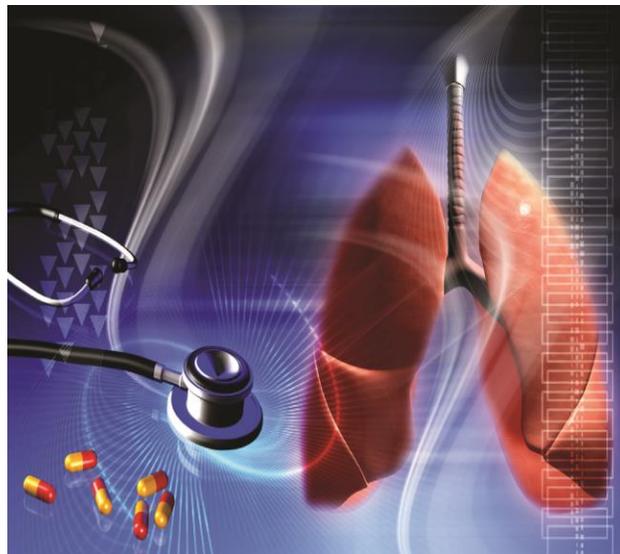


Clinical Handbook

Respiratory Therapy Program



Student Name: (Print) _____ Clinical Site: _____

Course Code: 1832L 2833L 2834L 2835L 2836L (Please circle appropriate rotation).

Semester: _____ Term: _____ Date of Term: (From) _____ (To) _____

Professor's Name: _____

This handbook contains program specific information vital to your educational experience. It is expected that all Respiratory Care students adhere to the policies and procedures, and complete all proficiencies contained in this handbook.

Introduction

The staff of Florida National University welcomes you to your clinical rotation in respiratory care. Knowing that knowledge is important, your involvement in this clinical experience will shape your future as a respiratory care practitioner. It is imperative that you actively participate and immerse yourself in this clinical practicum. Your requirements will include extensive reading, individual assignments, group projects, and demonstrate an array of clinical proficiencies throughout the clinical rotation. In addition to these requirements, you are expected to demonstrate promptness, professionalism and an attire befitting of the profession that you are about to embark. On behalf of the entire Respiratory Therapy faculty, I would like to thank you for accepting this challenge and the opportunity to be part of this experience as a respiratory therapy student.

Respectfully:

Jose Antonio Lammoglia, MA, RRT
Program Director, Respiratory Therapy
Allied Health Division
jlammoglia@mm.fnc.edu

Respiratory Therapy Program Mission

The mission is to prepare competent, qualified Registered Respiratory Therapist professionals who will enhance the quality of healthcare in their community. This will involve preparing individuals who have scientific and clinical knowledge, skills in applying the knowledge and understanding the human condition to differentiate among the various components of effective respiratory care including leadership, community involvement and a committed to respect a culture that values diversity.

Program Goal

The goal of this program is to provide academic and clinical opportunities through excellence in teaching and practicum to achieve competent Respiratory Therapists. The program strives to impart cognitive (knowledgeable), psychomotor (skills), and affective (behavior) learning domains that establishes comprehensive learning, innovation and development, and a philosophy that focuses on the needs of each student.

Respiratory Therapist General Duties

- Set up and operate devices such as mechanical ventilators, therapeutic gas administration apparatus, environmental control systems, and aerosol generators, following specified parameters of treatment.
- Provide emergency care, including artificial respiration, external cardiac massage, and assistance with cardiopulmonary resuscitation.
- Determine the requirements for treatment, such as type, method, and duration of therapy; precautions to take; and medication and dosages compatible with physicians' orders.
- Monitor patient's physiological responses to therapy, such as vital signs, arterial blood gases, and blood chemistry changes, and consult with physician if adverse reactions occur.
- Read prescription, measure arterial blood gases, and review patient information to assess patient condition.
- Work as part of a team of physicians, nurses and other health care professionals to manage patient care.
- Enforce safety rules and ensure careful adherence to physicians' orders.
- Maintain charts that contain patients' pertinent identification and therapy information.
- Inspect, clean, test, and maintain respiratory therapy equipment to ensure equipment is functioning safely and efficiently, ordering repairs when necessary.
- Educate patients and their families about their conditions and teach appropriate disease management techniques, such as breathing exercises and the use of medications and respiratory equipment.

In addition to performing respiratory care procedures, respiratory therapists are involved in clinical decision-making and patient education. The scope of practice for respiratory therapy includes, but is not limited to the:

- Acquiring and evaluation of clinical data
- Assessment of the cardiopulmonary status of patients
- Assisting and implementation of prescribed diagnostic studies such as arterial puncture and analysis, pulmonary function testing, and polysomnography
- Evaluation of data to assess the appropriateness of prescribed respiratory care
- Establishment of therapeutic goals for patients with cardiopulmonary disease
- Contribution, development, and modification of respiratory care plans
- Establishment of case management initiatives for patients with cardiopulmonary and related diseases
- Initiation of prescribed respiratory care treatments, evaluating and monitoring patient responses to such therapy and modifying the prescribed therapy to achieve the desired therapeutic objectives
- Recommendation, initiation and administration of prescribed pulmonary rehabilitation
- Promotion and continued support of patient, family, and community education
- Promotion and continued support of cardiopulmonary wellness, disease prevention, and disease management
- Participation of life support activities as required; and promoting evidence-based medicine; research; and clinical practice guidelines
- Familiarization of the various “Clinical Standards and Guidelines” presented by organization such as the American Association of Respiratory Care (AARC), American Thoracic Society (ATS), College of Chest Physician (CCP) and other nationally known organizations

Fundamental Materials for Achieving Competency

Below you will find a list of essentials items that each student must obtain:

Materials:

- Stethoscope
- Uniform per College Standard (baby blue scrubs with school logo, white lab coat with FNU logo or patch and white shoes, FNU photo identification)
- Black pen
- Pharmacology cards
- Bandage Scissors
- Calculator(battery powered)
- Clipboard/Pocket notebook
- Watch with second hand or digital
- Required reading material(clinical handbook, textbooks)

AARC Statement of Ethics and Professional Conduct¹

In accordance with the “position statement,” AARC Statement of Ethics, and Professional Conduct from the American Association for Respiratory Care, “the conduct of the professional activities of all Respiratory Therapist’s shall be bound by the following ethical and professional principles¹.” Therefore, Respiratory Therapists shall:

- Demonstrate behavior that reflects integrity, supports objectivity, and fosters trust in the profession and its professionals.
- Seek educational opportunities to improve and maintain their professional competence and document their participation accurately.
- Perform only those procedures or functions in which they are individually competent and which are within their scope of accepted and responsible practice.
- Respect and protect the legal and personal rights of patients, including the right to privacy, informed consent, and refusal of treatment.
- Divulge no protected information regarding any patient or family unless disclosure is required for the responsible performance of duty authorized by the patient and/or family, or required by law.
- Provide care without discrimination on any basis, with respect for the rights and dignity of all individuals.
- Promote disease prevention and wellness.
- Refuse to participate in illegal or unethical acts.
- Refuse to conceal, and will report, the illegal, unethical, fraudulent, or incompetent acts of others.
- Follow sound scientific procedures and ethical principles in research.
- Comply with state or federal laws that govern and relate to their practice.
- Avoid any form of conduct that is fraudulent or creates a conflict of interest, and shall follow the principles of ethical business behavior.
- Promote health care delivery through improvement of the access, efficacy, and cost of patient care.
- Encourage and promote appropriate stewardship of resources.

Effective 07/12
Revised 12/07
Revised 07/09
Revised 10/11
Revised 07/12
Revised 04/13
Revised 12/15
Revised 09/16
Revised 06/19

¹ AARC Statement of Ethics and Professional Conduct http://www.aarc.org/resources/position_statements/ethics.html

Policies and Processes by which Students May Perform Clinical Work while Enrolled in the Program: Essential Functions / Core Performance Standards

Specific health, physical and technical requirements are required from all candidates challenging the Respiratory Therapy program. The clinical practicum requires that each student be capable of demonstrating the following functions. The areas of concern are defined by gross and fine motor abilities, physical strength and endurance, mobility, hearing, visual, tactile, smell, reading, arithmetic, emotional stability, analytical and critical thinking, interpersonal and communicative skills. Each student must carefully review the following descriptions and acknowledge their full understanding of these requirements. **In accordance with the American with Disabilities Act (ADA), the Respiratory Therapy Program at Florida National College acts in accordance with all the standards. The attached *Essential Functions/Core Performance Standards Worksheet* provides the framework and categories that relate to an individual's functional ability, activities/attributes, and to any limitations/deficits of functional abilities that may exist.** The Respiratory Therapy Program shall implement these standards in combination with the professional scope of practice, job analysis, and expert consultation to make decisions related to the ability of the respiratory therapy student to perform the essential functions of respiratory care.

Essential Functions / Core Performance Standards

<p>1. Gross motor ability</p>	<p>1.1 Move within confined spaces 1.2 Sit and maintain balance 1.3 Stand and maintain balance 1.4 Reach above shoulders 1.5 Reach below waist</p>	<p>Skills: Grasp, hold, and read small instruments such as volume measuring devices. Lift medication vials to eyes to read. Record patient data in record or change the settings on equipment by turning knob and observe change(s). Squeeze suction catheter button. Squeeze medication vials to empty. Write in patient chart.</p>
<p>2. Fine motor ability</p>	<p>2.1 Pickup objects with hands 2.2 Grasp small objects with hands 2.3 Write clearly and neatly with pen or pencil 2.4 Type on a keyboard 2.5 Pinch/squeeze or pick up objects 2.6 Twist knobs with hands 2.7 Possess manual dexterity for sterility and infection control purposes.</p>	<p>Skills: Change equipment settings above head and below waist. Function in an ICU environment by moving about in an ICU room in order to perform procedures on the patient. Student must also read patient chart, equipment settings, and/or equipment displays. Sit or stand to record findings.</p>
<p>3. Physical Endurance</p>	<p>3.1 Stand at client's side during procedure 3.2 Sustain repetitive movements 3.3 Maintain physical tolerance (continue tasks throughout a shift) 3.4 Work and complete tasks at a reasonable pace</p>	<p>Skills: Bend to change equipment settings on floor, at knee level, waist level, chest level, eye level, or above head. Gather equipment and manually resuscitate patient. Make rapid adjustments if needed to ensure patient safety. Make way to patient room if an emergency is called using stairs. Turn to change settings on monitor while standing at patient bedside</p>
<p>4. Physical Strength</p>	<p>4.1 Lift 25 pounds 4.2 Carry equipment/supplies 4.3 Squeeze with hands (e.g., use of a manual resuscitator) 4.4 Able to push/roll 60 pounds 4.5 Move heavy object weighing from 10-50 pounds by using upper body strength.</p>	<p>Skills: Procedures such as CPT and CPR require that you stand, move, and perform repetitive procedures on patients throughout the day. Repeat this procedure periodically throughout a shift.</p>

<p>5. Mobility</p>	<p>5.1 Twist 5.2 Bend 5.3 Stoop/squat 5.4 Move quickly 5.5 Walk and climb ladders/stools/stairs</p>	<p>Skills: Help patient up in bed and from stretcher to bed and back. Carry medications, pulse oximeter, stethoscope, or other equipment to patient room. Push ventilator or other heavy equipment from respiratory care department to patient room. Lift equipment from bed height to shelf height above chest level.</p>
<p>6. Hearing</p>	<p>6.1 Hear normal and different speaking level sounds 6.2 Hear audible alarms 6.3 Hear telephones 6.4 Hear sounds with stethoscope(e.g., lungs and heart sounds)</p>	<p>Skills: Hear audible alarms such as a ventilator alarm. Hear overhead pages to call for emergency assistance. Listen to heart sounds to determine if heart is beating. Determine the intensity and quality of patient breath sounds in order to help determine a diagnosis. Listen to patient breath sounds to determine if patient is breathing.</p>
<p>7. Visual</p>	<p>7.1 Distinguish color 7.2 Distinguish color intensity 7.3 See emergency lights/lamps 7.4 See object up to 20 inches away 7.5 Use peripheral vision 7.6 Visually assess clients</p>	<p>Skills: Confirm settings visually such as with ventilator display. Read patient chart to determine correct therapy. Read settings on monitors and other equipment. Visually assess patient color to assess for hypoxia or any changes in patient condition.</p>
<p>8. Tactile</p>	<p>8.1 Detect environmental temperature 8.2 Detect temperature 8.3 Feel the differences in sizes, shapes (e.g. palpate artery/vein) 8.4 Feel vibrations (e.g. pulses)</p>	<p>Skills: Assess patient by feeling for pulse, temperature, tactile fremitus, edema, subcutaneous emphysema.</p>
<p>9. Smell</p>	<p>9.1 Detect odors from client 9.2 Detect smoke 9.3 Detect gas or noxious smells (e.g. gas leak or smoke)</p>	<p>Skills: Assess for unusual odors originating from the patient or environment requiring attention.</p>
<p>10. Reading</p>	<p>10.1 Read and interpret physicians' orders 10.2 Read and understand written documents 10.3 Read very fine or small print</p>	<p>Skills: Read and interpret physician orders and or physician, therapist, and nurse's notes. Read from a computer monitor screen. Gather data accurately, and in a reasonable amount of time to ensure safe and effective patient care relative to other caregivers.</p>
<p>11. Arithmetic</p>	<p>11.1 Calibrate equipment 11.2 Compute fractions 11.3 Convert numbers to metric 11.4 Count rates (e.g. pulses, breathing rate) 11.5 Tell time and measure time (duration) 11.6 Perform basic arithmetic functions add, subtract, multiply, divide 11.7 Read and understand columns of writing (e.g. flow sheets) 11.8 Read digital displays and graphic printouts 11.9 Read graphs (e.g. vital sign sheets, ventilator flow</p>	<p>Skills: Read and interpret patient graphics charts and graphic displays. Perform basic arithmetic functions in order to calculate minute ventilation, convert temperature, correctly place graduated tubing, and other functions.</p>

<p>12. Emotional Stability</p>	<p>11.10 Read measurement marks 11.11 Record numbers (chart observed parameters) 11.12 Use a calculator 11.13 Use measuring tools (e.g. thermometer, NIF, Peak Flow, VC)</p> <p>12.1 Establish therapeutic boundaries 12.2 Provide client with appropriate emotional support 12.3 Adapt to changing environment/stress 12.4 Deal with the unexpected (e.g. emergency situations, trauma) 12.5 Perform multiple responsibilities concurrently 12.6 Show appropriate compassion through communications</p>	<p>Skills: Provide for safe patient care despite a rapidly changing and intensely emotional environment. Perform multiple tasks concurrently such as delivering medication or oxygen in one room while performing an arterial blood gas in another (in an emergency room or general floor environment). Maintain enough composure to provide for safe effective patient care despite crisis circumstances.</p>
<p>13. Analytical Thinking</p>	<p>13.1 Evaluate outcomes 13.2 Prioritize tasks 13.3 Problem solve 13.4 Process information 13.5 Transfer/extrapolate knowledge from one situation to another 13.6 Use long and short term memory</p>	<p>Skills: Evaluate priorities and different sources of diagnostic information to help arrive at a patient diagnosis. Appropriately evaluate data in order to notify physician and nurses when necessary.</p>
<p>14. Critical Thinking</p>	<p>14.1 Identify cause-effect relationships 14.2 Plan/control activities for others 14.3 Synthesize knowledge and skills 14.4 Sequence information</p>	<p>Skills: Evaluate priorities and different sources of diagnostic information to help arrive at a patient diagnosis and treatment plan.</p>
<p>15. Interpersonal</p>	<p>15.1 Respect differences in clients 15.2 Establish rapport with clients and co-workers 15.3 Work effectively with physicians, staff, clients and their families</p>	<p>Skills: Communicate effectively under any circumstance (courteous or offensive) with patients, families, doctors, nurses and other staff in order to meet therapeutic goals for the patient.</p>
<p>16. Communication</p>	<p>16.1 Convey information through writing 16.2 Explain procedure(s) 16.3 Give oral reports 16.4 Speak clearly and distinctly 16.5 Speak on the telephone</p>	<p>Skills: Communicate effectively and appropriately with doctors, nurses, patients, family, and other staff in order to provide for most effective and efficient patient care.</p>

Clinical Requirements and Evaluation during Clinical Externship

There is a Dress Code Requirement for all clinical rotation / practicum's due to of the environment in which a health care provider practices. Each student must adhere to the following guidelines to ensure his/her safety and the safety of the patients within the facility. The dress code states that:

1. The student is expected to dress in appropriate attire for all clinical sessions as outlined below:
 - 1.1 The uniform consists of mostly white closed-toe and heel leather shoes, blue scrubs with the school logo inscribed, plain white tee shirts worn under the scrub top and a white long-sleeved hip-length lab coat that contains a respiratory therapy student patch on the left sleeve.
 - 1.2 The Florida National College and hospital issued picture ID must appear in a visible part of the uniform at all times in the classroom or clinical setting.
 - 1.3 The uniform should always be clean and wrinkle free and the shoes and shoelaces free of a dirty appearance.
2. When in uniform, jewelry must be kept to a minimum
 - 2.1 Earrings may not exceed one pair and must be small earrings for safety and aesthetic reasons.
 - 2.2 Limiting finger rings to plain wedding bands is an accepted practice
 - 2.3 Bracelets, necklaces, nose, tongue rings, or decorative pins are acceptable in the clinical settings
3. When in uniform your fingernails are important.
 - 3.1 Nails are to be kept short at all times and if nail polish is used it should be a natural colored polish.
 - 3.2 The use of acrylic, decorative, or false nails increases the possibility harboring bacterial and fungal infections. Therefore, the use of these aesthetic does not comply with this dress code.
 - 3.3 The cuticles and area underneath the nail tips must be free of dirt or oil.
4. Hair must be clean and pulled back from the face in a manner that prevents it from falling over the shoulders or contaminate sterile fields while in uniform.
 - 4.1 Facial hairs need to be well groomed.
5. Cosmetics and fragrances while in uniform.
 - 5.1 Perfumes or highly scented personal products are not be used because the fumes can cause breathing difficulties to most patients.
 - 5.2 While in uniform, the student's personal hygiene must be clean and free from body odor.
6. No smoking or gum chewing during clinical/practicum time
 - 6.1 Most hospitals establish a smoke-free environment to within 250 feet of the hospital grounds.
7. Eating, and/or drinking is allowed only in designated areas while at clinical/practicum.
8. The hospital and/or the College reserve the right to require any student who is not correctly dressed to leave the hospital.

Clinical Policies

1. Make sure your clinical instructor knows where you are during clinical time, and if your assignment has changed from its original arrangement, you must notify them accordingly.
2. Before leaving your clinical site, notify your clinical instructor and make sure that he/she dismisses you from the clinical site and is aware of any incomplete assignments.
3. Each student must attend a meeting related to advances in the field of respiratory therapy or medicine conducted by a physician or expert. Examples of this may include physician rounds, invasive and non-invasive procedures, seminars, or formally structured meetings conducted during your clinical rotation. This mandatory requirement is an excellent opportunity to enhance your learning activity. Notify your clinical instructor so they may include other students to these same educational opportunities. This is your responsibility and a courtesy to your fellow classmates. Contact with any specific physician should include activities that are measurable and in direct relationship to the subject matter.
4. The notice of privacy practices is a document that explains the confidentiality of patients and that all information is strictly confidential. Breach of confidentiality will result in disciplinary action.
5. Students may not conduct personal telephone calls or texting during clinical hours.
6. You should notify your clinical instructor if you become ill during your clinical time to consider the appropriate medical attention and a course of action. You will have to make up all clinical time missed by making the necessary arrangements with your instructor. You are responsible for costs incurred during treatment.
7. **Students will perform the psychomotor skills required of a respiratory therapist. Required proficiency check-off evaluations will be used as an evaluation and grading guide for the psychomotor and cognitive skills during these and all clinical/laboratories sessions.** In addition, being punctual and actively participating each time is required. Dress code is essential as part of your affective behavior documentation. You must bring your school utensils such as stethoscope, textbooks, notebook, calculator, blunt/bandage scissors, black pen and school / hospital ID. Please refer to the list of “fundamental materials listed in this clinical handbook.
8. In order to ‘pass’ any proficiency, the student must consistently perform the objective according to the accepted procedure standard. Each student must then continue to provide evidence of a ‘passing’ performance on objectives previously passed. Students, who are not capable of re-demonstrating these safe performances, may be re-assessed, suspended, or possibility termination from the clinical course and/or program.
9. Students who consistently have trouble with their clinical skills must go to the campus lab for remediation. Students failing to master any specific skill and or arrange to complete the necessary hours of clinical time will require academic advisement and may be required to withdraw from the course.
10. **Each student must verbally communicate any tasks performed during their clinical rotation.** This includes but may not be limited to, patient diagnosis, history and physical, diagnostic testing, therapy outcomes and prognosis. In addition, you will have to complete a daily **Clinical Activity Log** that provides a detailed description of your clinical observations and activities for that particular day.
11. **Student must complete a total of 24 hrs./week rotations totaling 192 hours/term.**
 - Student can miss 24 hours of practicum without been dropped from the course and required to retake it with the following cohort.
 - Student can miss an extra 24 hours with proof of illness and or death in immediate family.
 - No makeups allowed. Failure to comply will impede passing the course.

Respiratory Clinical/Practicum I, II, III, IV, and V: All students must pass the clinical performance evaluations, practical exam, (all inclusive learning domains cognitive, psychomotor, and affective behaviors) and clinical case study analysis with the percentage of 80 (“B”) or above. Failure to achieve this threshold will require that the student repeat the practicum before advancing to any subsequent level.

Respiratory Clinical: Objectives

Patient Assessment: Advanced Skills

Unit **ONE**:

Objectives:

Upon completion of this section, the student will be able to:

1. Describe the significance of measuring body temperatures, ranges, differences in degrees Fahrenheit and Celsius for all patient populations, and causes.
2. Explain the significance of the pulse; understand the normal ranges for adults and children; causes of abnormal pulses and how rhythm and strength play an important role.
3. Describe how to assess the work of breathing.
4. Describe various factors that influence blood pressure such as pumping mechanism, resistance elasticity, and viscosity of the cardiovascular system.
5. Describe systolic and diastolic blood pressure, ranges, causes of hemodynamic stability and instability.
6. Define and identify sound characteristics and the physical properties when distinctive conditions affect sound conduction and transmission.
7. Identify the most common types of stethoscopes including their advantages and disadvantages.
8. Determine and describe the various respiratory terminologies, rates, patterns, and ranges.
 - a. Identify the four major classifications of normal breath sounds and their characteristics, location, and theory of sound production by performing auscultation.
 - b. Identify the four major classification of abnormal breath sounds and their characteristics, location, and theory of sound production by performing auscultation.
9. Describe and identify the anatomical landmarks of the chest.
10. Explain and apply the physical assessment techniques of inspection, palpation, and percussion of the chest.
11. Differentiate among tones and changes in air versus tissue densities such as hyper-resonance, resonance, dullness, and flatness.
12. Differentiate various spinal abnormalities and their effects on respiratory structures.
13. Describe the appearance of digital clubbing and the significance these changes cause.
14. Describe and differentiate between the various abnormalities of the sternum.
15. Implement the appropriate medical charting that documents the assessment procedures performed on each patient.
16. Apply infection control guidelines and standards associated with equipment and procedures, according to OSHA regulations and CDC guidelines.
17. Administer, evaluate, and recommend a pharmacology regimen to a patient.

Unit One: **Patient Assessment**

Competency: Perform a comprehensive patient assessment for a given patient

Rationale: The Respiratory Therapist must be able to recognize, interpret, and perform patient assessment procedures that will lead to appropriate therapeutic recommendations such as administering therapy in an effective manner, evaluate progress and to recognize adverse reactions to therapy.

Completion date: _____

1. _____ The student accurately locates the corresponding medical chart, obtains, and interprets (normal and abnormal) information relative to the case.
2. _____ Gathers' the pertinent *Subjective* information on a given patient.
3. _____ Gathers' the pertinent *Objective* information on a given patient.
4. _____ Utilize the collected information from steps #3 and 4 to interpret and develop an *Analysis* (assessment) on the patient.
5. _____ Demonstrate an ability to incorporate *subjective, objective, and assessment techniques* to develop a *plan*.
6. _____ Applies' the seven decision-making steps (**Therapeutic Decision Making**) to formulate a respiratory care treatment plan.

Patient Assessment: **Therapeutic Decision Making**

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Recognize problems <ol style="list-style-type: none"> a) Knowledge of normal situation(s) b) Trigger of abnormal situation(s) 2. Define problem(s) <ol style="list-style-type: none"> a) Gather appropriate information (subjective and objective) b) Analyze and interpret information c) Draw conclusions 3. Specify patient goal(s)/therapeutic objective(s) <ol style="list-style-type: none"> a) Return patient to normal –OR– b) Return patient to baseline, if chronic condition 4. Develop modality alternatives to meet goal(s) <ol style="list-style-type: none"> a) Match goal(s) of therapeutic modalities to goal(s) specified in Step#3² 5. Select modalities <ol style="list-style-type: none"> a) Determine availability b) Evaluate benefit versus risk(s)³ 6. Implement decision(s) <ol style="list-style-type: none"> a) Follow applicable laws b) Follow hospital and department policies and procedures (<i>protocols</i>) 7. Evaluate patient <ol style="list-style-type: none"> a) Gather appropriate information b) Evaluate for adverse reaction(s) c) Evaluate for change in patient status after intervention <ol style="list-style-type: none"> 1) Goal(s) accomplished 2) Acceptable progress toward goal(s) 3) Unacceptable, but some progress 4) Movement away from goal(s) <p>[if '1' then D/C therapy; if '2', '3', or '4', return to step #2]</p> | <ol style="list-style-type: none"> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ |
|--|--|

Comments: acceptable omitted unacceptable pass repeat Score _____

Signatures: Student: _____ Instructor: _____ Date: _____

² (See AARC Clinical Practice Guidelines)

³ Risks (e.g. time, cost, pain, morbidity, mortality)

Patient Assessment: **Lung and Thorax Assessment**

1. **Patient Medical Record Review and Data Evaluation**

- a) Verifies, interprets and evaluates physician's orders or protocol by reviewing patient's records.
- b) Examines chart for relevant patient data/notes (diagnosis, medication, therapies, radiographs, laboratory results, hemodynamic, electrocardiograms, sleep reports.)
- c) Collects and evaluates information obtained in "b"

1. _____

2. **Equipment and Patient Preparation**

- a) Washes hands or applies disinfectant and demonstrates the use of gloves and provide privacy
- b) Selects, obtains, assembles equipment correctly, and verifies function (troubleshoot when indicated)
- c) Applies personal protective equipment (PPE), observes precautions.
- d) Uses two patient identifiers and introduces self and corresponding department
- e) Explains purpose and objectives of the procedure and confirms patient understanding
- f) Position patient for procedure, assess vital signs (including SpO2) and LOC

3. **Assessment and Implementation**

- a) Inspect anterior, lateral and posterior chest, noting shape, configuration and symmetry. Inspect the neck muscles, trapezius, tracheal position and skin color. Assess for signs of distress, nasal flaring, intercostal retractions, etc. Determine type of breathing (Regular or abnormal: Paradoxical breathing, Kussmaul, Cheyne-stokes, Biot's, Apneustic, Ataxic and/or obstructive type of breathing).
- b) Palpate the anterior chest body landmarks, clavicles, suprasternal notch, manubrium, the angle of Louis, sternum, xiphoid process and costal angle. Recognize landmarks for RUL, RML, RLL, LUL and LLL. Assess for crepitus.
- c) Palpate posterior chest landmarks: Upper lobes C7 (the apex of lung) to T3, lower lobes T3 to T10 on exhalation, and T3 to T12 on inhalation. Test for tactile fremitus, crepitus, and symmetric chest expansion.
- d) Percuss anterior and posterior chest determine resonance, hyper-resonance or dull sounds.
- e) Auscultate anterior and posterior chest determine bronchial, bronchovesicular, vesicular and/or adventitious sounds. Assess for vocal fremitus
- f) Assess distal digital fingertips for clubbing and/or cyanosis.
- g) Draw conclusions and collect findings.

2. _____

4. **Follow-up**

- a) Ensures patient comfort, safety and washes hands and/or applies disinfectant
- b) Records pertinent patient data in chart or departmental records
- c) Recommend any appropriate therapy and/or make any necessary adjustments.

3. _____

Comments: acceptable omitted unacceptable pass repeat Score _____

Signatures: Student: _____ Instructor: _____ Date: _____

Patient Assessment: **Heart, Neck Vessels and Peripheral Vascular Assessment**

1. Patient Medical Record Review and Data Evaluation

- a) Verifies, interprets and evaluates physician’s orders or protocol by reviewing patient’s data.
- b) Examines chart for relevant patient data/notes (diagnosis, medication, therapies, radiographs, laboratory results, hemodynamic, electrocardiograms, sleep reports.)
- c) Collects and evaluates information obtained in “b”

Equipment and Patient Preparation

- a) Washes hands or applies disinfectant and demonstrates the use of gloves and provide privacy
- b) Selects, obtains, assembles equipment correctly, and verifies function (troubleshoot when indicated)
- c) Applies personal protective equipment (PPE), observes precautions.
- d) Uses two patient identifiers and introduces self and corresponding department
- e) Explains purpose and objectives of the procedure and confirms patient understanding
- g) Position patient for procedure and assess vital signs (including SpO2) and LOC

3. Assessment and Implementation

- a) Inspect anterior chest for deformities, precordium for heaves, and the carotid arteries for pulsations.
- b) Assess for jugular venous distention (position 30-45 degrees, locate top height of pulsation, locate sternal angle, estimate difference between parallel line and top of pulsations; > 3cm= heart failure)
- c) Palpate carotid arteries (one at a time), the apex of the heart (5th left-ICS MCL) locate PMI. Palpate the precordium at the left sternal border and the base looking for pulsations.
- d) Auscultate the carotid arteries using the bell (if narrowing=bruits)
- e) Identify the auscultatory areas and using the diaphragm to auscultate the Erb point, identify S1,S2, heart rhythm and heart rate, auscultate aortic, pulmonic, and mitral valve areas. Listen for extra heart sounds S3 and S4. Listen for murmurs.
- f) Assess arterial pulses, radial, brachial, femoral, popliteal, posterior tibialis and dorsalis pedis.
- g) Assess for capillary refill.
- h) Evaluate lower extremities for pedal edema.
- i) Draw conclusions and collect findings.

5. Follow-up

- a) Ensures patient comfort, safety and washes hands and/or applies disinfectant
- b) Records pertinent patient data in chart or departmental records
- c) Recommend any appropriate therapy and/or make any necessary adjustments.

1. _____

2. _____

3. _____

Comments: ✓ acceptable ⊙ omitted ☒ unacceptable pass repeat Score _____

Signatures: Student: _____ Instructor: _____ Date: _____

Patient Assessment: Hemodynamic Monitoring: **HEMODYNAMIC MEASUREMENTS**

1. Equipment and Patient Preparation

- a) Verifies, interprets and evaluates physician's orders or protocol
- b) Examines chart for any other patient data/notes (diagnosis, medication, therapies, radiographs, laboratory results)
- c) Washes hands or applies disinfectant
- d) Selects, obtains, assembles equipment correctly, verifies function (Troubleshoot equipment if Indicated)
- e) Applies personal protective equipment (PPE), observes standard precautions and transmission based isolation procedures as appropriate
- f) Identifies patient, introduces self and department
- g) Explains purpose of the procedure and confirms patient understanding and follow directions if necessary under any circumstance

2. Assessment and Implementation

- a) Verifies no relative or absolute contraindications exist, modifies procedure accordingly
- b) Assesses patient (vital signs, SpO₂, breath sounds, ventilatory status)
- c) Identifies components of Swan-Ganz catheter:
 1) Inflation lumen port 2) Distal lumen port 3) Proximal lumen port 4) Thermistor connection 5) Proximal lumen orifice 6) Balloon 7) Distal orifice
- d) Identifies proper injectate site (proximal port)
- e) Identifies pressure waves; states the normal pressure ranges for each:
 1) CVP 2) RA 3) RV systolic 4) RV diastolic 5) PA systolic 6) PA diastolic 7) PAP mean 8) PWP
- f) Corrects any malfunctions of pressure measuring system
- g) Records cardiac output from monitor for a minimum of three injection within 10%
- h) Averages three measurements
- i) Interprets all data obtained

3. Follow-up

- a) Ensures patient comfort and safety and returns all lines and monitoring parameters to previous levels when finished
- b) Disposes of infectious waste and washes hands and/or applies disinfectant
- c) Records pertinent patient data in chart or departmental records
- d) Notifies appropriate personnel and makes necessary recommendations and or modifications to the patient care plan

Comments: acceptable omitted unacceptable

pass repeat

Score _____

Signatures: Student: _____ Instructor: _____ Date: _____

1. _____		
23. _____		

Unit Two: Medical Gas Therapy

Competency: Evaluate, recommend, and administer the appropriate oxygen therapy for a given patient

Rationale: Oxygen is a prescribed drug commonly administered to patients in requiring emergency life support, pulmonary disability, and post-operative states that have or may develop cardiopulmonary complications. Administration of oxygen and other medical gases is one of the main duties of the Respiratory Therapist; hence, a thorough understanding of the goals, indications, contraindications, and hazards is necessary. The Respiratory Therapist must be able to evaluate (assessment of need), recommend (appropriateness of modality), and administer (accurately dispense) all medical gas modalities. Administering oxygen therapy also compels providers of health care providers to recognize adverse reactions to therapy.

Completion date: _____

The student is able to locate oxygen zone valves and demonstrate the role of the Respiratory Therapist in a mock fire drill.

1. ____ The student administers oxygen therapy as prescribed by a physician's or their assistant.
2. ____ The student is able to demonstrate the use of oxygen analyzers.
3. ____ The student is able to demonstrate the use of a pulse oximeter.
4. ____ The student is able to demonstrate the use of an oxygen cylinder with their regulator.
5. ____ The student is able to evaluate and recommend the oxygen therapy for a given patient.
6. ____ The student applies the seven decision-making steps (**Therapeutic Decision Making**) to formulate a respiratory care treatment plan.

Oxygen Supply Systems

Unit TWO:

Objectives:

Upon completion of this section, the student will be able to:

1. Identify the contents of medical gas cylinders
2. Identify the markings on a medical gas cylinder as defined by the Department of Transportation (DOT)
3. Differentiate between the American Standard Safety System (ASSS) index for large cylinders, the Diameter Index Safety System (DISS) and the Pin Index Safety System (PISS) for small cylinders.
4. Demonstrate the safe handling, transport, and storage of medical gas cylinders.
5. Describe the two main types of valves found on “E” and “H” medical gas cylinders and their functions.
6. Identify the components of a bulk liquid system.
7. Identify the components of a reserve system.
8. Operate and troubleshoot an air compressor.
9. Identify the components of a single-stage and a multistage regulator.
10. Identify the components of a bourdon gauge regulator.
11. Identify the components of a Thorpe tube flowmeter.
12. Differentiate between a pressure-compensated and a non-pressure compensated flowmeter.
13. Calculate the duration of flow of a cylinder.
14. Set up and safely operate a blender.
15. Locate and identify zone valves in a healthcare facility.
16. Identify and safely use wall outlet quick-connect systems.
17. Describe the safety features within an oxygen piping system.
18. Discuss the purpose of a zone valve and a station outlet.
19. Understand the characteristics of a small and large liquid oxygen reservoir and the advantages and disadvantages of each.
20. Differentiate between types of concentrators available.
21. Describe the principles of operation.
22. Describe how liter flow affects the output (concentration) during operation.

Oxygen Therapy: **Therapeutic Decision Making**

- | | |
|--|---|
| <p>1. Recognize problems</p> <ul style="list-style-type: none"> a) Knowledge of normal situation(s) b) Trigger of abnormal situation(s) <p>2. Define problem(s)</p> <ul style="list-style-type: none"> a) Gather appropriate information (subjective and objective) b) Analyze and interpret information c) Draw conclusions <p>3. Specify patient goal(s)/therapeutic objective(s)</p> <ul style="list-style-type: none"> a) Return patient to normal –OR– b) Return patient to baseline, if chronic condition <p>4. Develop modality alternatives to meet goal(s)</p> <ul style="list-style-type: none"> a) Match goal(s) of therapeutic modalities to goal(s) specified in Step#3 ¹ <p>5. Select modalities</p> <ul style="list-style-type: none"> a) Determine availability b) Evaluate benefit versus risk(s)¹ <p>6. Implement decision(s)</p> <ul style="list-style-type: none"> a) Follow applicable laws b) Follow hospital and department policies and procedures (<i>protocols</i>) <p>7. Evaluate patient</p> <ul style="list-style-type: none"> a) Gather appropriate information b) Evaluate for adverse reaction(s) c) Evaluate for change in patient status after intervention <ul style="list-style-type: none"> 1) Goal(s) accomplished 2) Acceptable progress toward goal(s) 3) Unacceptable, but some progress 4) Movement away from goal(s) <p style="margin-left: 40px;">[if '1' then D/C therapy; if '2', '3', or '4', return to step #2]</p> | <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p> <p>5. _____</p> <p>6. _____</p> <p>7. _____</p> |
|--|---|

Comments: ✓ acceptable ⊖ omitted ☒ unacceptable pass repeat Score _____

Signatures: Student: _____ Instructor: _____ Date: _____

Medical Gas Therapy: **Oxygen Supply Systems (Flowmeters, compressors and blender)**

1 Patient Medical Record Review and Data Evaluation

- a) Verifies, interprets and evaluates physician's orders or protocol by reviewing data in the patient record
- b) Examines chart for relevant patient data/notes (diagnosis, medication, therapies, radiographs, laboratory results, hemodynamic, electrocardiograms, sleep reports.)
- c) Collects and evaluates information obtained in "b"

1. _____

2 Equipment and Patient Preparation

- a) Washes hands or applies disinfectant and demonstrates the use of gloves
- b) Selects, obtains, assembles equipment correctly, and verifies function (troubleshoot if indicated)
- c) Applies personal protective equipment (PPE), observes precautions.
- e) Uses two patient identifiers and introduces self and corresponding department
- f) Explains purpose and objectives of the procedure and confirms patient understanding
- g) Educates patient on the safety of the modality

3 Assessment and Implementation

- a) Positions patient for procedure, assess vital signs, SpO2, breath sounds and ventilator status.
- b) Demonstrate proper use of oxygen delivery devices differentiate between a pressure-compensated and a non-pressure compensated flowmeter.
- c) Demonstrate proper operation and troubleshooting of an air compressor.
- d) Set up and safely operate a blender
- e) Attaches therapeutic modality(device) to oxygen adapter or humidifier
- f) Adjusts flow-meter to prescribed or appropriate liter flow
- g) Positions the interface properly and comfortably on patient's face
- h) Assesses effectiveness of therapy and/or makes necessary adjustments

2. _____

4 Follow-up

- a) Ensures patient comfort and safety
- b) Disposes of infectious waste and washes hands and/or applies disinfectant
- c) Records pertinent patient data in chart or departmental records
- d) Disconnects and turns unit off if not a continuous modality.
- e) Replaces previous modalities and ensures stability of oxygenation parameters
- f) Notifies appropriate personnel and makes necessary recommendations and or modifications to the patient care plan

3. _____

Comments: ✓ acceptable ☐ omitted ☒ unacceptable

☐ pass ☐ repeat

Score _____

Signatures: Student: _____ Instructor: _____ Date: _____

Medical Gas Therapy: Gas Pressure and Flow Regulation: **Tanks and Regulator Set-up**

1. Gas Pressure and Flow Regulation

- a) Verifies, interprets and evaluates physician's orders or protocol by reviewing patient's records
- b) Examines chart for relevant patient data/notes (diagnosis, medication, therapies, radiographs, laboratory results, hemodynamic, electrocardiograms, sleep reports.)
- c) Collects and evaluates information obtained in "b"
- d) Identifies and verifies contents of cylinder primarily by the information listed on the label and color as a secondary indication
- e) Identifies and interprets marking on cylinder
- f) Identify the safety systems on large and small cylinders, wall outlet, regulators, and flow-meter(s)
- g) Selects the proper regulator and flow-meter for large and small cylinders or the correct quick connect for a wall outlet
- h) Observes proper handling, transportation, and storage of cylinder techniques
- i) Performs proper 'cracking' of cylinder (alerts bystanders)
- j) Verifies presence of "metal rimmed washer" seals on 'E' cylinder regulators
- k) Properly connects regulator to cylinder (corrects any leaks)
- l) Properly opens cylinder valve for gas delivery (reads cylinder pressure correctly)
- m) Identifies type of flow-meter (compensated versus non-compensated)
- n) Connects flow-meter correctly to wall outlet
- o) Adjusts liter flow as prescribed
- p) Calculate duration of flow of a cylinder
- q) Position the interface properly and comfortably on patient's face (if indicated)
- r) Assess effectiveness and make necessary adjustments

1. _____

2. Follow-up

- a) Turn off unit if not a continuous modality
- b) Closes cylinder valve and bleeds pressure from regulator
- c) Removes regulator from cylinder
- d) Stores cylinder properly
- e) Discusses hazards associated with cylinder and regulator

2. _____

Comments: ✓ acceptable ⊖ omitted ☒ unacceptable

pass repeat

Score _____

Signatures: Student: _____ Instructor: _____ Date: _____

Oxygen Therapy Administration

Unit **TWO**:

Objectives:

Upon completion of this section, the student will be able to:

1. Identify and assemble various oxygen delivery devices, such as the nasal cannula, high-flow nasal cannula, simple mask, partial re-breathing mask, non-re-breathing mask, high-flow non-re-breathing mask and air entrainment (Venturi) masks.
2. Classify each oxygen delivery device as high-flow or low-flow.
3. Estimate the FIO₂ for an oxygen delivery device, given the operating flow rate.
4. Given a patient scenario, select and administer the appropriate oxygen device.
5. Demonstrate effective communication skills needed for patient-practitioner interaction.
6. Calculate inspiratory flow demands and total flows delivered for a given FIO₂, using air-to-oxygen mixing ratios.
7. Assess a patient for response to oxygen therapy.
8. Identify and correct common problems with oxygen delivery devices.

Medical Gas Therapy: **Oxygen Therapy**

1 Patient Medical Record Review and Data Evaluation

- a) Verifies, interprets and evaluates physician's orders or protocol by reviewing data in the patient record
- b) Examines chart for relevant patient data/notes (diagnosis, medication, therapies, radiographs, laboratory results, hemodynamic, electrocardiograms, sleep reports.)
- c) Collects and evaluates information obtained in "b"

1. _____

2 Equipment and Patient Preparation

- a) Washes hands or applies disinfectant and demonstrates the use of gloves
- b) Selects, obtains, assembles equipment correctly, and verifies function
- c) Troubleshoot equipment when indicated
- d) Applies personal protective equipment (PPE), observes standard precautions and transmission based isolation procedures when applicable
- e) Uses two patient identifiers and introduces self and corresponding department
- h) Explains purpose and objectives of the procedure and confirms patient understanding
- i) Educates patient on the safety of the modality

3 Assessment and Implementation

- a) Positions patient for procedure
- b) Assesses patient (vital signs, SpO₂, breath sounds, ventilatory status)
- c) Attaches therapeutic modality(device) to oxygen adapter or humidifier
- d) Adjusts flow-meter to prescribed or appropriate liter flow
- e) Positions the interface properly and comfortably on patient's face
- f) Estimate the FiO₂ for an oxygen delivery device, given the operating flow rate.
- h) Confirms fit and verifies patient comfort
- i) Assesses effectiveness of therapy and/or makes necessary adjustments

2. _____

4 Follow-up

- a) Ensures patient comfort and safety
- b) Disposes of infectious waste and washes hands and/or applies disinfectant
- c) Records pertinent patient data in chart or departmental records
- g) Disconnects and turns unit off if not a continuous modality.
- h) Replaces previous modalities and ensures stability of oxygenation parameters
- i) Notifies appropriate personnel and makes necessary recommendations and or modifications to the patient care plan

3. _____

Comments: ✓ acceptable ⊙ omitted ☒ unacceptable

pass repeat

Score _____

Signatures: Student: _____ Instructor: _____ Date: _____

Monitoring: Oxygen Analyzer

Unit Three:

Objectives:

Upon completion of this section, the student will be able to:

1. Describe the proper use of an oxygen analyzer
2. Given a specific oxygen analyzer, identify its component parts.
3. Calibrate an oxygen analyzer to room air and 100% oxygen.
4. Analyze the FIO₂ on a given oxygen delivery system.
5. Describe the effects of moisture buildup and pressure on the measured FIO₂.
6. Describe the differentiating oxygen percentages measureable within different enclosures.

Monitoring: **OXYGEN ANALYZER**

1. **Patient Medical Record Review and Data Evaluation**

- a) Verifies, interprets and evaluates physician's orders or protocol by reviewing data in the patient record
- b) Examines chart for relevant patient data/notes (diagnosis, medication, therapies, radiographs, laboratory results, hemodynamic, electrocardiograms, sleep reports.)
- c) Collects and evaluates information obtained in "b"

1. _____

2. **Equipment and Patient Preparation**

- a) Washes hands or applies disinfectant and demonstrates the use of gloves
- b) Selects, obtains, assembles equipment correctly, and verifies function
- c) Troubleshoot equipment when indicated
- d) Applies personal protective equipment (PPE), observes standard precautions and transmission based isolation procedures when applicable
- e) Uses two patient identifiers and introduces self and corresponding department
- f) Explains purpose and objectives of the procedure and confirms patient understanding
- g) Educates patient on the safety of the modality if applicable
- h) Positions patient for procedure

2. _____

3. **Implementation and Assessment**

- a) Assembles oxygen delivery device to be analyzed
- b) Assembles additional oxygen flow meter and attaches nipple adaptor
- c) Secures oxygen connecting tubing to the adaptor
- d) Exposes sensor to room air to establish baseline (low cal) and adjust accordingly.
- e) Exposes sensor to 100% source gas to establish second point (high cal) and adjust accordingly
- f) Analyze desired oxygen source then allows analyzer reading to stabilize
- g) Assesses patient (vital signs, SpO₂, breath sounds, ventilatory status)
- h) The FIO₂ is adjusted according to lab result, the physician orders, weaning protocols, or any combinations of these elements.

3. _____

4. **Follow-up**

- a) Ensures patient comfort and safety
- b) Disposes of infectious waste and washes hands and/or applies disinfectant
- c) Records pertinent patient data in chart or departmental records
- d) Notifies appropriate personnel and makes necessary recommendations and or modifications to the patient care plan

4. _____

Comments: ✓ acceptable ⊖ omitted ☒ unacceptable

pass repeat

Score _____

Signatures: Student: _____ Instructor: _____ Date: _____

Noninvasive Blood Gas Monitoring: **PULSE OXIMETRY**

1. **Patient Medical Record Review and Data Evaluation**

- a) Verifies, interprets and evaluates physician's orders or protocol by reviewing data in the patient record
- b) Examines chart for relevant patient data/notes (diagnosis, medication, therapies, radiographs, laboratory results, hemodynamic, electrocardiograms, sleep reports.)
- c) Collects and evaluates information obtained in "b"

1. _____

2. **Equipment and Patient Preparation**

- a) Washes hands or applies disinfectant and demonstrates the use of gloves
- b) Selects, obtains, assembles equipment correctly, and verifies function
- c) Troubleshoot equipment when indicated
- d) Applies personal protective equipment (PPE), observes standard precautions and transmission based isolation procedures when applicable
- e) Uses two patient identifiers and introduces self and corresponding department
- f) Explains purpose and objectives of the procedure and confirms patient understanding
- g) Educates patient on the safety of the modality if applicable
- h) Positions patient for procedure

2. _____

a) **Implementation and Assessment**

- b) Positions patient for procedure
- c) Assesses patient by measuring the patient's pulse rate manually and/or by ECG monitor(if applicable)
- d) Confirms the FIO₂ and/or modality settings in the patient's room
- e) Turns on the oximeter and verifies alarm settings
- f) Selects a site for the probe application and checks for adequate perfusion; removes nail or artificial nails if necessary
- g) Allows for proper stabilization
- h) Observes the pulse rate on the pulse oximeter and correlates it with the manually measure rate
- i) Records the pulse rate, oxygen saturation, respiratory rate

3. _____

3. **Follow-up**

- a) Ensures patient comfort and safety
- b) Disposes of infectious waste and washes hands and/or applies disinfectant
- c) Disconnects and turns unit off if not a continuous pulse oximeter monitoring
- d) Records pertinent patient data in chart or departmental records
- e) Notifies appropriate personnel and makes necessary recommendations and or modifications to the patient care plan

4. _____

Comments: ✓ acceptable ⊖ omitted ☒ unacceptable

pass repeat

Score _____

Signatures: Student: _____ Instructor: _____ Date: _____

Unit Four: Humidity and Aerosol Therapy

Competency: Evaluate, recommend, and administer the appropriate humidification/aerosol therapy for a given patient.

Rationale: In respiratory therapy, humidity and aerosol therapy play an intricate role in the management of many patients with acute or chronic diseases and/or conditions. There are a vast number of types and brands of devices used in conjunction with oxygen therapy, bronchial hygiene, mechanical ventilation, and home care. The Respiratory Therapist must be competent in both the selection of equipment and the application of humidity and aerosol therapy. This will enable therapists to evaluate, recommend, and administer the appropriate modality in order to make appropriate therapeutic recommendations. Appropriate recommendations in the evaluation and administration of therapy provide an important and fundamental basis to recognize adverse reactions to therapy.

Unit Four: Humidity Devices

Objectives:

Upon completion of this section, the student will be able to:

1. Define humidity and aerosol.
2. Discuss factors that can affect humidity.
3. Discuss the applications in a clinical and home setting.
4. Identify the components of the heat and moisture exchanger (HME) and bubble and wick humidifiers.
5. Differentiate between the types of humidifiers, including their clinical uses, advantages, and disadvantages.
6. Assemble and operate the various types of humidifiers.
7. Perform monitoring, maintenance, and troubleshooting techniques.
8. Discuss the various features of all modality types.
9. Discuss the principles of operation among all types of humidity and aerosol therapy.
10. Relate, according to AARC clinical practice guidelines, the proper amount of humidification required for patients with artificial airways.

Unit Four: Aerosol Generators

Objectives:

Upon completion of this section, the student will be able to:

1. Differentiate between the types of aerosol generators by operating principles.
2. Select and apply the appropriate aerosol delivery device based on a specific clinical situation.
3. Discuss the limitations of each type of aerosol delivery device.
4. List the hazards and complications associated with aerosol delivery.
5. Apply, demonstrate, and confirm the necessary communication skills needed to explain the appropriate application of an aerosol device to a patient.
6. Apply and demonstrate medical charting skills necessary for the therapeutic application of an aerosol delivery device.
7. Apply infection control guidelines and standards associated with aerosol delivery equipment and procedures, according to OSHA regulations and CDC guidelines.

Unit Four: Aerosol and Medication Therapy

Objectives:

Upon completion of this section, the student will be able to:

1. Select and use the various aerosol delivery and adjunctive devices for all clinical situations.
2. Discuss the indications, advantages, disadvantages, limitations, contraindications, and hazards of each type of aerosol delivery device and method used during the delivery of medication.
3. Perform patient assessment, and monitor and evaluate the patient's response during each phase (before, during, and after) of administering aerosolized medication(s).
4. Obtain a sputum specimen for analysis using sputum induction techniques.
5. Chart an aerosol medication treatment.
6. Practice communication skills needed for the administration of an aerosol medication treatment.
7. Apply infection control guidelines and standards associated with equipment and procedures used for aerosol medication delivery, according to OSHA regulations and CDC guidelines.

Completion date: _____

Evaluate and recommend the humidity/aerosol therapy plan for a given condition or disease.

1. _____ Administer humidity/aerosol therapy in accordance with a given physicians order.
2. _____ Demonstrate the use of a Small Volume Nebulizer (SVN), Bland Aerosol Nebulizer (BAN) or any other specialized nebulizer relative to a disease or condition.
3. _____ Demonstrate the use of a Metered Dose Inhaler (MDI), Dry Powder Inhaler (PDI) or any other specialized nebulizer relative to a disease or condition
4. _____ Apply the seven decision-making steps (**Therapeutic Decision Making**) to formulate a respiratory care treatment plan.

Aerosol Medication Delivery: **Therapeutic Decision Making**

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Recognize problems <ol style="list-style-type: none"> a) Knowledge of normal situation(s) b) Trigger of abnormal situation(s) 2. Define problem(s) <ol style="list-style-type: none"> a) Gather appropriate information (subjective and objective) b) Analyze and interpret information c) Draw conclusions 3. Specify patient goal(s)/therapeutic objective(s) <ol style="list-style-type: none"> a) Return patient to normal –OR– b) Return patient to baseline, if chronic condition 4. Develop modality alternatives to meet goal(s) <ol style="list-style-type: none"> a) Match goal(s) of therapeutic modalities to goal(s) specified in Step#3⁴ 5. Select modalities <ol style="list-style-type: none"> a) Determine availability b) Evaluate benefit versus risk(s)⁵ 6. Implement decision(s) <ol style="list-style-type: none"> a) Follow applicable laws b) Follow hospital and department policies and procedures (<i>protocols</i>) 7. Evaluate patient <ol style="list-style-type: none"> a) Gather appropriate information b) Evaluate for adverse reaction(s) c) Evaluate for change in patient status after intervention <ol style="list-style-type: none"> 1) Goal(s) accomplished 2) Acceptable progress toward goal(s) 3) Unacceptable, but some progress 4) Movement away from goal(s) <p style="margin-left: 40px;">[if '1' then D/C therapy; if '2', '3', or '4', return to step #2]</p> | <ol style="list-style-type: none"> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ |
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Comments: ✓ acceptable ⊙ omitted ☒ unacceptable pass repeat Score _____

Signatures: Student: _____ Instructor: _____ Date: _____

⁴ (See AARC Clinical Practice Guidelines)

⁵ Risks (e.g. time, cost, pain, morbidity, mortality)

Aerosol Medication Delivery: **SVN, BAN, or other specialty nebulizers**

1. **Patient Medical Record Review and Data Evaluation**

- a) Verifies, interprets and evaluates physician's orders or protocol by reviewing data in the patient record
- b) Examines chart for relevant patient data/notes (diagnosis, medication, therapies, radiographs, laboratory results, hemodynamic, electrocardiograms, sleep reports.)
- c) Collects and evaluates information obtained in "b"

1. _____

2. **Equipment and Patient Preparation**

- a) Washes hands or applies disinfectant and demonstrates the use of gloves
- b) Selects, obtains, assembles equipment correctly, and verifies function
- c) Troubleshoot equipment when indicated
- d) Applies personal protective equipment (PPE), observes standard precautions and transmission based isolation procedures when applicable
- e) Uses two patient identifiers and introduces self and corresponding department
- f) Explains purpose and objectives of the procedure and confirms patient understanding
- g) Educates patient on the safety of the modality

2. _____

3. **Assessment and Implementation**

- a) Positions patient for procedure
- b) Selects appropriate aerosol generator and delivery device to achieve therapeutic objectives
- c) Determines **best** medication delivery method (**SVN, BAN, or other specialty nebulizer**)
- d) Checks label and verifies correct medication, dosage and expiration date
- e) Prepares medications per physician's orders
- f) Determines most appropriate patient interface to achieve therapeutic goals (mouthpiece, T-piece, tracheostomy collar, ventilator in-line adapter)

3. _____

Comments: ✓ acceptable ⊙ omitted ☒ unacceptable pass repeat Score _____

Signatures: Student: _____ Instructor: _____ Date: _____

Pharmacology: **Therapeutic Decision Making**

- | | |
|--|---|
| <p>1. Recognize problems</p> <ul style="list-style-type: none"> a) Knowledge of normal situation(s) b) Trigger of abnormal situation(s) <p>2. Define problem(s)</p> <ul style="list-style-type: none"> a) Gather appropriate information (subjective and objective) b) Analyze and interpret information c) Draw conclusions <p>3. Specify patient goal(s)/therapeutic objective(s)</p> <ul style="list-style-type: none"> a) Return patient to normal –OR– b) Return patient to baseline, if chronic condition <p>4. Develop modality alternatives to meet goal(s)</p> <ul style="list-style-type: none"> a) Match goal(s) of therapeutic modalities to goal(s) specified in Step#3⁶ <p>5. Select modalities</p> <ul style="list-style-type: none"> a) Determine availability b) Evaluate benefit versus risk(s)⁷ <p>6. Implement decision(s)</p> <ul style="list-style-type: none"> a) Follow applicable laws b) Follow hospital and department policies and procedures (<i>protocols</i>) <p>7. Evaluate patient</p> <ul style="list-style-type: none"> a) Gather appropriate information b) Evaluate for adverse reaction(s) c) Evaluate for change in patient status after intervention <ul style="list-style-type: none"> 1) Goal(s) accomplished 2) Acceptable progress toward goal(s) 3) Unacceptable, but some progress 4) Movement away from goal(s) <p style="padding-left: 40px;">[if '1' then D/C therapy; if '2', '3', or '4', return to step #2]</p> | <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p> <p>5. _____</p> <p>6. _____</p> <p>7. _____</p> |
|--|---|

Comments: acceptable omitted unacceptable pass repeat Score _____

Signatures: Student: _____ Instructor: _____ Date: _____

⁶ (See AARC Clinical Practice Guidelines)
⁷ Risks (e.g. time, cost, pain, morbidity, mortality)

Unit Four: **Pharmacology**

Competency: Administer, evaluate, and recommend the pharmacology regimen for a patient

Rationale: The Respiratory Therapist must be able to administer and evaluate the patients' pharmacology regimen, and interpret physician's orders in order to make appropriate therapeutic recommendations not limited to administer therapy in the most effective manner, but to evaluate progress and to recognize adverse reactions to therapy.

Completion date: _____

1. _____ Administer the following medications in accordance with a physician's order.

<ul style="list-style-type: none"> a) acetylcysteine (Mucomyst) b) albuterol (Proventil) c) aminophylline (Aminophylline) d) atropine sulfate (Atropine) e) beclomethasone (Vanceril) f) bitolterol g) budesonide (Pulmicort) h) budesonide + formoterol (Symbicort) i) cromolyn sodium (Intal) j) epinephrine k) flunisolide (Aerobid, Aerobid M) l) fluticasone (Flovent) m) fluticasone + salmeterol (Advair) n) hypertonic saline o) hypotonic saline p) ipratropium bromide (Atrovent) q) ipratropium bromide + albuterol (DuoNeb or Combivent) r) isoetharine (Bronkosol) s) levalbuterol (Xopenex) 	<ul style="list-style-type: none"> t) metaproterenol (Alupent) u) montelukast (Singulair) v) nedocromil (Tilade) w) nicotrol patch (Nicoderm CQ) x) normal saline y) pentamidine (Nebupent) z) pirbuterol (Maxair) aa) prednisone (Deltasone) bb) racemic epinephrine (Vaponefrin) cc) ribavirin (Virazole) dd) salmeterol (Serevent) ee) theophylline (Theo-Dur) ff) tiotropium (Spiriva) gg) tobramycin (Tobi) hh) triamcinolone (Azmacort) ii) varenicline (Chantix) jj) xylocaine (Lidocaine) kk) zafirlukast (Accolate)
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2. _____ Evaluate and recommend the pharmacology regimen for a patient based on previous knowledge of the pharmacology agents mode of action, mode of delivery, onset, indications, contraindications, drug interaction, side effects, adverse reactions, dosage (adult & pediatric).

3. _____ Apply the seven decision-making steps (**Therapeutic Decision Making**) to formulate a respiratory care treatment plan.

Comments: acceptable omitted unacceptable pass repeat Score _____

Signatures: Student: _____ Instructor: _____ Date: _____

Aerosol Delivery: **SPUTUM INDUCTION**

1. Equipment and Patient Preparation

- a) Verifies, interprets and evaluates physician's orders or protocol
- b) Examines chart for any other patient data/notes (diagnosis, medication, therapies, radiographs, laboratory results)
- c) Washes hands or applies disinfectant
- d) Selects, obtains, assembles equipment correctly, verifies function (Troubleshoot equipment if indicated)
- e) Applies personal protective equipment (PPE), observes standard precautions and transmission based isolation procedures as appropriate
- f) Identifies patient, introduces self and department
- g) Explains purpose of the procedure and confirms patient understanding
- h) Determines patient ability to perform procedure and follow directions (if ventilator interface is used, follows procedure per protocol)
- i) Selects appropriate aerosol generator and delivery device to achieve therapeutic objectives

1. _____

2. Assessment and Implementation

- a) Selects the proper equipment for obtaining a sputum sample: **A) USN, B) Bland aerosol, C) Other aerosol**
- b) Positions patient for procedure
- c) Assesses patient (vital signs, SpO₂, breath sounds, ventilatory status)
- d) Administers the therapy: **Instructs patient in the proper coughing techniques****
- e) Instruct patient to expectorate into the sterile sputum cup
- f) Ensures that the sample is from the lungs and not naso/oropharynx
- g) Monitors vital signs throughout procedure
- h) Labels the sample accurately and properly according to facility policy
- i) Places the sample in biohazard bag according to facility policy
- j) Ensures that the proper laboratory request form is completed
- k) Ensures that the sample is sent to the laboratory
- l) Terminates treatment if significant adverse reaction occurs

2. _____

3. Follow-up

- a) Ensures patient comfort and safety
- b) Disposes of infectious waste and washes hands and/or applies disinfectant
- c) Records pertinent patient data in chart or departmental records
- d) Notifies appropriate personnel and makes necessary recommendations and or modifications to the patient care plan

3. _____

Comments: acceptable omitted unacceptable pass repeat Score _____

Signatures: Student: _____ Instructor: _____ Date: _____

Respiratory Therapy Program

Bronchial Hygiene and Lung Expansion Therapy

Unit Five:

Competency: Evaluate, recommend, and administer the appropriate Bronchial Hygiene protocol for a given condition or disease.

Rationale: Bronchial Hygiene is a non-invasive therapeutic technique designed to improve gas exchange by helping to mobilize and remove secretions. Chest Physical Therapy (CPT) is a bronchial hygiene technique that incorporates postural drainage, percussion, and/or vibration delivered with a specific frequency and rhythm in the management of many patients with diverse diseases and/or conditions. CPT is not a stand-alone therapeutic intervention but rather a modality that incorporates a variety of devices used in conjunction to help those with difficulty mobilize secretions. The Respiratory Therapist must be competent in the technique, selection of adjunct equipment in order to make appropriate therapeutic recommendations not limited to administer therapy in the most effective manner, but to evaluate progress and to recognize adverse reactions to therapy.

Completion date: _____

1. _____ Perform the following pulmonary hygiene techniques: chest physical therapy (CPT), postural drainage (PD), vibrations, percussion in accordance with a given physicians order.
2. _____ Demonstrate Directed Cough, Pursed Lip Breathing, Diaphragmatic Breathing, PEP Therapy and any other specialized bronchial hygiene technique.
3. _____ Evaluate and recommend the appropriate chest physical therapy (CPT) program for a given patient.
4. _____ Apply the seven decision-making steps (**Therapeutic Decision Making**) to formulate a respiratory care treatment plan.

Respiratory Therapy Program

Adjunct Techniques for Bronchial Hygiene

Unit Five:

Objectives:

Upon completion of this section, the student will be able to:

1. Instruct and monitor a patient on coughing, splinting, and pursed-lip breathing.
2. Practice directed cough and manually assisted cough techniques to improve cough effectiveness according to AARC clinical practice guidelines.
3. Perform vibratory PEP therapy according to AARC clinical practice guidelines.
4. Instruct and monitor a patient while performing diaphragmatic, thoracic expansion, and relaxation breathing exercises.
5. Perform inspiratory muscle-training techniques.

Bronchial Hygiene: Chest Physiotherapy

Unit Five:

Objectives:

Upon completion of this section, the student will be able to:

1. Describe why bronchial hygiene therapy is an important aspect of respiratory care.
2. Identify each lobe and segment of the lungs and the corresponding bronchi on a lung model.
3. Properly position and perform postural drainage, percussion, and vibration techniques for all lungs lobes and segments.
4. After reviewing x-ray reports and assessing physical examination results, perform chest physical therapy techniques to the appropriate lobes and segments.

Respiratory Therapy Program

Bronchial Hygiene: **Chest Physiotherapy or other specialty bronchial hygiene technique**

1. Patient Medical Record Review and Data Evaluation

- a) Verifies, interprets and evaluates physician's orders or protocol by reviewing data in the patient record
- b) Examines chart for relevant patient data/notes (diagnosis, medication, therapies, radiographs, laboratory results, hemodynamic, electrocardiograms, sleep reports.)
- c) Collects and evaluates information obtained in "b"

1. _____

2. Equipment and Patient Preparation

- a) Washes hands or applies disinfectant and demonstrates the use of gloves
- b) Selects, obtains, assembles equipment correctly, and verifies function
- c) Troubleshoot equipment when indicated
- d) Applies personal protective equipment (PPE), observes standard precautions and transmission based isolation procedures when applicable
- e) Uses two patient identifiers and introduces self and corresponding department
- f) Explains purpose and objectives of the procedure and determines patient ability to perform procedure and follow directions.
- g) Educates patient on the safety of the modality

2. _____

3. Assessment and Implementation

- a) Positions patient for procedure
- b) Assesses patient (vital signs, SpO₂, breath sounds, ventilatory status)
- c) Positions patient for procedure
- d) Determines lobes and segments to be drained by assessing CXR, progress notes, and breath sounds
- e) Verifies no relative or absolute contraindications exist, modifies procedure accordingly
- f) Correctly positions patient for segments to be drained
- g) Performs percussion in correct locations with appropriate techniques
- h) Performs expiratory vibration with pressure appropriate to patient tolerance
- i) Assesses adequate ventilation, oxygenation and vital signs during procedure
- j) Encourages and assists patient cough; notes sputum production
- k) Repositions patient prior to departure
- l) Collects sputum, labels, and sends to lab if indicated

3. _____

4. Follow-up

- a) Ensures patient comfort and safety
- b) Disposes of infectious waste and washes hands and/or applies disinfectant
- c) Records pertinent patient data in chart or departmental records
- d) Notifies appropriate personnel and makes the necessary recommendations and or modifies the patient care plan

4. _____

Comments: acceptable omitted unacceptable pass repeat Score _____

Signatures: Student: _____ Instructor: _____ Date: _____

Respiratory Therapy Program

Bronchial Hygiene: **Directed Cough or other specialty bronchial hygiene techniques**

1. Patient Medical Record Review and Data Evaluation

- a) Verifies, interprets and evaluates physician's orders or protocol by reviewing data in the patient record
- b) Examines chart for relevant patient data/notes (diagnosis, medication, therapies, radiographs, laboratory results, hemodynamic, electrocardiograms, sleep reports.)
- c) Collects and evaluates information obtained in "b"

1. _____

2. Equipment and Patient Preparation

- a) Washes hands or applies disinfectant and demonstrates the use of gloves
- b) Selects, obtains, assembles equipment correctly, and verifies function
- c) Troubleshoot equipment when indicated
- d) Applies personal protective equipment (PPE), observes standard precautions and transmission based isolation procedures when applicable
- e) Uses two patient identifiers and introduces self and corresponding department
- f) Explains purpose and objectives of the procedure and determines patient ability to perform procedure and follow directions.
- g) Educates patient on the safety of the modality

2. _____

3. Assessment and Implementation

- a) Positions patient for procedure
- b) Instructs patient in vibratory PEP therapy (repeat as needed)
- c) Instructs patient in effective use of diaphragm and cough
- d) Assures forceful contraction of abdominal muscles
- e) Instruct patient the patient serial coughing techniques
- f) Instructs patient on forced expiratory technique (FET), or huffing
- g) Provides manually assisted cough
- h) Applies pressure to the lateral thoracic cage coordinated with the patient's cough effort
- i) With tracheostomy, provides manually assisted deep inspiration utilizing a manual resuscitator bag in conjunction with manually assisted cough techniques (quad cough)
- j) Repeats procedures as indicated/tolerated and re-assesses adequate ventilation, oxygenation and vital signs during procedure
- k) Collect sputum, labels, and send to lab if indicated

3. _____

Comments: acceptable omitted unacceptable pass repeat Score _____

Signatures: Student: _____ Instructor: _____ Date: _____

Respiratory Therapy Program

Lung Expansion Therapy: **Incentive Spirometry**

1. Patient Medical Record Review and Data Evaluation

- a) Verifies, interprets and evaluates physician's orders or protocol by reviewing data in the patient record
- b) Examines chart for relevant patient data/notes (diagnosis, medication, therapies, radiographs, laboratory results, hemodynamic, electrocardiograms, sleep reports. Collect pre-operative volume achieved and feedback.)
- c) Collect and evaluate information obtained in "b" and do an assessment of need for therapy (post-op patients, immobility or neuromuscular disease).

1. _____

2. Equipment and Patient Preparation

- a) Washes hands or applies disinfectant and demonstrates the use of gloves
- b) Selects, obtains, assembles equipment correctly, and verifies function (troubleshoot if indicated)
- c) Applies personal protective equipment (PPE), observes precautions
- e) Uses two patient identifiers and introduces self and corresponding department
- f) Explains purpose of the procedure and determines patient ability to perform the procedure and follow directions, or be able to take a deep breath effectively (VC<10ml/Kg or IC< 1/3 predicted). Presence of a stoma is not a contraindication but requires device adaptation.
- g) Demonstrate proper procedure and educate about hazards and complications such as hyperventilation, dizziness, numbness and tingling, risk of barotrauma (emphysematous lungs), pain and bronchospasm.

2. _____

3. Assessment and Implementation

- a) Position patient for procedure, take vital signs, auscultate lungs and set initial goal (1/2 of pre-op volume)
- b) Instruct patient to place mouthpiece and tightly seal lips around it (may need nose clips)
- c) Instruct patient to inspire slowly and deeply (to maximize distribution of ventilation) at a slow to moderate flow rate, and sustain maximal inspiratory effort for 5 to 10 seconds.
- d) Instruct patient that a normal exhalation should follow the breath hold and to take a rest as long as needed between maneuvers (some patients may need to rest for 30 sec. to 1 min. in between)
- e) If incision present, instruct patient to support incision by placing a pillow against it.
- f) Instruct patient that maneuver has to be repeated Q1-2 hrsX10
- g) Instruct patient that once the goal has been reached to increase it to the next following
- h) Collect data and record in chart. Recommend or modify therapy if necessary.

3. _____

4. Follow-up

- a) Return visit to monitor correct technique with new and increasing inspiratory volumes each day.
- b) Assess breath sounds for absence of fine crackles or diminished sounds, vital signs and chest x-ray.
- c) Assess for increased VC to a preoperative values

Comments: acceptable omitted unacceptable pass repeat Score _____

Signatures: Student: _____ Instructor: _____ Date: _____

Respiratory Therapy Program

Unit Six: Airway management and invasive and non-invasive positive pressure mechanical ventilation

Competency: Evaluate, recommend, and administer an appropriate airway management for a given patient.

Rationale: A patent airway is essential for human life and it is the responsibility of the Respiratory Therapist to maintain and care for that airway. A number of companies manufacture a variety of artificial airways designed to help remove secretions. You are likely to encounter artificial airways for relief of airway obstruction, facilitation of bronchial hygiene and prolonged mechanical ventilation. The Respiratory Therapist must be competent in this technique, including the appropriate selection of equipment to help mobilize secretions. Competency is a function of each person's ability to evaluate, recommend and administer the appropriate therapeutic recommendations and recognize adverse reactions to therapy.

Completion date: _____

Demonstrate competency in the management of artificial airways by completing the following tasks in accordance with a given physicians order.

1. ____ Demonstrate proper insertion of nasopharyngeal airway (NPA)
2. ____ Demonstrate proper insertion of oropharyngeal airway (OPA)
3. ____ Evaluate and recommend the appropriate size for a given patient.
4. ____ Demonstrate proper insertion of endotracheal tube via oral or nasal route.
5. ____ Apply the seven decision-making steps (**Therapeutic Decision Making**) to formulate a respiratory care treatment plan.

Respiratory Therapy Program

Unit Six: Suctioning

Objectives:

Upon completion of this section, the student will be able to:

1. Identify the various types of suction devices and accessories, including Yankauer (tonsillar) catheter, Coude or bronchitrach-L angle-tip endo-bronchial catheters, closed suction system devices (Ballard), and sputum traps.
2. Determine the proper suction catheter size for a given airway.
3. Demonstrate proper aseptic techniques such as donning of gloves, handling of the sterile contents of a suction kit and performing this therapeutic intervention.
4. Aseptically perform nasotracheal suctioning of an airway management trainer using appropriate personal protective equipment.
5. Perform endotracheal suctioning on an intubated patient or airway management trainer using appropriate personal protective equipment.
6. Perform tracheo-bronchial lavage during suctioning.
7. Collect a sputum specimen during suctioning.
8. Demonstrate the proper disposal of contaminated suction equipment.

Correlate the physical principles involved in suctioning, such as Poiseuille's law, to suction equipment and procedures

Respiratory Therapy Program

Airway Management/Suctioning: **Therapeutic Decision Making**

- | | | |
|--|----|-------|
| <p>1. Recognize problems</p> <ul style="list-style-type: none"> a) Knowledge of normal situation(s) b) Trigger of abnormal situation(s) | 1. | _____ |
| <p>2. Define problem(s)</p> <ul style="list-style-type: none"> a) Gather appropriate information (subjective and objective) b) Analyze and interpret information c) Draw conclusions | 2. | _____ |
| <p>3. Specify patient goal(s)/therapeutic objective(s)</p> <ul style="list-style-type: none"> a) Return patient to normal –OR– b) Return patient to baseline, if chronic condition | 3. | _____ |
| <p>4. Develop modality alternatives to meet goal(s)</p> <ul style="list-style-type: none"> a) Match goal(s) of therapeutic modalities to goal(s) specified in Step#3⁸ | 4. | _____ |
| <p>5. Select modalities</p> <ul style="list-style-type: none"> a) Determine availability b) Evaluate benefit versus risk(s)⁹ | 5. | _____ |
| <p>6. Implement decision(s)</p> <ul style="list-style-type: none"> a) Follow applicable laws b) Follow hospital and department policies and procedures (<i>protocols</i>) | 6. | _____ |
| <p>7. Evaluate patient</p> <ul style="list-style-type: none"> a) Gather appropriate information b) Evaluate for adverse reaction(s) c) Evaluate for change in patient status after intervention <ul style="list-style-type: none"> 1) Goal(s) accomplished 2) Acceptable progress toward goal(s) 3) Unacceptable, but some progress 4) Movement away from goal(s) <p style="margin-left: 40px;">[if '1' then D/C therapy; if '2', '3', or '4', return to step #2]</p> | 7. | _____ |

Comments: acceptable omitted unacceptable pass repeat Score_____

Signatures: Student: _____ Instructor: _____ Date: _____

⁸ (See AARC Clinical Practice Guidelines)

⁹ Risks (e.g. time, cost, pain, morbidity, mortality)

Respiratory Therapy Program

Ventilator Initiation: **ADULT VENTILATOR INITIATION**

1. Patient Medical Record Review and Data Evaluation

- a) Verifies, interprets and evaluates physician's orders or protocol
- b) Examines chart for any other patient data/notes (diagnosis, medication, therapies, radiographs, laboratory results)
- c) Collects and evaluates information obtained in "b"

2. Equipment and Patient Preparation

- a) Washes hands or applies disinfectant and demonstrates the use of gloves
- b) Selects, obtains, assembles equipment correctly, and verifies function
- c) Troubleshoot equipment when indicated
- d) Applies personal protective equipment (PPE), observes standard precautions and transmission based isolation procedures when applicable
- e) Uses two patient identifiers and introduces self and corresponding department
- f) Explains purpose and objectives of the procedure and determines patient ability to understand procedure (if applicable) and follow directions.
- g) Prepares vacuum pressure in the event it becomes necessary to perform a suctioning procedure (see protocol).
- h) Ensures oxygenation device is available
- i) Connects the ventilator to the appropriate emergency electrical outlet
- j) Connects the corresponding high-pressure hose(s) to the appropriate 50 psig gas source outlet
- k) Attaches the correct circuit, filters and humidification system as needed
- l) Turns the ventilator on and performs the required tests to verify proper ventilator operation.
- m) Perform any additional leak test and correct issues that verify ventilator function.

3. Assessment and Implementation

- a) Verifies no relative or absolute contraindications exist, modifies procedure accordingly
- b) Assesses patient (vital signs, SpO₂, breath sounds, ventilatory status)
- c) Assesses indications for mechanical ventilation; evaluates the patient by performing:
 - 1) Vital signs, color, WOB, pulse oximetry, capnography 2) Physical assessment of the chest , 3) Auscultation 4) Airway size, type, placement, and patency 5) Suctioning
- d) Selects the initial ventilator settings according to order or protocol
- e) Sets initial alarm parameters
- f) Connects the patient to the ventilator and adjusts the following as needed:
 - 1) Ventilator parameters and alarms 2) Sensitivity (pressure or flow trigger) 3) Mode 4) Rate/frequency 5) V_T/V_E 6) PIP/pressure support 7) Flow rate/I-time%/Flow Pattern/I:E ratio
- g) Analyzes and adjusts FiO₂ as indicated
- h) Adjusts circuit humidification system
- i) Notes LOC, use of sedation, and paralytics
- j) Observes and interprets ventilator graphics
- k) Completes patient-system ventilator check

4. Follow-up

- a) Ensures patient comfort and safety; returns oxygen therapy to previous level; turns off suction gauge when finished
- b) Disposes of infectious waste and washes hands and/or applies disinfectant
- c) Records pertinent patient data in chart or departmental records
- d) Notifies appropriate personnel and makes necessary recommendations and or modifications to the patient care plan

Comments: ✓ acceptable ○ omitted ☒ unacceptable

pass repeat

Score _____

1.			
2.			
3.			
4.			

Signatures: Student: _____ Instructor: _____ Date: _____

Respiratory Therapy Program

Noninvasive Ventilation: **CPAP/BIPAP™ INITIATION (NON-INVASIVE VENTILATION)**

1. Patient Medical Record Review and Data Evaluation

- a) Verifies, interprets and evaluates physician's orders or protocol by reviewing data in the patient record
- b) Examines chart for relevant patient data/notes (diagnosis, medication, therapies, radiographs, laboratory results, hemodynamic, electrocardiograms, sleep reports.)
- c) Collects and evaluates information obtained in "b"

2. Equipment and Patient Preparation

- a) Washes hands or applies disinfectant and demonstrates the use of gloves
- b) Selects, obtains, assembles equipment correctly, and verifies function
- c) Troubleshoot equipment when indicated
- d) Applies personal protective equipment (PPE), observes standard precautions and transmission based isolation procedures when applicable
- e) Uses two patient identifiers and introduces self and corresponding department
- f) Explains purpose and objectives of the procedure and determines patient ability to understand procedure (if applicable) and follow directions.
- g) Prepares vacuum pressure in the event it becomes necessary to perform a suctioning procedure (see protocol).
- h) Ensures oxygenation device is available
- i) Identifies the circuit components of a continuous flow noninvasive circuit and assembles:
 - 1. 6-foot smooth bore tubing
 - 2. Exhalation port or mask with integrated exhalation port
 - 3. Proximal pressure tubing
 - 4. Interface
 - 5. Bacteria filter to machine outlet
- J) Performs required leak test (if applicable)

3. Assessment and Implementation

- a) Verifies no relative or absolute contraindications exist, modifies procedure accordingly
- b) Assesses patient (vital signs, SpO₂, breath sounds, ventilatory status)
- c) Differentiates between CPAP and BiPAP
- d) Turns the unit or system on and selects proper mode, pressures, ramp or rise time, F_IO₂, and timed inspiration
- e) Checks alarm function and sets alarms
- f) Positions patient and measures the patient for appropriate mask size
- g) Uses spaces to fill any gaps
- h) Attaches the mask to the hose
- i) Attaches the head straps to the patient's head; confirms proper fit comfort
- j) Evaluates waveforms to identify tidal volume, rate, pressures and flow, and air trapping or auto-PEEP
- k) Adjusts the pressure(s) (CPAP, IPAP, EPAP) to conform with the physician's order
- l) Reassesses vital signs, SpO₂, breath sounds and ventilatory status
- m) Determines how patient is tolerating the pressure; readjusts mask if necessary
- n) Evaluates for alternative interface if patient is not tolerating the mask

4. Follow-up

- a) Ensures patient comfort and safety; returns oxygen therapy to previous level; turns off suction gauge when finished
- b) Disposes of infectious waste and washes hands and/or applies disinfectant
- c) Records pertinent patient data in chart or departmental records
- d) Notifies appropriate personnel and makes necessary recommendations and or modifications to the patient care plan

Comments: ✓ acceptable ⊙ omitted ☒ unacceptable

pass repeat Score _____

Signatures: Student: _____ Instructor: _____ Date: _____

1.			
2.			
3.			
4.			

Respiratory Therapy Program

Clinical Performance Evaluation

- 5 **Independent:** Near flawless performance; minimal errors; able to perform without supervision; seeks out new learning; shows initiative.
- 4 **Minimally Supervised:** Few errors, able to self-correct; seeks guidance when appropriate
- 3 **Competent:** Minimal required level; no critical errors; able to correct with coaching; meets expectations; safe.
- 2 **Marginal:** Below average; critical errors or problem areas noted; would benefit from remediation.
- 1 **Dependent:** Poor; unacceptable performance; unsafe; gross inaccuracies; potentially harmful

PERFORMANCE CRITERIA	SCORE				
COGNITIVE DOMAIN					
Consistently displays knowledge, comprehension, and command of essential concepts	5	4	3	2	1
Demonstrates the relationship between theory and clinical practice	5	4	3	2	1
Able to select, review, apply, analyze, synthesize, interpret, and evaluate information; makes recommendations to modify care plan	5	4	3	2	1
Psychomotor Domain					
Selects, assembles, and verifies proper function and cleanliness of equipment; assures operation and corrects malfunctions	5	4	3	2	1
Minimal error, no critical errors; able to self-correct; performs all steps safely and accurately	5	4	3	2	1
Exhibits the required manual dexterity	5	4	3	2	1
Performs procedure in a reasonable time frame for clinical level	5	4	3	2	1
Applies and maintains aseptic technique and PPE as required	5	4	3	2	1
Maintains concise and accurate patient and clinical records	5	4	3	2	1
Reports promptly on patient status/needs to appropriate personnel	5	4	3	2	1
Affective Domain					
Exhibits courteous and pleasant demeanor; shows consideration and respect, honesty, and integrity	5	4	3	2	1
Communicates verbally and in writing clearly and concisely	5	4	3	2	1
Preserves confidentiality and adheres to all policies.	5	4	3	2	1
Follows directions, exhibits sound judgment, and seeks help when required	5	4	3	2	1
Demonstrates initiative, self-direction, responsibility, and accountability	5	4	3	2	1
TOTAL POINTS = /75= AVERAGE GRADE=					
___ Pass: Satisfactory Performance					
Minimal Supervision Needed, may progress to next level, clinical time completed					
___ FAIL: Unsatisfactory Performance					
Minor reevaluation only					
Needs additional Clinical practice before reevaluation					
Needs additional Laboratory practice before skills performed in clinical area					
Recommend Clinical Probation					
Evaluator(Print Name) _____ Evaluator Sign _____ Date: _____					



Respiratory Therapy Program

Additional Notes or Comments:

Student's signature Date

Evaluator's signature Date

Respiratory Therapy Program

Clinical Progress Report

Hospital: _____ Indicate Term: 1832L 2833L 2834L 2835L 2836L

Unit___: _____ Final Score_____

CLINICAL COMPETENCIES (%) _____

PROFESSIONALISM (%) _____

CLINICAL COMPREHENSION (Mid-Term) (%) _____

CLINICAL COMPREHENSION (Final) (%) _____

QUIZZES (%) _____

CASE STUDY ANALYSIS (%) _____

FINAL GRADE _____

COMMENTS:

Signatures: Student: _____ Instructor's _____ Date _____

Respiratory Therapy Program

Check List

- Orientation
 - Charting
 - Body mechanics
- Skills lab
 - Aseptic techniques
 - Oxygen administration
 - Arterial blood gases- Interpretation
 - Monitoring techniques
 - Airway care
 - Ventilator patient transport
 - Patient Extubation/ Intubation (observation/attempt)
 - Artificial airway ID & main
 - Pulmonary pathophysiology
- Patient assessment
 - Pulse oximetry
 - Arterial blood gases sampling
 - Chest assessment
 - ICU patient assessment
 - Chest X-Ray Interpretation
- Therapeutic Modalities
 - SAN / SVN / Jet Neb
 - MDI / DPI therapy
 - General pharmacology
 - Drawing /preparing meds
 - Respiratory pharmacology
 - Critical care pharmacology
 - General pathophysiology
- Aerosol therapy
 - CPAP
 - BiPAP
 - CPT
 - IPPB
 - Mechanical ventilation / Modes
 - Mechanical ventilation initiation
 - Mechanical ventilation changes
 - Static / Dynamic Compliance
- Assessment
 - Bronchoscopy
 - Chest tubes/drainage
 - Hyperbaric medicine
 - CP R
- Diagnostic Modalities
 - PFT's
 - Hemodynamic monitoring
 - Bronchoscopy
- Clinical Progress Report
- Interpersonal Relations Evaluation
 - Mid-Term
 - Final
- Clinical Performance Evaluation
- Daily Logs
- Case Studies

Respiratory Therapy Program

Student/Applicant Declaration on Essential Functions and Submission of Health Form

Printed Name

I have read the description of Essential Functions/Core Performance Standards for the Respiratory Care Program.

A practicing physician or relevant practitioner has completed a health form that provides the results from a physical examination, laboratory test, and immunization records. Therefore, I acknowledge that I am able to perform, or will be able to learn to perform, all of the functions listed.

Signature

Date

Print and return this completed page, immediately, to the Respiratory Therapy Program Director.

Respiratory Therapy Program

Respiratory Therapy Program

Disclosure of additional expenses*
Respiratory Therapy

	Comments:
Name:	
Address:	
email:	
Phone number:	
Student ID #:	
<p>Special Instructions: Complete uniform must be worn at all times while on campus and in your hospital clinical rotation. Complete uniform includes: white lab coat ¾ length, long sleeves with school logo on your left sleeve, color approved scrubs, student ID, white shoes, stethoscope, black pen, blunt scissors, calculator, all required textbooks, notebooks, pocket notebook, flashcards. For more information refer to the Student Handbook.</p>	<input type="checkbox"/> Acknowledge receipt/read Technical Standards for the Profession Respiratory Care
<p>Uniforms, test books, laboratory coat, and a stethoscope are also the student's financial responsibility. Uniforms can be purchased in FNU book store, they must have FNU's logo.</p>	

Documents for clinical compliance

Certifications				(circle one)	Y	N	Additional Information
<input type="checkbox"/> Semester I : CPR/OSHA/HIV	\$50	Physical Exam	\$ _____				
<input type="checkbox"/> Semester II: ACLS	\$155	Immunizations or Titer(s)	\$ _____				<input type="checkbox"/> TB test
<input type="checkbox"/> Semester III: PALS	\$165	Liability Insurance	\$25.50				
<input type="checkbox"/> Hospital ID	\$ 5	FDLE L II (Money Order)	\$ 43.00				
Total	\$375	Background Check & Finger prints	\$90.00				Drug Test \$50.00

NBRC Examinations Fees	State Licensure Fees	Current State Licensure fee is \$165.00 + 2 Mandatory CEUs on Prevention of Medical Errors (approximately \$14.00) + a Credential Verification letter form the NBRC \$5.00.				Kettering Review Approximate fees
		Total	Notes			
Therapist Multiple Choice Exam	\$190 CRT	\$165	=\$355	1) The Florida Board of Respiratory Care http://www.doh.state.fl.us/mqa/respiratory/index.html requires that all licensed Respiratory Therapist(s) complete 24 CEU's every biennium, addition to:	3 or 4 days comprehensive review \$395-\$295 (group rate)	
CSE-RF	\$200 RRT	\$165	=\$555	Disaster Preparedness. New licensure applicants must submit proof of Medical Errors and HIV.		
RRT Board	\$390			2) The National Board of Respiratory Care www.nbrc.org (NBRC) requires that all credentialed Respiratory Therapist(s) complete and provide evidence through their Continuing Competency Program of a total of 30 CEU's every five years. 3) The American Association for Respiratory Care www.aarc.org (AARC) represents	Clinical Simulation practice Lab \$103	
RT Board Review	Group Rate Given to Publishers Price Varies	The combination of the WRRT& CSE-RRT		our profession in all fiscal activities at the government level.	For RET 2264C, 2265C, 2503L, and 2934L Approximately \$100	

Respiratory Therapy Program

	←			4) The Florida Society of Respiratory Care www.fsrc.org (FSRC) is the our State Organization.	Exit Comprehensive Exam group fee \$50
Total	\$Varies				
<p>Note: Participation in the clinical portion of the Respiratory Therapy Program is contingent to the following criteria: you will have presented all approved Clinical Compliance Forms and met Technical Standards for the Profession of Respiratory Care, have a clear Background Check, and have satisfactorily completed the pre-requisite didactic courses for the rotation.</p>					
<p>Disclaimer: Whereas all efforts have been made to provide the most accurate prices, the information contained in this document is based on data available at the time of writing, which we believe is accurate and reliable. FNU reserves the right to change the Information without prior notice.</p>			<p>The candidate/student hereby declares that will actively complete and present all required documents, and all seminars will be completed on the assigned schedule time. Signature</p>		
<p>Student Signature/Date</p> <p>This is to certify that the above named hereby acknowledge receipt and understanding of the disclosure of additional expenses and mandatory use of school approved uniform.</p>				<p>Student Signature/Date</p> <p>This is to certify that the above named hereby has completed and presented ALL required documentation.</p>	

- Prices for Additional Expenses will vary in accordance with changes requested by the institutions providing the services listed in this document. When the latter occurs, the student will be notified immediately. FNU will not be responsible for additional expenses incurred by the student when providers increase prices. The student will be obliged to assume that cost.