

# Postoperative Respiratory Failure Rate

## Patient Safety Indicators #11

### Technical Specifications

#### Provider-Level Indicator

AHRQ Quality Indicators, Version 4.4, March 2012

### Numerator

Discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM codes for acute respiratory failure in any secondary diagnosis field.

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Discharges among cases meeting the inclusion and exclusion rules for the denominator with ICD-9-CM codes as follows:

- *Mechanical Ventilation for 96 consecutive hours or more* - zero or more days after the first major operating room procedure code
- *Mechanical Ventilation for less than 96 consecutive hours or undetermined* - two or more days after the first major operating room procedure code
- *Reintubation* - one or more days after the first major operating room procedure code

#### ICD-9-CM Acute Respiratory Failure diagnosis codes<sup>1,2</sup>:

<b>51851</b>	<b>AC RESP FLR FOL TRMA/SRG</b>	<i>51881</i>	<i>ACUTE RESPIRATORY FAILURE</i>
<b>51853</b>	<b>AC/CHR RSP FLR FOL TR/SG</b>	<i>51884</i>	<i>ACUTE &amp; CHRONC RESP FAIL</i>

<sup>1</sup> Italicized codes are not active in the current fiscal year.

<sup>2</sup> Bolded codes are new to the current fiscal year.

#### ICD-9-CM Mechanical Ventilation for 96 consecutive hours or more procedure code:

9672 CONT INV MEC CEN 96+ HRS

#### ICD-9-CM Mechanical Ventilation procedure codes:

9670	CONV INV MEC VEN-UNSP DUR	9671	CONT INV MEC VEN <96 HRS
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#### ICD-9-CM Reintubation procedure code:

9604 INSERT ENDOTRACHEAL TUBE

### Denominator

All elective [i.e., elective: SID Admission type # is recorded as elective (Admission Type = 3)] surgical discharges age 18 and older defined by specific DRGs or MS-DRGs and an ICD-9-CM code for an operating room procedure.

See *Patient Safety Indicators Appendices*:

- Appendix A – Operating Room Procedure Codes
  - Appendix D – Surgical Discharge DRGs
  - Appendix E – Surgical Discharge MS-DRGs
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Exclude cases:

- with principal diagnosis of acute respiratory failure or secondary diagnosis present on admission\*
- with any diagnosis code of neuromuscular disorder
- where a procedure for tracheostomy is the only operating room procedure
- where an esophageal resection procedure occurs
- where a lung cancer procedure occurs
- where a procedure for the nose, mouth and pharynx occurs
- where a procedure for tracheostomy occurs before the first operating room procedure.

**Note:** If day of procedure is not available in the input data file, the rate may be slightly lower than if the information was available.

- with any diagnosis code of craniofacial anomalies with
  - 1) a procedure code for laryngeal or pharyngeal surgery *or*
  - 2) a procedure on face
- with any diagnosis code of degenerative neurological disorder
- MDC 14 (pregnancy, childbirth, and puerperium)
- MDC 4 (diseases/disorders of respiratory system)
- MDC 5 (diseases/disorders of circulatory system)
- with missing 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

**ICD-9-CM Neuromuscular disorder diagnosis codes<sup>1,2</sup>:**

3570	AC INFECT POLYNEURITIS	35921	MYOTONIC MUSCLR DYSTRPHY?
35800	MYSTHNA GRVS W/O AC EXAC	35922	MYOTONIA CONGENITA
35801	MYASTHNA GRAVS W AC EXAC	35923	MYOTONIC CHONDRODYSTRPHY
3581	MYASTHENIA IN OTH DIS	3593	PERIODIC PARALYSIS
3582	TOXIC MYONEURAL DISORDER	3594	TOXIC MYOPATHY
<b>35830</b>	<b>LAMBERT-EATON SYND NOS</b>	3595	MYOPATHY IN ENDOCRIN DIS
<b>35831</b>	<b>LAMBERT-EATON SYND NEOPL</b>	3596	INFL MYOPATHY IN OTH DIS
<b>35839</b>	<b>LAMBERT-EATON SYN OT DIS</b>	35971	INCLUSION BODY MYOSITIS
3588	MYONEURAL DISORDERS NEC	35979	INFLM/IMMUNE MYOPATH NEC
3589	MYONEURAL DISORDERS NOS	35981	CRITICAL ILLNESS MYOPATHY
3590	CONG HERED MUSC DYSTRPHY	35989	MYOPATHIES NEC
3591	HERED PROG MUSC DYSTRPHY	3599	MYOPATHY NOS
3592	<i>MYOTONIC DISORDERS</i>		

<sup>1</sup> Italicized codes are not active in the current fiscal year.

<sup>2</sup> Bolded codes are new to the current fiscal year.

**ICD-9-CM Tracheostomy procedure codes:**

3121	MEDIASTINAL TRACHEOSTOMY	3174	REVISION OF TRACHEOSTOMY
3129	OTHER PERM TRACHEOSTOMY		

**ICD-9-CM Esophageal resection procedure codes<sup>1</sup>:**

424	<i>ESOPHAGECTOMY</i>	4254	THORAC ESOPHAGOENTER NEC
4240	ESOPHAGECTOMY NOS	4255	THORAC LG BOWEL INTERPOS
4241	PARTIAL ESOPHAGECTOMY	4256	THORAC ESOPHAGOCOLOS NEC
4242	TOTAL ESOPHAGECTOMY	4258	THORAC INTERPOSITION NEC
425	<i>THORAC ESOPHAG ANAST</i>	4259	THORAC ESOPHAG ANAST NEC
4251	THORAC ESOPHAGUESOPHAGOS	426	<i>STERN ESOPHAG ANAST</i>
4252	THORAC ESOPHAGOGASTROST	4261	STERN ESOPHAGUESOPHAGOST
4253	THORAC SM BOWEL INTERPOS	4262	STERN ESOPHAGOGASTROSTOM

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4263	STERN SM BOWEL INTERPOS	4268	STERN INTERPOSITION NEC
4264	STERN ESOPHAGOENTER NEC	4269	STERN ESOPHAG ANAST NEC
4265	STERN LG BOWEL INTERPOS	4399	TOTAL GASTRECTOMY NEC
4266	STERN ESOPHAGOCOLOS NEC		

<sup>1</sup> Italicized codes are not active in the current fiscal year.

**ICD-9-CM Lung cancer procedure codes:**

3239	OTH SEG LUNG RESECT NOS	3259	OTHER PHENUMONECTOMY NOS
3249	LOBECTOMY OF LUNG NEC		

**ICD-9-CM Laryngeal or pharyngeal surgery procedure codes:**

253	COMPLETE GLOSSECTOMY	3022	VOCAL CORDECTOMY
254	RADICAL GLOSSECTOMY	3029	OTHER PART LARYNGECTOMY
2731	LOC EXC BONY PALATE LES	303	COMPLETE LARYNGECTOMY
290	PHARYNGOTOMY	304	RADICAL LARYNGECTOMY
2933	PHARYNGECTOMY	313	INCIS LARYNX TRACHEA NEC
2939	EXCIS/DESTR LES PHAR NEC	315	LOCAL DESTRC TRACH LES
294	PLASTIC OP ON PHARYNX	3169	OTHER LARYNGEAL REPAIR
2953	CLOS PHARYNX FISTULA NEC	3173	THRACHEA FUSTULA CLOS NEC
2959	PHARYNGEAL REPAIR NEC	3175	TRACHEAL RECONSTRUCTION
2991	PHARYNGEAL DILATION	3179	OTHER TRACHEAL REPAIR
3009	DESTRUCT LARYNX LES NEC	3198	OTH LARYNGEAL OPERATION
3021	EPIGLOTTIDECTOMY	3199	OTHER TRACHEAL OPERATION

**ICD-9-CM Procedure on face codes:**

252	PARTIAL GLOSSECTOMY	2931	CRICOPHARYNGEAL MYOTOMY
2559	REPAIR OF TONGUE NEC	7646	FACIAL BONE RECONSTR NEC
2732	WIDE EXC BONY PALATE LES	7665	SEG OSTEOPLASTY MAXILLA
2762	CLEFT PALATE CORRECTION	7666	TOT OSTEOPLASTY MAXILLA
2763	REVIS CLEFT PALAT REPAIR	7669	FACIAL BONE REPAIR NEC
2769	OTH PLASTIC REPAIR PALAT	7691	BONE GRAFT TO FACE BONE

**ICD-9-CM Craniofacial abnormality diagnosis codes:**

74483	MACROSTOMIA	7483	LARYNGTRACH ANOMALY NEC
74484	MICROSTOMIA	7560	ANOMAL SKULL/FACE BONES
7449	CONG FACE/NECK ANOM NOS		

**ICD-9-CM Nose, mouth and pharynx procedure codes:**

214	RESECTION OF NOSE	253	COMPLETE GLOSSECTOMY
2161	DIATHER/CRYO TURBINECTOM	254	RADICAL GLOSSECTOMY
2162	TURBINATE FRACTURE	2559	REPAIR OF TONGUE NEC
2169	TURBINECTOMY NEC	2594	OTHER GLOSSOTOMY
2172	OPEN REDUCTION NASAL FX	2599	TONGUE OPERATION NEC
2199	NASAL OPERATION NEC	2621	SALIVARY CYST MARSUPIAL
2231	RADICAL MAXILLARY ANTROT	2629	SALIV LESION EXCIS NEC
2239	EXT MAXILLARY ANTROT NEC	2630	SIALOADENECTOMY NOS
2241	FRONTAL SINUSOTOMY	2631	PARTIAL SIALOADENECTOMY
2242	FRONTAL SINUSECTOMY	2632	COMPLETE SIALOADENECTOMY
2250	SINUSOTOMY NOS	2641	SUTURE OF SALIV GLND LAC
2251	ETHMOIDOTOMY	2642	SALIVARY FISTULA CLOSURE
2252	SPHENOIDOTOMY	2649	SALIVARY REPAIR NEC
2253	MULTIPLE SINUS INCISION	2699	SALIVARY OPERATION NEC
2260	SINUSECTOMY NOS	270	DRAIN FACE & MOUTH FLOOR
2261	C-LUC EXC MAX SINUS LES	271	INCISION OF PALATE
2262	EXC MAX SINUS LESION NEC	2731	LOC EXC BONY PALATE LES
2263	ETHMOIDECTOMY	2732	WIDE EXC BONY PALATE LES
2264	SPHENOIDECTOMY	2742	WIDE EXCISION OF LIP LES
2271	NASAL SINUS FISTULA CLOS	2743	EXCISION OF LIP LES NEC
2279	NASAL SINUS REPAIR NEC	2749	EXCISION OF MOUTH NEC
229	OTHER NASAL SINUS OPS	2753	CLOSURE OF MOUTH FISTULA
242	GINGIVOPLASTY	2754	REPAIR OF CLEFT LIP
251	DESTRUCTION TONGUE LES	2755	FULL-THICK GRFT TO MOUTH
252	PARTIAL GLOSSECTOMY	2756	SKIN GRAFT TO MOUTH NEC

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2757	PEDICLE ATTACH TO MOUTH	2892	EXCIS TONSIL/ADENOID LES
2759	MOUTH REPAIR NEC	2899	TONSIL/ADENOID OPS NEC
2761	SUTURE OF PALATE LACERAT	290	PHARYNGOTOMY
2762	CLEFT PALATE CORRECTION	292	EXC BRANCHIAL CLEFT CYST
2763	REVIS CLEFT PALAT REPAIR	293	<i>DESTRUCT PHARYNGEAL LES</i>
2764	INSERT PALATAL IMPLANT	2931	CRICOPHARYNGEAL MYOTOMY
2769	OTH PLASTIC REPAIR PALAT	2932	PHARYNGEAL DIVERTICULEC
2771	INCISION OF UVULA	2933	PHARYNGECTOMY
2772	EXCISION OF UVULA	2939	EXCIS/DESTR LES PHAR NEC
2773	REPAIR OF UVULA	294	PLASTIC OP ON PHARYNX
2779	OTHER UVULA OPERATIONS	2951	SUTURE OF PHARYNGEAL LAC
2792	MOUTH INCISION NOS	2952	CLOS BRANCH CLEFT FISTUL
2799	ORAL CAVITY OPS NEC	2953	CLOS PHARYNX FISTULA NEC
280	PERITONSILLAR I & D	2954	LYSIS PHARYNGEAL ADHES
284	EXCISION OF TONSIL TAG	2959	PHARYNGEAL REPAIR NEC
285	EXCISION LINGUAL TONSIL	2992	DIVIS GLOSSOPHARYNG NERV
2891	INCIS TO REMOV TONSIL FB	2999	PHARYNGEAL OPERATION NEC

**ICD-9-CM Degenerative neurological disorder diagnosis codes<sup>1,2</sup>:**

2900	SENILE DEMENTIA UNCOMP	29411	DEMENTIA W BEHAVIOR DIST
29010	PRESENILE DEMENTIA	2948	MENTAL DISOR NEC OTH DIS
29011	PRESENILE DELIRIUM	2949	MENTAL DISOR NOS OTH DIS
29012	PRESENILE DELUSION	3100	FRONTAL LOBE SYNDROME
29013	PRESENILE DEPRESSION	3102	POSTCONCUSSION SYNDROME
29020	SENILE DELUSION	<i>3108</i>	<i>NONPSYCHOT BRAIN SYN NEC</i>
29021	SENILE DEPRESSIVE	<b>31081</b>	<b>PSEUDOBULBAR AFFECT</b>
2903	SENILE DELIRIUM	<b>31089</b>	<b>NONPSYCH MNTL DISORD NEC</b>
29040	VASCULAR DEMENTIA,UNCOMP	3109	NONPSYCHOT BRAIN SYN NOS
29041	VASC DEMENTIA W DELIRIUM	3310	ALZHEIMER'S DISEASE
29042	VASC DEMENTIA W DELUSION	3311	<i>FRONTOTEMPORAL DEMENTIA</i>
29043	VASC DEMENTIA W DEPRESSN	33111	PICK'S DISEASE
2908	SENILE PSYCHOSIS NEC	33119	FRONTOTEMP DEMENTIA NEC
2909	SENILE PSYCHOT COND NOS	3312	SENILE DEGENERAT BRAIN
2930	DELIRIUM D/T OTHER COND	<b>3316</b>	<b>CORTICOBASAL DEGENERATION</b>
2931	SUBACUTE DELIRIUM	33182	DEMENTIA WITH LEWY BODIES
2940	AMNESTIC DISORD OTH DIS	<b>34882</b>	<b>BRAIN DEATH</b>
2941	<i>DEMENTIA IN OTH DISEASES</i>	797	SENILITY W/O PSYCHOSIS
29410	DEMENTIA W/O BEHAC DIST		

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