

Iatrogenic Pneumothorax Rate

Pediatric Quality Indicators #5

Technical Specifications

Provider-Level Indicator

AHRQ Quality Indicators, Version 4.4, March 2012

Revised April 2012

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 code:

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 2500 grams (Birth Weight Category 1-8)
- 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)
- with missing discharge gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)

* Only for cases that otherwise qualify for the numerator

See *Pediatric Quality Indicators Appendices*:

- Appendix I – Definitions of Neonate, Newborn, Normal Newborn, and Outborn
- Appendix L- Low Birth Weight Categories

ICD-9-CM Chest trauma diagnosis codes¹:

80700	FRACTURE RIB NOS-CLOSED	8621	DIAPHRAGM INJURY-OPEN
80701	FRACTURE ONE RIB-CLOSED	86221	BRONCHUS INJURY-CLOSED
80702	FRACTURE TWO RIBS-CLOSED	86222	ESOPHAGUS INJURY-CLOSED
80703	FRACTURE THREE RIBS-CLOS	86229	INTRATHORACIC INJ NEC-CL
80704	FRACTURE FOUR RIBS-CLOSE	86231	BRONCHUS INJURY-OPEN
80705	FRACTURE FIVE RIBS-CLOSE	86232	ESOPHAGUS INJURY-OPEN
80706	FRACTURE SIX RIBS-CLOSED	86239	INTRATHORAC INJ NEC-OPEN
80707	FRACTURE SEVEN RIBS-CLOS	8628	INTRATHORACIC INJ NOS-CL
80708	FX EIGHT/MORE RIB-CLOSED	8629	INTRATHORAC INJ NOS-OPEN
80709	FX MULT RIBS NOS-CLOSED	8750	OPEN WOUND OF CHEST
80710	FRACTURE RIB NOS-OPEN	8751	OPEN WOUND CHEST-COMPL
80711	FRACTURE ONE RIB-OPEN	8760	OPEN WOUND OF BACK
80712	FRACTURE TWO RIBS-OPEN	8761	OPEN WOUND BACK-COMPL
80713	FRACTURE THREE RIBS-OPEN	9010	INJURY THORACIC AORTA
80714	FRACTURE FOUR RIBS-OPEN	9011	INJ INNOMIN/SUBCLAV ART
80715	FRACTURE FIVE RIBS-OPEN	9012	INJ SUPERIOR VENA CAVA
80716	FRACTURE SIX RIBS-OPEN	9013	INJ INNOMIN/SUBCLAV VEIN
80717	FRACTURE SEVEN RIBS-OPEN	90140	INJ PULMONARY VESSEL NOS
80718	FX EIGHT/MORE RIBS-OPEN	90141	INJURY PULMONARY ARTERY
80719	FX MULT RIBS NOS-OPEN	90142	INJURY PULMONARY VEIN
8072	FRACTURE OF STERNUM-CLOS	90181	INJ INTERCOSTAL ART/VEIN
8073	FRACTURE OF STERNUM-OPEN	90182	INJ INT MAMMARY ART/VEIN
8074	FLAIL CHEST	90183	INJ MULT THORACIC VESSEL
8075	FX LARYNX/TRACHEA-CLOSED	90189	INJ THORACIC VESSEL NEC
8076	FX LARYNX/TRACHEA-OPEN	9019	INJ THORACIC VESSEL NOS
8090	FRACTURE TRUNK BONE-CLOS	9110	ABRASION TRUNK
8091	FRACTURE TRUNK BONE-OPEN	9111	ABRASION TRUNK-INFECTED
8600	TRAUM PNEUMOTHORAX-CLOSE	9118	SUPERFIC INJ TRUNK NEC
8601	TRAUM PNEUMOTHORAX-OPEN	9119	SUPERF INJ TRNK NEC-INF
8602	TRAUM HEMOTHORAX-CLOSED	9220	CONTUSION OF BREAST
8603	TRAUM HEMOTHORAX-OPEN	9221	CONTUSION OF CHEST WALL
8604	TRAUM PNEUMOHEMOTHOR-CL	9223	<i>BACK CONTUSION</i>
8605	TRAUM PNEUMOHEMOTHOR-OPN	92231	BACK CONTUSION
86100	HEART INJURY NOS-CLOSED	92233	INTERSCPLR REG CONTUSION
86101	HEART CONTUSION-CLOSED	9228	MULIPLE CONTUSION TRUNK
86102	HEART LACERATION-CLOSED	9229	CONTUSION TRUNK NOS
86103	HEART CHAMBER LACERAT-CL	92611	CRUSHING INJURY BACK
86110	HEART INJURY NOS-OPEN	92619	CRUSHING INJ TRUNK NEC
86111	HEART CONTUSION-OPEN	9268	MULT CRUSHING INJ TRUNK
86112	HEART LACERATION-OPEN	9269	CRUSHING INJ TRUNK NOS
86113	HEART CHAMBER LACER-OPN	9290	CRUSH INJ MULT SITE NEC
86120	LUNG INJURY NOS-CLOSED	9299	CRUSHING INJURY NOS
86121	LUNG CONTUSION-CLOSED	9541	INJ SYMPATH NERVE NEC
86122	LUNG LACERATION-CLOSED	9548	INJURY TRUNK NERVE NEC
86130	LUNG INJURY NOS-OPEN	9549	INJURY TRUNK NERVE NOS
86131	LUNG CONTUSION-OPEN	95911	INJURY OF CHEST WALL NEC
86132	LUNG LACERATION-OPEN	95919	TRUNK INJURY-SITES NEC
8620	DIAPHRAGM INJURY-CLOSED	9599	INJURY-SITE NOS

¹ Italicized codes are not active in the current fiscal year.

ICD-9-CM Pleural effusion diagnosis codes¹:

0101	<i>TUBERCULOUS PLEURISY IN PRIMARY PROGRESSIVE TUBERCULOSIS</i>	01016	PRIM TB PLEURIS-OTH TEST
01010	PRIM TB PLEURISY-UNSPEC	0117	<i>TUBRCULOUS PNEUMOTHORAX**</i>
01011	PRIM TB PLEURISY-NO EXAM	01170	TB PNEUMOTHORAX-UNSPEC
01012	PRIM TB PLEUR-EXAM UNKN	01171	TB PNEUMOTHORAX-NO EXAM
01013	PRIM TB PLEURIS-MICRO DX	01172	TB PNEUMOTHORX-EXAM UNKN
01014	PRIM TB PLEURISY-CULT DX	01173	TB PNEUMOTHORAX-MICRO DX
01015	PRIM TB PLEURIS-HISTO DX	01174	TB PNEUMOTHORAX-CULT DX
		01175	TB PNEUMOTHORAX-HISTO DX

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Iatrogenic Pneumothorax Rate
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01176	TB PNEUMOTHORAX-OTH TEST	01206	TB PLEURISY-OTH TEST
0120	<i>TUBERCULOUS PLEURISY</i>	1972	SECOND MALIG NEO PLEURA
01200	TB PLEURISY-UNSPEC	5111	BACT PLEUR/EFFUS NOT TB
01201	TB PLEURISY-NO EXAM	5118	<i>OTHER SPECIFIED FORM OF EFFUSION, EXCEPT TUBERCULOUS</i>
01202	TB PLEURISY-EXAM UNKN	51181	MALIGNANT PLEURAL EFFUSN
01203	TB PLEURISY-MICRO DX	51189	EFFUSION NEC EXC TB
01204	TB PLEURISY-CULT DX	5119	PLEURAL EFFUSION NOS
01205	TB PLEURISY-HISTOLOG DX		

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ICD-9-CM Thoracic surgery procedure codes¹:

0522	CERVICAL SYMPATHECTOMY	3342	BRONCHIAL FISTULA CLOS
0523	LUMBAR SYMPATHECTOMY	3343	LUNG LACERATION CLOSURE
0529	OTHER SYMPATHECTOMY	3348	BRONCHIAL REPAIR NEC
0780	THYMECTOMY NOS	3349	LUNG REPAIR NEC
0781	OTH PART EXCISION THYMUS	<hr/>	
0782	OTH TOTL EXCISION THYMUS	Lung transplant	
0783	THORAC PART EXISN THYMUS	335	<i>LUNG TRANSPLANTATION**</i>
0784	THORAC TOTAL EXC THYMUS	3350	LUNG TRANSPLANTNOS
3121	MEDIASTINAL TRACHEOSTOMY	3351	UNILAT LUNG TRANSPLANT
3145	OPN BX LARYNX OR TRACHEA	3352	BILAT LUNG TRANSPLANT
3173	TRACHEA FISTULA CLOS NEC	336	COMB HEART/LUNG TRANSPLA
3179	OTHER TRACHEAL REPAIR	<hr/>	
3199	OTHER TRACHEAL OPERATION	Diagnostic procedures on chest wall, pleura, mediastinum, and diaphragm	
3209	OTHER DESTRUC BRONC LES	3329	BRONCH/LUNG DX PROC NEC
321	OTHER BRONCHIAL EXCISION	3333	PNEUMOPERIT-LUNG COLLAPS
3220	THORAC EXC LUNG LESION	3392	BRONCHIAL LIGATION
<hr/>		3393	PUNCTURE OF LUNG
Local excision or destruction of lesion or tissue of lung		3398	BRONCHIAL OPERATION NEC
3221	EMPHYSEMA BLEB PPLICATION	3399	LUNG OPERATION NEC
3222	LUNG VOL REDUCTION SURG	3401	INCISION OF CHEST WALL
3223	OPEN ABLTN LUNG LES/TISS	3402	EXPLORATORY THORACOTOMY
3224	PERC ABLTN LUNG LES/TISS	3403	REOPEN THORACOTOMY SITE
3225	THOR ABLTN LUNG LES/TISS	3405	PIEUOPERITONEAL SHUNT
3226	ABLTN LUNG TISS NEC/NOS	3409	OTHER PLEURA INCISION
3227	BRNC THRMPLSTY,ABLT MSCL	341	INCISION OF MEDIASTINUM
3228	ENDOSC DESTRUC LUNG LES	3420	THORACOSCOPIC PLEURAL BX
3229	DESTROY LOC LUNG LES NEC	3421	TRANSPLEURA THORACOSOCOPY
323	<i>SEGMENTAL RESECTION OF LUNG</i>	3422	MEDIASTINOSCOPY
3230	THORAC SEG LUNG RESECT	3423	CHEST WALL BIOPSY
3239	OTH SEG LUNG RESECT NOS	3424	PLEURAL BIOPSY NEC
324	LOBECTOMY OF LUNG	3425	CLOS MEDIASTINAL BIOPSY
3241	THORAC LOBECTOMY LUNG	3426	OPEN MEDIASTINAL BIOPSY
3249	LOBECTOMY OF LUNG NEC	3427	BIOPSY OF DIAPHRAGM
325	<i>COMPLETE PNEUMONECTOMY</i>	3428	DX PROCEDURE THORAX NEC
3250	THORACOSPC PNEUMONECTOMY	3429	DX PROC MEDIASTINUM NEC
3259	OTHER PNEUMONECTOMY NOS	343	DESTRUCT MEDIASTIN LES
326	RADL DISSEC THORAC STRUCT	344	DESTRUCT CHEST WALL LES
329	OTHER EXCISION OF LUNG	3451	DECORTICATION OF LUNG
330	INCISION OF BRONCHUS	3452	THORACOSCOPC DECORT LUNG
331	INCISION OF LUNG	3459	OTHER PLEURAL EXCISION
3320	THORACOSCOPC LUNG BIOPSY	<hr/>	
3325	OPEN BRONCHIAL BIOPSY	Repair of chest wall	
3326	CLOSED LUNG BIOPSY	3471	SUTURE CHEST WALL LACER
3327	CLOS ENDOSCOPIC LUNG BX	3472	THORACOSTOMY CLOSURE
3328	OPEN LUNG BIOPSY	3473	CLOS THORACIC FISTUL NEC
3331	DESTR PHREN- LUNG COLLAPS	3474	PECTUS DEFORMITY REPAIR
3332	PNEMOTHORAX-LUNG COLLAPS	3479	OTHER CHEST WALL REPAIR
3334	THORACOPLASTY	<hr/>	
3339	SURG COLLAPS OF LUNG NEC	Operations on diaphragm	
<hr/>		3481	EXCISE DIAPHRAGM LESION
Repair and plastic operation on lung and bronchus		3482	SUTURE DIAPHRAGM LACERAT
3341	BRONCHIAL LACERAT SUTURE	3483	CLOSE DIAPHRAGM FISTULA

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3484	OTHER DIAPHRAGM REPAIR	4255	THORAC LG BOWEL INTERPOS
3485	IMPLANT DIAPHRA PACEMAKE	4256	THORAC ESOPHAGOCOLOS NEC
3489	DIAPHRAGM OPERATION NEC	4258	THORAC INTERPOSITION NEC
3493	REPAIR OF PLEURA	4259	THORAC ESOPHAG ANAST NEC
3499	THORACIC OPERATION NEC		
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Operations on thoracic duct			
4061	THORAC DUCT CANNULATION	4261	STERN ESOPHAGUESOPHAGOST
4062	THORACIC DUCT FISTULIZAT	4262	STERN ESOPHAGOGASTROSTOM
4063	CLOSE THORACIC DUCT FIST	4263	STERN SM BOWEL INTERPOS
4064	LIGATE THORACIC DUCT	4264	STERN ESOPHAGOENTER NEC
4069	THORACIC DUCT OP NEC	4265	STERN LG BOWEL INTERPOS
		4266	STERN ESOPHAGOCOLOS NEC
		4268	STERN INTERPOSITION NEC
		4269	STERN ESOPHAG ANAST NEC
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Esophagotomy			
4201	ESOPHAGEAL WEB INCISION		
4209	ESOPHAGEAL INCISION NEC		
4210	ESOPHAGOSTOMY NOS		
4211	CERVICAL ESOPHAGOSTOMY		
4212	ESOPH POUCH EXTERIORIZAT		
4219	EXT FISTULIZAT ESOPH NEC		
4221	ESOPHAGOSCOPY BY INCIS		
4225	OPEN BIOPSY OF ESOPHAGUS		
4231	LOC EXCIS ESOPH DIVERTIC		
4232	LOCAL EXCIS ESOPHAG NEC		
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Excision of esophagus			
4239	DESTRUCT ESOPHAG LES NEC		
4240	ESOPHAGECTOMY NOS		
4241	PARTIAL ESOPHAGECTOMY		
4242	TOTAL ESOPHAGECTOMY		
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Intrathoracic anastomosis of exophagus			
4251	THORAC ESOPHAGUESOPHAGOS		
4252	THORAC ESOPHAGOGASTROST		
4253	THORAC SM BOWEL INTERPOS		
4254	THORAC ESOPHAGOENTER NEC		
		427	ESOPHAGOMYOTOMY
		4281	INSERT PERM TUBE ESOPHAG
		4282	SUTURE ESOPHAGEAL LACER
		4283	ESOPHAGOSTOMY CLOSURE
		4284	ESOPH FISTULA REPAIR NEC
		4285	ESOPHAG STRICTURE REPAIR
		4286	PROD SUBQ TUNNEL NO ANAS
		4287	ESOPHAGEAL GRAFT NEC
		4289	ESOPHAGEAL REPAIR NEC
		435	PROXIMAL GASTRECTOMY
		4399	TOTAL GASTRECTOMY NEC
		4465	ESOPHAGOGASTROPLASTY
		4466	CREAT ESOPHAGASTR SPHINCT
		4467	LAP CREAT ESOPH SPHINCT
		7781	OTH CHEST CAGE OSTECTOMY
		7791	TOT CHEST CAGE OSTECTOMY
		8104	DRSL/DRSLUMB FUS ANT/ANT
		8134	REFUS DRS/DRSLMB ANT/ANT

¹ Italicized codes are not active in the current fiscal year.

ICD-9-CM Lung or pleural biopsy procedure codes:

3326	CLOSED LUNG BIOPSY	3424	PLEURAL BIOPSY NEC
3328	OPEN LUNG BIOPSY		

ICD9-CM Diaphragmatic surgery repair procedure codes¹:

537	<i>ABD REPAIR-DIAPHR HERNIA</i>	5381	DIAPHRAGMATIC PLICATION
5371	LAP ABD REP-DIAPHR HERN	5382	PARASTERN HERNIA REPAIR
5372	OPN ABD DIAPHRM HERN NEC	5583	CLOSE RENAL FISTULA NEC
5375	ABD REP-DIAPHR HERN NOS	5584	REDUCE RENAL PEDICL TORS
5380	THOR REP-DIAPH HERN NOS		

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ICD9-CM Cardiac procedure codes¹:

3506	TRNSAPCL REP AORTC VALVE	3527	OPN/OTH REP TCSPD VLV-TS
3508	TRNSAPCL REPL PULM VALVE	3528	OPN/OTH REPL TCSPD VALVE
3510	OPEN VALVULOPLASTY NOS	3531	PAPILLARY MUSCLE OPS
3511	OPN AORTIC VALVULOPLASTY	3532	CHORDAE TENDINEAE OPS
3512	OPN MITRAL VALVULOPLASTY	3533	ANNULOPLASTY
3513	OPN PULMON VALVULOPLASTY	3534	INFUNDIBULECTOMY
3514	OPN TRICUS VALVULOPLASTY	3535	TRABECUL CARNEAE CORD OP
3520	OPN/OTH REP HRT VLV NOS	3539	TISS ADJ TO VALV OPS NEC
3521	OPN/OTH REP AORT VLV-TIS	3550	PROSTH REP HRT SEPTA NOS
3522	OPN/OTH REP AORTIC VALVE	3551	PROS REP ATRIAL DEF-OPN
3523	OPN/OTH REP MTRL VLV-TIS	3553	PROS REP VENTRIC DEF-OPN
3524	OPN/OTH REP MITRAL VALVE	3554	PROS REP ENDOCAR CUSHION
3525	OPN/OTH REP PULM VLV-TIS	3560	GRFT REPAIR HRT SEPT NOS
3526	OPN/OTH REPL PUL VALVE	3561	GRAFT REPAIR ATRIAL DEF

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3562	GRAFT REPAIR VENTRIC DEF	3712	PERICARDIOTOMY
3563	GRFT REP ENDOCAR CUSHION	3731	PERICARDIECTOMY
3570	HEART SEPTA REPAIR NOS	3732	HEART ANEURYSM EXCISION
3571	ATRIA SEPTA DEF REP NEC	3733	EXC/DEST HRT LESION OPEN
3572	VENTR SEPTA DEF REP NEC	3735	PARTIAL VENTRICULECTOMY
3573	ENDOCAR CUSHION REP NEC	3736	EXC,DESTRCT,EXCLUS LAA
3581	TOT REPAIR TETRAL FALLOT	3741	IMPL CARDIAC SUPPORT DEV
3582	TOTAL REPAIR OF TAPVC	3749	HEART/PERICARD REPR NEC
3583	TOT REP TRUNCUS ARTERIOS	3751	HEART TRANSPLANTATION
3584	TOT COR TRANSPOS GRT VES	3752	IMP TOT INT BI HT RP SYS
3591	INTERAT VEN RETRN TRANSP	3753	REPL/REP THR UNT TOT HRT
3592	CONDUIT RT VENT-PUL ART	3754	REPL/REP OTH TOT HRT SYS
3593	CONDUIT LEFT VENTR-AORTA	3755	REM INT BIVENT HRT SYS
3594	CONDUIT ARTIUM-PULM ART	3760	IMP BIVN EXT HRT AST SYS
3595	HEART REPAIR REVISION	3761	PULSATION BALLOON IMPLAN
3598	OTHER HEART SEPTA OPS	3762	INSRT NON-IMPL CIRC DEV
3599	OTHER HEART VALVE OPS	3763	REPAIR HEART ASSIST SYS
3603	OPEN CORONRY ANGIOPLASTY	3764	REMVE EXT HRT ASSIST SYS
3610	AORTOCORONARY BYPASS NOS	3765	IMP VENT EXT HRT AST SYS
3611	AORTOCOR BYPAS-1 COR ART	3766	IMPLANTABLE HRT ASSIST
3612	AORTOCOR BYPAS-2 COR ART	3767	IMP CARDIOMYOSTIMUL SYS
3613	AORTOCOR BYPAS-3 COR ART	3791	OPN CHEST CARDIAC MASSAG
3614	AORTCOR BYPAS-4+ COR ART	3804	INCISION OF AORTA
3615	1 INT MAM-COR ART BYPASS	3805	THORACIC VESSEL INC NEC
3616	2 INT MAM-COR ART BYPASS	3844	RESECT ABDM AORTA W REPL
3617	ABD-CORON ARTERY BYPASS	3845	RESECT THORAC VES W REPL
3619	HRT REVAS BYPS ANAS NEC	3864	EXCISION OF AORTA
362	ARTERIAL IMPLANT REVASC	3865	THORACIC VESSEL EXCISION
3631	OPEN CHEST TRANS REVASC	3884	OCCLUDE AORTA NEC
3632	OTH TRANSMYO REVASCULAR	3885	OCCLUDE THORACIC VES NEC
3639	OTH HEART REVASCULAR	390	SYSTEMIC-PULM ART SHUNT
3691	CORON VESS ANEURYSM REP	3921	CAVAL-PULMON ART ANASTOM
3699	HEART VESSEL OP NEC	3922	AORTA-SUBCLV-CAROT BYPAS
370	PERICARDIOCENTESIS	3923	INTRATHORACIC SHUNT NEC
3710	INCISION OF HEARTNOS		
3711	CARDIOTOMY		

¹ Bolded codes are new to the current fiscal year.