

SPRINGFIELD TECHNICAL COMMUNITY COLLEGE

ACADEMIC AFFAIRS

Course Number: RSPC 207 Department: Respiratory Care

Course Title: Respiratory Care 3 Semester: Spring Year: 1997

Objectives/Competencies

Course Objective	Competencies
1. Review the patient's chart for the following data and recommend diagnostic procedures based upon the currently available information.	1. Review the patient's history, results of the physical examination, and current vital signs. 2. Review the admission orders and the current respiratory care orders. 3. Review the progress notes for the patient. 4. Review the results of the patient's pulmonary function tests and arterial blood gas analysis. 5. Review the patient's chest x-ray findings. 6. View the patient's chest s-ray film to find the position of the endotracheal or tracheostomy tube. 7. Review the results of monitoring the following respiratory parameters: a. Review the patient's respiratory rate. b. Review the patient's tidal volume c. Review the patient's minute volume. d. Review the patient's inspiratory time to expiratory time ratio. e. Review the patient's maximum inspiratory pressure.

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<p>2. Interview the patient to answer the following questions:</p>	<ul style="list-style-type: none"> f. Review the patient’s maximum expiratory force. g. Review the patient’s vital capacity. h. Pulse Oximetry (SpO2). <p>8. Review the results of monitoring the following hemodynamic parameters.</p> <ul style="list-style-type: none"> a. Review the patient’s blood pressure. b. Review the results of the patient’s heart/pulse rate. <p>1. What is the patient’s level of consciousness?</p> <ul style="list-style-type: none"> a. Alert b. Stuporous/Very lethargic c. Semi-comatose d. Comatose/come <p>2. Is the patient oriented to time, place, and person?</p> <p>3. What is the patient’s emotional state?</p> <p>4. What is the patient’s ability to cooperate?</p> <p>5. Does the patient complain of dyspnea and/or orthopnea?</p> <ul style="list-style-type: none"> a. Exercise tolerance and activities of daily living b. Physical environment, social support systems, nutritional status <p>6. What is the patient’s sputum production like?</p> <ul style="list-style-type: none"> a. time when occurs b. quantity c. adhesiveness of sputum <p>7. What is the patient’s work of breathing?</p>

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3. Determine the patient's complete respiratory condition in the following way of observation:	<ol style="list-style-type: none">1. Evaluate the patient's general appearance.2. Determine if the patient is cyanotic.3. Determine if the patient is diaphoretic.4. Determine if the patient has nasal flaring.5. Determine if the patient has clubbing of the fingers.6. Determine if the patient has peripheral edema.7. Determine the shape of the patient's chest.8. Determine if the patient has asymmetrical chest movement when breathing.9. Determine if the patient has intercostal and/or sternal retractions.10. Determine if the patient uses accessory muscles when breathing.11. Determine if the patient has muscle wasting.12. Determine if the patient has venous distension.13. Determine if the patient has capillary refill.14. Determine if the patient has diaphragmatic movement when breathing.15. Determine the patient's breathing pattern:<ol style="list-style-type: none">a. eupneab. hypopneac. hyperpnead. bradypneae. tachypneaf. Kassmaul'sg. Cheyne-Stokesh. Biot's

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<p>4. Determine the patient's complete respiratory condition in the following ways by palpation and percussion.</p> <p>5. Determine the patient's complete respiratory condition in the following ways by auscultation:</p>	<p>i. apnea</p> <p>16. Determine the kind of cough the patient has:</p> <ol style="list-style-type: none"> a. normal b. serial c. midinspiratory d. Huff e. assisted. <p>17. Determine the quantity and quality of the patient's sputum.</p> <ol style="list-style-type: none"> 1. Determine the patient's pulse rate, rhythm, and force. 2. Determine if the patient has asymmetrical chest movements when breathing. 3. Determine if the patient has palpable rhonchi, indicating secretions in the airway. 4. Determine if the patient has crepitus. 5. Determine if tactile fremitus is present. 6. Determine if the patient has tracheal deviation. 7. Determine diaphragmatic excursion by percussion and areas of altered resonance. <p>1. Determine if the patient has bilaterally normal breath sounds.</p> <ol style="list-style-type: none"> a. vesicular b. tracheal c. bronchial d. bronchovesicular

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	<ol style="list-style-type: none"> 2. Determine if the patient has increased, decreased, absent, or unequal breath sounds. 3. Determine if the patient has rhonci (wheezing) or rales (crackles). 4. Determine if the patient has any stridor. 5. Determine if the patient has a friction rub. 6. Determine the patient's blood pressure.
<ol style="list-style-type: none"> 6. Determine and continue to monitor the patient's response to the treatment or procedure. 	<ol style="list-style-type: none"> 1. Determine the patient's vital signs and record them in the chart. 2. Monitor the patient's heart rhythm. 3. Auscultate the patient's breath sounds and record any changes. 4. Recommend a chest x-ray examination, as needed, to help determine the patient's condition. 5. Perform bedside spirometry. 6. Ask about the patient's feelings toward the treatment or procedure and write it in the chart.
<ol style="list-style-type: none"> 7. Evaluate the physician's orders and the patient's respiratory care plan; make any recommendations or changes, as needed. 	<ol style="list-style-type: none"> 1. Determine the treatment/procedure goal(s) after reviewing the orders and respiratory care plan. 2. Evaluate how appropriate the orders, respiratory care plan, and goal(s) are for the patient's disease or condition. 3. Make any recommendations to the respiratory care plan you believe are appropriate based on existing or new information. 4. Participate in developing the respiratory care plan.

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<p>8. Modify treatment or procedure and recommend any changes in the patient's respiratory care plan depending on the response.</p> <p>9. Record any treatment(s) and/or procedure(s) on the patient's chart and consult with the other members of the health care team.</p>	<ol style="list-style-type: none"> 1. Recommend changes as to how long a treatment or procedure should be given to a patient. 2. Stop the treatment or procedure if the patient has an adverse reaction to it. 3. Recommend cancellation of the physician's order for a treatment or procedure because of the patient's adverse reaction to it. <ol style="list-style-type: none"> 1. Record any treatment(s) and/or procedure(s) performed, including the date, time, frequency of therapy, medications, and ventilatory data. 2. Record and evaluate the patient's objective response to the treatment(s) and/or procedure(s) including: <ol style="list-style-type: none"> a. Record the following vital signs: heart rate and rhythm, respiratory rate, and blood pressure. b. Record the patient's breath sounds. c. Record the type of cough the patient has and the nature of the sputum. d. Record any adverse reactions the patient had to the treatment(s) and/or procedure(s). e. Record and evaluate the patient's subjective feelings and reactions to the treatment(s) and/or procedure(s). 3. Recheck any math work and make note of incorrect data. 4. Consult with other members of the health care team about significant clinical information regarding the patient.

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	<ol style="list-style-type: none"> 3. Inspect the patient’s chest x-ray to evaluate the patient’s response to care <ol style="list-style-type: none"> a. fundamentals of radiology b. patient positioning for a chest x-ray c. normal adult chest x-ray findings d. normal neonatal chest x-ray findings e. (C-T) ratio f. air bronchogram g. silhouette sign 4. Look for the presence of, or any changes in, pneumothorax, subcutaneous emphysema, or any other extrapulmonary air. 5. Look for the presence of, or any changes in, mediastinal shift. 6. Look for the position of any chest tubes. 7. Look for the presence of, or any changes in, pulmonary infiltrates or consolidation. 8. Look for the presence of, or any changes in, atelectasis. 9. Look for the positions of, or any changes in, hemidiaphragms. 10. Look for the presence of, or any changes in, hyperinflation. 11. Look for the presence of, or any changes in, pleural fluid. 12. Look for the presence of, or any changes in, pulmonary edema. 13. Look for the presence and position of any foreign bodies. 14. Check the chest x-ray for the size and patency of the

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<p>12. Interpretation of Blood Gases: Interpret the arterial blood gas results in order to determine how the patient is responding to respiratory care.</p> <p>13. Special Procedures: Assist the physician who is performing the following procedures:</p>	<p>patient's major airways.</p> <p>15. Check the x-ray for the position of the patient's endotracheal or tracheostomy tube.</p> <p>16. Check the chest x-ray for a sign that the cuff on the endotracheal or tracheostomy tube is overinflated.</p> <ol style="list-style-type: none"> 1. Assessment of oxygenation <ol style="list-style-type: none"> a. Age-based acceptable PaO₂. b. Evaluation of hypoxemia c. General relationship between inspired oxygen percentage and Pa₂ 2. Assessment of carbon dioxide and pH <ol style="list-style-type: none"> a. Clinical terminology for ABG's b. Evaluation of ventilatory and metabolic effects on acid-base status c. Primary blood gas classifications <ol style="list-style-type: none"> 1. Cardioversion 2. Bronchoscopy <ol style="list-style-type: none"> a. Recommend a bronchoscopy procedure to get additional information on the patient's condition. b. Select a fiberoptic bronchoscope for the planned procedure. c. Put the fiberoptic bronchoscope together, make sure that it works properly, and identify any problems with it. d. Fix any problems with the equipment.

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<p>14. Sleep and Breathing: Sleep apnea studies:</p>	<ul style="list-style-type: none"> e. Assist with the procedure. 3. Thoracentesis <ul style="list-style-type: none"> a. Recommend the insertion of a chest tube. b. Put a pleural drainage system together, make sure it works properly, and identify any problems with it. c. vacuum level. d. water seal e. drainage collection f. suction control g. pressure relief valve on the four-chamber system h. fix any problems with the pleural drainage system i. assist with the thoracentesis procedure 4. Transtracheal aspiration 5. Stress testing <ul style="list-style-type: none"> a. Review the patient’s chart for information on any previous pulmonary stress testing. b. Recommend pulmonary stress testing to get additional information on the patient’s condition. c. Assist with the procedure. 1. Review the patient’s chart for information on any previous sleep studies. 2. Assist with a sleep apnea study. 3. Interpret the results of a sleep study: <ul style="list-style-type: none"> a. Obstructive sleep apnea b. Central sleep apnea c. Mixed sleep apnea

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