

DEBRIEFING/GUIDED REFLECTION OVERVIEW

Airway and breathing are the most important initial concerns of this patient. Priority in this patient's management is addressing the ABC's. An important goal of initial assessment is to recognize that an asthma attack is severe and administer effective treatment. This patient should be placed on a cardiac monitor with automated blood pressure measurement, establishment of IV access, and continuous pulse oximetry. Humidified oxygen by either non-rebreather mask or nasal cannula is administered to keep SpO₂ above 92%.

Commonly used medications to treat severe asthma exacerbations include adrenergic agonists, anticholinergic agents, and corticosteroids. Methylxanthines are no longer recommended because they appear to add no benefit to optimal inhaled β₂-agonist therapy and may increase adverse effects. The use of antibiotics in the treatment of exacerbations of asthma is not established.

Arterial blood gas (ABG) measurement provides important information in acute asthma. This test may reveal dangerous levels of hypoxemia or hypercarbia secondary to hypoventilation; typically, results are consistent with respiratory alkalosis. Because of the accuracy and utility of pulse oximetry, only patients whose oxygenation is not restored to over 90% with oxygen therapy require an ABG.

SCENARIO OVERVIEW

Estimated Scenario time: 20 - 30 minutes
Guided Reflection time: 30 minutes

Target Groups: Nurses
Complex Case

Brief Summary:

This case presents a patient in acute respiratory distress. The patient has a history of asthma. The student will be expected to quickly recognize acute respiratory distress with impending respiratory arrest. The student needs to communicate effectively, and promptly initiate a coordinated team approach to patient management and care.

Learning Objectives:

- Identifies the primary nursing diagnosis
- Implements patient safety measures
- Evaluates patient assessment information including vital signs
- Implements therapeutic communication
- Implements direct communication with multidisciplinary team members
- Demonstrates effective teamwork
- Prioritizes and implements Physician Orders appropriately

Scenario Specific:

- Recalls indications, contraindications, and potential adverse effects of prescribed medications.
- Implements the "5 rights" of medication administration
- Implements a focused respiratory assessment
- Recalls indications and contraindications for oxygen therapy
- Recognizes signs and symptoms of respiratory distress
- Initiates relevant cardiac and respiratory monitoring
- Implements correct treatment of respiratory distress in a timely manner

REPORT TO STUDENTS

Time: 11:00 p.m.

Jennifer Hoffman is a 33-year-old female brought to Emergency Department by ambulance. She has a history of asthma with multiple emergency visits within the last year. She appears to be in severe respiratory distress, struggling to breathe. She is unable to speak other than simple one word statements. EMS services has started an IV of Normal Saline at a keep open rate.

Clinical signs immediately visible:

- Alert and pale
- Extremely anxious
- Profusely diaphoretic
- Using accessory muscles to breathe

ADDITIONAL INFORMATION, MEDICAL HISTORY

Patient data: Female – Age 33 years. Weight 99 pounds (45 kg). Height 61 Inches (1.55 meter)

DOB: 1/31/XX

MR#: PCS13100

Allergies: Seasonal hay fever

Prior medical history: History of asthma since childhood with multiple emergency visits within the past year. Medications used at home include Beclovent, Intal, Serevent, and Proventil inhaler.

Recent medical history: Recent upper respiratory infection.

EQUIPMENT CHECKLIST

Equipment	Medications and Fluids
<input type="checkbox"/> Universal precautions equipment	<input type="checkbox"/> Normal Saline 1000 mL
<input type="checkbox"/> Stethoscope	<input type="checkbox"/> Albuterol (Proventil) 2.5 mg in 2.5 mL
<input type="checkbox"/> Blood pressure cuff	<input type="checkbox"/> Ipratropium Bromide (Atrovent) 0.5 mg/mL in Normal Saline via nebulization
<input type="checkbox"/> SpO2 monitor	<input type="checkbox"/> Methylprednisolone (Solu-Medrol) IV 125 mg
<input type="checkbox"/> SpO2 probe	
<input type="checkbox"/> Thermometer	Documentation Forms
<input type="checkbox"/> ECG monitor	<input type="checkbox"/> Patient Information Card - Blank
<input type="checkbox"/> ECG electrode cables	<input type="checkbox"/> Physician Orders
<input type="checkbox"/> Oxygen supply source	<input type="checkbox"/> Data Collection Form
<input type="checkbox"/> Oxygen water reservoir	
<input type="checkbox"/> Oxygen delivery devices (nasal cannula and/or mask)	Diagnostics available
<input type="checkbox"/> Respiratory nebulizer	<input type="checkbox"/> None
<input type="checkbox"/> IV start supplies	
<input type="checkbox"/> IV tubing	
<input type="checkbox"/> IV pump	
<input type="checkbox"/> Peak flow meter	
<input type="checkbox"/> General medication administration supplies	

PREPARATION OF SIMMAN SIMULATOR

- Emergency Department
- Dress SimMan in female clothing with wig
- Sitting up
- Secure ID band with patient name, DOB and MR#
- Insert IV in right forearm with Normal Saline at keep open rate

NUMBER OF PARTICIPANTS:

Student Roles:

- 1 primary nurse
- 1 family member
- 1 observer

Instructor Roles:

- 1 physician or advanced practice nurse
- 1 respiratory therapist if a respiratory therapist delivers all respiratory treatments in the local clinical facility

	Monitor Settings (Actions)	Patient / Manikin (Actions)	Student Interventions (Events)	Cue / Prompt
5 to 10 minutes	Initial state: awRR: 36 HR: 110 BP: 140/90 SpO2: 78% Temp: 98.8 F	Auscultation sounds: Breath sounds wheezing bilaterally volume 3 Heart sounds volume 4 Vocal sounds: "Can't...breathe..."	Wash hands Introduce self Identify patient Obtain vital signs Attach SpO2 probe Auscultate lung sounds Apply humidified oxygen Ask secondary nurse to get the physician in the room immediately Calm the patient	Role member providing cue: Family member Cue: If help is not requested promptly family member says, "Get the doctor, where is the doctor?"
10 to 20 minutes	Severe respiratory distress trend: awRR: > 40 HR: > to 130 BP: < to 80/60 SpO2: < to 58% Over 5 minutes	Vocal sounds: "Please...help....me"	Communicates directly with physician Medical orders received Apply ECG monitor Start automatic BP Start IV fluid	Role member providing cue: Physician Cue: If student is unsure of what to do, physician may guide
20 to 30 minutes	After Albuterol trend: awRR: < to 20 HR: < to 100 BP: > to 124/70 SpO2: > to 92% Over 5 minutes	Auscultation sounds: Breath sounds loud wheezes	Follow physicians order Administer Proventil nebulizer combined with Atrovent Administer IV Solu-Medrol Communicate therapeutically with family member Continues to monitor vital signs, respiration and SpO2 level	

CORRECT TREATMENT

Proposed correct treatment (outline):

- Wash hands
- Introduce self
- Identify the patient (name, ID band, DOB, MR#)
- Obtain BP, pulse, respiratory rate, temperature, SpO2
- Perform respiratory assessment
- Attach ECG monitor leads
- Give oxygen
- Monitor level of consciousness
- Recognize severe respiratory distress
- Call for help
- Administer emergency medications per order
- Maintain cardiovascular and respiratory stability

NURSING DIAGNOSIS

Ineffective airway clearance related to thick tenacious secretions, fatigue and weak cough force secondary to asthma

Defining characteristics:

- Dyspnea
- Orthopnea
- Adventitious breath sounds
- Sputum production
- Changes in respiratory rate and rhythm

Impaired gas exchange related to alveolar-capillary membrane changes

Defining characteristics:

- Tachycardia
- Hypercapnia
- Hypoxia
- Dyspnea
- Abnormal skin color
- Abnormal rate, rhythm, depth of breathing
- Diaphoresis

Anxiety related to threat of death

Defining characteristics:

- Fearful
- Anxious
- Increased pulse, respirations, and blood pressure