Module F: Using the Nursing Process to Care for Individuals with Problems in O₂ - CO₂ Exchange

1. **Statement of Purpose**

There are many factors that can impact on the successful functioning of the respiratory system. As a result nurses must promote respiratory health. This requires skill in assessing pulmonary function, in given O₂ therapy and in removing secretions and foreign bodies from the respiratory tract. This module focuses on those skills and knowledge nurses must have to care for clients who have problems with respiratory function.

2. **Terminology**

<table>
<thead>
<tr>
<th>Term</th>
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<tbody>
<tr>
<td>Apnea</td>
<td>Hemoptysis</td>
<td>Exhalation/expiration</td>
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<tr>
<td>Dyspnea</td>
<td>Phlegm</td>
<td>Inhalation/inspiration</td>
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<tr>
<td>Eupnea</td>
<td>Orthopnea</td>
<td>Diaphragmatic Breathing</td>
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<tr>
<td>Ventilation</td>
<td>Hyperventilation</td>
<td>Pursed lip Breathing</td>
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<td>Hypoventilation</td>
<td>Wheezing</td>
<td>Vital capacity</td>
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<td>Tidal volume</td>
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3. **Classroom Content**

3.1 **Classroom Objectives**

a. Differentiate between external and internal respiration.
b. Differentiate between thoracic and diaphragmatic breathing.
c. Describe the following respiratory characteristics assessed by the nurse:
   1) rate
   2) depth
   3) rhythm
   4) character
d. Describe common methods to assess respiratory functions.
e. Discuss concept map development for a client with an O₂ - CO₂ exchange problem.
f. Discuss common disruptions to respiratory functioning in clients of all ages:
   1) physical - microorganisms
   2) mechanical
   3) chemical
3.2 Learning Activities

a. Know terminology
b. Read assigned chapters in Kozier, Fundamentals of Nursing
c. Review the anatomy & physiology of the respiratory system.
d. Discuss, in class, the nurse's role in the care of clients of all ages who have disruptions in their respiratory functioning:
   1) physical
   2) mechanical
   3) chemical
e. Discuss, in class, the methods of administering O₂ and the nurse's responsibilities in administering O₂.
f. Review CPR procedures
g. Read assigned chapters in Lynn, Taylor’s Clinical Nursing Skills
h. View appropriate videos
i. Use assigned computer software.

3.3 References

a. Kozier, Fundamentals of Nursing
b. Taylor’s Clinical Nursing Skills
c. Doenges, Nursing Care Plans

4. Clinical Objectives

a. Provide care as possible for a client with a disruption in respiratory functioning.
b. Complete a mini care plan on a client with respiratory dysfunction.
c. Administer medication (not IV’s) to assigned client.
d. Document care on client’s chart.
e. Apply principles of Standard Precautions on an assigned client

5. Skills Laboratory Requirements

5.1 Required Skill: Respiratory Procedures

a. Postural drainage
b. Deep breathing and coughing
c. Diaphragmatic breathing
d. Administer O₂
   1) via mask
   2) via cannula
   3) via tent
   4) via croupette

5.2 Self-Review Skills

a. Medical asepsis
b. Open Sterile Gloving
c. Body Mechanics
d. Positioning
e. Vital Signs

5.3 Skills Laboratory Terminology

See: Lynn, Taylor's Clinical Nursing Skills

5.4 Skills Laboratory Objectives

See: Lynn, Taylor's Clinical Nursing Skills

5.5 References

a. Lynn, Taylor's Clinical Nursing Skills
b. Kozier, Fundamentals of Nursing
c. Videotapes, computer software, and articles as assigned.