Postoperative Respiratory Failure Rate

Pediatric Quality Indicators #9
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.

-----------------------------------------------------------------
OR
-----------------------------------------------------------------

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 (based on days from admission to procedure)
- Mechanical Ventilation for less than 96 consecutive hours or undetermined - two or more days after the first major operating room procedure code (based on days from admission to procedure)
- Reintubation - one or more days after the first major operating room procedure code (based on days from admission to procedure)

ICD-9-CM Acute respiratory failure diagnosis codes\(^1,2:\)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>51851</td>
<td>AC RESP FLR FOL TRMA/SRG</td>
</tr>
<tr>
<td>51853</td>
<td>AC/CHR RSP FLR FOL TR/SG</td>
</tr>
<tr>
<td>51881</td>
<td>ACUTE RESPIRATORY FAILURE</td>
</tr>
<tr>
<td>51884</td>
<td>ACUTE &amp; CHRONIC RESP FAIL</td>
</tr>
</tbody>
</table>

\(^1\) Italicized codes are not active in the current fiscal year.
\(^2\) Bolded codes are new to the current fiscal year.

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>9672</td>
<td>CONT INV MEC VEN 96+ HRS</td>
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ICD-9-CM Mechanical ventilation procedure codes:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9670</td>
<td>CON INV MEC VEN-UNSP DUR</td>
</tr>
<tr>
<td>9671</td>
<td>CONT INV MEC VEN &lt;96 HRS</td>
</tr>
</tbody>
</table>

ICD-9-CM Reintubation procedure code:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>9604</td>
<td>INSERT ENDOTRACHEAL TUBE</td>
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</tbody>
</table>

Denominator

All elective* surgical discharges under age 18 defined by specific DRGs or MS-DRGs and an ICD-9-CM code for an operating room procedure.

*Elective: Admission type # is recorded as elective (SID ATYPE = 3)

See Pediatric Quality Indicators Appendices:

- Appendix A – Operating Room Procedure Codes
- Appendix B – Surgical DRGs
Exclude cases:
• with principal diagnosis of acute respiratory failure or secondary diagnosis present on admission*
• where a procedure for tracheostomy is the only operating room procedure
• 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 ICD-9-CM diagnosis code of neuromuscular disorder
• with respiratory or circulatory diseases (MDC 4 and 5)
• with any diagnosis code of craniofacial anomalies with
  o 1) a procedure code for laryngeal or pharyngeal surgery or
  o 2) a procedure on face
• with a procedure for esophageal resection
• with a procedure for lung cancer
• with a procedure for nose, mouth and pharynx
• with any diagnosis code of degenerative neurological disorder
• MDC 14 (Pregnancy, Childbirth, and Puerperium)
• neonates with birth weight less than 500 grams (Birth Weight Category 1)
• 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 Tracheostomy procedure codes:
3121 MEDIASTINAL TRACHEOSTOMY 3174 REVISION OF TRACHEOSTOMY
3129 OTHER PERM TRACHEOSTOMY

ICD-9-CM Neuromuscular disorder diagnosis codes1,2:
3570 AC INFECT POLYNEURITIS 3592 MYOTONIC DISORDERS
35800 MYASTHNA GRVS W/O AC EXAC 35922 MYOTONIA CONGENITA
35801 MYASTHNA GRVS W AC EXAC 35923 MYOTONIC CHONDRODYSTRPHY
3581 MYASTHENIA IN OTH DIS 3593 PERIODIC PARALYSIS
3582 TOXIC MYONEURAL DISORDER 3594 TOXIC MYOPATHY
35830 LAMBERT-EATON SYND NOS 3595 MYOPATHY IN ENDOCRIN DIS
35831 LAMBERT-EATON SYND NEOPL 3596 INF MYOPATHY IN OTH DIS
35839 LAMBERT-EATON SYN OT DIS 35971 INCLUSION BODY MYOSITIS
3588 MYONEURAL DISORDERS NEC 35979 INFLM/IMMUNE MYOPATH NEC
3589 MYONEURAL DISORDERS NOS 35981 CRITICAL ILLNESS MYOPHY
3590 CONG HERED MUSC DYST RPHY 35989 MYOPATHIES NEC
3591 HERED PROG MUSC DYST RPHY 3599 MYOPATHY NOS
1 Italicized codes are not active in the current fiscal year.
2 Bolded codes are new to the current fiscal year.

ICD-9-CM Laryngeal or pharyngeal surgery procedure codes:
253 COMPLETE GLOSSECTOMY 3022 VOCAL CORRECTOMY
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 DESTRUC TRACH LES
294 PLASTIC OP ON PHARYNX 3169 OTHER LARYNGEAL REPAIR
2953 CLOS PHARYNX FISTULA NEC 3173 TRACHEA FISTULA 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 Face procedure 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
2769 OTH PLASTIC REPAIR PALAT 7691 BONE GRAFT TO FACE BONE

ICD-9-CM Craniofacial abnormality diagnosis codes:
74483 MACROSTOMIA 7483 LARYNGOTRACH ANOMALY NEC
74484 MICROSTOMIA 7560 ANOMAL SKULL/FACE BONES
7449 CONG FACE/NECK ANOM NOS

ICD-9-CM Esophageal resection procedure codes1:
424 ESOPHAGECTOMY 4258 THORAC INTERPOSITION NEC
4240 ESOPHAGECTOMY NOS 4259 THORAC ESOPHAG ANAST NEC
4241 PARTIAL ESOPHAGECTOMY 426 STERN ESOPHAG ANAST
4242 TOTAL ESOPHAGECTOMY 4261 STERN ESOPHAGOSPHAGOST
425 THORAC ESOPHAG ANAST 4262 STERN ESOPHAGOGASTROSTOM
4251 THORAC ESOPHAGOESOPHAGOS 4263 STERN SM BOWEL INTERPOS
4252 THORAC ESOPHAGOGASTROST 4264 STERN ESOPHAGENTER NEC
4253 THORAC SM BOWEL INTERPOS 4265 STERN LG BOWEL INTERPOS
4254 THORAC ESOPHAGOENTER NEC 4266 STERN ESOPHAGOLOCOS NEC
4255 THORAC LG BOWEL INTERPOS 4268 STERN INTERPOSITION NEC
4256 THORAC ESOPHAGOCOLOS NEC 4269 STERN ESOPHAG ANAST NEC
1 Italicized codes are not active in the current fiscal year.

ICD-9-CM Procedure on lung cancer procedure codes:
ICD-9-CM Procedure on nose, mouth and pharynx procedure codes:

- **214** RESECTION OF NOSE  
  2732 WIDE EXC BONY PALATE LES
- **2161** DIATHER/CRYO TURBINECTOM  
  2742 WIDE EXCISION OF LIP LES
- **2162** TURBINATE FRACTURE  
  2743 EXCISION OF LIP LES NEC
- **2169** TURBINECTOMY NEC  
  2749 EXCISION OF MOUTH NEC
- **2172** OPEN REDUCTION NASAL FX  
  2753 CLOSURE OF MOUTH FISTULA
- **2199** NASAL OPERATION NEC  
  2754 REPAIR OF CLEFT LIP
- **2231** RADICAL MAXILLARY ANTROT  
  2755 FULL-THICK GRFT TO MOUTH
- **2239** EXT MAXILLARY ANTROT NEC  
  2756 SKIN GRAFT TO MOUTH NEC
- **2241** FRONTAL SINUSOTOMY  
  2757 PEDICLE ATTACH TO MOUTH
- **2242** FRONTAL SINUSECTOMY  
  2759 MOUTH REPAIR NEC
- **2250** SINUSOTOMY NOS  
  2761 SUTURE OF PALATE LACERAT
- **2251** ETHMOIDOTOMY  
  2762 CLEFT PALATE CORRECTION
- **2252** SPHENOIDOTOMY  
  2763 REVIS CLEFT PALAT REPAIR
- **2253** MULTIPLE SINUS INCISION  
  2764 INSERT PALATAL IMPLANT
- **2260** SINUSECTOMY NOS  
  2769 OTH PLASTIC REPAIR PALAT
- **2261** C-LUC EXC MAX SINUS LES  
  2771 INCISION OF UVULA
- **2262** EXC MAX SINUS LESION NEC  
  2772 EXCISION OF UVULA
- **2263** ETHMOIDECTOMY  
  2773 REPAIR OF UVULA
- **2264** SPHENOIDECTOMY  
  2779 OTHER UVULA OPERATIONS
- **2271** NASAL SINUS FISTULA CLOS  
  2792 MOUTH INCISION NOS
- **2279** NASAL SINUS REPAIR NEC  
  2799 ORAL CAVITY OPS NEC
- **229** OTHER NASAL SINUS OPS  
  280 PERITONSILLAR I & D
- **242** GINGIVOPLASTY  
  284 EXCISION OF TONSIL TAG
- **251** DESTRUCTION TONGUE LES  
  285 EXCISION LINGUAL TONSIL
- **252** PARTIAL GLOSSECTOMY  
  2891 INCIS TO REMOV TONSIL FB
- **253** COMPLETE GLOSSECTOMY  
  2892 EXCIS TONSIL/ADENOID LES
- **254** RADICAL GLOSSECTOMY  
  2899 TONSIL/ADENOID OPS NEC
- **2559** REPAIR OF TONGUE NEC  
  290 PHARYNGOTOMY
- **2594** OTHER GLOSSTOMY  
  292 EXC BRANCHIAL CLEFT CYST
- **2599** TONGUE OPERATION NEC  
  293 DESTRUCT PHARYNGEAL LES
- **2621** SALIVARY CYST MARSUPIAL  
  2931 CRICOPHARYNGEAL MYOTOMY
- **2629** SALIV LESION EXCIS NEC  
  2932 PHARYNGEAL DIVERSTICULEC
- **2630** SIALOADENECTOMY NOS  
  2933 PHARYNGECTOMY
- **2631** PARTIAL SIALOADENECTOMY  
  2939 EXCIS/DESTR LES PHAR NEC
- **2632** COMPLETE SIALOADENECTOMY  
  294 PLASTIC OP ON PHARYNX
- **2641** SUTURE OF SALIV GLND LAC  
  2951 SUTURE OF PHARYNGEAL LAC
- **2642** SALIVARY FISTULA CLOSURE  
  2952 CLOS BRANCH CLEFT FISTUL
- **2649** SALIVARY REPAIR NEC  
  2953 CLOS PHARYNX FISTULA NEC
- **2699** SALIVARY OPERATION NEC  
  2954 LYSIS PHARYNGEAL ADHES
- **270** DRAIN FACE & MOUTH FLOOR  
  2959 PHARYNGEAL REPAIR NEC
- **271** INCISION OF PALATE  
  2992 DIVIS GLOSSOPHARYNG NERV
- **2731** LOC EXC BONY PALATE LES  
  2999 PHARYNGEAL OPERATION NEC

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ICD-9-CM Degenerative neurological disorder diagnosis codes\textsuperscript{1,2}:

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<thead>
<tr>
<th>Code</th>
<th>Diagnosis</th>
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<tr>
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<td>PRESENILE DELUSION</td>
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<td>FRONTAL LOBE SYNDROME</td>
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<td>29013</td>
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<td>POSTCONCUSSION SYNDROME</td>
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<td>PSEUDOBULBAR AFFECT</td>
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<td>VASC DEMENTIA W DELUSION</td>
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<td>FRONTOTEMPORAL DEMENTIA</td>
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<td>PICK'S DISEASE</td>
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<td>SENILE PSYCHOSIS NEC</td>
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<td>FRONTOTEMP DEMENTIA NEC</td>
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<td>SENILE DEGENERAT BRAIN</td>
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<td>DELIRIUM D/T OTHER COND</td>
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