

# Guidelines for Validation of Selected AHRQ Quality Indicators

PSI 11: Postoperative Respiratory Failure January 11, 2008, Draft 2.3





# **PSI 11: Postoperative Respiratory Failure**

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# **Getting started**

Prior to starting data abstraction, familiarize yourself with the medical record, pertinent health information policies and procedures specific for your medical center, as well as the specific Patient Safety Indicator (PSI) abstraction guideline and instrument.

Review the "Getting Started" document (AHRQ\_Pilot\_Getting\_Started.doc).

The abstraction Instrument is provided as Appendix A of this document.

# General Instructions for Completing the AHRQ Study Record

Please complete all data fields: All data fields must be completed to enable submission of a Patient Record to the AHRQ Patient Safety Indicator (PSI) database. If you do not have the information for a given field, check the "Not Documented" box. Except as noted below, avoid leaving any questions blank. Most questions that relate to specific findings or data elements default to "no" if left unchecked.

We assume that if a finding is not documented in the records that it does not occur. Questions that relate to specific times, physical findings or laboratory values generally can be answered with "9", "99", "999", "999" etc., if the necessary information is missing or uninterpretable. If you believe that a question should be answered in this manner, but the computer entry system does not allow it, contact your supervisor and/or AHRQ.

Use leading "zeros" to complete a number string **EXCEPT** for DRG and/or procedure codes. For example, if given a double digit entry and the number of events to be entered is less than 10, precede the entry with a zero (e.g., 07 for 7). ENTER all DRG and procedure codes as written with careful consideration of the decimal point. Do not right or left margin adjust and do not add any additional digits including 'zeros". For example, 38.9 should be entered as  $[ \_ 3 8.9 ]$ 

**Date/time:** All dates are recorded in the [MM/DD/YYYY] format. All times are recorded using a 24-hour clock (or military time) [\_\_:\_\_]. To convert clock time to military time, with the exception of midnight and noon, add 12 to any time after noon. For estimating time, use time anchors such as important events, television shows or other references to narrow the time window.

**Information sources:** All information entered into the database must be gleaned from the medical record. Many hospitals are in the process of converting from paper to an electronic medical record (EMR or EMR). It is acceptable to use a combination of sources, as long as the record retrieved was an approved component of the record system at the time care was rendered. It

is permissible to obtain missing reports. For example, if the patient had a MRI but the final MRI report is missing. It is acceptable to access the report on-line or to obtain a copy from the radiology department. Electronic generated reports used for diagnoses should contain an electronic signature.

**Conflicting information:** For conflicting information in the record, document the finding of the most senior member of the patient care team. The hierarchy from most senior to junior is as follows:

Primary, attending or consulting physician
Chief or senior resident (e.g., generally 3 <sup>rd</sup> or 4 <sup>th</sup> year or higher
depending on specialty)
Junior resident (e.g. 2 <sup>nd</sup> year or PG2)
Intern (e.g., 1st year or PG1)
Medical student (with MD signature)
Physician extender [physician assistant (PA), Nurse Practitioner (NP)
mid-wife, or advanced practice RN [clinical nurse specialists (CNS),
certified registered nurse anesthetists (CRNA) or other]
PA student or NP student (with physician signature)
RN (registered nurse with or without further certifications regardless of
level of entry into practice such as ASN, BSN, MSN, etc).
Other licensed and applied healthcare professionals such as a
licensed practical nurse (LPN), vocational nurse (LVN) nurse, physical
therapist (PT), dietician, etc.
Unlicensed assistive personnel (e.g., physical therapy aid, nutritional
aid, laboratory assistant, nursing assistant or nursing aid).

Notes completed by students should not be used for review unless cosigned by a physician or other appropriate level staff. Medical student notes are often labeled MS3, MSIII, MS4, MSIV, or AI (acting intern). Residents notes may be labeled as R4, R3, R2, R1 or RPN" (for resident progress note with the corresponding year of training), PG4, PG3 etc., or PGY4, PGY3 respectively (for postgraduate year); or HO3, HO4, etc. (for house officer followed by the training year). The more senior resident in a leadership role may use the title "chief resident".

Several types of inconsistencies may occur in the medical record. Except as described in subsequent sections, inconsistencies should be resolved as follows:

a. If two notes are directly contradictory (e.g., one physician describes the patient's medical problem as stable but another specially states unstable), record the findings of the one more senior. If the contradictory notes are written by individuals at the same level (e.g., two attending physicians), record the findings of the person with more specialized knowledge and expertise in the specific area (e.g. a surgeon for surgical findings and an internist or cardiologist for cardiopulmonary findings).

- b. If two notes are inconsistent but not directly contradictory (e.g., one physician reports "an accidental laceration of the bladder", but another "does not report that any accidental laceration occurred", record the findings of the more senior person. If the inconsistent notes are written by individuals at the same level (e.g., two attending) look for other evidence in the chart (e.g. nursing, laboratory or radiology notes) that corroborates the more specific or serious finding. If such evidence cannot be found, record the findings of the person with more specialized knowledge and expertise.
- c. If two notes are inconsistent due to omission of relevant information (e.g. one physician states "deep vein thrombosis" but another does not mention deep vein thrombosis), the note that provides the most specific information relative to that data element should always be used (regardless of seniority).

**Data verification:** Each page of the medical record should contain at least two unique patient identifiers (e.g., medical record number, patient name, date of birth, etc.). While abstracting data, please confirm that each page of the medical record is for the index patient and associated hospital admission. It is not uncommon for portions of the record to be misfiled.

#### **Case Ascertainment**

Patients included in the AHRQ PI validation database: This is a retrospective chart review based on a computer randomized sample (without replacement) generated from administrative data. This sample includes patients discharged within the last 12-24 months. Data collection should occur between March 2008 and May 2008. Each hospital participating in the AHRQ PSI Validation Project will receive a computer generated list of patients for data abstraction. This list is subsequently referred to as the sampling list. The sampling list will contain an AHRQ unique patient identification code number as well as the medical record or patient control number to be used for chart identification.

It is extremely important that you include only patients listed on your sampling list. Do not substitute a patient with a like diagnosis. Patients selected for this validation project were sampled based on the following inclusion and exclusion criteria.

#### **Inclusion criteria**

Selected patients should have all of the following criteria (denominator):

- Be 18 years and older
- Be an elective admission
- Have a specific surgical DRG (Appendix A: PSI Technical Specifications)
- Had an operative procedure that was performed in the operating room (Appendix B: PSI Technical Specifications)
- Have a discharge ICD-9-CM code for acute respiratory failure (518.81 and 518.84) in any secondary diagnosis field.
- Have one of the following discharge ICD-9-CM codes for a reintubation procedure as follows:
  - o (96.04) one or more days after the major operating room procedure code
  - o (96.70 or 97.71) two or more days after the major operating room procedure code
  - o (96.72) zero or more days after the major operating room procedure code.

#### **Exclusion criteria**

Patients on your sampling list should have none of the following exclusions:

- An ICD-9-CM code for acute respiratory failure in the principal diagnosis field or as a secondary diagnosis present on admission
- Where a procedure for tracheostomy is the only operating room procedure or where a procedure for tracheostomy occurs before the first operating room procedure. This includes mediastinal tracheostomy (3121), other permanent tracheostomy (3129) and/or a revision for tracheostomy (3174)
- Have a major diagnostic code (MDC) category of 14 (a disease condition related to pregnancy, childbirth, or the puerperium).
- Have a MDC of 4 (disease/disorder of the respiratory system )
- Have a MDC of 5 (disease/disorder of the circulatory system)
- An ICD
   – 9
   – CM diagnosis code for a neuromuscular disorder as defined in PSI Technical Specifications (March 2007) Version 3.2

For additional information on inclusion and exclusion criteria, refer to the AHRQ technical guidelines, March 12, 2007. \*

# **COMPLETING THE PATIENT RECORD**

#### Section 1: Abstractor details

**QUESTION 1.1:** Date abstraction completed

**Abstraction date:** Enter the date of the chart abstraction using the MM/DD/YYYY format.

## **QUESTION 1.2:** Abstractor identification number

**Abstractor identification:** Each abstractor will have a unique log-in identifier linked to a unique abstractor identification number. It is essential that each abstractor use their assigned identifier and password when signing into the AHRQ PSI program and in completing data abstraction.

#### Section 2: Record identification/validation

**QUESTION 2.1:** AHRQ Study identification number

**AHRQ study identification number:** Enter the ARHQ study identification code of the record you are abstracting. This number can be found on the computer generated sampling list. It is important that you have the correct chart before proceeding. It is important that you have the correct chart before proceeding.

**QUESTION 2.2:** Medical record number/Patient control number

Medical Record Number (MRN, MR#, or Patient control number): The medical record number/ patient control number will be used for audit purposes and patient verification only. Do not continue abstraction if the medical record/patient control number does not match the AHRQ study identification code. If the patient has been admitted under more than one medical record number, ensure that the primary and final medical record numbers match the sampling list. If there are any questions regarding the validity of the medical record number(s), notify your supervisor and/or appropriate departments to establish the correct number for the patient. If there is a conflict in the medical record number and AHRQ study number that cannot be easily rectified or resolved, notify the coordinating center.

**Primary data source:** Admission record.

**OUESTION 2.3:** Date of birth

**Date of birth (DOB):** Use the DOB on the admission or face sheet. Data used for analysis will contain the calculated age. Use a leading zero when entering single digit months (e.g., 03 for March).

**Preferred data source:** Admitting form.

**QUESTION 2.4**: What is the patient's gender?

**Gender (Sex):** Enter if the patient is male or female.

**Preferred data source:** Use the admission or face sheet followed by the physician's admission history and physical followed by the nurse's admission assessment.

**Common Problems/ Questions:** Often there is conflicting information concerning demographic information. If the data element (e.g. gender, birth date, etc.) is recorded differently on the admission sheet and on another parts of the medical record, check several sources to verify the correct response. If an incorrect demographic is entered on admission, it will appear on all system generated reports until changed (i.e., laboratory test, diagnostic procedures, etc). Use reports that are not automatically generated to verify information (e.g. history and physical)

#### **QUESTION 2.5:** Date of admission

**Admission Date:** Verify the month, day and year the patient was admitted to the hospital. If there are conflicting times in the medical record, use the time on the face sheet followed by the admitting assessment form. If there are conflicts greater than 24-hours between the sampling list, admit date and chart date, notify the coordinating center.

**Preferred data sources:** Face sheet, Nursing Admission Assessment Record, History and Physical (H&P), pre-operative assessment form if admitted directly to the pre-op area.

#### **QUESTION 2.6:** Date of discharge

**Discharge date:** Enter the month, day and year the patient was discharged from the acute care hospital or index facility. This includes transfer to a non-acute care area associated with some hospital systems (e.g., a sub-acute care unit, long-term care, or rehabilitation area). For patients that expired during the hospitalization, use the date the patient was pronounced.

**Preferred data sources:** Face sheet, Nursing Discharge Record, Ambulance transfer record, discharge summary. For patients that expired, use the death certificate or death note followed by the nursing record.

#### **Section 3: Ascertainment of event**

**QUESTION 3.1:** Does the chart identify that the patient had a surgical procedure performed in an operating room during this hospital admission?

**Surgical procedure:** Answer yes, if the patient had a surgical procedure that was performed in an operating room during this hospital admission. If the patient did not have a procedure performed in the operating room, answer NO. Procedures performed in an ancillary area, such as at the bedside or in an area

such as a cardiac interventional suite or interventional radiology suite (regardless of the level of complexity), should be answered as NO. For all NO responses, provide an explanation in the TEXT BOX of the procedure performed, the location, and reason why the case was flagged for review.

**Preferred data sources:** Surgeon's record, operating room record, anesthesiologist's record, and discharge summary.

**QUESTION 3.2:** Was this hospital admission elective?

**Elective surgery:** An elective surgery is defined as one that is scheduled by the patient or the physician and is not performed on an emergent basis. An example of an elective surgery would be a patient scheduled for a nephrectomy secondary to a pre-identified mass. A more complicated example would be a patient diagnosed with an abdominal aortic aneurysm (AAA) after an outpatient consultation with his primary physician for erectile dysfunction who is then scheduled and admitted for a non-urgent (elective) repair. If the aneurysm was leaking and the patient was emergently, transferred, then the surgery would not be considered elective.

Examples of non-elective cases include a patient admitted for diarrhea and weakness who is diagnosed as having a possible abdominal abscess and undergoes an exploratory laparoscopy or a patient admitted with chest pain that undergoes a heart catheterization followed by a coronary artery by-pass surgery (CABG) the following day.

**Preferred data sources:** Admission records, history and physical, initial nursing notes, or physician's records.

**QUESTION 3.3:** What was the admission source?

**Admission source:** If the admission source (Q3.3) is the emergency department (ED), please explain the circumstances surrounding the reason for admission in the TEXT BOX and END the abstraction. Direct admissions are defined as those patients who are directly admitted to the hospital or preoperative surgical holding area, and who by-pass the emergency or urgent care department.

**Preferred data sources:** Admission record, history and physical, initial physician's notes, initial nursing notes.

**QUESTION 3.4:** Did the patient have a tracheostomy tube placed during this hospitalization?

**Tracheostomy placed:** Answer YES if a tracheostomy tube was placed at any time during this hospitalization. Tracheostomy procedures may be performed in

the OR, but are often performed in the ICU (as a percutaneous tracheotomy) or other similarly highly staffed and monitored area. The term tracheostomy in this guideline is used by convention for all these procedures and is considered to be synonymous with tracheotomy. Include procedures performed as non-electively (emergent or urgent) or electively. Include cricothyrotomy.

## **Branching directions:**

If yes to 3.4, answer Q3.4a thru 3.4c.

Tracheostomy tube synonyms and inclusions:

☐ Tracheal tube (cuffed, uncuffed or unspecificed)
☐ Fenestrated or unfenestracted trach or tracheal tube
☐ Trach

**Preferred data sources:** Operating room record, surgical note, physician's notes, progress notes.

**QUESTION 3.4a:** Date of tracheostomy.

**Preferred data sources:** Operating room record, surgical note, physician's notes, progress notes.

**QUESTION 3.4b:** Was the only operative procedure that the patient underwent during this hospitalization a tracheostomy?

**Tracheostomy history:** If YES, explain in the TEXT BOX provided as to the circumstances surrounding the tracheostomy as the only surgical procedure performed in the operating room during this hospitalization and then END the abstraction. This includes any type of tracheostomy procedure (e.g., mediastinal, permanent or a revision of a tracheostomy).

**Preferred data sources:** Operating room record, surgical note, physician's notes, progress notes.

**QUESTION 3.4c:** Was the tracheostomy performed <u>before</u> the first operating procedure?

**New tracheostomy:** This question is ascertaining if the patient underwent a procedure for a tracheostomy during this hospitalization that occurred <u>before</u> the first operating room procedure.

**Preferred data sources:** Physician's progress or procedure notes, ICD–9-CM coding record, operative or procedure records, respiratory therapy notes and flow sheets.

**QUESTION 3.5:** Status of acute respiratory failure. Check all that apply.

**Status of Respiratory Failure:** The first part of the question asks you to check if the diagnosis of acute respiratory failure was present on admission. If this box was the only box checked, continue with Q3.6. If the diagnosis of acute respiratory failure was not present on admission but preceded first operative procedure, then answer Q3.5a by entering the date the acute respiratory failure was first diagnosed. If patient had a diagnosis of acute respiratory failure that occurred after the first operative procedure, select the answer and enter the date that it was first diagnosed. If the patient did not have a diagnosis of respiratory failure, select the last answer and state based on review of the chart, why you believe the chart was flagged for review and continue to abstract the chat.

For a diagnosis of respiratory failure to be counted, it must be documented as such in the medical record. Acceptable terminology includes *respiratory failure* and *acute respiratory failure*. Documentation of pneumonia or another respiratory related condition is not the same as documentation of respiratory failure. Ancillary notes such as nursing and respiratory are helpful in narrowing the time window for searching the chart, but the diagnosis should be made by a physician or physician extender.

Acute respiratory failure synonyms, definitions, and inclusions:

	Acute respiratory failure occurs when the lungs fail to oxygenate the
	arterial blood adequately and/or fail to prevent CO2 retention. There is
	no absolute definition of the levels of arterial p02 and PCO2 that
	indicate respiratory failure. However, a P02 of less than 60 mm Hg or
	a PCO2 of more than 50 mm Hg are numbers often quoted. The
	overall diagnosis depends considerably on the patient's history and
	condition.
$\Box$	In general, respiratory failure is linked to four major mechanisms (1)

- ☐ In general, respiratory failure is linked to four major mechanisms (1) hypoxemia-hypoventilation, (2)diffusion impairment, (3) shunt, and (4) ventilation-perfusion inequality.
- Adult respiratory distress syndrome or ARDS (often referred to as "acute respiratory failure"). It is an end result of a variety of insults, including trauma to the lung or to the rest of the body, aspiration, sepsis, and shock from any cause.

**Preferred data sources:** Operative records, surgeon notes, anesthesia notes/records, progress records, and procedure record.

In the next three questions, Q3.6–Q3.9, for the conditions to be selected, they are required to be the chief reason for the patient's hospitalization (admission) – hence the "principal diagnosis" or main reason for the patient's admission to the hospital.

**QUESTION 3.6:** Was pregnancy or some condition related to pregnancy the "principal diagnosis"?

**Major diagnostic code (MDC) 14:** Answer YES if pregnancy or a condition related to pregnancy was the condition chiefly responsible for the patient's hospital admission. If YES, provide an explanation in the TEXT BOX provided as to the condition and then END the abstraction. If a women who is pregnant is admitted for an orthopedic operation, unrelated to the pregnancy, answer this question as NO and continue with the abstraction.

**Preferred data sources:** Admission record, Admission Face Sheet, ICD- 9- CM code sheet, history and physical.

**QUESTION 3.7:** Did the patient have any of the following respiratory diseases or disorders as the "**principal diagnosis**"?

Respiratory system: The "principal diagnosis" is defined as the "condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care". The diseases listed here are part of MDC 4 (Major disease classification of diseases/disorders of respiratory system). Patients admitted with any of these conditions as a principal diagnosis should be excluded from this study. Do not exclude patients who have these diseases as secondary diagnoses (e.g., cormorbid conditions).

General rules for principal diagnosis:

- 1. The patient may only have ONE principal diagnosis per hospital admission
- 2. This diagnosis MUST be present at admission, even if not recognized at that time. Example: A patient presents to the Emergency Department with hemoptysis and is medically evaluated. The patient is diagnosed with lung cancer. The principal diagnosis in this case is lung cancer.

Other examples for consideration: If a patient with diabetes and asthma is admitted for a left knee replacement, the principal diagnosis will be associated with the initial knee injury. Although the asthma and diabetes are important factors related to the patient's health, neither would be considered the primary reason for admission. This patient should remain in the study. Conversely, if a patient is admitted with COPD exacerbation and it is also discovered that the patient has a fractured ankle that is subsequently repaired during the hospitalization; this patient would be excluded since their principal reason for admission was the exacerbation of COPD, not the fractured ankle.

Chronic obstructive pulmonary disease synonyms and inclusions:
☐ Type A chronic obstructive pulmonary disease
☐ Type B Chronic obstructive pulmonary disease
☐ COPD (chronic obstructive pulmonary disease)
☐ Chronic asthma
☐ Pulmonary emphysema

Chronic bronchiolitis. Emphysema [include all types] Chronic bronchitis A mixture of emphysema and chronic bronchitis MacLeod's syndrome Swyer-James syndrome
S synonyms and inclusions: Chronic bronchitis Emphysematous bronchitis Obstructive (chronic) (diffuse) bronchitis Bronchitis with chronic airway obstruction emphysema Chronic obstructive asthma with acute bronchitis Chronic asthmatic bronchitis
Any other respiratory infection as stated in the chart.  Bacterial pneumonia Viral pneumonia Fungal pneumonia Parasitic pneumonia Atypical pneumonia Community-acquired pneumonia Ventilator-associated pneumonia Severe acute respiratory syndrome Aspiration pneumonia Lipid pneumonia Eosinophilic pneumonia Bronchiolitis obliterans organizing pneumonia
ve heart failure (CHF) synonyms and inclusions: Only include if CHF is present with pulmonary edema (or cardiogenic pulmonary edema)
ry embolism synonyms and inclusions: Blood clot to or in the lungs Pulmonary embolism an infarction Iatrogenic pulmonary embolism and/or infarction
I pneumonitis or fibrosis synonyms and inclusions: Idiopathic interstitial lung diseases Idiopathic pulmonary fibrosis Nonspecific interstitial pneumonitis Bronchiolitis obliterans with organizing pneumonia (boop) Respiratory bronchiolitis-associated interstitial lung disease Desquamative interstitial pneumonitis

<ul><li>☐ Lymphocytic interstitial pneumonitis</li><li>☐ Acute interstitial pneumonitis</li></ul>
Cancer of the lung or respiratory tract synonyms and inclusions:  Bronchial carcinoma Pulmonary neoplasm Small cell or oat-cell carcinomas of pulmonary system Non-small cell carcinomas such as squamous carcinoma, large cell undifferentiated carcinoma, adenocarcinoma and alveolar cell carcinoma
Chest trauma synonyms and inclusions:  Any type of chest wall fracture Barotrauma Diaphragmatic injury Pneumothorax, hemothorax or hemopneumothorax secondary to trauma Broken, cracked or fractured rib Flail chest, Scapular, clavicular, sternoclavicular, or sternal joint dislocation or fracture Traumatic asphyxia Scapulothoracic dissociation Pulmonary contusion or a parenchymal injury secondary to trauma, Bronchial or esophageal injury Chylothorax Collar bone fracture Any type of blunt thoracic or other type of thoracic injury or trauma
Pleural effusion synonyms and inclusions:
Other major respiratory illness synonyms and inclusions:   Cystic fibrosis

Respiratory disease may also be categorized by obstructive versus restrictive disease. Examples of obstructive diseases are; emphysema, chronic those related to diseases of the lung parenchyma and include conditions such as diffuse interstitial pulmonary fibrosis; parenchymal restrictive disease such as sarcoidosis, hypersensitivity pneumonitis, interstitial disease caused by drugs, poison, and radiation, collagen disease, and lymphangitis carcinomatosa; diseases of the pleura such as pneumothorax (e.g., spontaneous, tension, or from a complicating lung disease), pleural effusion, and pleural thickening;

diseases of the chest wall such as scoliosis or ankylosing spondylitis, and neuromuscular disease (addressed under question 3.9 and question 4.1).

If any of the disease categories checked as the "principal diagnosis" this is an exclusion criteria and you would **END the abstraction.** 

**Preferred data sources:** History and physical, admission record, hospital code sheet, physician's notes, nursing notes.

**QUESTION 3.8** Did the patient have any diseases /disorders of the circulatory system as the "principal diagnosis"?

**Circulatory disease:** See question 3.7 for definition of a **principal diagnosis.** Select if any of the following conditions were chiefly responsible for occasioning the admission of the patient to the hospital for care. The diseases listed here correlated to MDC 5 (Major disease classification of diseases/disorders of circulatory system).

Myocardial infarction synonyms and inclusions  ☐ Heart attack ☐ Acute myocardial infarction (AMI) despite ☐ Any subtype of acute myocardial infarction such as anterior, inferior, non-Q, subendocardial MI., etc.
Heart Failure synonyms and inclusions  ☐ Congestive heart failure ☐ Left ventricular heart failure ☐ Right ventricular heart failure ☐ Back end failure
Cardiac dysrhythmia or arrhythmia synonyms and inclusions  Atrial fibrillation (fib) and/or flutter  Multifocal or other types of "atrial tachycardia"  Supraventricular tachycardia (SVT) (all types)  Junctional rhythm  Any type of Atrial-ventricular (AV) block  First degree  Second degree (e.g., Wenckebach, Mobitz I and II)  Third degree (complete)  Premature ventricular contractions (PVCs)  Right or left anterior fascicular block  Left anterior or posterior fascicular block  Ventricular tachycardia (V tach)  Ventricular fibrillation
Cardiac valvular disease synonyms and inclusions  ☐ Aortic valve insufficiency

☐ Mitral valve prolapse
Peripheral Vascular Disease synonyms and inclusions – PVD
Hypertension synonyms and inclusions : ☐ High blood pressure
Endocarditis synonyms and inclusions :
Coronary artery disease synonyms and inclusions :  CAD Coronary heart disease (CHD) Heart disease Ischemic heart disease
Select other if the patient was admitted primarily for any other major circulatory disorders. If the patient had any of these disorders, <b>END</b> the abstraction after explaining why the chart was most likely flagged for review in the TEXT BOX provided.
<b>Preferred data sources:</b> Code sheet, history and physical, admitting record, physician's notes.
<b>QUESTION 3.9:</b> Does the medical record indicate that the patient had any of the following neuromuscular disorders? Check all that apply.
<b>Neuromuscular disorders:</b> See questions 3.7 for explanation of principal diagnosis. If the patient had any of these disorders, <b>END</b> the abstraction after explaining why the chart was most likely flagged for review in the TEXT BOX provided.
Myoneural disorder synonyms and inclusions:  Myasthenia gravis  Myasthenia in other disease  Myasthenia gravis with acute exacerbation  Myasthenia gravis without acute exacerbation  Eaton—Labert syndrome  Acute infective polyneuritis  Toxic myoneural disorders  Myoneural disorders NOS  Myoneural disorders, unspecified
Acute infective polyneuritis synonyms and inclusions:  Guillain–Barre' syndrome)  Postinfectious polyneuritis

	Other myopathies such as myopathy of critical illness.  Progressive muscular dystrophy Congenital heredity muscular dystrophy Heredity progressive muscular dystrophy Toxic myopathy Myopathy in endocrine disease Inflammatory myopathy in other disease Critical illness myopathy-acute necrotizing myopathy, or myopathy of critical illness. Myopathy, unspecified Other neuromuscular disorders such as myotonic disorders, and periodic paralysis which includes familial periodic paralysis.  data sources: Code sheet, history and physical, admitting record,
physician's	s notes.
Section 4	4: Risk factors
	<b>N 4.1:</b> Does the medical record indicate that the patient had any of the on-exclusionary neuromuscular related risk factors. Check all that
listed in thi	scular related disorders: Unlike Q 3.9, the neuromuscular disorders s question do not exclude the patient from the case review. If any of litions are present, continue with the chart abstraction.
	Synonyms and inclusions: Alzheimer's disease Vascular dementia (e.g., multi-infarct or Binswanger's, arteriosclerotic,degenerative,) All types of dementia due to/associated with such as alcohol –induced persisting,drug induced persisting Lewy bodies Jacob-Creutzfeldt disease (new variant) Mixed dementia Frontal, frontotemporal, or idiopathic, senility dementia and/or variants Pick's disease
	pellar disease synonyms and inclusions: Friedreich's ataxia Primary cerebellar degeneration(heredity,sporadic) Spinocerebellar disease Heredity spastic paraplegia Cerebellar ataxia (Marie's,Sanger-Brown,dyssynergia cerebellaris myoclonica, other)

<ul> <li>☐ Ataxia —telanglectasis [Louis-Bar syndrome],</li> <li>☐ Corticostriatal-spinal degeneration</li> </ul>	
Parkinson's disease synonyms and inclusions:  ☐ Paralysis agitans ☐ Parkinsonism ☐ Parkinson's disease (idiopathic, primary)	
Motor neuron disorder synonyms and inclusions:  Amyotrophic lateral sclerosis (ALS) (e.g., Lou Gehrig's disease)  Primary lateral sclerosis (PLS)  Progressive muscular atrophy (PMA)  Motor neuron disease (bulbar) ( mixed type )  Progressive bulbar palsy or pseudobulbar palsy  Spinal muscular atrophy (SMA)  Duchenne-Aran muscular atrophy	
Multiple Sclerosis (M.S.) or other demyelinating disorder synonyms and inclusions:  Central pontine myelinolysis Multiple sclerosis (brain stem,cord,generalized) Other demyelinating disease of the central nervous system Neuromyelitis optica Schilder's disease Balo's concentric sclerosis Encephalitis periaxialis Acute (transverse) myelitis Idiopathic transverse myelitis Central demyelination of copus callosum Marchiafava(-Bignami) disease Chronic inflammatory demyelinating polyneuritis	
Quadriplegia, paraplegia or hemiplegia synonyms:	
<ul> <li>☐ Hemiplegia and hemiparesis, affecting unspecified side, dominant</li> <li>☐ Side,nondominant side</li> <li>☐ Flaccid hemiplegia, spastic hemiplegia</li> <li>☐ Cerebral palsy</li> <li>☐ Congenital spastic paralysis (cerebral)</li> <li>☐ Little's disease</li> <li>☐ Paralysis (spastic) due to birth injury (intracranial, spinal)</li> <li>☐ Spastic paralysis specified as noncongenital or noninfantile</li> <li>☐ Hemiplegia, congenital hemiplegia</li> <li>☐ Quadriplegia ,quadriparesis</li> <li>☐ Tetraplegia</li> </ul>	

Poliomyelitits synonyms and inclusions:  Poliomyelitis (acute) (anterior) (epeidemic), abortive,ascending,orifressuve,bulbar,cerebral, with deformities, lte effect,nonepidemic,nonparalytic,residual,sequelae due to and ac	ute
<b>Preferred data sources:</b> Code sheet, history and physical, admitting record, physician's notes.	ı
<b>QUESTION 4.2:</b> Indicate the preoperative anesthesia coding (ASA physical status) for the initial operation as indicated in the anesthesiology record:	
ASA Status: The American Society of Anesthesiologist (ASA) Physical Statuclassification provides a common language in referring to the severity of system disease in various patients. Prior to surgery, each patient should be given the proper ASA classification as part of the routine pre procedure screening.	emic
ASA Physical Status Descriptions:	
<ul> <li>□ ASA-1: A normal healthy patient. Patients are able to walk up one flig of stairs or two level city blocks without distress. Little or no anxiety.</li> <li>□ ASA-2: A patient with mild to moderate systemic disease that results in functional limitations. Patients are able to walk up one flight of stairs or level city blocks, but will have to stop after completion of the exercise because of distress. Examples: History of well-controlled disease state including non-insulin dependent diabetes, prehypertension, epilepsy, asthma, or thyroid conditions; ASA I with a respiratory condition,</li> </ul>	no two
pregnancy, and/or active allergies.  ASA-3: A patient with severe systemic which results in functional limitations, but that is not incapacitating. Patients are able to walk up of flight of stairs or two level city blocks, but will have to stop enroute because of distress. Examples: Poorly controlled diabetes mellitus with vascular complications, angina pectoris, prior myocardial infarction, pulmonary disease that limits activity.	
<ul> <li>pulmonary disease that limits activity</li> <li>ASA-4: Patients have severe systemic disease that limits activity and i constant threat to life. Patients are unable to walk up one flight of stair two level city blocks. Distress is present even at rest. Examples: Histor of unstable angina pectoris, myocardial infarction or cerebrovascular accident within the last six months, severe congestive heart failure, moderate to severe chronic obstructive pulmonary disease, and uncontrolled diabetes, hypertension, epilepsy, or thyroid condition.</li> </ul>	s or
☐ ASA-5: A moribund patient who is not expected to survive without the operation. Examples: Ruptures abdominal aortic aneurysm, pulmonary embolus, head injury with increased intracranial pressure.	y

☐ ASA-6: A declared brain-dead patient whose organs are being removed for donation. These patients are not included in this study and therefore this is not a listed choice.

**Preferred data sources:** Anesthesiology preoperative record, anesthesia records, operative record, and/or other anesthesiology flow sheets.

**QUESTION 4.3:** Height and weight prior to first surgery:

**Height and weight:** Use the first healthcare worker obtained weight closest to the time of admission. A dry weight is preferred.

**Preferred data sources:** Admission record, initial nursing assessment, medication record.

## **Section 5: Evaluation and Treatment**

Complete the following set of questions for the each operative procedure performed in the operating room prior to the first diagnosis of respiratory failure.

**QUESTION 5.1:** Indicate the name(s) and ICD-9- CM code(s) for each major procedure performed during this operation. Limit your answer to the top three procedures. Do not include incidental or minor procedures:

**Operative procedure:** Cite the name of the procedure (text) and associated ICD–9-CM code for the top three procedures performed. Only include major procedures for the patient's visit to the operating room. Do not count incidental tests and procedures such as a line placement, x-ray or electrocardiogram as a major procedure.

**Preferred data sources:** Hospital coding sheet, operative records, discharge summary, and face sheet.

**QUESTION 5.2:** Operative date and times.

**Operative times:** Complete the table using the following definitions. Note that the intent of these questions is to determine the length of time the patient was under the influence of anesthesia.

- 1. Anesthesia induction/start time: Indicate the date and time the first anesthetic drug was administered.
- 2. Surgery start: Enter the date and time that the initial incision was made
- 3. Surgery finish: The date and time the incision was closed is considered the surgical end time.

4. Anesthesia finish: Indicate the date and time the last bolus of anesthetic was administered or the end time of the anesthetic infusion

**Preferred data sources:** Anesthesiologist operative record, operating nursing record, or surgeon's record.

**QUESTION 5.3:** Identify the type of anesthesia used on this operation:

**Anesthesia type:** Select the primary type of anesthesia used during the operative procedure.

General anesthesia: If general anesthesia is selected, choose the type of delivery. For definitional purposes, general anesthesia for this tool is defined as anesthesia by anesthetic or inhalation gases. Theses gases may be administered by endotracheal or nasotracheal tube, laryngeal mask airway (LMA), or by mask. Typical types of inhaled general anesthetic agents include (not inclusive list): halothane, enflurane, isoflurane, desfluorane, sevofluorane, and nitrous oxide.

<ul><li>☐ Tracheal tube</li><li>☐ Easy tube</li></ul>	
Synonyms for laryngeal mask airway:  LMA  AmbuLaryngeal Masks  ILMA–intubating laryngeal mask airway	

Regional anesthesia generally involves the introduction of local anesthetics to block the nerve supply to a specific part of the body, such as a limb, so patients cannot feel pain. Regional anesthesia for this study includes both central and peripheral techniques such as epidural anesthesia, spinal anesthesia, and procedures such as neuroaxial blocks, plexus or brachial blocks, and single nerve blocks. Regional anesthesia may be performed as a single shot or with a continuous catheter through which medication is given over a prolonged period of time (e.g continuous peripheral nerve block). Also included are intravenous regional techniques such as a Bier block. If regional anesthesia is selected, answer Q 5.3a regarding the route of delivery.

Conscious sedation: This type of sedation induces an altered state of consciousness that minimizes pain and discomfort through the use of pain relievers and sedatives. Patients, who receive conscious sedation usually are able to speak and respond to verbal cues throughout the procedure, communicating any discomfort they experience to the provider.

Local anesthesia is applied topically such as to the skin or to a body cavity (examples of local anesthesia of body cavities include intrapleural anesthesia and intraarticular anesthesia).

**Preferred data sources:** Anesthesiology operative record, operating note, and surgeon's operative report.

**QUESTION 5.3a:** Type of regional anesthesia delivery.

**Regional anesthesia:** Please indicate from the anesthesiology record the type of regional anesthesia delivered.

Spinal regional anesthesia delivery is the infection of a local anesthetic into the cerebrospinal fluid (CSF), generally through a long fine needle. Synonyms include spinal analgesia or epidural anesthesia.

There are two types of epidural catheters routinely placed-lumbar and thoracic. Both place medication into the epidural space but differ in the level inserted and in the areas therefore affected. A lumbar epidural is placed in the lumbar or "L" level whereas a thoracic placed in the thoracic or "T" level. If either type of epidural is placed, stated whether it was retained for postoperative pain control.

**Preferred data sources:** Surgeon's operating note, anesthesiologist's note and then in subsequent surgical notes postoperatively.

**QUESTION 5.4:** If YES to Q5.3 (general anesthesia), what type of intraoperative neuromuscular blockage agent was used? Check all that apply.

**Neuromuscular agents:** Select all neuromuscular blocking agents that were used during the operative event. Only include agents given intra-operatively. If the agent used is not listed, complete the space provided.

Preferred data sources: Anesthesiology record

**QUESTION 5.4a:** If any of the agents in Q5.4 were given, was it reversed pharmacologically?

**Reversal:** Reversed pharmacologically means by use of medications. The most common neuromuscular blocking reversal agent is neostigmine.

Preferred data source: Anesthesiology record

**QUESTION 5.5:** Indicate the estimated blood loss (ml) that is recorded in the surgeon's record for this operation. Use the anesthesiologist's record if the blood loss is not recorded in the surgeon's record.

**Estimated blood loss:** Routinely noted in "cc's" but may be cited in mLs".

**Preferred data sources:** Surgeon's record followed by the anesthesiologist's record

**QUESTION 5.6:** State the date and time the patient first got out of bed post-operatively.

**Out of bed:** Out of bed can be with assistance and includes getting up to the bedside commode and/or chair. If patient never got out of bed after surgery, then indicate this in the check box (e.g., patient died or was functionally dependent at time of hospital discharge). If the exact date is not known, but the patient did get out of bed at some time during the hospitalization, estimate the date. If the time that the patient first got out of bed is not noted but only the date then check time unknown. Do you relay on the physician orders as they may not have been carried out or there may have been a delay in implementation.

**Preferred data sources:** Nursing notes, PT notes, physical therapy notes, or hospital specific flow sheets related to patient's activities and/or functional abilities.

**QUESTION 5.7:** Was the patient intubated for the operation?

**First intubation:** If the patient was intubated at the time of the operation or for the operative procedure, then answer YES. For Yes answers, complete the corresponding table by entering the date and time of intubation, immediate reason for intubation and date and time of the patient's extubation. If the reason for intubation does not fit the selections listed, select other and explain in the space provided. Do not include Laryngeal Mask Airway (LMA) or CPAP mask as a form of intubation. Extubation date and time is the time the "tube" was actually removed from the patient and not the time the patient was weaned from a ventilator.

Intubation	synonyms and inclusions:
	Endotracheal tube (ET or ETT)
	Cuffed or uncuffed endotracheal tube
	Monitoring lumen tubes
	Preformed or reinforced endotracheal tubes (various brand names)
	Nasotracheal tube
	Tracheal tube
	Directional endotracheal tube
	Easy tube
	Microlaryngeal surgery tubes
	Larvngectomy tubes

Exclusions: Non-invasive intubation such as nasal CPAP, CPAP, and use of a laryngeal mask airway (LMA).

Further explanations of the reasons for intubation are as follows. Each of these four mechanisms can contribute to severe hypoxemia associated with respiratory failure.

Routine intubation: As part of the surgical procedure such as general
anesthesia that is performed prior to the onset of respiratory
compromise.
Airway compromise: Include situations where the airway was
compromised and patient needed to be intubated to improve oxygen
saturation. An example of this would be a ventilation–perfusion
inequality that if often responsible for the low arterial P02 seen in
respiratory failure.
Hypoxia: Symptoms of hypoxia include cyanosis, cardiovascular signs
such as tachycardia followed by bradycardia, and central nervous
system effects such as mental confusion and/or seizures.
Hypoventilation: This is seen commonly with drug over-dose, chest
wall abnormality, ventilation-perfusion inequality (e.g., severe COPD),
C02 retention (e.g., COPD or acidosis), neuromuscular disease,
diaphragm fatigue, and long-standing interstitial disease.
Other airway concerns: Include conditions such as frequent suctioning
of the airway required.

Many of the listed reasons should be reflected not only in the physician progress notes, but on the chest x-ray or other tests obtained prior to or at the time of intubation. Findings commonly found on chest x-ray include pneumonia, pulmonary edema, atelectasis, and ARDS. It may be necessary to "read between the lines" for causes such as: poor respiratory effort post extubation. For these cases it may be necessary to review the respiratory care and nursing care flow sheets.

Regarding intubation and extubation times. Physician documentation is preferred but may not always be possible. If the exact time of intubation is not documented for patient's intubated in surgery, use the anesthesia start time. For intubations performed outside of the OR, there should be a corresponding procedure note or note placed in the progress notes by a physician or physician extender of the need for and time of intubation. In some hospitals, respiratory therapists play a major role in intubation and particularly in the extubation of patients. Their notes may be very helpful. For patients extubated immediately post-operatively, the post-anesthesia care record may be very helpful and the critical care flow sheet for patient's extubated more remotely. Use the time of death in cases where the patient expires, and the exact time of extubation is not noted.

**Preferred data sources:** Pre-surgical history and physical, pre-operative anesthesia record, surgical records/anesthesia flow-sheet, physician progress notes, respiratory records, and nursing flow sheets.

**QUESTION 5.8:** Was the patient intubated or reintubated after the initial operation but prior to any additional operations?

**Post-intubation:** For Yes responses, complete the corresponding table for intubation performed after the initial operation. Complete the table for each intubation up to the 5th time (a total of five intubations between question 5.7 and 5.8). Duplicate the table as necessary. If the patient was **not** intubated after his or her initial operation, SKIP to Q5.8. See question 5.7 for directions in completing the top section. In addition to stating the time and date of intubation, the immediate reason for intubation, and time and date of the patient's extubation (as in Q 5.7), record the pre-intubation arterial blood gas information, pre-intubation oxygen saturation results (e.g., pulse oximetry reading), and post–intubation blood gases.

#### Definitions:

□ **FiO**<sub>2</sub> (Fractional inspired O<sub>2</sub>%): The amount of inspired oxygen that the patient was receiving at the time of the ABG or oxygen saturation reading. For those patients receiving oxygen by nasal cannula or by liter mask, please convert the liter flow into the fractional inspired oxygen (see below). This number may be readily found on the ABG request and/or on the nursing flow sheets. Note: Room air (RA)=21%. Ventilators may provide 21% to 100% oxygen.

Conversion for nasal cannulas is as follows:

Conversions for masks (Lpm is liter per minute or I/m):

5-6 Lpm 40% 6-7 Lpm 50% 7-8 Lpm 60%

#### Partial rebreather:

6 Lpm 35% 8 Lpm 50% 10 Lpm 60%

#### Non-rebreather:

6 Lpm 60%

	8 Lpm 80%	<b>%</b>	
	pressure of oxygen oxygen is able to mo	I pressure of oxygen in arterial blood): This m dissolved in the blood and is an indicator of ho ove from the lungs into the blood. Use the tem f more than measure is provided. This measu	w well perature
	SpO <sub>2</sub> or SaO <sub>2</sub> (%):	Saturation of peripheral oxygen is an estimate by <b>pulse oximetry</b> .	tion of the
	PaCO₂ mmHg (parti measures how much carbon dioxide is abl	ial pressure of carbon dioxide in arterial blood not carbon dioxide is dissolved in the blood and le to move out of the body. This measure is one of the venous blood measurement.	how well obtained
	pH: Normal blood p associated with acide Respiratory rate (R	pH is between 7.35 and 7.45. A pH of less that losis and a pH greater than 7.45 with alkalosis (R): Breaths per minute. Note this is not askeut do state if the patient was on ventilatory support level.	ed for post-
inc wit not	clude: a designated Ar ith other laboratory res	arterial blood gas reports (ABG) within the me rterial Blood Gas (ABG) section, respiratory ca sults, on the critical care or respiratory flow sho documentation when associated with clinical cl	are section, eets, and
pat res	atients experiencing th spectively. Select all fa	conditions that contributed to the patient's intuneir first intubation post-operatively, or reintubations that apply. In addition, state the type owns at the time of his/her intubation.	ation
Inte	☐ Critical care unit ☐ Cardiac or corona☐ Surgical Intensive	e care unit (SÌCU) ntensive care unit (NSICU) e care unit (MICU)	
Ste	ep-down or transitionate  Telemetry  Cardiac step-dow	al care unit synonyms and inclusions: vn unit	

For patients intubated in areas outside of the general hospital units, select "other and state the location in the TEXT BOX. Example may include interventional radiology lab, special procedure room, etc.

**Preferred data sources:** Physician and/or anesthesiology notes, code records, other progress notes, nursing flow sheets, and respiratory records.

Once this table has been completed for up to the 5<sup>th</sup> intubation, go to Q5.15.

For patients who were not reintubated postoperatively, complete Q5.9-Q5.14.

**QUESTION 5.10:** What was the LOWEST arterial PO2 measured after the patient's surgical procedure? Indicate the corresponding date and time.

What was the LOWEST oxygen saturation SaO2 measured after the patient's surgical procedure? Indicate the corresponding date and time

**PaO<sub>2</sub> mmHg** (partial pressure of oxygen in arterial blood): This measures the pressure of oxygen dissolved in the blood and is an indicator of how well oxygen is able to move from the lungs into the blood. Use the temperature corrected measure if more than measure is provided. This measure is obtained from the **ABG result**.

**Preferred data sources:** Respiratory records, nursing flow sheets, consultation records, and physician records.

**QUESTION 5.11:** What was the HIGHEST arterial PaCO<sub>2</sub> (mmHg) measured after the patient's surgical procedure? Indicate the corresponding date and time.

**Highest PaCO<sub>2</sub> (**partial pressure of carbon dioxide in arterial blood): This measures how much carbon dioxide is dissolved in the blood and how well carbon dioxide is able to move out of the body. This measure is obtained from the **ABG result**. Do not use the venous blood measurement from chemistry report.

**Preferred data sources:** Respiratory records, nursing flow sheets, consultation records, and physician records.

**QUESTION 5.13:** What was the LOWEST oxygen saturation SaO2 measured after the patient's surgical procedure? Indicate the corresponding date and time

**SpO<sub>2</sub> or SaO<sub>2</sub> (%):** Saturation of peripheral oxygen s an estimation of the oxygen saturation level measured by **pulse oximetry**.

**Preferred data sources:** Respiratory records, nursing flow sheets, consultation records, and physician records.

**QUESTION 5.13:** What was the highest level of breathing support after the patient's first operation?

**Breathing support:** Select the type of oxygenation administration used to support the patient's oxygenation needs after surgery regardless of liter flow/administration level. They are listed in lowest to highest support (lowest level of support being nasal cannula and highest being BIPAP or CPAP mask). Do not confuse CPAP mask administration with ventilator CPAP (questions 5.10-5.14 refer to non-ventilated patients).

BiPAP/CF	PAP inclusions and synonymns:
	Bi-level Positive Airway Pressure.mask
	Continuous Positive Airway Pressure mask.
	Nasal CPAP
	Fixed CPAP
	APAP or AutoPAP or AutoCPAP (Automatic Positive Airway Pressure)
	VPAP
	xPAP ST

**Preferred data sources:** Respiratory records, nursing flow sheets, consultation records, and physician records.

**QUESTION 5.14:** Indicate the condition(s) as stated by the physician that were potentially responsible for the occurrence of postoperative respiratory failure. Check ALL that apply.

Associated risk factors: (this category not cited in tool): The majority of the listed risk factors should be reflected not only in the physician progress notes, but on chest x-ray or other tests obtained prior to or at the time of intubation. Findings commonly found on chest x-ray include: pneumonia, pulmonary edema, atelectasis, and ARDS. It may be necessary to "read between the lines" for causes such as poor respiratory effort post extubation. For these cases it may be necessary to review the respiratory care and nursing care flow sheets. If the primary reason is not listed, please select other and describe in the TEXT BOX provided.

# **Answer the following question for all patients:**

**QUESTION 5.15:** Postoperative pain control used: Complete this table for all patients who used patient controlled epidural analgesia during the first 48 hours following the first operation.

**PCA:** Only include patients that had an epidural PCA that was started within 48-hours following the first surgery. State the time and date that the epidural PCA was first used. Often the PCA is placed in surgery with the first dose given by the anesthesiologist. State the last time medication was administered via the epidural (not the time the catheter was removed), as well as the level of the

epidural, either thoracic or lumbar (see Q 5.3a for definitions). Select if opiate mediation and/or if a local anesthetic medication was administered via the epidural catheter.

**Preferred data sources:** Respiratory records, nursing flow sheets, consultation records, procedure notes, medication administration records, epidural flowsheet, and physician records.

## **Section 6: Outcomes**

**QUESTION 6.1:** Does the chart suggest that the patient suffered any of the following adverse effects as a result of respiratory failure? Check all that apply.

**Adverse outcomes:** It may be necessary to "read between the lines" and utilize your medical expertise when evaluating the adverse effects for some of these categories:

Select residual disability or impairment of normal function if the patient was not able to perform functionally at their pre-hospital levels because of the respiratory failure. This includes the significant deconditioning that may be associated with long intensive care stays. Other examples of residual disability or impairment include: ulceration of the larynx, broken teeth, and injury to the vocal cords.

Select tracheostomy if this procedure was performed because of the respiratory failure such as failure to wean from the ventilator.

Select transfer to a long-term care hospital (LTCA) for the purpose of ongoing ventilator needs. This includes transfer to a sub-acute unit (that may be associated with an acute care hospital) and a respiratory type long term care facility that can manage patients requiring long-term ventilator care. Do not select this option for routine skilled nursing admissions (e.g., transfers to rehabilitation, skilled nursing, etc) if unrelated to ventilator care.

Select the death option if the patient died as a direct or indirect result of the respiratory failure.

**Preferred data sources:** Discharge summary, physician notes, progress notes, discharge planning notes and referrals relating to discharge.

**QUESTION 6.3:** Was the patient readmitted to your facility within 30 days of discharge?

**Readmission:** State whether the patient was readmitted to an acute medical care facility within 30-days post-discharge. If YES, answer Q6.3, if NO skip to Q6.4. Only mark critical documentation missing if you are unable to determine if the patient was readmitted to your facility within 30 days of discharge.

**Preferred data sources:** It will be necessary to look at subsequent medical records following this admission if included as part of the hard copy chart, or as part of the electronic medical record.

**QUESTION 6.4:** If Q.6.3 =YES, was the reason for readmission due to the postoperative respiratory failure event?

**Readmission secondary to respiratory failure:** Only mark "critical documentation missing" if there is a question to whether the patient was readmitted.

**Preferred data sources:** History and physical from this new hospitalization 30 days following this captured postoperative respiratory failure

**QUESTION 6.3:** If there are special circumstances or comments related to this case that you feel are important that were not captured in the survey, please state in the TEXT BOX. (Keep comments to 200 words or less).

**Special comments:** Only complete this TEXT BOX, if there are items related to the case that are not adequately reflected in the abstraction form and/or there is additional information that you feel would be important for the researcher to be aware of reflecting this case.

**Preferred data sources:** Any area in the medical record which reflects a special circumstance related to this case that has not been captured so far in this tool.