAL EXCISION OF OTHER LESION OR TISSUE OF ESOPHAGUS	4287	OTHER GRAFT OF ESOPHAGUS
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Excision of esophagus			
4239	OTHER DESTRUCTION OF LESION OR TISSUE OF ESOPHAGUS	4289	OTHER REPAIR OF ESOPHAGUS
4240	ESOPHAGECTOMY, NOS	4465	ESOPHAGOGASTROPLASTY
4241	PARTIAL ESOPHAGECTOMY	4466	OTHER PROCEDURES FOR CREATION OF ESOPHAGOGASTRIC SPHINCTERIC COMPETENCE
4242	TOTAL ESOPHAGECTOMY		
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Intrathoracic anastomosis of esophagus			
4251	INTRATHORACIC ESOPHAGOESOPHAGOSTOMY	8104	DORSAL AND DORSO-LUMBAR FUSION, ANTERIOR TECHNIQUE
4252	INTRATHORACIC ESOPHAGOGASTROSTOMY	8134	REFUSION OF DORSAL AND DORSOLUMBAR SPINE, ANTERIOR TECHNIQUE
4253	INTRATHORACIC ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF SMALL BOWEL		
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<i>ICD-9-CM Lung or Pleural Biopsy procedure codes:</i>			
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	5380	THOR REP-DIAPH HERN NOS
5371	LAPAROSCOPIC REPAIR OF DIAPHRAGMATIC HERNIA, ABDOMINAL APPROACH OCT08-	5381	DIAPHRAGMATIC PPLICATION
5372	OTHER AND OPEN REPAIR OF DIAPHRAGMATIC HERNIA, ABDOMINAL APPROACH OCT08-	5382	PARASTERN HERNIA REPAIR
5375	REPAIR OF DIAPHRAGMATIC HERNIA, ABDOMINAL APPROACH, NOS OCT08-	5583	LAPAROSCOPIC REPAIR OF DIAPHRAGMATIC HERNIA, WITH THORACIC APPROACH OCT08-
		5584	OTHER AND OPEN REPAIR OF DIAPHRAGMATIC HERNIA, WITH THORACIC APPROACH OCT08-

ICD9-CM Cardiac Procedure codes:

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

3603	OPEN CHEST CORONARY ARTERY ANGIOPLASTY	3751	HEART TRANSPLANTATION
3610	AORTOCORONARY BYPASS FOR HEART REVASCULARIZATION, NOT OTHERWISE SPECIFIED	3752	IMPLANTATION OF TOTAL REPLACEMENT HEART SYSTEM
3611	(AORTO)CORONARY BYPASS OF ONE CORONARY ARTERY	3753	REPLACEMENT OF REPAIR OF THORACIC UNIT OF TOTAL REPLACEMENT HEART SYSTEM
3612	(AORTO)CORONARY BYPASS OF TWO CORONARY ARTERIES	3754	REPLACEMENT OR REPAIR OF OTHER IMPLANTABLE COMPONENT OF TOTAL REPLACEMENT HEART SYSTEM
3613	(AORTO)CORONARY BYPASS OF THREE CORONARY ARTERIES	3755	REMOVAL OF INTERNAL BIVENTRICULAR HEART REPLACEMENT SYSTEM OCT08-
3614	(AORTO)CORONARY BYPASS OF FOUR OR MORE CORONARY ARTERIES	3760	IMPLANTATION OR INSERTION OF BIVENTRICULAR EXTERNAL HEART ASSIST SYSTEM OCT08-
3615	SINGLE INTERNAL MAMMARY-CORONARY ARTERY BYPASS	3761	IMPLANT OF PULSATION BALLOON
3616	DOUBLE INTERNAL MAMMARY-CORONARY ARTERY BYPASS	3762	INSERTION OF NON-IMPLANTABLE HEART ASSIST SYSTEM
3617	ABDOMINAL -CORONARY ARTERY BYPASS	3763	REPAIR OF HEART ASSIST SYSTEM
3619	OTHER BYPASS ANASTOMOSIS FOR HEART REVASCULARIZATION	3764	REMOVAL OF HEART ASSIST SYSTEM
362	HEART REVASCULARIZATION BY ARTERIAL IMPLANT	3765	IMPLANT OF EXTERNAL HEART ASSIST SYSTEM
3631	OPEN CHEST TRANSMYOCARDIAL REVASCULARIZATION	3766	INSERTION OF IMPLANTABLE HEART ASSIST SYSTEM
3632	OTHER TRANSMYOCARDIAL REVASCULARIZATION	3767	IMPLANTATION OF CARDIOMYOSTIMULATION SYSTEM
3639	OTHER HEART REVASCULARIZATION	3791	OPEN CHEST CARDIAC MASSAGE
3691	REPAIR OF ANEURYSM OF CORONARY VESSEL	3804	INCISION OF VESSEL, AORTA
3699	OTHER OPERATIONS ON VESSELS OF HEART	3805	INCISION OF VESSEL, OTHER THORACIC
370	PERICARDIOCENTESIS	3844	RESECTION OF ABDOMINAL AORTA WITH GRAFT REPLACEMENT
3710	INCISION OF HEART, NOT OTHERWISE SPECIFIED	3845	RESECTION OF THORACIC VESSEL WITH GRAFT REPLACEMENT
3711	CARDIOTOMY	3864	EXCISION OF LESION OF AORTA
3712	PERICARDIOTOMY	3865	EXCISION OF LESION OTHER THORACIC VESSEL
3731	PERICARDIECTOMY	3884	LIGATION , DIVISION OF AORTA
3732	EXCISION OF ANEURYSM OF HEART	3885	LIGATION, DIVISION OF OTHER THORACIC VESSELS
3733	EXCISION OR DESTRUCTION OF OTHER LESION OR TISSUE OF HEART, OPEN APPROACH	390	SYSTEMIC TO PULMONARY ARTERY SHUNT
3735	PARTIAL VENTRICULECTOMY	3921	CAVAL-PULMONARY ARTERY ANASTOMOSIS
3736	EXCISION OR DESTRUCTION OF LEFT ATRIAL APPENDAGE (LAA) OCT08-	3922	AORTA-SUBCLAVIAN-CAROTID BYPASS
3741	IMPLANTATION OF PROSTHETIC CARDIAC SUPPORT DEVICE AROUND THE HEART	3923	OTHER INTRATHORACIC VASCULAR SHUNT OR BYPASS
3749	OTHER REPAIR OF HEART AND PERICARDIUM		