Pediatric Respiratory Failure

There is NOT a universally accepted definition for respiratory failure in the pediatric population\(^1\). Respiratory failure is the inability to provide \(O_2\) and remove \(CO_2\) at a rate that meets metabolic demands.

**Acute Respiratory Failure (ARF)**
- Not all patients with acute respiratory failure require intubation and mechanical ventilation.
- Any of the following interventions meet the criteria for acute respiratory failure.
  - Supplemental oxygen with a \(FIo_2 > 30-35\%\) to maintain oxygenation (\(SpO_2 \geq 90\%\))
    - Room air = \(FIo_2 0.21, 2L NC 0.28, 3L NC 0.32\)\(^i\)
  - High-flow nasal cannula, vapotherm or non-rebreather mask oxygen, CPAP or BiPAP

**Chronic Respiratory Failure (CRF)**
- Continuous home oxygen or ventilator support (mechanical vent or nasal BiPAP) or
- Having baseline \(SaO_2 < 88\%\) on room air or \(pCO_2 > 50\) with a normal pH due to a respiratory condition

**Acute on Chronic Respiratory Failure**
- Chronic respiratory failure is worsening of \(SaO_2\) and/or \(pCO_2\) with symptoms

**Documentation Caveat:** ICD-10-CM does not dictate which criteria a provider must use, **BUT** auditors question clinical validation. If a patient has respiratory failure, it must be justified in the documentation\(^iii\).

**Respiratory Failure Compared to Respiratory Distress:**
- Respiratory insufficiency or respiratory distress is sometimes documented when the child clinically meets criteria for respiratory failure. These are lower-weighted, therefore use **respiratory failure** when the child meets criteria.
- In ICD-10-CM, respiratory failure is divided into: acute respiratory failure, chronic respiratory failure or acute and chronic respiratory failure.
  - Each of these divisions is subdivided into: With hypoxia, with hypercapnia or unspecified.

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\(^1\) https://acdis.org/system/files/resources/35450%20Pediatric%20Respiratory%20Failure%20White%20Paper.pdf  
\(^ii\) Coding Clinic, 4th Q, 2016, pp. 147-149  

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Note: This does not apply to children in the newborn period. There are specific documentation and coding conventions for respiratory failure in newborns.