

# Coding Respiratory Failure

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Consider the following scenario: a patient is admitted through the emergency department (ED) with acute shortness of breath. The ED notes and history and physical document acute respiratory failure. Blood gases show an oxygen level of 75, pCO<sub>2</sub> level of 40, and a blood pH of 7.40. The chest X-ray shows infiltrates and the patient is treated with antibiotics and respiratory therapy. The discharge summary gives a final diagnosis of pneumonia without mention of respiratory failure. Should acute respiratory failure be coded?

This coding scenario is seen frequently in the acute care setting. Respiratory failure in this situation, and when it is present with other conditions, has long caused confusion for coding professionals. ICD-10-CM brought about more specificity to identify variations in the condition, but coding guidance has remained consistent with ICD-9-CM guidelines. Let's explore the clinical indicators for respiratory failure, examine the current coding guidelines, and look at this and other related coding scenarios.

## Respiratory Failure Definition

Respiratory failure is a life-threatening condition that results from inadequate gas exchange by the respiratory system. It presents with abnormal arterial oxygen and/or carbon dioxide levels and is usually due to an underlying cause. Symptoms of acute respiratory failure include extreme shortness of breath; rapid respiratory rate using accessory muscles of respiration such as intercostal muscle retraction, paradoxical breathing, or cyanosis; loss of consciousness; increased heart rate; and a decrease of oxygenated blood with blood gas measurements of pO<sub>2</sub> less than 60, pCO<sub>2</sub> greater than 50, and arterial blood pH less than 7.35. A pO<sub>2</sub> decrease of 15 mm Hg from the patient's normal pO<sub>2</sub> or an arterial blood pH less than 7.35 in a patient with chronic lung disease may be an indicator of respiratory failure. Increased respiratory rate, abnormal blood gases, and evidence of increased work of breathing are usually included in the definition of respiratory failure in clinical trials. Hypoxemia is when blood oxygen drops, showing a pO<sub>2</sub> of less than 8kPa, and hypercapnia is when blood carbon dioxide levels rise, showing a pCO<sub>2</sub> of greater than 6.0kPa.

There are two classifications of respiratory failure, Type I and Type II. Type I respiratory failure shows low oxygen and normal or low carbon dioxide levels. Type II shows hypoxemia with hypercapnia. It is caused by inadequate alveolar ventilation and both oxygen and carbon dioxide are affected. The buildup of carbon dioxide levels generated by the body cannot be eliminated.

Acute respiratory failure requires close patient monitoring and evaluation with aggressive respiratory therapy and/or mechanical ventilation. The absence of mechanical ventilation does not preclude the diagnosis of respiratory failure.

## Coding Respiratory Failure as Principal Diagnosis

In order to report respiratory failure as the principal diagnosis code, the failure must be present on admission and be the main reason for treatment after study, except in a few limited situations. These situations include:

1. **Poisoning causing respiratory failure.** When the patient is admitted with respiratory failure due to an intentional drug overdose, or due to drug abuse/dependence, the poisoning code is listed as the principal diagnosis code.
2. **An obstetrics condition causing respiratory failure.** When an obstetrics condition (during pregnancy, delivery, or postpartum) causes respiratory failure, the obstetrics complication code is sequenced first and the code for the respiratory failure is second.
3. **Human Immunodeficiency Virus (HIV)–related condition.** With an HIV-related condition such as pneumonia in HIV causing respiratory failure, the HIV code is listed as the principal diagnosis, with the related condition and respiratory failure listed second.

4. **Sepsis with respiratory failure.** For sepsis with respiratory failure, the sepsis is listed as the principal diagnosis, with the underlying disease and respiratory failure listed second. In order to apply this guideline, the sepsis must be present or suspected on admission. If the sepsis develops later during hospitalization, the sepsis is listed as the secondary diagnosis code.

## Coding Two or More Conditions that Equally Qualify as Principal Diagnosis

When respiratory failure is one of two or more conditions that equally qualify as the principal diagnosis code, either can be listed as the principal diagnosis code—except in the situations discussed in the previous section of this article.

This situation is typified when congestive heart failure (CHF) causes acute respiratory failure. The criteria for principal diagnosis as determined by the circumstances of admission, diagnostic workup, and/or therapy provided, should dictate which condition is selected as the principal diagnosis code. If both conditions are considered to be equally treated, either can be sequenced as the principal diagnosis code. If in doubt, query the attending physician.

## Coding Respiratory Failure with Respiratory Condition

When two or more conditions equally qualify as the principal diagnosis code, the same analogy as in the previous section of this article is applied to acute respiratory failure and a respiratory condition such as pneumonia, chronic obstructive pulmonary disease with exacerbation, or other respiratory conditions. In a situation in which the patient is emergently admitted with acute respiratory failure and requires intubation and mechanical ventilator support, and it is later determined that the patient has aspiration pneumonia, coding guidelines say that the criteria for principal diagnosis as determined by the circumstances of admission, diagnostic workup, and/or therapy provided should dictate which condition is selected as the principal diagnosis code. In this case, it may be more appropriate to list the acute respiratory failure as the principal diagnosis.

In another example, the patient is admitted with respiratory failure and is found to have a pulmonary embolus, which is treated with a vena cava filter. The pulmonary embolus should be considered as the principal diagnosis code. In this case, the respiratory failure is of secondary importance to the pulmonary embolus, which requires invasive measures.

## Coding Respiratory Failure in ICD-10-CM

ICD-10-CM provides for a distinction between acute respiratory failure and unspecified respiratory failure, and it further allows for the coding of respiratory failure with hypercapnia or hypoxemia. Coding guidelines for principal diagnoses in ICD-10-CM are the same as in ICD-9-CM. More comprehensive instruction is now given in the Centers for Medicare and Medicaid Services' ICD-10-CM Official Guidelines for Coding and Reporting, including instruction previously only given in the American Hospital Association's *Coding Clinic* publication. Coding and clinical documentation improvement specialists must acknowledge that all prior coding instruction given for ICD-9-CM applies to ICD-10-CM, and should thus be very familiar with the prior coding instruction.

## Coding Scenarios

In the coding example at the beginning of this article, the patient's blood gases and blood pH are not consistent with acute respiratory failure, so the physician should be queried. The query should explain the clinical findings and ask for further clarification of the diagnosis.

In another case, a patient is admitted in acute respiratory failure following a cardiac arrest. The patient's blood gases show a pCO<sub>2</sub> of 78 percent with a blood pH of 7.28. The patient is intubated and placed on mechanical ventilation. The patient's family decides not to pursue any further measures and wishes to place the patient on comfort care only. The patient expires four days after admission. Is it appropriate to list the acute respiratory failure as the principal diagnosis code? Some would argue that the cardiac arrest was the underlying cause of the respiratory failure and that should be listed as the final diagnosis code. The clinical indicators are certainly present for acute respiratory failure. The coding guidance shows that respiratory failure can stand alone as a diagnosis without the necessity of listing the underlying cause first, so it should be acceptable to list the acute respiratory failure as the final diagnosis code.

## Build Familiarity with Clinical Indicators

It is important to be familiar with the clinical indicators for acute respiratory failure and understand the coding guidance to assign the correct diagnosis codes. Sequencing of the diagnosis codes can affect coding compliance and reimbursement. If coding decisions are based on the clinical documentation present, and prevailing coding guidelines, then the coded data will be accurate.

## References

Centers for Medicare and Medicaid Services. "ICD-10-CM Official Guidelines for Coding and Reporting, FY 2019." [www.cms.gov/Medicare/Coding/ICD10/Downloads/2019-ICD10-Coding-Guidelines-.pdf](http://www.cms.gov/Medicare/Coding/ICD10/Downloads/2019-ICD10-Coding-Guidelines-.pdf).

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