## IM5 (Pediatrics) Critical Thinking Worksheet

**Patient Age:** 35.2 weeks **Patient Weight:** 2.305kg

| **Student Name:** Brooke Jones | **Unit:** NICU **Pt. Initials:** | **Date:** 12/15/2021 |
|---|---|---|
| **1. Disease Process & Brief Pathophysiology (Identify Key Concepts to Your Patient and Include Reference):**<br>Respiratory Distress Syndrome (RDS) is a breathing disorder that results from inadequate pulmonary surfactant. Surfactant is a mixture of phospholipids and proteins that decreases the surface tension and prevents alveolar collapse during exhalation and is fully developed by 32 weeks of gestation. Due to the surfactant defiency, preterm newborns experience inadequate gas exchange and are at risk for hypoxemia and respiratory acidosis. | **2. Factors for the Development of the Disease/Acute Illness:**<br>Low Gestational age (P)<br>Male predominance<br>Maternal diabetes<br>Perinatal depression | **3. Signs and Symptoms:**<br>Cyanosis (P)<br>Flaring of the nostrils (P)<br>Tachypnea (P)<br>Grunting sounds with breathing (P)<br>Chest retractions (P) |
| **4. Diagnostic Tests Pertinent or Confirming of Diagnosis:**<br>Chest X-ray (P)<br>ABGs (P)<br>Echocardiography (P) | **5. Lab Values That May Be Affected:**<br>ABGs: (P)<br>PaO2<br>PaCO2<br>pH<br>HCO3<br>O2Sat | **6. Current Treatment (Include Procedures):**<br>Endotracheal tube<br>Ventilator (P)<br>Supplemental oxygen (P)<br>CPAP (P)<br>Surfactant replacement with artificial surfactant<br>Medications |

Citations

Mirastschijski, U., Dembinski, R., & Maedler, K. (2020). Lung surfactant for pulmonary barrier restoration in patients with COVID-19 pneumonia. *Frontiers in Medicine*, *7*. https://doi.org/10.3389/fmed.2020.00254

*Respiratory distress syndrome*. (n.d.). Advancing Heart, Lung, Blood, and Sleep Research & Innovation | NHLBI, NIH. https://www.nhlbi.nih.gov/health-topics/respiratory-distress-syndrome

*Respiratory distress syndrome*. (n.d.). Children's Hospital of Philadelphia. https://www.chop.edu/conditions-diseases/respiratory-distress-syndrome

D.O.B. 12/1/21
Gestational Age 35.2 weeks Adjusted Gestational Age 37.2 weeks
Birthweight 4 lbs and 14 oz/2215g
Current weight 5 lbs and 1 oz/2305g
APGAR at birth: 4/7/8

Lack of surfactant

Risk factors:
Premature
- Born at 33.2 weeks
C-section

Respiratory Distress Syndrome (RDS)

At birth (12/1)
pH- 7.248
PaCO2- 54.7
PaO2- 59.7
HCO3- 23.3
O2 Sat- 86.3

Most recent (12/15)
pH- 7.353
PaCO2- 52.2
PaO2- 65.3
HCO3- 28.4
O2Sat- 95.5

Treatment:
Bubble CPAP (12/1)
Curosurf #1 (12/2)
Echocardiography (12/2)
Chest X-ray (12/3)
Mechanical ventilator (12/2-12/6)
High flow NC (12/7)
RA (12/14)

Interventions:
Provide oxygen
Monitor ABGs
Suction oral cavity
Manage nutrition

Signs and symptoms:
Difficulty breathing
Tachypnea
Chest retractions
Grunting sounds
Nasal flaring