

Iatrogenic Pneumothorax Rate

Patient Safety Indicators #22

Technical Specifications

Area-Level Indicator

AHRQ Quality Indicators, Version 4.3, August 2011

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

**AHRQ QI, Patient Safety Indicators #22, Technical Specifications,
Iatrogenic Pneumothorax Rate
www.qualityindicators.ahrq.gov**

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

**AHRQ QI, Patient Safety Indicators #22, Technical Specifications,
Iatrogenic Pneumothorax Rate
www.qualityindicators.ahrq.gov**

5118	OTHER SPECIFIED FORM OF EFFUSION, EXCEPT TUBERCULOUS	51189	OTHER SPECIFIED FORMS OF EFFUSION, EXCEPT TUBERCULOSIS (OCT08)
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	3250	THORACOSPC PNEUMONECTOMY
0523	SYMPATHECTOMY LUMBAR	3259	OTHER PNEUMONECTOMY NOS
0529	OTHER SYMPATHECTOMY AND GANGLIONECTOMY	326	RADICAL DISSECTION OF THORACIC STRUCTURES
0780	THYMECTOMY, NOT OTHERWISE SPECIFIED	329	OTHER EXCISION OF LUNG
0781	OTHER PARTIAL EXCISION OF THYMUS	330	INCISION OF BRONCHUS
0782	OTHER TOTAL EXCISION OF THYMUS	331	INCISION OF LUNG
0783	THORACOSCOPIC PARTIAL EXCISION OF THYMUS	3320	THORACOSCOPC LUNG BIOPSY
0784	THORACOSCOPIC TOTAL EXCISION OF THYMUS	3325	OPEN BIOPSY OF BRONCHUS
3121	MEDIASTINAL TRACHEOSTOMY	3326	CLOSE [PERCUTANEOUS][NEEDLE] BIOPSY OF LUNG
3145	OPEN BIOPSY OF LARYNX OR TRACHEA	3327	CLOSED ENDOSCOPIC BIOPSY OF LUNG
3173	CLOSURE OF OTHER FISTULA OF TRACHEA	3328	OPEN BIOPSY OF LUNG
3179	OTHER REPAIR AND PLASTIC OPERATIONS ON TRACHEA	3331	DESTRUCTION OF PHRENIC NERVE FOR COLLAPSE OF LUNG (NO LONGER PERFORMED)
3199	OTHER OPERATIONS ON TRACHEA	3332	ARTIFICIAL PNEUMOTHORAX FOR COLLAPSE OF LUNG
3209	OTHER LOCAL EXCISION OR DESTRUCTION OF LESION OR TISSUE OF BRONCHUS	3334	THORACOPLASTY
321	OTHER EXCISION OF BRONCHUS	3339	OTHER SURGICAL COLLAPSE OF LUNG
3220	THORAC EXC LUNG LESION	<hr/>	
<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)	<hr/>	
3227	BRNC THRMPSTY, ABLT MSCL	<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
325	COMPLETE PNEUMONECTOMY	3399	OTHER OPERATIONS ON LUNG
		3329	OTHER DIAGNOSTIC PROCEDURE ON LUNG AND BRONCHUS
		3333	PNEUMOPERITONEUM FOR COLLAPSE OF LUNG

**AHRQ QI, Patient Safety Indicators #22, Technical Specifications,
Iatrogenic Pneumothorax Rate
www.qualityindicators.ahrq.gov**

3401	INCISION OF CHEST WALL	4201	INCISION OF ESOPHAGEAL WEB
3402	EXPLORATORY THORACOTOMY	4209	OTHER INCISION OF ESOPHAGUS
3403	REOPENING OF RECENT THORACOTOMY SITE	4210	ESOPHAGOSTOMY, NOS
3405	CREATION OF PLEUROPERITONEAL SHUNT	4211	CERVICAL ESOPHAGOSTOMY
3409	OTHER INCISION OF PLEURA	4212	EXTERIORIZATION OF ESOPHAGEAL POUCH
341	INCISION OF MEDIASTINUM	4219	OTHER EXTERNAL FISTULIZATION OF ESOPHAGUS
<u>Diagnostic procedures on chest wall, pleura, mediastinum, and diaphragm</u>		4221	OPERATIVE ESOPHAGOSCOPY BY INCISION
3420	THORACOSCOPIC PLEURAL BX	4225	OPEN BIOPSY OF ESOPHAGUS
3421	TRANSPLEURAL THORACOSCOPY	4231	LOCAL EXCISION OF ESOPHAGEAL DIVERTICULUM
3422	MEDIASTINOSCOPY	4232	LOCAL EXCISION OF OTHER LESION OR TISSUE OF ESOPHAGUS
3423	BIOPSY OF CHEST WALL	<u>Excision of esophagus</u>	
3424	PLEURAL BIOPSY	4239	OTHER DESTRUCTION OF LESION OR TISSUE OF ESOPHAGUS
3425	CLOSED [PERCUTANEOUS][NEEDLE] BIOPSY OF MEDIASTINUM	4240	ESOPHAGECTOMY, NOS
3426	OPEN BIOPSY OF MEDIASTINUM	4241	PARTIAL ESOPHAGECTOMY
3427	BIOPSY OF DIAPHRAGM	4242	TOTAL ESOPHAGECTOMY
3428	OTHER DIAGNOSTIC PROCEDURES ON CHEST WALL, PLEURA, AND DIAPHRAGM	<u>Intrathoracic anastomosis of exophagus</u>	
3429	OTHER DIAGNOSTIC PROCEDURES ON MEDIASTINUM	4251	INTRATHORACIC ESOPHAGOESOPHAGOSTOMY
343	EXCISION OR DESTRUCTION OF LESION OR TISSUE OF MEDIASTINUM	4252	INTRATHORACIC ESOPHAGOGASTROSTOMY
344	EXCISION OR DESTRUCTION OF LESION OF CHEST WALL	4253	INTRATHORACIC ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF SMALL BOWEL
3451	DECORTICATION OF LUNG	4254	OTHER INTRATHORACIC ESOPHAGOENTEROSTOMY
3452	THORACOSCOPC DECORT LUNG	4255	INTRATHORACIC ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF COLON
3459	OTHER EXCISION OF PLEURA	4256	OTHER INTRATHORACIC ESOPHAGOCOLOSTOMY
<u>Repair of chest wall</u>		4258	INTRATHORACIC ESOPHAGEAL ANASTOMOSIS W/ OTHER INTERPOSITION
3471	SUTURE OF LACERATION OF CHEST WALL	4259	OTHER INTRATHORACIC ANASTOMOSIS OF ESOPHAGUS
3472	CLOSURE OF THORACOSTOMY	<u>Antesternal anastomosis</u>	
3473	CLOSURE OF OTHER FISTULA OF THORAX	4261	ANTESTERNAL ESOPHAGOESOPHAGOSTOMY
3474	REPAIR OF PECTUS DEFORMITY	4262	ANTESTERNAL ESOPHAGOGASTROSTOMY
3479	OTHER REPAIR OF CHEST WALL	4263	ANTESTERNAL ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF SMALL BOWEL
<u>Operations on diaphragm</u>		4264	OTHER ANTESTERNAL ESOPHAGOENTEROSTOMY
3481	EXCISION OF LESION OR TISSUE OF DIAPHRAGM	4265	ANTESTERNAL ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION OF COLON
3482	SUTURE OF LACERATION OF DIAPHRAGM	4266	OTHER ANTESTERNAL ESOPHAGOCOLOSTOMY
3483	CLOSURE OF FISTULA OF DIAPHRAGM	4268	OTHER ANTESTERNAL ESOPHAGEAL ANASTOMOSIS W/ INTERPOSITION
3484	OTHER REPAIR OF DIAPHRAGM	4269	OTHER ANTESTERNAL ANASTOMOSIS OF ESOPHAGUS
3485	IMPLANTATION OF DIAPHRAGMATIC PACEMAKER	<u>Other repair of esophagus</u>	
3489	OTHER OPERATIONS ON DIAPHRAGM		
3493	REPAIR OF PLEURA		
3499	OTHER OPERATIONS ON THORAX, OTHER		
<u>Operations on thoracic duct</u>			
4061	CANNULATION OF THORACIC DUCT		
4062	FISTULIZATION OF THORACIC DUCT		
4063	CLOSURE OF FISTULA OF THORACIC DUCT		
4064	LIGATION OF THORACIC DUCT		
4069	OTHER OPERATIONS ON THORACIC DUCT		
<u>Esophagotomy</u>			

**AHRQ QI, Patient Safety Indicators #22, Technical Specifications,
Iatrogenic Pneumothorax Rate
www.qualityindicators.ahrq.gov**

427	ESOPHAGOMYOTOMY	4287	OTHER GRAFT OF ESOPHAGUS
4281	INSERTION OF PERMANENT TUBE INTO ESOPHAGUS	4289	OTHER REPAIR OF ESOPHAGUS
4282	SUTURE OF LACERATION OF ESOPHAGUS	4465	ESOPHAGOGASTROPLASTY
4283	CLOSURE OF ESOPHAGOSTOMY	4466	OTHER PROCEDURES FOR CREATION OF ESOPHAGOGASTRIC SPHINCTERIC COMPETENCE
4284	REPAIR OF ESOPHAGEAL FISTULA, NEC	8104	DORSAL AND DORSO-LUMBAR FUSION, ANTERIOR TECHNIQUE
4285	REPAIR OF ESOPHAGEAL STRICTURE	8134	REFUSION OF DORSAL AND DORSOLUMBAR SPINE, ANTERIOR TECHNIQUE
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	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	3597	PERC MTRL VLV REPR W IMP
3550	REPAIR OF UNSPECIFIED SEPTAL DEFECT OF HEART WITH PROSTHESIS	3598	OTHER OPERATIONS ON SEPTA OF HEART
3551	REPAIR OF ATRIAL SEPTAL DEFECT WITH PROSTHESIS, OPEN TECHNIQUE		

**AHRQ QI, Patient Safety Indicators #22, Technical Specifications,
Iatrogenic Pneumothorax
www.qualityindicators.ahrq.gov**

3599	OTHER OPERATIONS ON VALVES OF HEART	3749	OTHER REPAIR OF HEART AND PERICARDIUM
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
3737	EXC/DESC HRT LES, THRSPC	3923	OTHER INTRATHORACIC VASCULAR SHUNT OR BYPASS
3741	IMPLANTATION OF PROSTHETIC CARDIAC SUPPORT DEVICE AROUND THE HEART		

Denominator

Discharges in the numerator are assigned to the denominator based on the Metro Area¹ or county of the patient residence, not the Metro Area or county of the hospital where the discharge occurred.

Exclude cases:

- with any code indicating thoracic procedure, lung or pleural biopsy, or cardiac procedure
- with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing), county (PSTCO=missing)

ICD-9-CM Thoracic Surgery procedure codes:

3227	BRNC THRMPLSTY, ANLT MSCL	4467	LAP CREAT ESOPH SPHINCT
435	PROXIMAL GASTRECTOMY	7781	OTH CEHST CAGE OSTECTOMY
4399	TOTAL GASTRECTOMY NEC	7791	TOT CHEST CAGE OSTECTOMY

ICD-9-CM Cardiac procedure codes:

3597	PERC MTRL VLV REPR W IMP	3737	EXC/DEST HRT LES, THRSPC
------	--------------------------	------	--------------------------

1

¹ The term "metropolitan area" (MA) was adopted by the U.S. Census in 1990 and referred collectively to metropolitan statistical areas (MSAs), consolidated metropolitan statistical areas (CMSAs) and primary metropolitan statistical areas (PMSAs). In addition, "area" could refer to either 1) FIPS county, 2) modified FIPS county, 3) 1999 OMB Metropolitan Statistical Area or 3) 2003 OMB Metropolitan Statistical Area. Micropolitan Statistical Areas are not used in the QI software.