

Breathing air into ICD-10-CM reporting for ARDS

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Since the start of the pandemic, HIM, CDI, and coding professionals have focused on understanding acute respiratory distress syndrome (ARDS) as a manifestation of COVID-19.

Although ARDS was first identified in modern medical literature in the late 1960s, many coders may have limited knowledge about the condition because it is documented infrequently in the health record. Since ARDS is included as a common respiratory manifestation of COVID-19 in the [ICD-10-CM Official Guidelines for Coding and Reporting](#), it is essential to understand the syndrome for accurate and complete coding.

According to the [Merck Manual](#), acute respiratory distress syndrome is “a type of respiratory (lung) failure resulting from many different disorders that cause fluid to accumulate in the lungs and oxygen levels in the blood to be too low.” The lack of oxygen in the blood deprives organs of the oxygen they need to function.

ARDS, which used to be called adult respiratory distress syndrome, is a life-threatening lung injury that typically occurs in patients who are already in the hospital for trauma or infection. Although some patients can recover from ARDS completely, other patients experience long-lasting damage to their lungs.

[The ARDS Definition Task Force in Berlin classifies](#) stages of ARDS to identify the severity and is based on the degree of the hypoxemia:

- Mild: $\text{PaO}_2/\text{FiO}_2 \leq 300$ mm Hg but > 200 mm Hg
- Moderate: $\text{PaO}_2/\text{FiO}_2 \leq 200$ mm Hg but > 100 mm Hg
- Severe: $\text{PaO}_2/\text{FiO}_2 \leq 100$ mm Hg

Signs and symptoms of ARDS

The common signs and symptoms associated with ARDS include:

- Confusion
- Cyanosis
- Extreme tiredness
- Low blood pressure
- Rapid, labored breathing
- Severe shortness of breath

ARDS can have a rapid onset, developing within one to two days of the original injury or infection. However, it may take up to four or five days to occur. Patients with ARDS are mainly treated in the intensive care unit (ICU) or the step-down unit.

Underlying causes of ARDS

Any condition that injures the lungs can cause ARDS. Some of the most common underlying causes of ARDS include:

- COVID-19
- Head or chest injuries or other major life-threatening injuries
- Inhalation of toxic substances
- Large amounts of blood transfusions
- Pancreatitis
- Pneumonia
- Sepsis

Diagnosis of ARDS

A provider may hear crackling or wheezing sounds in the lungs during a physical exam. Diagnostic studies may include:

- Pulse oximetry to determine the blood oxygenation levels
- Chest X-ray, which shows fluid in the lungs. Providers need to distinguish the fluid in lungs from ARDS and heart failure or chronic lung disease.

Chest X-ray findings may vary depending on the severity of the ARDS. Early radiology findings include normal or diffuse bilateral alveolar ground-glass opacities or consolidation. The opacities may progress to more extensive, diffuse consolidations, which are often asymmetrical.

Treatment for ARDS

Treatment for ARDS usually begins with treatment directed at the underlying cause. In addition, oxygen therapy is necessary to support the patient's lungs so they can heal. Oxygen therapy may include:

- Bilevel positive airway pressure (BiPAP)
- Continuous positive airway pressure (CPAP)
- High-flow nasal cannula
- Mechanical ventilation
- Nasal cannula
- Non-rebreather mask

For the treatment of ARDS, the mode of oxygen delivery is not as important as the amount of oxygen that is being delivered. Typically, ARDS patients require 40% FiO₂ and cannot be weaned. Occasionally, if the oxygen level is high but the blood oxygen level continues to remain low, patients are placed in the prone position to get more oxygen into the blood.

In extremely severe cases, extracorporeal membrane oxygenation (ECMO) may be necessary. ECMO routes blood outside of the body and pumps it through a membrane which adds oxygen and removes carbon dioxide before returning the blood to the body.

ICD-10-CM classification of ARDS

Acute respiratory distress syndrome is reported with ICD-10-CM code J80 and has the following two inclusion terms listed in the Tabular List:

- Acute respiratory distress syndrome in adult or child
- Adult hyaline membrane disease

As the *Merck Manual* definition states, ARDS is a type of respiratory failure. Respiratory failure is classified to ICD-10-CM category J96.- (respiratory failure, not elsewhere classified). Additional characters are available to identify if the respiratory failure is acute, chronic, or acute and chronic as well as with hypoxia or hypercapnia.

When both respiratory failure and ARDS are documented in the same record, then only the code for ARDS is assigned based on coding directives under the respiratory failure category. An Excludes1 note under category J96.- excludes acute respiratory distress syndrome (J80). The Excludes1 note means that the condition is not coded here. In other words, it is assigned to the code listed in the coding directive.

In addition, if the respiratory failure was present on admission (POA) and the condition progressed to ARDS during the hospital encounter, assign POA indicator Y.

Coding Clinic states, "Per the Excludes1 note under category J96, only code J80 should be assigned when respiratory failure and ARDS are both documented. Assign the POA indicator Y for the ARDS, since the patient experienced deterioration and worsening of her respiratory condition. ARDS is a life-threatening form of respiratory failure and is not an unrelated condition. When acute respiratory failure is documented along with ARDS, only one code is reported to capture the highest level of severity with a POA indicator of Y."

MS-DRGs for ARDS

Based on how ARDS is designated in the MS-DRG classification system, it would seem that ARDS is not as severe as acute respiratory failure. This is evidenced by ARDS being classified to MS-DRG 204 (Respiratory Signs and Symptoms) which has a relative weight of 0.7925.

In addition, in the [All-Patient Refined Diagnosis Related Group \(APR-DRG\) classification system](#), the default severity of illness (SOI) level is 2 (moderate) and the risk of mortality (ROM) level is 3 (major) for the ARDS ICD-10-CM code. This is compared to respiratory failure (category J96), which is classified to MS-DRG 189 (Pulmonary Edema and Respiratory Failure) and has a relative weight of 1.2248.

The default SOI level is 4 (extreme) and the ROM level is 4 (extreme) for respiratory failure. Despite how it is classified, the coding professional is responsible for assigning the appropriate codes based on provider

documentation in the record and following all coding rules and guidelines.

All HIM and coding professionals will likely agree that it is vital to report all COVID-19-related conditions, such as ARDS, to aid physicians and scientists in their research of the virus. And, maybe due to the attention the disease is receiving as a result of the pandemic, the MS-DRG classification and severity designation for it will be modified in the near future.

More information about ARDS can be found at the websites and resources:

Merck Manual Consumer Version: [Acute Respiratory Distress Syndrome \(ARDS\) - Lung and Airway Disorders](#)

Mayo Clinic: [ARDS Overview](#)

American Lung Association: [Acute Respiratory Distress Syndrome \(ARDS\)](#)

Kenneth T. Horlander, MD, FCCP. (2020, April 9). [Acute Respiratory Distress Syndrome \(ARDS\) Imaging: Practice Essentials, Radiography, Computed Tomography](#). eMedicine/Medscape.

***Editor's note:** Howard is the senior inpatient consultant with 3M Health Information Systems, and Belley is the manager of compliance/audits and content with 3M Health Information Systems. Opinions expressed are that of the author and do not necessarily represent HCPro, ACDIS, or any of its subsidiaries. For questions, contact editor Amanda Norris at anorris@hcpro.com.*

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