Unfolding Clinical Reasoning Case Study:  
**Pneumonia/COPD Content/Concept Map**

## I. Content

### Anatomy/Physiology:
- Pneumonia
- COPD
- Sepsis

### Pharmacology:
**Home Meds:**
1. Fluticasone/salmeterol (Advair) diskus 1 puff every 12 hours
2. Albuterol (Ventolin) MDI 2 puffs every 4 hours prn
3. Lisinopril (Prinivil) 10 mg po daily
4. Gemfibrozil (Lopid) 600 mg po bid
5. Diazepam (Valium) 2.5 mg po every 6 hours as needed
6. Triamterene-HCTZ (Dyazide) 1 tab daily

**Medical Management:**
1. albuterol-ipratropium (Combivent) 2.5 mg neb
2. lorazepam (Ativan) 1 mg IV push
3. methylprednisolone (Solumedrol) 125 mg IV push
4. levofloxacin (Levaquin) 750 mg IVPB (after blood cultures drawn)
5. acetaminophen (Tylenol) 1000mg oral

### Diagnostic/Labs:
- 12 lead EKG: sinus tachycardia
- Chest x-ray
- CBC
- BMP
- Lactate
- Arterial blood gas
- Blood culture
- Sputum culture
- UA/UC

### Dosage Calculation:
1. Methylprednisolone (Solumedrol) 125 mg IV push (125 mg/2 mL vial)
2. Lorazepam (Ativan) 1 mg IV push (2 mg/1 mL vial)
3. levofloxacin (Levaquin) 750 mg IVPB (150 mL volume) 150 mL over 90 minutes

### Nursing Priorities:
- IMPAIRED GAS EXCHANGE
- INEFFECTIVE AIRWAY CLEARANCE
- ALTERED BODY TEMPERATURE

### Priority Setting:
Which orders do you implement first and why?
1. Albuterol-ipratropium (Combivent) 2.5 mg neb
2. Establish peripheral IV
3. Lorazepam (Ativan) 1 mg IV push
4. Methylprednisolone (Solumedrol) 125 mg IV push
5. Levofloxacin (Levaquin) 750 mg IVPB (after blood cultures drawn)
6. Acetaminophen (Tylenol) 1000mg oral

### Patient Education & Discharge Planning:
1. Pursed lip breathing
2. Signs of COPD exacerbation and when she should come to the ED for evaluation
3. Review action/indications for use of all relevant medications, especially her inhalers
II. Concepts (in order of emphasis)
   I. Gas Exchange
   II. Infection
   III. Acid-Base Balance
   IV. Thermoregulation
   V. Clinical Judgment
   VI. Pain
   VII. Patient Education
   VIII. Communication
   IX. Collaboration

III. NCLEX Client Need Categories
   I. Safe and Effective Care Environment
      a. 20%—Management of Care
         i. Providing and directing nursing care that enhances the care delivery setting to protect clients, family/significant others, and healthcare personnel
            1. Establish priorities
            2. Collaboration w/treatment team
            3. Advocacy

   II. Health Promotion & Maintenance:
      i. 9%—The nurse provides and directs nursing care of the client and family/significant others that incorporates knowledge of expected growth and development principles, prevention and/or early detection of health problems, and strategies to achieve optimal health.
         1. Disease prevention
         2. Physical assessment
         3. Client education

   III. Psychosocial Integrity:
      i. 9%—Nurse provides care that promotes and supports the emotional, mental, and social well-being of the patient and family who are experiencing stressful events.
         1. Coping mechanisms
         2. Therapeutic communication
         3. End of life care

IV. Physiologic Integrity
   a. 15%—Pharmacological & Parenteral Therapies:
      i. Providing care related to the administration of medications and parenteral therapies
         1. Expected actions, adverse/side effects
         2. Medication administration
         3. IV therapies
         4. Dosage calculation

4. Proper use of spacers or other devices to optimize inhalation of metered dose inhalers (MDI) in the lungs
b. 12%—Reduction of Risk Potential:
   i. Reducing the likelihood that clients will develop complications or health problems related to existing conditions, treatments or procedures
      1. Changes in VS
      2. Diagnostic tests
      3. Lab values
      4. System specific assessments
      5. Potential for alterations in body systems

c. 13%—Physiological Adaptation:
   i. Managing and providing care for clients with acute, chronic, or life threatening health conditions.
      1. Pathophysiology
      2. F&E imbalances
      3. Medical emergencies

IV.  QSEN Skills
   I. Patient-centered Care
      a. Implementation of care plan and evaluation of care
      b. Provide patient-centered care with sensitivity and respect for the diversity of human experience
      c. Assess presence and extent of pain and suffering. Assess levels of physical and emotional comfort
      d. Elicit expectations of patient & family for relief of pain, discomfort, or suffering
      e. Initiate effective treatments to relieve pain and suffering in light of patient values, preferences and expressed needs

   II. Evidence-based Practice
      a. Base individualized care plan on patient values, clinical expertise and evidence

   III. Teamwork and Collaboration
      a. Follow communication practices that minimize risks associated with handoffs among providers and across transitions in care (SBAR). Assert own position/perspective in discussions about patient care