



## PSI #22 Iatrogenic Pneumothorax

### Area-Level Indicator

#### Numerator

Discharges 18 years and older with ICD-9-CM code for iatrogenic pneumothorax in any diagnosis field (principal or secondary) of medical and surgical discharges defined by specific DRGs or MS-DRGs.

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

5121 IATROGENIC PNEUMOTHORAX

See *Patient Safety Indicators Appendices*:

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

Exclude cases:

- MDC 14 (pregnancy, childbirth, and puerperium)
- with diagnosis code of chest trauma or pleural effusion
- with an ICD-9-CM procedure code of diaphragmatic surgery repair
- with any code indicating thoracic surgery, lung or pleural biopsy, or cardiac surgery

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

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

86121	LUNG CONTUSION-CLOSED	90182	INJ INT MAMMARY ART/VEIN
86122	LUNG LACERATION-CLOSED	90183	INJ MULT THORACIC VESSEL
86130	LUNG INJURY NOS-OPEN	90189	INJ THORACIC VESSEL NEC
86131	LUNG CONTUSION-OPEN	9019	INJ THORACIC VESSEL NOS
86132	LUNG LACERATION-OPEN	9110	ABRASION TRUNK
8620	DIAPHRAGM INJURY-CLOSED	9111	ABRASION TRUNK-INFECTED
8621	DIAPHRAGM INJURY-OPEN	9118	SUPERFIC INJU TRUNK NEC
86221	BRONCHUS INJURY-CLOSED	9119	SUPERFIC INJU TRUNK NEC-INF
86222	ESOPHAGUS INJURY-CLOSED	9220	CONTUSION OF BREAST
86229	INTRATHORACIC INJ NEC-CL	9221	CONTUSION OF CHEST WALL
86231	BRONCHUS INJURY-OPEN	9223	BACK CONTUSION
86232	ESOPHAGUS INJURY-OPEN	92231	BACK CONTUSION
86239	INTRATHORAC INJ NEC-OPEN	92233	INTERSCPLR REG CONTUSION
8628	INTRATHORACIC INJ NOS-CL	9228	MULIPLE CONTUSION TRUNK
8629	INTRATHORAC INJ NOS-OPEN	9229	CONTUSION OF TRUNK
8750	OPEN WOUND OF CHEST	92611	CRUSHING INJURY BACK
8751	OPEN WOUND CHEST-COMPL	92619	CRUSHING INJ TRUNK NEC
8760	OPEN WOUND OF BACK	9268	MULT CRUSHING INJ TRUNK
8761	OPEN WOUND BACK-COMPL	9269	CRUSHING INJ TRUNK NOS
9010	INJURY THORACIC AORTA	9290	CRUSH INJ MULT SITE NEC
9011	INJ INNOMIN/SUBCLAV ART	9299	CRUSHING INJURY NOS
9012	INJ SUPERIOR VENA CAVA	9541	INJ SYMPA NERVE NEC
9013	INJ INNOMIN/SUBCLAV VEIN	9548	INJURY TRUNK NERVE NEC
90140	INJ PULMONARY VESSEL NOS	9549	INJURY TRUNK NERVE NOS
90141	INJURY PULMONARY ARTERY	95911	INJURY OF CHEST WALL NEC
90142	INJURY PULMONARY VEIN	95919	TRUNK INJURY-SITES NEC
90181	INJ INTERCOSTAL ART/VEIN	9599	INJURY-SITE NOS

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

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

5118	OTHER SPECIFIED FORM OF EFFUSION, EXCEPT TUBERCULOUS	51189	OTHER SPECIFIED FORMS OF EFFUSION, EXCEPT TUBERCULOSIS
51181	MALIGNANT PLEURAL EFFUSION		
	OCT08-	5119	UNSPECIFIED PLEURAL EFFUSION

*ICD-9-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-

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

0522	SYMPATHECTOMY CERVICAL	325	COMPLETE PNEUMONECTOMY
0523	SYMPATHECTOMY LUMBAR	3250	THORACOSPC PNEUMONECTOMY
0529	OTHER SYMPATHECTOMY AND GANGLIONECTOMY	3259	OTHER PNEUMONECTOMY NOS
0780	THYMECTOMY, NOT OTHERWISE SPECIFIED	326	RADICAL DISSECTION OF THORACIC STRUCTURES
0781	OTHER PARTIAL EXCISION OF THYMUS	329	OTHER EXCISION OF LUNG
0782	OTHER TOTAL EXCISION OF THYMUS	330	INCISION OF BRONCHUS
0783	THORACOSCOPIC PARTIAL EXCISION OF THYMUS	331	INCISION OF LUNG
0784	THORACOSCOPIC TOTAL EXCISION OF THYMUS	3320	THORACOSCOPC LUNG BIOPSY
3121	MEDIASTINAL TRACHEOSTOMY	3325	OPEN BIOPSY OF BRONCHUS
3145	OPEN BIOPSY OF LARYNX OR TRACHEA	3326	CLOSE [PERCUTANEOUS][NEEDLE] BIOPSY OF LUNG
3173	CLOSURE OF OTHER FISTULA OF TRACHEA	3327	CLOSED ENDOSCOPIC BIOPSY OF LUNG
3179	OTHER REPAIR AND PLASTIC OPERATIONS ON TRACHEA	3328	OPEN BIOPSY OF LUNG
3199	OTHER OPERATIONS ON TRACHEA	3331	DESTRUCTION OF PHRENIC NERVE FOR COLLAPSE OF LUNG (NO LONGER PERFORMED)
3209	OTHER LOCAL EXCISION OR DESTRUCTION OF LESION OR TISSUE OF BRONCHUS	3332	ARTIFICIAL PNEUMOTHORAX FOR COLLAPSE OF LUNG
321	OTHER EXCISION OF BRONCHUS	3334	THORACOPLASTY
3220	THORAC EXC LUNG LESION	3339	OTHER SURGICAL COLLAPSE OF LUNG
<u>Local excision or destruction of lesion or tissue of lung</u>		<u>Repair and plastic operation on lung and bronchus</u>	
3221	PLICATION OF EMPHYSEMATIOUS BLEB	3341	SUTURE OF LACERATION OF BRONCHUS
3222	LUNG VOLUME REDUCTION SURGERY	3342	CLOSURE OF BRONCHIAL FISTULA
3223	OPEN ABLTN LUNG LES/TISS OCT06-	3343	CLOSURE OF LACERATION OF LUNG
3224	PERC ABLTN LUNG LES/TISS OCT06-	3348	OTHER REPAIR AND PLASTIC OPERATIONS ON BRONCHUS
3225	THOR ABLTN LUNG LES/TISS OCT06-	3349	OTHER REPAIR AND PLASTIC OPERATIONS ON LUNG
3226	ABLTN LUNG TISS NEC/NOS OCT06-	<u>Lung transplant</u>	
3228	ENDOSCOPIC EXCISION OR DESTRUCTION OF LESION OR TISSUE OF LUNG	335	LUNG TRANSPLANTATION
3229	OTHER LOCAL EXCISION OR DESTRUCTION OF LESION OR TISSUE OF LUNG	3350	LUNG TRANSPLANTATION, NOS
323	SEGMENTAL RESECTION OF LUNG	3351	UNILATERAL LUNG TRANSPLANTATION
3230	THORAC SEG LUNG RESECT	3352	BILATERAL LUNG TRANSPLANTATION
3239	OTH SEG LUNG RESECT NOS	336	COMBINED HEART-LUNG TRANSPLANTATION
324	LOBECTOMY OF LUNG	3392	LIGATION OF BRONCHUS
3241	THORAC LOBECTOMY LUNG	3393	PUNCTURE OF LUNG
3249	OTHER LOBECTOMY OF LUNG	3398	OTHER OPERATIONS ON BRONCHUS
		3399	OTHER OPERATIONS ON LUNG

3329	OTHER DIAGNOSTIC PROCEDURE ON LUNG AND BRONCHUS	4069	OTHER OPERATIONS ON THORACIC DUCT
3333	PNEUMOPERITONEUM FOR COLLAPSE OF LUNG	<hr/>	
3401	INCISION OF CHEST WALL	Esophagotomy	
3402	EXPLORATORY THORACOTOMY	4201	INCISION OF ESOPHAGEAL WEB
3403	REOPENING OF RECENT THORACOTOMY SITE	4209	OTHER INCISION OF ESOPHAGUS
3405	CREATION OF PLEUROPERITONEAL SHUNT	4210	ESOPHAGOSTOMY, NOS
3409	OTHER INCISION OF PLEURA	4211	CERVICAL ESOPHAGOSTOMY
341	INCISION OF MEDIASTINUM	4212	EXTERIORIZATION OF ESOPHAGEAL POUCH
<hr/>		4219	OTHER EXTERNAL FISTULIZATION OF ESOPHAGUS
Diagnostic procedures on chest wall, pleura, mediastinum, and diaphragm		4221	OPERATIVE ESOPHAGOSCOPY BY INCISION
3420	THORACOSCOPIC PLEURAL BX	4225	OPEN BIOPSY OF ESOPHAGUS
3421	TRANSPLEURAL THORACOSOCOPY	4231	LOCAL EXCISION OF ESOPHAGEAL DIVERTICULUM
3422	MEDIASTINOSCOPY	4232	LOCAL EXCISION OF OTHER LESION OR TISSUE OF ESOPHAGUS
3423	BIOPSY OF CHEST WALL	<hr/>	
3424	PLEURAL BIOPSY	Excision of esophagus	
3425	CLOSED [PERCUTANEOUS][NEEDLE] BIOPSY OF MEDIASTINUM	4239	OTHER DESTRUCTION OF LESION OR TISSUE OF ESOPHAGUS
3426	OPEN BIOPSY OF MEDIASTINUM	4240	ESOPHAGECTOMY, NOS
3427	BIOPSY OF DIAPHRAGM	4241	PARTIAL ESOPHAGECTOMY
3428	OTHER DIAGNOSTIC PROCEDURES ON CHEST WALL, PLEURA, AND DIAPHRAGM	4242	TOTAL ESOPHAGECTOMY
3429	OTHER DIAGNOSTIC PROCEDURES ON MEDIASTINUM	<hr/>	
343	EXCISION OR DESTRUCTION OF LESION OR TISSUE OF MEDIASTINUM	Intrathoracic anastomosis of exophagus	
344	EXCISION OR DESTRUCTION OF LESION OF CHEST WALL	4251	INTRATHORACIC ESOPHAGOESOPHAGOSTOMY
3451	DECORTICATION OF LUNG	4252	INTRATHORACIC ESOPHAGOGASTROSTOMY
3452	THORACOSCOPIC DECORT LUNG	4253	INTRATHORACIC ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF SMALL BOWEL
3459	OTHER EXCISION OF PLEURA	4254	OTHER INTRATHORACIC ESOPHAGOENTEROSTOMY
<hr/>		4255	INTRATHORACIC ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF COLON
Repair of chest wall		4256	OTHER INTRATHORACIC ESOPHAGOCOLOSTOMY
3471	SUTURE OF LACERATION OF CHEST WALL	4258	INTRATHORACIC ESOPHAGEAL ANASTOMOSIS W/ OTHER INTERPOSITION
3472	CLOSURE OF THORACOSTOMY	4259	OTHER INTRATHORACIC ANASTOMOSIS OF ESOPHAGUS
3473	CLOSURE OF OTHER FISTULA OF THORAX	<hr/>	
3474	REPAIR OF PECTUS DEFORMITY	Antesternal anastomosis	
3479	OTHER REPAIR OF CHEST WALL	4261	ANTESTERNAL ESOPHAGOESOPHAGOSTOMY
<hr/>		4262	ANTESTERNAL ESOPHAGOGASTROSTOMY
Operations on diaphragm		4263	ANTESTERNAL ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF SMALL BOWEL
3481	EXCISION OF LESION OR TISSUE OF DIAPHRAGM	4264	OTHER ANTESTERNAL ESOPHAGOENTEROSTOMY
3482	SUTURE OF LACERATION OF DIAPHRAGM	4265	ANTESTERNAL ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF COLON
3483	CLOSURE OF FISTULA OF DIAPHRAGM	4266	OTHER ANTESTERNAL ESOPHAGOCOLOSTOMY
3484	OTHER REPAIR OF DIAPHRAGM	4268	OTHER ANTESTERNAL ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION
3485	IMPLANTATION OF DIAPHRAGMATIC PACEMAKER	<hr/>	
3489	OTHER OPERATIONS ON DIAPHRAGM		
3493	REPAIR OF PLEURA		
3499	OTHER OPERATIONS ON THORAX, OTHER		
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Operations on thoracic duct			
4061	CANNULATION OF THORACIC DUCT		
4062	FISTULIZATION OF THORACIC DUCT		
4063	CLOSURE OF FISTULA OF THORACIC DUCT		
4064	LIGATION OF THORACIC DUCT		

4269	OTHER ANTESTERNAL ANASTOMOSIS OF ESOPHAGUS	4287	OTHER GRAFT OF ESOPHAGUS
<hr/>		4289	OTHER REPAIR OF ESOPHAGUS
Other repair of esophagus		4465	ESOPHAGOGASTROPLASTY
427	ESOPHAGOMYOTOMY	4466	OTHER PROCEDURES FOR CREATION OF ESOPHAGOGASTRIC SPHINCTERIC COMPETENCE
4281	INSERTION OF PERMANENT TUBE INTO ESOPHAGUS	8104	DORSAL AND DORSO-LUMBAR FUSION, ANTERIOR TECHNIQUE
4282	SUTURE OF LACERATION OF ESOPHAGUS	8134	REFUSION OF DORSAL AND DORSOLUMBAR SPINE, ANTERIOR TECHNIQUE
4283	CLOSURE OF ESOPHAGOSTOMY		
4284	REPAIR OF ESOPHAGEAL FISTULA, NEC		
4285	REPAIR OF ESOPHAGEAL STRICTURE		
4286	PRODUCTION OF SUBCUTANEOUS TUNNEL W/O ESOPHAGEAL ANASTOMOSIS		

*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 Cardiac Procedure codes:*

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

3592	CREATION OF CONDUIT BETWEEN RIGHT VENTRICLE AND PULMONARY ARTERY	3735	PARTIAL VENTRICULECTOMY
3593	CREATION OF CONDUIT BETWEEN LEFT VENTRICLE AND AORTA	3736	EXCISION OR DESTRUCTION OF LEFT ATRIAL APPENDAGE (LAA) OCT08-
3594	CREATION OF CONDUIT BETWEEN ATRIUM AND PULMONARY ARTERY	3741	IMPLANTATION OF PROSTHETIC CARDIAC SUPPORT DEVICE AROUND THE HEART
3595	REVISION OF CORRECTIVE PROCEDURE ON HEART	3749	OTHER REPAIR OF HEART AND PERICARDIUM
3598	OTHER OPERATIONS ON SEPTA OF HEART	3751	HEART TRANSPLANTATION
3599	OTHER OPERATIONS ON VALVES OF HEART	3752	IMPLANTATION OF TOTAL REPLACEMENT HEART SYSTEM
3603	OPEN CHEST CORONARY ARTERY ANGIOPLASTY	3753	REPLACEMENT OF REPAIR OF THORACIC UNIT OF TOTAL REPLACEMENT HEART SYSTEM
3610	AORTOCORONARY BYPASS FOR HEART REVASCULARIZATION, NOT OTHERWISE SPECIFIED	3754	REPLACEMENT OR REPAIR OF OTHER IMPLANTABLE COMPONENT OF TOTAL REPLACEMENT HEART SYSTEM
3611	(AORTO)CORONARY BYPASS OF ONE CORONARY ARTERY	3755	REMOVAL OF INTERNAL BIVENTRICULAR HEART REPLACEMENT SYSTEM OCT08-
3612	(AORTO)CORONARY BYPASS OF TWO CORONARY ARTERIES	3760	IMPLANTATION OR INSERTION OF BIVENTRICULAR EXTERNAL HEART ASSIST SYSTEM OCT08-
3613	(AORTO)CORONARY BYPASS OF THREE CORONARY ARTERIES	3761	IMPLANT OF PULSATION BALLOON
3614	(AORTO)CORONARY BYPASS OF FOUR OR MORE CORONARY ARTERIES	3762	INSERTION OF NON-IMPLANTABLE HEART ASSIST SYSTEM
3615	SINGLE INTERNAL MAMMARY-CORONARY ARTERY BYPASS	3763	REPAIR OF HEART ASSIST SYSTEM
3616	DOUBLE INTERNAL MAMMARY-CORONARY ARTERY BYPASS	3764	REMOVAL OF HEART ASSIST SYSTEM
3617	ABDOMINAL -CORONARY ARTERY BYPASS	3765	IMPLANT OF EXTERNAL HEART ASSIST SYSTEM
3619	OTHER BYPASS ANASTOMOSIS FOR HEART REVASCULARIZATION	3766	INSERTION OF IMPLANTABLE HEART ASSIST SYSTEM
362	HEART REVASCULARIZATION BY ARTERIAL IMPLANT	3767	IMPLANTATION OF CARDIOMYOSTIMULATION SYSTEM
3631	OPEN CHEST TRANSMYOCARDIAL REVASCULARIZATION	3791	OPEN CHEST CARDIAC MASSAGE
3632	OTHER TRANSMYOCARDIAL REVASCULARIZATION	3804	INCISION OF VESSEL, AORTA
3639	OTHER HEART REVASCULARIZATION	3805	INCISION OF VESSEL, OTHER THORACIC
3691	REPAIR OF ANEURYSM OF CORONARY VESSEL	3844	RESECTION OF ABDOMINAL AORTA WITH GRAFT REPLACEMENT
3699	OTHER OPERATIONS ON VESSELS OF HEART	3845	RESECTION OF THORACIC VESSEL WITH GRAFT REPLACEMENT
370	PERICARDIOCENTESIS	3864	EXCISION OF LESION OF AORTA
3710	INCISION OF HEART, NOT OTHERWISE SPECIFIED	3865	EXCISION OF LESION OTHER THORACIC VESSEL
3711	CARDIOTOMY	3884	LIGATION , DIVISION OF AORTA
3712	PERICARDIOTOMY	3885	LIGATION, DIVISION OF OTHER THORACIC VESSELS
3731	PERICARDIECTOMY	390	SYSTEMIC TO PULMONARY ARTERY SHUNT
3732	EXCISION OF ANEURYSM OF HEART	3921	CAVAL-PULMONARY ARTERY ANASTOMOSIS
3733	EXCISION OR DESTRUCTION OF OTHER LESION OR TISSUE OF HEART, OPEN APPROACH	3922	AORTA-SUBCLAVIAN-CAROTID BYPASS
		3923	OTHER INTRATHORACIC VASCULAR SHUNT OR BYPASS

## Denominator

Population of county or Metro Area associated with FIPS code of patient's residence or hospital location.