**Definition of Principal Diagnosis**

The principal diagnosis is that condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care.

Two or more diagnoses may equally meet the definition for principal diagnosis as determined by the circumstances of admission, diagnostic work-up and/or therapy provided. Be aware that there is a difference between admitting a patient to treat two conditions and two conditions being present at the time of admission. The principal diagnosis is always the reason for admission.

**Documentation to Support the Principal Diagnosis**

Determine from the medical record documentation whether or not the respiratory condition was the condition chiefly responsible for the admission and treatment. It is important to know the sequencing guidelines for respiratory failure, as well as the chapter-specific coding guidelines (obstetrics, poisoning, HIV, newborn) that provide sequencing direction.

**Coding Guidelines**

**Diagnoses**

**Arterial blood gases/respiratory failure**

A diagnosis of respiratory failure, 518.8x, is not based solely on arterial blood gas determinations. Though respiratory failure is generally said to have occurred when the arterial PaO\(_2\) is less than 60 mm Hg and/or the arterial PaCO\(_2\) is above 50 mm Hg, the degree of change from a patient’s usual status must be taken into consideration with patients who have chronic conditions such as chronic obstructive pulmonary disease. (See *Coding Clinic*, second quarter 1990, pages 20 and 21, and *Coding Clinic*, third quarter 1988, page 7.)

**Asthma in status asthmaticus/respiratory failure**

A patient with asthma in status asthmaticus is admitted to the hospital for treatment of acute respiratory failure. The principal diagnosis is acute respiratory failure, 518.81, and the secondary diagnosis is asthma, unspecified, with status asthmaticus, 493.91. (See *Coding Clinic*, first quarter 2005, page 5.)

**Chronic myasthenia gravis with acute exacerbation/respiratory failure**

A patient with chronic myasthenia gravis in acute exacerbation is admitted to the hospital due to acute respiratory failure. The principal diagnosis is acute respiratory failure, 518.81. The secondary diagnosis is myasthenia gravis with acute exacerbation, 358.01.
Acute respiratory failure may be sequenced as the principal diagnosis if it led to the hospital admission, or it may be listed as a secondary diagnosis if it occurs after admission. This applies to respiratory failure resulting from either a respiratory or nonrespiratory condition, unless the index or tabular list instructs otherwise. (See Coding Clinic, first quarter 2005, page 4 and Coding Clinic, fourth quarter 2004, page 139.)

**Congestive heart failure/respiratory failure**

When a patient was admitted in respiratory failure due to/associated with congestive heart failure (CHF), CHF was sequenced as the principal diagnosis until discharges of April 20, 2005, when the respiratory failure guidelines were revised.

A patient with CHF is admitted to the hospital for acute respiratory failure. The principal diagnosis is acute respiratory failure, 518.81, and the secondary diagnosis is CHF, 428.0. The principal diagnosis depends on the reason for admission. Query the physician if the documentation is unclear. (See Coding Clinic, first quarter 2005, page 5, and Coding Clinic, second quarter 1991, pages 3 and 4.)

**Emphysema/respiratory failure**

A patient with emphysema is admitted to the hospital for acute respiratory failure. The principal diagnosis is acute respiratory failure, 518.81. (See Coding Clinic, first quarter 2005, page 4.)

**Impending respiratory failure**

Impending respiratory failure is not assigned a code. A threat of respiratory failure may exist, but respiratory failure would not be assigned a code unless it occurs. (See Coding Clinic, second quarter 2002, page 6.)

**Intubation/mechanical ventilation/respiratory failure**

Absence of intubation and mechanical ventilation does not preclude the assignment of respiratory failure, 518.8x. (See Coding Clinic, third quarter 1988, page 7.)

**Overdosing on crack/respiratory failure**

A patient is found to be in respiratory failure after overdosing on crack and is placed on a ventilator. This is considered a poisoning. The principal diagnosis was assigned code 968.5, poisoning by other central nervous system depressants and anesthetics, surface (topical) and infiltration anesthetics until October 1 2002, when code 970.8, poisoning by other specified central nervous system stimulant, was created, plus 305.60, nondependent abuse of drugs, cocaine abuse, unspecified and 518.81, respiratory failure. (See Coding Clinic, first quarter 1993, page 25.)

A patient who overdosed on crack was admitted to the hospital with acute respiratory failure. The principal diagnosis is sequenced as 970.8, poisoning by other specified central nervous system stimulant. The secondary diagnoses are 518.81, acute respiratory failure, and 305.60, nondependent abuse of drugs, cocaine abuse, unspecified. Poisoning is sequenced first because there is a chapter-specific guideline (Section 1 C, 17,e, 2,d) that provides sequencing directions specifying that the poisoning code is sequenced first, followed by a code for the manifestation. (See Coding Clinic, first quarter 2005, pages 6 and 7.)

**Postpartum pulmonary embolism/respiratory failure**

A patient is admitted postpartum for a pulmonary embolism that resulted in respiratory failure. The principal diagnosis is pulmonary embolism, 673.24, obstetrical blood-clot embolism, postpartum condition or complication. Acute respiratory failure, 518.81, is sequenced as a secondary diagnosis. A chapter-specific guideline (Section 1, C, 11, a, 1) provides sequencing directions specifying that chapter 11 codes have sequencing priority over codes from other chapters. (See Coding Clinic, first quarter 2005, page 6.)
Respirator dependence

Code V46.1, other dependence on machines, respirator, was expanded October 1, 2004. Code V46.11, dependence on respirator, status, and V46.12, encounter for respirator dependence during power failure were added. Code V45.11 is only assigned if there are no complications or malfunctions of the respirator equipment, and is always sequenced as a secondary code. Code V46.12 is always sequenced as a principal or first-listed code. (DRG 467) (See Coding Clinic, fourth quarter 2004, pages 100 and 101.)

Respiratory failure/acute exacerbation of myasthenia gravis

An admission for acute respiratory failure and an acute exacerbation of myasthenia gravis should be sequenced with acute respiratory failure, 518.81, as the primary diagnosis and acute exacerbation of myasthenia gravis, 358.01, as a secondary diagnosis.

Respiratory failure of newborn

Respiratory failure of a newborn is assigned code 770.84 (New code October 1, 2002). (See Coding Clinic, fourth quarter 2002, page 65.)

Respiratory failure due to poisoning

The principal diagnosis is the appropriate poisoning code as indicated for the substance(s) involved. Assign respiratory failure as an additional diagnosis. (See Coding Clinic, first quarter 2005, page 68, Coding Clinic, third quarter 1991, page 14 and Coding Clinic, second quarter 1990, page 11.)

Respiratory failure/Pneumocystis carinii/AIDS

Respiratory failure due to Pneumocystis carinii which is due to AIDS is assigned code 042, Human Immunodeficiency Virus, and sequenced as the principal diagnosis. Acute respiratory failure, 518.81, with pneumocystosis, 136.3, are sequenced as secondary diagnoses. Chapter-specific guidelines such as the HIV coding guidelines take precedence over general coding guidelines. (See Coding Clinic, first quarter 2005, page 7, and Coding Clinic, first quarter 2003, page 15.)

Respiratory failure/pneumonia

As of April 20, 2005, when a patient is admitted with respiratory failure and another acute condition, the principal diagnosis depends on the circumstances of the admission. The guideline regarding two or more diagnoses that equally meet the definition for principal diagnosis may be applied. (See Coding Clinic, first quarter 2005, pages 3-8.)

Until April 20, 2005, if the reason for admission was respiratory failure and pneumonia, respiratory failure was sequenced as the principal diagnosis. These conditions are not co-equal. When respiratory failure is documented as being secondary to or associated with a respiratory condition, respiratory failure should be sequenced as the principal diagnosis. The guideline regarding two or more interrelated conditions meeting the definition of principal diagnosis did not apply to respiratory failure and pneumonia since this condition had been specifically addressed in separate Coding Clinic instructions. (See Coding Clinic, second quarter 2003, pages 21 and 22.)

If the medical record indicates the reason for admission is acute respiratory failure for a patient with acute respiratory failure and pneumonia, the principal diagnosis is acute respiratory failure. (See Coding Clinic, November-December 1987, pages 5 and 6.)

Respiratory failure/sepsis

If a patient is admitted to the hospital with severe Staphylococcus aureus sepsis and acute respiratory failure, the principal diagnosis is 038.11, Staphylococcus aureus septicemia, followed by 995.92, SIRS due to infectious process with organ dysfunction and 518.81, acute respiratory failure. Subcategory 995.9 instructs coders to code first the underlying systemic infection. Acute respiratory failure is included as a specified organ dysfunction under code 995.92. (See Coding Clinic, first quarter 2005, pages 7 and 8.)
**Sequencing of respiratory failure (effective with discharges April 20, 2005)**

Effective with discharges April 20, 2005, respiratory failure coding principles were revised. Some principles regarding the sequencing of respiratory failure were retained and some now contain revised information. Guidelines #1 and #2, published in *Coding Clinic*, second quarter 1991, page 3, have been superseded by information in *Coding Clinic*, first quarter 2005, pages 3-8.

Code 518.81, acute respiratory failure may be assigned as a principal diagnosis when it is the condition established after study to be chiefly responsible for occasioning the admission to the hospital, and the selection is supported by the alphabetical index and tabular list.

Chapter-specific coding guidelines for obstetrics, poisoning, HIV and newborns that provide sequencing direction take precedence.

Respiratory failure occurring after admission may be included as a secondary diagnosis.

When a patient is admitted with respiratory failure and another acute condition (MI, CVA), the principal diagnosis depends on the circumstances of the admission. The guideline regarding two or more diagnoses that equally meet the definition for principal diagnosis may be applied.

The guidelines no longer differentiate between those for respiratory failure in association with or due to respiratory conditions and those in association with or due to nonrespiratory conditions. (See *Coding Clinic*, first quarter 2005, page 3.)

**Sequencing of respiratory failure in association with or due to a nonrespiratory condition**

For discharges prior to April 20, 2005, if a nonrespiratory condition is chronic, respiratory failure is sequenced as the principal diagnosis. An example of this would be an admission for respiratory failure due to progressive myasthenia gravis. The patient received treatment for both. Respiratory failure would have been sequenced as the principal diagnosis. For discharges after April 20, 2005, see *Coding Clinic*, first quarter 2005, page 3. (See *Coding Clinic*, second quarter 1991, page 3.)

For discharges prior to April 20, 2005, if a nonrespiratory condition is chronic but acutely exacerbated, that condition is sequenced as the principal diagnosis. An example would be respiratory failure due to decompensated CHF. CHF would have been sequenced as the principal diagnosis. For discharges after April 20, 2005, see *Coding Clinic*, first quarter 2005, page 3. (See *Coding Clinic*, second quarter 1991, pages 3 and 4.)

If a nonrespiratory condition is acute, the acute nonrespiratory condition is sequenced as the principal diagnosis. A patient who was admitted with signs and symptoms of an acute myocardial infarction (AMI) was intubated. The final diagnosis was determined to be acute respiratory failure associated with an AMI. The principal diagnosis is AMI. For discharges after April 20, 2005, the selection of principal diagnosis will depend on the circumstances of the admission. (See *Coding Clinic*, first quarter 2005, page 3, and *Coding Clinic*, second quarter 1991, pages 4 and 5.)

**Sequencing of respiratory failure in association with respiratory conditions.**

Respiratory failure sequencing depends on the reason for admission. When respiratory failure due to an underlying respiratory condition is the reason for admission, respiratory failure is the principal diagnosis. When respiratory failure develops after admission, it is a secondary diagnosis. When a patient is admitted due to respiratory failure and pneumonia, respiratory failure is sequenced first. These conditions are not co-equal. The guideline regarding two or more interrelated conditions meeting the definition of principal diagnosis does not apply since this has been specifically addressed in separate *Coding Clinic* instructions. (See *Coding Clinic*, first quarter 2005, pages 3-8, and *Coding Clinic*, second quarter 2003, pages 21 and 22; *Coding Clinic*, second quarter 2000, page 21; *Coding Clinic*, second quarter 1991, pages 3-5; and *Coding Clinic*, November-December 1987, pages 5 and 6.)
Steam burn/respiratory condition

The patient had steam burns to the face (erythematous without blisters) from a boiler explosion and was admitted because of upper airway inflammation due to steam. The patient was intubated and ventilated for 48 hours. The principal diagnosis code is 506.2, upper respiratory inflammation due to fumes and vapors, because it was the reason for the admission. Secondary diagnosis codes are 941.19, burn of face, head and neck, erythema (first degree), multiple sites (except with eye) of face, head, and neck, and E921.0, accident caused by explosion of pressure vessel, boilers. Procedure codes assigned are 96.71, continuous mechanical ventilation for less than 96 consecutive hours and 96.04, insertion of endotracheal tube. (See Coding Clinic, third quarter 2005, page 10.)

Procedures

BiPAP (bi-level positive airway pressure)

BiPAP was previously classified as a noncontinuous ventilator.

The new BiPAP S/T-D Ventilatory Support System is recognized as a continuous ventilator for patients with spontaneous respirations.

Neither of these systems are sequenced under category 96.7, other continuous mechanical ventilation, since a patient on BiPAP does not have either the insertion of an endotracheal tube or a tracheostomy as required for the use of category 96.7. BiPAP is assigned code 93.90, continuous positive airway pressure [CPAP]. (See Coding Clinic, third quarter 1998, page 14.)

Continuous intra-arterial blood gas monitoring

Blood gases are a significant indicator of cardiopulmonary function. This monitoring enables an uninterrupted display of arterial blood gas levels and trends for the previous 24 hours. As of October 1, 2002, code 89.60, continuous intra-arterial blood gas monitoring, is the code assigned. Prior to October 1, 2002, code 89.65, measurement of systemic arterial blood gases was assigned. (See Coding Clinic, fourth quarter 2002, page 112.)

Determining duration of mechanical ventilation

When a patient is intubated in the emergency room and admitted to the same hospital, begin counting the duration of the mechanical ventilation at the time of the intubation in the emergency room. (See Coding Clinic, second quarter 1992, pages 13 and 14.)

When a patient is intubated and started on ventilation in an emergency room and transferred to another hospital, the duration of the mechanical ventilation at the second hospital is counted from the time of admission to the second hospital. (See Coding Clinic, second quarter 1992, page 14.)

When a ventilator dependent patient is admitted to a LTCH for weaning from mechanical ventilation, the duration of mechanical ventilation should be coded and is counted starting from the time of admission to the long-term care hospital. (See Coding Clinic, first quarter 2004, pages 23 and 24.)

Mechanical ventilation used during a procedure is considered integral to the procedure, so no code from category 96.7 should be assigned. (See Coding Clinic, fourth quarter 1991, page 16.)

When a patient is intubated for mechanical ventilation, the duration is counted from the time of the intubation. If the intubation was done prior to admission, begin counting the duration at the time of the admission. (See Coding Clinic, fourth quarter 1991, pages 17 and 18.)

Begin counting the duration for tracheostomy patients on ventilation at the time the mechanical ventilation was begun. (See Coding Clinic, fourth quarter 1991, page 17.)
When a patient is documented to have an extended duration (several days) of ventilation following surgery, the duration is counted from the time the patient was intubated for ventilation at the time of surgery. (See Coding Clinic, second quarter 1992, page 14.)

“Extended” duration, meaning several days, has been further defined as meaning more than two days. (See Coding Clinic, third quarter 2004, page 11.)

A patient was intubated during a lobectomy of the lung and then extubated at the end of the procedure. The patient required re-intubation later that day and was on mechanical ventilation for 23 hours. Assign codes 96.71, continuous mechanical ventilation for less than 96 hours, and 96.04, insertion of endotracheal tube, to describe the re-intubation and postoperative mechanical ventilation. (See Coding Clinic, volume 10, number 5 1993, page 17.)

**Endotracheally intubated/manually bagged/expired**

A patient in respiratory arrest was endotracheally intubated and manually bagged, but expired before being placed on mechanical ventilation. Assign code 93.93, nonmechanical methods of resuscitation. It would be inappropriate to assign code 96.71 for manual ventilation. (See Coding Clinic, second quarter 2003, page 17.)

**INOmax therapy**

INOmax (nitric oxide/nitrogen) therapy is used to treat persistent pulmonary hypertension in newborns and pulmonary hypertension in patients with respiratory failure and hypoxia. This was assigned code 93.98, other control of atmospheric pressure and composition, until October 1, 2002, when a new code was created. This is now assigned code 00.12, administration of inhaled nitric oxide. (See Coding Clinic, fourth quarter 2002, page 94, and Coding Clinic, first quarter 2002, page 14.)

**Intermittent positive pressure breathing (IPPB)**

Intermittent positive pressure breathing, IPPB, 93.91; continuous negative pressure ventilation, (CNP), iron lung, 93.99; continuous positive airway pressure, (CPAP), 93.90; and other methods of respiratory therapy by face mask, nasal cannula, and nasal catheter are all coded under category 93.9, respiratory therapy. (See ICD-9-CM, volume 3, tabular list, category 93.9, and Coding Clinic, fourth quarter 1991, pages 21 and 22.)

**Noninvasive positive pressure ventilation (NIPPV)**

Noninvasive positive pressure ventilation is assigned code 93.90, continuous positive airway pressure, (CPAP). NIPPV is not classified as mechanical ventilation, because the patient is not mechanically ventilated via tracheostomy or endotracheal intubation. There is no need for ET tube and/or sedation. NIPPV can involve use of a ventilator and can go beyond CPAP. Therefore, review all documentation to determine appropriate code. (See Coding Clinic, third quarter 2004, page 3.)

**Positive airway pressure ventilation (CPAP)**

Positive airway pressure ventilation via facemask is assigned code 93.90, continuous positive airway pressure. (See Coding Clinic, first quarter 2002, page 13.)

**RespirTech PRO**

Ventilation performed with RespirTech PRO when endotracheal intubation is utilized, is assigned code 96.7x, other continuous mechanical ventilation. If the ventilation is done with RespirTech PRO utilizing a facemask, it is assigned code 93.90, continuous positive airway pressure. The definitive variable for use of category 96.7 is mechanical ventilation via endotracheal intubation and not endotracheal intubation alone. (See Coding Clinic, second quarter 2002, page 19 and Coding Clinic, first quarter 2002, pages 12 and 13.)