

Neonatal Respiratory Disorders	
Apnea of Prematurity	
<b>Etiology</b>	Prematurity < 34 weeks
<b>Symptoms and Diagnostics</b>	<ul style="list-style-type: none"> <li>• Periods of 10 to 20 seconds of apnea followed by bradycardia and desaturations.</li> <li>• Must exclude all other potential causes (sepsis, IVH, etc).</li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>• Caffeine (loading dose 20mg/kg of caffeine citrate, then 5 mg/kg/day maintenance, may increase up to 10mg/kg/day)</li> <li>• CPAP/Intubation if severe</li> <li>• Consider septic work up if sudden onset of spells despite proper therapy</li> </ul>
BPD/CLD	
<b>Etiology</b>	<ul style="list-style-type: none"> <li>• Prematurity</li> <li>• Severe Pulmonary Disease</li> </ul>
<b>Symptoms and Diagnostics</b>	<ul style="list-style-type: none"> <li>• NICHD Criteria for mild, moderate, severe BPD: based on GA and oxygen requirement</li> <li>• Diagnosis made after 36 weeks</li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>• <b>Vent:</b> Minimize barotraumas, low FiO<sub>2</sub></li> <li>• <b>Tx:</b> Supplemental O<sub>2</sub>, diuretics, bronchodilators, consider steroids, Vitamin A (preventative)</li> <li>• <b>Monitoring:</b> Consider echo at 36 weeks to look for pulmonary hypertension</li> <li>• Post-discharge follow up</li> </ul>
PPHN	
<b>Etiology</b>	Risk Factors: <ul style="list-style-type: none"> <li>• Asphyxia</li> <li>• Sepsis</li> <li>• Severe lung disease</li> <li>• Meconium aspiration</li> <li>• Pulm. vascular disease</li> </ul>
<b>Symptoms and Diagnostics</b>	<ul style="list-style-type: none"> <li>• Hypoxia/Hypoxemia</li> <li>• Hypotension</li> <li>• CXR: Meconium aspiration or "black" lungs due to lack of pulmonary blood flow</li> <li>• Cardiac workup to rule out congenital heart disease</li> <li>• +/- ECHO (often with R→L shunting at PDA or PFO)</li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>• Decrease PVR and increase pulmonary blood.</li> <li>• <b>Goals:</b> Post-ductal Sat &gt; 94%, pCO<sub>2</sub> 30-35, pH 7.45 – 7.5, Mean Arterial Pressure &gt; 45-50 mm Hg, aggressive sedation, maintain HCT&gt;40</li> <li>• <b>Oxygenation Index (OI):</b>  <math display="block">OI = FiO_2 \times MAP / PaO_2</math>           If OI &gt; 20 → iNO            If OI &gt; 40 – 60 → consider ECMO         </li> </ul>
RDS/HMD	
<b>Etiology</b>	Surfactant deficiency
<b>Symptoms and Diagnostics</b>	<ul style="list-style-type: none"> <li>• Hypoxia</li> <li>• <b>CXR:</b> "ground glass", low lung volume, and air bronchograms</li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>• CPAP vs. Intubation</li> <li>• Surfactant Administration if intubated, 2nd dose if still intubated after 12 hours</li> <li>• Minimize barotrauma and FiO<sub>2</sub></li> </ul>
TTN	
<b>Etiology</b>	<ul style="list-style-type: none"> <li>• Delayed resorption of fluid</li> <li>• Usually term infants</li> <li>• Birth by C-section</li> </ul>