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Introduction

Welcome to the Department of Cardiopulmonary Science and the Respiratory Therapy Program! Your acceptance into this program suggests that you are serious about your studies and that you are motivated toward establishing a career in the allied health profession of respiratory therapy. We the faculty will do everything we can in order to help you achieve your goals and become a valuable contributor to patient care. We ask that you take your responsibilities seriously by attending all classes, meeting all assigned deadlines, and respecting the policies and procedures of the Respiratory Therapy Program.

The purpose of this handbook is to give you, the student, a convenient reference for familiarizing yourself with the policies and procedures of the Respiratory Therapy Program. This handbook deals with subjects that are pertinent primarily to our Program and is intended to supplement the official LSU Health Sciences Center (LSUHSC) Catalog/Bulletin, and the School of Allied Health Professions (SAHP) Student Handbook and orientation packet/materials that are given out to all students at orientation by the Office of Student Affairs. Any policies and procedures set forth in the Catalog/Bulletin, SAHP Student Handbook, or orientation materials have not been repeated in this manual. Program academic and clinical policies apply to all students and faculty regardless of location of instruction. Although most of the information that you need will be located in one of these three sources, should you have any questions, feel free to ask a member of the faculty, who will be happy to assist you.

Description of the Cardiopulmonary Science Curriculum

The Department of Cardiopulmonary Science offers a bachelor's degree in Cardiopulmonary Science. The Department provides professional preparation in the allied health specialties of respiratory therapy (including polysomnography) and cardiovascular sonography (cardiac and vascular ultrasound). Applicants choose whether to enter the respiratory therapy program OR the cardiovascular sonography program. Successful completion of the Cardiopulmonary Science curriculum requires two years of study at the LSU Health Sciences Center (LSUHSC) and leads to a Bachelor of Science degree in Cardiopulmonary Science.

Statement of Equal Opportunity

The LSU System assures equal opportunity for all qualified persons without regard to race, color, religion, sex, sexual orientation, national origin, age, disability, marital status, or veteran's status in the admission to, participation in, or employment in the programs and activities, which the LSU System operates. The Department of Cardiopulmonary Science adheres to this policy in its admissions to, participation in, or employment in the Department of Cardiopulmonary Science.
LSUHSC
Department of Cardiopulmonary Science
Respiratory Therapy Program

Chancellor, LSU Health Sciences Center
Larry H. Hollier, MD

Dean, School of Allied Health Professions
J.M. Cairo, PhD

Assistant Dean for Academic Affairs
John Dolan, RhD

Assistant Dean for Fiscal Affairs
Joseph Lassalle, III

Assistant to the Dean for Clinical Affairs
Elizabeth Levitzky, MBA

Director of Office of Student Affairs
Yudialys Delgado, BS

Department Head, Department of Cardiopulmonary Science
Andy Pellett, PhD, RDCS

Medical Director
Carol Mason, MD

Program Director for Advanced Respiratory Therapy
John Zamjahn, PhD, RRT

Director of Clinical Education for Respiratory Therapy
Tim Cordes, MHS, RRT, NPS

Part Time
Didactic / Laboratory Faculty
Terry Forrette, MHS, RRT

Clinical Affiliates / Program Site Coordinators
Access Respiratory Homecare Sleep & Wellness Center
Anna Campo, BS, RRT, RCP
Baton Rouge General Medical Center
Chris Albright, BS, RRT
Children’s Hospital
Dawn B. Bordelon, B.S., RRT
East Jefferson General Hospital
Susan Bailey, BS, RRT
Danny Schellhaas, RRT
Earl K. Long Medical Center/LSUHSC
James Morris, BS, RRT
LSU Interim Public Hospital
Johnny D’Aquin, RRT, RPFT
David Doyle, BS, RRT, CPFT
North Oaks Medical Center
Wendy Herring, RRT
Lawrence Balado, RRT
Our Lady of the Lake Regional Medical Center
Crystal D. Barkemeyer, BS, RRT
Southeast Louisiana Veterans Health Care System
Jennifer Whitney, RRT
St. Tammany Parish Hospital
Brett Stafford, BS, RRT
Touro Infirmary
Larry Anderson, RRT
Tulane University Medical Center
Christopher Hakenjos, BS, RRT
Carl Romero, MBA, BS, RRT
West Jefferson Medical Center
Jules Poirier, RRT
Woman’s Hospital
Danette M. Legendre, RRT-NPS

Program Advisory Committee
Representatives of (minimum):
Students
Graduates
Faculty
Sponsor Administration
Employers
Physicians
Public

Kristen McGoey
Administrative Assistant

Our Lady of the Lake – LSUHSC Consortium Program for Respiratory Therapy
Sue Davis, MHS, RRT
Kendall Beasley, BS, RRT
Respiratory Therapy Program Accreditation

The Respiratory Therapy Program is accredited by the Commission on Accreditation for Respiratory Care (CoARC). The Program's accreditation is for a period of 10 years from 11/30/2011 to 11/30/2021. Our CoARC Program Reference # is 200251. The Program is not accredited in polysomnography.

Commission on Accreditation for Respiratory Care
1248 Harwood Road
Bedford, TX 76021-4244
Phone: 817.283.2835; Fax: 817.354.8519
http://www.coarc.com/

Respiratory Therapy Program Goal and Objectives

Goal: To prepare graduates with demonstrated competence in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains of respiratory care practice as performed by registered respiratory therapists (RRTs). Upon completion of the program, graduates will be competent Registered Respiratory Therapists.

Objective 1: Upon completion of the program, graduates will demonstrate the ability to comprehend, apply, and evaluate clinical information relevant to their roles as advanced-level respiratory therapists.

Objective 2: Upon completion of the program, graduates will demonstrate the technical proficiency in all skills necessary to fulfill their roles as advanced-level respiratory therapists.

Objective 3: Upon completion of the program, graduates will demonstrate personal behavior consistent with professional and employer expectations for advanced-level respiratory therapists.

Description of the Respiratory Therapy Program and Eligibility for National Credentialing Examinations

The Respiratory Therapy Program involves didactic and laboratory instruction in respiratory therapy that is supplemented with clinical experience in every semester except the first. Upon successful completion of 19 months of study, each student receives a Special Letter of Completion issued by CoARC stating that the student has successfully completed the courses approved by CoARC and has met the requirements for this special letter of completion in lieu of the National Board for Respiratory Care's (NBRC, http://www.nbrc.org/) graduation and degree requirement in respiratory therapy. With this letter, the student is eligible for the Certified Respiratory Therapist (CRT) and Registered Respiratory Therapist (RRT) examinations. Thus, when registering for these
exams you are considered a student enrolled in an accredited respiratory therapy education program in an institution offering a baccalaureate degree and have been awarded a special certificate of completion approved by the CoARC. After completing the Respiratory Therapy Program, students take an additional semester (5 months) of courses that includes polysomnography to earn a bachelor’s degree in Cardiopulmonary Science. **Students are strongly encouraged to take the CRT and written portion of the RRT examination during the break between the fall semester and the final spring semester.**

**Advanced Placement**

The Department’s program in respiratory therapy does NOT offer advanced placement.

**Earning CRT and RRT Credentials**

Following successful completion of the CRT examination, one earns the CRT credential and is recognized as a certified respiratory therapist and becomes eligible to take the RRT examination. Likewise, after successful completion of the RRT examination, one earns the RRT credential and is recognized as a registered respiratory therapist. The RRT examination consists of a written part and a clinical simulations part. You may take them in any order, but both parts must be passed to earn the RRT credential. The CRT and RRT credential must be earned within three years of completing the respiratory therapy program. Individuals whose three-year time limit has expired must retake and pass the CRT Examination to reinstate their eligibility for the RRT Examination.

**Becoming a Licensed Respiratory Therapist**

In order to practice respiratory therapy in most states, including Louisiana, one must hold a minimum of a CRT credential and obtain a state respiratory therapy license. Students are encouraged during the months leading up to receiving their special letter of completion to start the application process with the Louisiana State Board of Medical Examiners (LSBME, [http://www.lsbme.louisiana.gov/](http://www.lsbme.louisiana.gov/)) to become a licensed respiratory therapist (LRT). A felony conviction may affect a graduate’s ability to sit for the NBRC examinations or attain state licensure.

**Additional Program Related Costs to Students**

<table>
<thead>
<tr>
<th>Required</th>
<th>Approximate Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbooks and lab supplies</td>
<td>$1500</td>
</tr>
<tr>
<td>Clinical background check and supplies (i.e., scrubs, stethoscope, bandage scissors, hemostat, and safety goggles)</td>
<td>$250</td>
</tr>
<tr>
<td>LSUSC Parking and gate card</td>
<td>$90</td>
</tr>
<tr>
<td>Basic Life Support (BLS), Advanced Cardiac Life Support (ACLS), Pediatric Advanced Life Support (PALS) Provider cards</td>
<td>$23</td>
</tr>
</tbody>
</table>
- CRT/RRT Review course $70
- Diploma, Cap and Gown $47

### Profession Related
- NBRC CRT examination $190
- NBRC RRT examination (written portion/clinical simulations portion) $190/$200
- Each NBRC credentialing exam (CPFT, RPFT, NPS, SDS, ACCS) $200-$300
- Renewal of AARC Membership (before/after graduation date) $50/$90
- Louisiana State Respiratory Care Conference and Exhibits Registration (Student-AARC Member/-Non-ARRC Member) $0/$65
- Louisiana Respiratory Therapy licensure fee/renewal $125/85

### Expectations and Guidelines
Acceptance into the Cardiopulmonary Science Bachelor of Science Degree Program at LSU Health Sciences Center - New Orleans indicates that the faculty and staff in the Department of Cardiopulmonary Science have chosen to dedicate their time, effort and expertise to train you to become an allied health practitioner. Your acceptance of our invitation to enter the program indicates that you are committed to becoming a professional in the cardiopulmonary sciences by fulfilling the degree requirements and taking all the appropriate board exams. Your acceptance also marks the beginning of an intense two-year didactic and clinical preparation to become a competent and caring professional in respiratory therapy. Successful completion of the Program demands the fullest commitment of time, effort and energy from all parties involved. This section outlines the specific qualities, attributes and learning strategies required of a successful student in the Program, and further serves to define resources and references you may need throughout your course of study as well as those you may need in your career as a professional in the cardiopulmonary sciences.

### I. Transitioning to Professionalism

Your tenure as a student in the Department of Cardiopulmonary Science will be unlike your past educational experiences. Unlike the general curriculum required for most bachelor’s degrees, your coursework will be streamlined and specialized to the cardiopulmonary sciences and will traverse classroom examination to demonstration of competency in clinical settings. The most successful graduates from the Cardiopulmonary Science Program demonstrate a triad of qualities including professional decorum, professional integrity, and educational leadership. The integrated incorporation of these qualities eases the transition from college student to health care professional.

#### a. Professional Decorum
First impressions go a long way in determining how one is perceived and treated in the classroom and in the clinic. In order to earn respect on both a professional
and personal level, one must project the appearance of a competent professional. Arriving on time or early demonstrates that you understand and respect the importance of your attendance in both the clinic and the classroom. Health care professionals should be well groomed, dressed in the appropriate attire, and prepared for the task at hand whether it be classroom activities (books, assignments, prior readings, etc.) or in the clinic (lab coat, scissors, black pen, stethoscope, etc.). Students should also be respectful of those who may be sensitive to strong odors by limiting the use of scented products (i.e. colognes, lotions, cigarette smoke, etc.). Taken together, these guidelines define the professional decorum expected of each student enrolled in the Department of Cardiopulmonary Science as they pertain to both the classroom and clinical environments.

As a student, you are expected to:

- Arrive on time
- Be well-groomed (both your person and your property)
- Dress in the appropriate attire
- Have the needed materials/equipment
- Wear your Identification Badge (on campus and in clinics)

b. Professional Integrity

As a respiratory therapist, your professional success will be determined in part by your professional integrity. The successful student is one who possesses effective communication skills, is self-directed and willingly participates in all aspects of the educational process. These students demonstrate great respect for themselves, their professors and colleagues; they are honest and embrace clinical practice with ethical and moral standards. Furthermore, these students are admired by those with whom they interact for their sympathetic and empathetic standard of care in the clinical setting.

As a student, you are expected to:

- Utilize effective social and communication skills
- Be self directed and motivated in your studies and in clinic
- Demonstrate respect for yourself, the faculty and staff, and your peers
- Provide sympathetic and empathetic care

c. Educational Leadership

Your proficiency as a respiratory therapist will also be evaluated on your educational leadership. The most successful professionals not only understand and are proficient at the “how” of the tasks in their field, but also understand the “why” behind the actions on a fundamental level. It is not enough to memorize the material presented; students must possess an understanding of the material
beyond recall. Such understanding of fundamental procedures and disease processes allows a professional to make the most informed decisions and anticipate realistic outcomes and complications in patient care. Furthermore, health care professionals are expected or required to continue their education after completion of the degree program. In fact, it is now the policy of some hospitals to require continued education (R.R.T., asthma educator, etc.) for advancement. Educational leadership also incorporates the service of the health care profession in that professionals are expected to share their knowledge with other professionals and to participate in the training of students and new staff members. As a student, you are expected to:

- Master the presented material beyond the recall level
- Demonstrate mastery of the fundamental principles and techniques
- Pursue education outside of the classroom
- Demonstrate competency in diagnostic and/or therapeutic procedures and patient care

II. A Lifetime of Professionalism

There are numerous opportunities available for students to develop their professionalism. These include participation in Camp Pelican, health fairs, mentoring, membership in professional organizations, attendance at state and national conferences, and earning the highest credentials in respiratory therapy.

a. Camp Pelican (www.camppelican.org)

Camp Pelican is a week long summer camp sponsored by Louisiana Pulmonary Disease Camp Incorporated, a non-profit organization founded in 1976 by a group of respiratory therapists, nurses, and physicians to promote an appreciation of the plight of children with chronic and debilitating lung disease, such as cystic fibrosis, chronic asthma, and children who are ventilator assisted, and many others. Each year our respiratory therapy students are afforded the opportunity to share their technical and personal skills with the community by assisting campers with their specialized routine care 24 hours a day. This is an extremely rewarding experience for both the student and camper.

b. Mentorship

By becoming a mentor to your fellow students, you are helping to provide them with the skills necessary to achieve their highest potential and thus strengthening your profession and community. Mentoring can be done silently by setting an example to others, or mentoring can be hands-on through sharing proven study skills, time management, knowledge and experience with fellow students. You should realize that as seniors, you are constantly mentoring to juniors that will have profound effects on their professionalism.
c. Health Screening

Students are occasionally asked to help provide health screenings to the LSUHSC network employees or to members of the community. This is an opportunity for students to provide educational information related to respiratory therapy and cardiovascular technology to the community, as well as gain valuable insight into patient care. Students have the opportunity to participate with the American College of Allergy, Asthma, and Immunology in providing free spirometry testing at the St Thomas Community Wellness Center, as part of National Asthma Awareness Week.

d. Membership in Professional Organizations

Membership in your professional organization is critical to ensure a united, strong voice that speaks for all its members to advocate for patients in areas of access to appropriate health care professionals, quality of patient care, and patient services. The respiratory therapy profession has a national organization called the American Association for Respiratory Care (AARC, www.aarc.org/), with an AARC State Society in most states. In Louisiana, the AARC State Society is the Louisiana Society for Respiratory Care (LSRC, www.lsnc.net ). Since 1947, the AARC has been committed to enhancing our professionalism as respiratory care practitioners, improving our performance on the job, and helping us broaden the scope of knowledge essential to our success.

Your support of the AARC and LSRC is integral to the success of the profession. By joining the AARC, you help gain access and strengthen positions and credibility with lawmakers and administrative agencies. Each of you has the ability to both indirectly and directly strengthen the foundation of the respiratory profession by becoming a member today. The AARC is dedicated to helping you grow and develop as a respiratory care professional. They offer news, authoritative and up-to-date information and resources, and provide life-long learning through continuing education, and career assistance. During the state and national meetings you will have the opportunity to hear the latest research regarding the profession, be introduced to new technology and equipment, and network with other professionals from around the nation.

e. Credentialing

During the course of the program, students become eligible to sit for national board exams for respiratory therapy offered by the NBRC (www.nbrc.org). Upon successful completion of the respective exams, they become certified respiratory therapists and then registered respiratory therapists. Students who hold either the CRT or RRT credential are able to apply for state licensure (www.lsbrme.org), which is required to practice respiratory therapy.
In order to ensure superior health care to patients, health care professionals seek and demonstrate the highest level of competency in their profession. The respiratory therapist who has demonstrated the highest level of competency in their profession is the registered respiratory therapist (RRT). As a student of an advanced respiratory therapy program, you are expected to obtain and perform at the highest level of competency as evident by earning the RRT credential. In addition to earning the RRT credential, students and therapists can provide leadership and specialized training by becoming an Asthma Educator, Basic Life Support Provider and Instructor, Advanced Cardiac Life Support Provider and Instructor, Pediatric Advanced Life Support Provider and Instructor, Neonatal Resuscitation Program Provider and Instructor.

Therapists often give of their time, knowledge, and expertise to the advancement of their profession by becoming clinical instructors, unit coordinators, shift supervisors, and managers. They participate in research, and provide seminars, in-services and continuing education.

III. Helpful Hints to Success

a. Commit Yourself.

No, not to a mental institution, but to truly learning cardiopulmonary sciences. You can’t go about learning respiratory therapy in a halfhearted fashion. In order to integrate the many concepts of cardiopulmonary sciences you must be aggressive and be devoted to your studies. This may mean spending less time with family, friends, and co-workers and more time with fellow students, faculty, and patients.

b. Ask Yourself Why.

Whenever possible, ask yourself why something is the way that it is, or happens the way that it does. If you are unsure of the answer, ask the instructor. This method will help you remember and integrate material, and increase your level of understanding. The beauty of respiratory therapy is that so much of the physiology, pathophysiology, diagnostic techniques, and treatment modalities make sense. If something does not make perfect sense to you, make every effort to see that it does. Do not simply give in and memorize the material.

c. Take Responsibility for What You Don’t Know.

If you don’t understand something, and you are like most students, you will do one of two things. You can forget about the material, attempt to learn it the day before the test when it is too late, completely botch it on the exam, and then blame the teacher for not explaining it to your satisfaction. Better yet, you can ask the teacher, preferably on the day of the lecture, about the material that you don’t understand. The teacher is here to help you, so take advantage of his or
her knowledge. You cannot and must not be afraid of asking questions. You’re paying for this, so get your money’s worth.

d. Focus on the Material, Not on the Exam.

In order to make your time here a rewarding and enjoyable (well, at least less stressful) experience, your goal must be to learn the material, not just pass the exams. The primary purpose of the exams is to get you to study. If you work hard and dedicate yourself to learning the material, the exams will take care of themselves. Do not continually ask, “Do we need to know this for the test?” If you familiarize yourself with everything presented in class, as well as each reference indicated by the instructor, you will do well.

e. Do Not Cram.

If you enjoy headaches, then by all means study the material at the last minute. However, if you want to reduce stress in your life, keep up with the material!

Grading Policy and Process of Seeking Remediation

The Department of Cardiopulmonary Science employs the following grading policy for all didactic courses:

A = 90-100%  B = 80-89%  C = 70-79%  D = 60-69%

The minimum passing grade is a C. Clinical courses are pass/fail. Any courses in which the student receives less than a “C” in a graded course or an “F” in a pass/fail course must be repeated, and a grade of “C” or higher or “P” earned, before the sequence can be continued. Additional information regarding grading of clinical courses is in the Clinical Policies and Procedures section of this handbook. Policy and Procedures Relating to Academic Misconduct are in the LSUHSC Catalog/Bulletin, http://www.lsuhsc.edu/catalog/ and SAHP Student Handbook.

Course syllabi provide specific guidelines on examinations. Faculty members administer and review for exams at their discretion. Exams are returned to students for review and discussion and then collected during the same class period. Students are encouraged to keep a record of their exam performances. A student may review their grades acquired during a course either by scheduling a meeting with the course director or by using the online secure course management system (Moodle).

A student who receives a failing grade on an exam is strongly encouraged to seek immediate guidance from the course director on possible means for improving his/her performance. These may include scheduled meetings with the course director or instructional faculty, seeking out tutoring, additional practice assignments and/or practice time. Students seeking guidance should make an
appointment with the appropriate course director and refer to the Appointments with Faculty Members section of this handbook.

**Statement of Satisfactory Academic Progress**

The following requirements pertaining to the status of satisfactory academic progress apply to all students enrolled in the Department of Cardiopulmonary Science. In order to achieve the status of satisfactory academic progress the student must satisfy the following standards:

1. Maintain a grade-point average that is consistent with the academic standards set by the Department’s grading policy.
2. Satisfactorily complete the required number of credit hours per semester established by the Department.
3. *Meet the LSUHSC, SAHP health requirement related to hepatitis vaccine series and annual tuberculin skin test.*
4. *Maintain current certification in CPR for Health Professionals.*
5. Completed required compliance training.
6. Meet the technical standards of the Cardiopulmonary Science Program as defined in the LSUHSC Catalog.
7. Satisfactorily complete all course work required for graduation in not more than eight calendar years.

*Students are required to submit evidence of compliance with all health requirements to the Student Health Services and Records (Lions Building, Rm 716, 2020 Gravier St.) and CPR compliance to the Program’s Director of Clinical Education. Students are required to complete required on-line compliance training through the Office of Compliance. The Assistant to the Dean for Clinical Affairs will inform the Department Head when students are in noncompliance. The Office of Compliance notifies students when they are not in compliance and instructs them on how to complete the required training. Students cannot enroll in semester courses until evidence of compliance is current. If a student comes due for one of the requirements during a semester, he/she must comply before continuing participation in semester coursework or clinical rotations.

In order to determine that a respiratory therapy student can safely apply modalities and data collection techniques on patients in the clinic, the student must demonstrate competency in the laboratory. These competencies combine and integrate assessments, behaviors and treatment procedures reflective of respiratory therapy practice. These competencies are graded either pass or fail. Competencies that the student must demonstrate are listed in respective course syllabi. Students are required to practice skills and pass a competency test on each procedure taught in the respective semester. Competency evaluations are comprehensive and any competency previously tested may be included in course practical exams. In the event that the student fails a competency evaluation, the student is required to continue to practice the skill until the evaluation is passed. Students must pass all competencies in order to pass the course in which the competencies are based. The student will not be allowed
to attend clinic until successfully completing all competency evaluations and practical tests. Failure to pass all competency evaluations may result in non-progression of the student in the program and/or semester and thus prevent the student from enrolling in subsequent clinical courses. Policies related to remediation opportunities in a given course are found in the course syllabus.

In order to achieve satisfactory performance in the patient care setting, each respiratory therapy student must meet the Technical Standards and conduct him- or herself in a manner consistent with the Student-Clinic Relationship and Clinical Policies and Procedures as outlined in this handbook. Unsatisfactory clinical practice is evidenced by behavior in any patient care setting that may jeopardize a patient’s physical and/or psychological safety. Unsatisfactory clinical practice also includes unprofessional and uncaring behaviors. Any behavior that is not consistent with the Student-Clinic Relationship and Clinical Policies and Procedures will result in a clinical course grade of F, or failing.

Each semester the Department reviews students' academic progress. The names of those students who have not achieved the status of satisfactory academic progress are forwarded to the Director of Student Affairs for appropriate action. Additional policy on Provisions for Academic Progression is in the LSUHSC Catalog/Bulletin, [http://www.lsuhsc.edu/catalog/](http://www.lsuhsc.edu/catalog/).

Student appeals may be made in accordance with the procedures set forth in the section of the catalog/bulletin under the SAHP Policies and Procedures related to Student Conduct entitled, “Student Grade Appeals”, and “Professional Misconduct Appeal”. These policies and procedures are also found in the SAHP Student Handbook.

**Requirements for Special Letter of Completion (SLC) and Graduation**

1. The student must have fulfilled all requirements of each course listed in the Cardiopulmonary Science curriculum, and have received a grade of “C” or better in all didactic courses and a passing grade “P” in all clinic courses (SLC and graduation).

2. The student must have met all financial obligations to the LSU System at least ten days prior to, receiving SLC, or graduation.

3. The student must be registered in the semester of anticipated graduation and pay the appropriate diploma fee.

4. The student must attend commencement ceremonies, unless excused, in writing, by the Dean.
Student Responsibilities and Rights (CM-56)

The Louisiana State University Health Sciences Center (LSUHSC) in New Orleans is dedicated to providing its students, residents, faculty, staff, and patients with an environment of respect, dignity, and support. The diverse backgrounds, personalities, and learning needs of individual students must be considered at all times in order to foster appropriate and effective teacher-learner relationships. Honesty, fairness, evenhanded treatment, and respect for students’ physical and emotional well-being are the foundation of establishing an effective learning environment.

Student Responsibilities

Students are responsible for complying with all policies/procedures, rules and regulations, and other information published by the Health Sciences Center. In addition, students are expected to abide by all federal, state and local laws.

Students are expected to:

- Exhibit the highest standard of personal, academic professional and ethical behavior.
- Treat faculty, staff, peers, clients, patients, and others with dignity and respect.
- Abide by the Code of Conduct that applies to their specific professional discipline.
- Students who violate any of the above when involved in any school or school related activity/function, whether on or off campus, will be subject to disciplinary action.

Students Rights

Mistreatment and abuse of students by faculty, residents, staff or fellow students is contrary to the educational objectives of the LSUHSC in New Orleans and will not be tolerated. Mistreatment and abuse include, but are not limited to, berating, belittling, or humiliation; physical punishment or threats; intimidation; sexual harassment; harassment or discrimination based on race, gender, sexual preference, age, religion, physical or learning disabilities; assigning a grade for reasons other than the student’s performance; assigning tasks for punishment or non-educational purposes; requiring the performance of personal services; or failing to give students credit for work they have done.

Students have rights as guaranteed by the U.S. Constitution and all appropriate federal, state and local laws. Primary among those is the right to a fair and impartial hearing, if the student is accused of misconduct or violating university regulations. Additionally, students have the right to file a complaint for alleged mistreatment. The Health Sciences Center has existing policies and procedures that relate to the following: financial aid; sexual harassment; final grade appeal; student housing; parking; drugs; alcohol; firearms; student’s access to records, and privacy; computer/internet use; dress and
professional conduct; health insurance; and liability insurance. Issues that relate to these specific policies, which may be found on the Health Sciences Center website, should be addressed to the appropriate office. The Office of Student Affairs of the appropriate school can help students with information about those policies.

Procedure for Addressing Student Complaints

If the Health Sciences Center or specific school already has a policy concerning the student’s complaint, procedures indicated in that policy should be used; if the Health Sciences Center or specific school has no specific policy, the following procedure should be used.

Informal Conflict Resolution

1. Discuss the conflict with the person against whom the complaint is made. In the event that the complainant does not feel comfortable doing so, the complaint should be directed to the Office of the Associate Dean for Academic/Student Affairs of the specific school.
2. The Associate Dean of Academic/Student Affairs will meet with the individual against whom the complaint has been made in an effort to resolve the conflict.

Filing a Formal Complaint

If the conflict cannot be resolved informally, the complainant must make a formal written complaint to the Associate Dean of Academic/Student Affairs. The written complaint must include the following:

- A statement of the complaint,
- Identification of individual/office against whom the complaint is made,
- The relief sought,
- The complaint must be signed by the complainant.

Upon receipt of the formal written complaint, the Associate Dean of Academic/Student Affairs of the appropriate school must take immediate action to resolve the conflict.

If the conflict cannot be resolved to the complainant’s satisfaction within a period of 10 working days, the matter will be referred to the Vice Chancellor for Academic Affairs of the Health Sciences Center by the Associate Dean. The referral will include the complainant’s formal written request plus a statement of actions taken by the Associate Dean to resolve this matter.

Referral to the Vice Chancellor of the Academic Affairs

The Vice Chancellor for Academic Affairs:
May make a decision as to how the matter can be resolved. This decision shall be communicated to all concerned parties in writing;

If for any reason the Vice Chancellor for Academic Affairs chooses not to render a decision, he/she may empanel an ad hoc committee comprising three faculty members, at least one of which is from the pool of elected members of the Faculty Senate and two students appointed by the appropriate Student Government Association President. The Committee shall meet in an effort to resolve the matter within a period of 10 working days. The Committee may meet with the concerned parties and others who can provide information that is helpful in resolving the matter. The Committee meetings will be closed, and information provided during the meeting shall be held in strictest confidence.

The Committee shall reach a decision as to the resolution of the matter and make its written recommendation to the Vice Chancellor of Academic Affairs within five working days. The Vice Chancellor for Academic Affairs, upon receipt of the Committee’s recommendation, will make a decision and communicate this decision in writing to all concerned parties and the Dean of the appropriate school. The decision of the Vice Chancellor for Academic Affairs is final and non-appealable.

General Policies and Procedures

Professional Behavior

1. **Class attendance is required.** Students are expected to provide advanced notice of absences or a reasonable explanation to the faculty member whose class is missed as soon as possible (and not later than 24 hours) after the missed class. In case of serious illness, or other emergencies, the student will need to inform his/her instructor via phone or e-mail. If the faculty member is not available by phone, the student will need to leave a message with the office staff of the Cardiopulmonary Science Department at (504) 568-4227. If the serious illness or emergency occurs on a day the student is scheduled at a clinical facility, it is the student's responsibility to inform the Director of Clinical Education as well as the supervisor of the clinical facility. Timelines for notification are described under the clinical policies and procedures section of the handbook. All missed clinical days must be made up. In the event of serious illness or emergency, the student and Director of Clinical Education will develop a written plan for making up missed clinical days.

2. **E-mail requirements.** Upon registration in the Program, each student is assigned an e-mail account through LSUHSC. Students will be required to use their e-mail accounts for registration purposes, and to receive messages from the School and the Department. It is preferred that the student correspond with faculty members through the LSUHSC e-mail account. Students are expected to check their e-mail regularly, at least daily.
3. **In class-computer use.** Courses may require the use of computers for classroom activities, including exams, quizzes, or other classroom activities. Please refer to course syllabi for specific policies for computer use and communicate with the course coordinator/instructor for answers to specific questions. When computers are used in class, it is expected to be for school classroom activities **only.** Any student using a computer during class for non-school related activities will be excused from the classroom. Students failing to comply with this policy will be reported to the Dean’s office, Department Head, and/or appropriate designee for disciplinary action and may be subject to dismissal from continuing their education at the School of Allied Health Professions.

4. **Mechanical Devices**

   **Cell phones are to be turned off during all classes and during all meetings with faculty.** In the rare case of a true emergency, the student is to ask for permission from the faculty member in charge of a given class or meeting to keep a cell phone turned on in order to receive the emergency call. Students whose electrical devices disrupt class may be asked to leave class and will not be permitted to return for the session. **Tape recorders** may be used in lecture classes **only with prior permission of the faculty,** in order to reinforce content acquisition. **They may not be used in lieu of class attendance.**

5. **Proper attire is required for all classroom, laboratory, and clinic sessions.** Patients/clients frequent the LSUHSC daily. Therefore, students are required to dress in attire suitable for the professional environment in which their classes are held, not just during visits to clinical sites. Bare feet, short shorts, sleeveless tops, spaghetti straps, tube tops, short skirts, and other revealing outfits are not considered professional or acceptable attire. Faculty will give instructions for laboratory and clinical dress as indicated.

6. **Students MUST respect the confidentiality of their clients/patients and colleagues.** Students are required to respect the dignity, individuality, privacy and personality of every individual. Information about a client should be shared on a “need to know” basis only, and not for reasons of personal interest. In other words, in order to provide services, it is necessary for various professional personnel to know personal information about a client. If a client's information is discussed related to official class business (e.g., during seminars, classes), the client's identity must remain anonymous, and information about the client that is not necessary to the learning situation must not be shared, (e.g., identity of known relatives, legal or moral issues not related to respiratory services being rendered). This is also true about personal discussions that students participate in during class time. Students are expected to respect the confidentiality and privacy of their classmates.
7. **Unprofessional, unethical, and illegal conduct** of any kind, including cheating on examinations or classroom assignments, plagiarism, and theft, etc., will subject the offending student to appropriate disciplinary measures that can include expulsion. **See the SAHP Student Handbook under Policy and Procedures Relating to Student Academic and Professional Conduct**

   http://alliedhealth.lsuhsnc.edu/Administration/professionalconduct.pdf

8. **Professionalism.** Being part of a profession requires that one display various professional behaviors.

   a. Students are expected to treat fellow students and other colleagues in a professional manner, meaning with respect and dignity. Disrespectful behaviors are not tolerated.

   b. Professionals are expected to be life-long learners. They are also expected to participate in their respective professional organizations. All students are required to become Web-based members of the AARC. It is strongly recommended that students obtain full membership in the AARC upon graduation.

9. **Hall conduct.** Students need to be cognizant when talking and gathering in the halls that noise travels easily. We ask that you make an effort to keep the noise at a minimum, particularly since we share the floor with other offices.

10. **Classrooms.** Students are expected to demonstrate respect for the School and courtesy to others. Students are expected to take responsibility for keeping the classrooms free of trash and debris, i.e., soft drink cans, papers, etc. Bulletin boards are intended for the display of instructional and professional materials, not personal or social items.

11. **Student lounge.** Room 6B2 is designated as a student lounge. The microwave and refrigerator in this room are for student use on the condition that students keep them clean at all times. Any food left in the refrigerator or in this room must be marked with the student’s name. **Food items left in the refrigerator or in the student lounge without a name attached are to be discarded by students.** The refrigerator and microwave are to be emptied and cleaned at the end of each semester. During hurricane season (June 1 to November 30), items should be removed at the end of each week. It is the responsibility of the students to see that these tasks are performed on a regular basis. Failure to keep both items clean may result in the termination of the use of these items.

12. **The use of alcohol is prohibited** in classroom buildings, laboratories, auditoriums, library buildings, faculty and administrative offices, athletic facilities, and all other public campus areas.

13. The unauthorized **use of, possession of, or being under the influence of alcohol** and the illegal use, abuse, possession, manufacture, dispensation,
distribution of, or being under the influence of controlled or illegal drugs is prohibited while at work, on call, on duty, at school, or engaged in LSUHSC – New Orleans campus business on or off LSUHSC-New Orleans premises.

14. We are committed to a violence-free workplace. Consistent with this policy, it is illegal and expressly prohibited to engage in the unauthorized carrying of a firearm or a dangerous weapon, by a student or non-student on University property at any time. This includes but is not necessarily limited to school sponsored functions or in a firearm-free zone. Violators will be arrested and prosecuted to the fullest extent of the law.

**Appointments with Faculty Members**

1. Appointments with a faculty member should be made out of class.
2. It is preferred that students make non-emergency appointments with faculty members in advance.
3. Faculty members are available during office hours as listed on course syllabi and on an as-needed basis.
4. Students or faculty may initiate a meeting.
5. The student or faculty member will need to make an appointment at a time that is convenient to both parties.
6. There are several ways in which one can make an appointment:
   - A student may stop by a faculty member’s office.
   - A student may call or send an e-mail.
   - A student or the faculty member can ask for an appointment before class, during a class break, or after class. Keep in mind that faculty often does not take their calendars to class, so the student may need to accompany the faculty member to his or her office after class to set the appointment.
   - A student can leave a message in writing in the faculty member’s box (located in the Cardiopulmonary Science Office, room 6C1); faculty can leave messages in the student's box (located in room 6B2)
   - If a message is left (either over the phone or in writing), indicate two to four possible meeting times in order to expedite the process of establishing an appointment, along with a phone number.
   - If a faculty member's door is open, it is preferred that students knock, and directly request to speak with the faculty member.
   - When a faculty member's door is closed, it is often because he or she is addressing job related responsibilities requiring privacy or time away from the office. In such situations, office staff or the student is to call the faculty member from a telephone to request permission to speak with the faculty member.
7. Students are not permitted in faculty offices unsupervised.
8. Students should meet with the faculty member(s) responsible for a course to discuss course-specific policies and procedures. If a student is not satisfied with the results of a meeting with a faculty member, he or she may then discuss the issue with the Program Director. If a student is still not satisfied with the results of a
meeting with the Program Director, he or she may then discuss the issue with the Department Head. For information about academic appeals, students can refer to that section under the SAHP in the LSUHSC Catalog/Bulletin, also available in SAHP Student Handbook.

**Written Reports**

Written reports are required to be in AMA style according to the *American Medical Association Manual of Style*.

**Building Access**

Students have access to the student lounge 24-7. All other areas of the Department are off-limits after 5:00 pm and on weekends, unless faculty approval has been obtained.

**Telephone Access**

A telephone is available for student use (with permission) in the main Cardiopulmonary Science office, room 6C1. **Campus emergency phone numbers** are placed in all classrooms and on all telephones.

**Mail Boxes**

Mailboxes in room 6B2 are provided for students. Please check your boxes regularly. Faculty mailboxes are located in the main Cardiopulmonary Science office, room 6C1.

**Computer Access**

Computers are available for student use in the LSUHSC library. Other departmental equipment is off limits to students unless faculty or staff permission is received. Use of the LSUHSC information technology (IT) infrastructure is a revocable privilege granted to those with an official affiliation with LSUHSC. Access to specific services on the IT infrastructure is based on a business need. Access to the IT infrastructure, and any components on the infrastructure, requires authorization. The LSUHSC IT infrastructure must be used in a manner consistent with protecting patient care and the critical business functions of the organization. No one should perform any activity on the IT infrastructure that undermines the public's confidence in LSUHSC to fulfill its mission. The owner of an LSUHSC user ID shall be held accountable for any violations of associated with that ID, regardless of the ownership or the location of the equipment where the violation may have occurred. Students should review Chancellor Memorandum (CM) 42 - Information Technology (IT) Infrastructure for more information on policy and procedures related to the LSUHSC IT infrastructure.
**Clinical Course Work Expenses** (i.e., parking, tolls, lodging and meals)

Expenses may be incurred by students enrolled in clinical course work and experiences in off-campus or out-of-state clinical sites. These expenses are the responsibility of the individual student and should be anticipated.

**Employment**

Employment during academic sessions is not recommended.

**Safety Tips**

The campus is located in an urban environment and theft does occur in and around LSUHSC. Therefore, keep your property secure at all times, even when moving between classrooms. Do not leave your backpacks, purses, or bags in one classroom while in another. When walking to and from your vehicle, be vigilant of your surroundings. Attacks on persons are infrequent, but they do happen. If possible, do not walk alone, especially at night. The University Police will escort you if you request the service. **Look out for each other, and BE SAFE!**

**Student notification of changes**

The University has attempted to centralize all communication among faculty, staff, students and administration by providing e-mail service and web-assisted technology for instruction and information. In the event that student notification is necessary, the e-mail service and Moodle course activities are the primary means to do so. Students are required to access Moodle courses to download handouts and assignments according to course requirements. Students are required to check the University e-mail often to ensure timely access to School and Program announcements. In the event that a student has no access to computers or internet at home, the University Library is available during the week on evenings and on weekends. Students should determine when the University Library is open to students in advance of assigned work to insure timely completion.

Difficulties accessing e-mail and Moodle should be reported to the HELP desk at 568-HELP (4357). The HELP desk is available 24 hours/7 days a week. Some areas of the LSU Health Sciences Center, New Orleans have computer supporters that only work Monday through Friday, 8:00 a.m. until 5:00 p.m. If you need assistance after 5:00 p.m. on Friday and before 8:00 a.m. on Monday, please contact the New Orleans Help Desk at (504) 568-HELP. Because technology is unpredictable at times, students may experience difficulties submitting assignments or accessing announcements at inconvenient times. Students are expected to check the Moodle sites, gradebook and announcements several times a week. In the event that a problem occurs, it is the student’s responsibility to e-mail the course instructor immediately to report the problem. There are occasions when a simple adjustment by the instructor can remediate the problem. Instructors reserve the right to decide if assigned work can be re-submitted.
Guidelines for use of Skills Labs

The Respiratory Therapy skills labs in room 6C3/6B3 and 6A10 are available to students during regular building hours and at other times by arrangement. The lab houses equipment and supplies for use by students enrolled in the Respiratory Therapy Program. Students are encouraged to use the skills laboratories for practice and self evaluation throughout clinical semesters. All equipment must be handled carefully. Items of equipment may NOT be removed from the lab. If the lab is locked during regular hours, contact a faculty member for access. Students are obligated and expected to comply with the rules and regulations that follow. Any misuse of equipment or deliberate failure to follow instructions will result in disciplinary action. All equipment and supplies must be maintained in their assigned cabinets or drawers.

Declaration of Risk

Students are required to participate in all assigned lab activities. Students are instructed in precautions, indications for and contraindications against each therapeutic modality, prior to participating in lab practice. It is the responsibility of the student to declare to the faculty any illness, injury or condition that could present the risk of potential danger in either the lab or clinical settings directly to the course coordinator or the program director. Personal information will be kept confidential, unless otherwise authorized by the student. Students should refer to the policies and procedures of student conduct sections of the SAHP Student Handbook.

If a student demonstrates psychomotor behaviors indicative of injury or illness, he/she will not be allowed to participate in clinical education or laboratory activities until evaluated, and released, by a physician. In the event that a student is under a physician’s care, the faculty must receive documentation of restrictions or release from care, in order to insure that accommodations can be made in the lab or clinic. In the event that a student’s health status changes due to an accident, pregnancy or illness at anytime while enrolled in the Program, the student must have a doctor’s documentation of release and/or restrictions in order to return to class or clinic. A copy of the documentation will be maintained in the student’s Departmental file.

General Rules

1. Horseplay is prohibited.
2. Children are not permitted in the skills labs.
3. Students are responsible for storing all equipment and supplies after use.
4. Students are responsible for ensuring the general tidiness of the lab at all times.
5. Use of derogatory and provocative language among students will not be tolerated.
6. Eating and drinking is prohibited in the skills laboratory.
Safety

1. Proper body mechanics must be practiced when positioning, transferring or moving mannequins or humans.
2. Do NOT sit on tables.
3. Students may NOT perform invasive procedures on each other. Procedures such as arterial puncture and suctioning may be performed on mannequins ONLY.
4. Sharps must be disposed of in an appropriate container.

Equipment

1. Operator's manuals are maintained for equipment stored in the lab. Refer to these manuals when operating specific items of equipment.
2. Medical gas cylinders are to be stored chained to the wall. Guidelines for safely handling medical gas cylinders will be distributed in the laboratory session and are to be followed.
3. Regulators must be removed from cylinders when not in use.
4. Label any broken equipment as "BROKEN" OR "DEFECTIVE" and notify Program Director of any non-working equipment.
5. Equipment with frayed, loose, or other observable dysfunctional wiring must NOT be use and be reported to Program faculty immediately.

Illness/Injury Policy

All students in clinical courses with health conditions (illnesses/infections/injury) which necessitate extended absences (3 or more days) must discuss the reason for the absence with the Director of Clinical Education. The student may continue in the program with the written approval of his/her physician. The student must report to the Student Health Services and Records to obtain a "Clearance for Class/Clinical Form". The student must provide a portion of this completed form to the Director of Clinical Education.

An illness that requires an extended absence that prevents the completion of course work because of circumstances beyond the student's control may necessitate the student's withdrawal, from course(s), resignation from the University and/or issuance of a grade of "I" (incomplete). In such cases, the student must consult the Program Director for Respiratory Therapy for guidance.

Emergency Disaster Plan

1. Text Messaging Alert System

In the event of an emergency, LSUHSC has the capability to send pertinent messages via text messaging. More information about this system, as well as how to
sign up, can be accessed via [http://www.lsuhsc.edu/alerts/](http://www.lsuhsc.edu/alerts/). All students are strongly encouraged to sign up.

2. **Departmental Disaster Plan**

   It is each individual’s responsibility, whether faculty, staff or student to obtain essential information about a hazardous condition from television, radio, or newspaper. It is each individual’s responsibility to evaluate the situation and determine the course of action that is in the individual’s best interest. The Department of Cardiopulmonary Science does not guarantee that every individual will be notified, nor assumes any liability for failure to contact any individual. Given these conditions, the Department will make an effort to notify faculty, staff, and students of important information regarding hazardous conditions (e.g., hurricane information). This effort will include one or more of the following means of communication: mass communication, telephone, and/or answer machine. In the case of mass communication, faculty, staff and students will be advised to listen to major television and radio stations for information. In case of telephone communication:

   1. **Andy Pellett** will be the first point of contact.

      (504) 957-8200 (cell)
      (504) 568-4229 (office)
      (504) 484-7879 (home)

   Alternatively, the following individual may be contacted.

   2. **John Zamjahn**  
      (504) 237-0728 (cell)  
      (504) 568-4228 (office)  
      (504) 737-0905 (home)

   The Department Head or alternate will contact faculty, staff, and students. (In case of students, student representatives within the Department may be enlisted to contact other students within the program).

   **Tim Cordes**  
   (504) 495-4794 (cell)  
   (504) 568-4234 (office)  
   (985) 792-7080 (home)

   **David Markey**  
   (504) 319-9104 (cell)

   **Kristen McGoey**  
   (504) 568-4227 (office)

   With respect to communication with the answering machine, if possible, the answer machine in the Department main office (568-4227) will be programmed with an appropriate message or notification.
The Clinical Experience

Students participate in four consecutive semester clinical courses to develop the clinical skills necessary to become a competent respiratory care professional. The clinical experience in respiratory therapy begins during the first fall semester. Students gain competence in the respiratory care of adult patients receiving non-intensive care. Emphasis is placed on routine patient care, including such modalities as oxygen therapy, use of aerosol humidity devices, aerosol delivery of medication, airway clearance techniques, and hyperinflation therapy. The fall clinical rotation is composed of a total of seven weeks (2-3 days per week) of experience at three different clinical sites. Students are exposed to 160 hours of combined adult and pediatric floor care.

Students gain competence in the respiratory care of adult patients in critical care units during the spring semester. Emphasis is placed on introduction of monitoring techniques, blood gas sampling and analysis, mechanical ventilation, patient weaning and extubation. The spring clinical rotation lasts approximately 8 weeks (3 days per week). Students will rotate between clinical sites spending approximately 3-4 weeks at each site. Students are exposed to 192 hours in the respiratory care of adult patients in critical care units. Students are afforded the opportunity to attend the LSRC State Convention and Exhibits held during one of the weeks of this rotation. If students choose not to attend, they are required to attend adult critical care clinicals that week.

Students gain competence in the respiratory care of pediatric and neonatal patients in critical care units, patients with chronic pulmonary disease in outpatient clinic settings, and for pediatric and adult patients in need of lung and airway emergency management, including intubation. Emphasis is placed on neonatal and pediatric monitoring techniques, blood gas sampling and analysis, mechanical ventilation, weaning and extubation, intubation, and physician interaction during outpatient management of patients with lung disease. The summer clinical rotation lasts approximately 8 weeks (3 days per week). Students will rotate between clinical sites spending approximately 192 hours in clinics (anesthesia and emergency room care, 24 hours, and neonatal and pediatric critical care units, 168 hours).

Students gain competence in the respiratory care of critically ill patients and patients receiving pulmonary diagnostic tests, pulmonary rehabilitation, and home care. Emphasis is placed on time management, advanced monitoring and pulmonary diagnostic techniques, advance modes of mechanical ventilation, emergency airway management, chronic pulmonary disease management through exercise prescription and education, and application of skills learned from previous clinical experience. This clinical rotation lasts approximately 9 weeks (3 days per week). Students will rotate between clinical sites spending approximately 260 hours in clinics (adult critical care, 160 hours composed of 8 and 12-hour shifts, pediatric pulmonary diagnostics, 16 hours, adult pulmonary diagnostics, 48 hours, and pulmonary rehabilitation, 24 hours, home care 4 hours).
As part of earning a Bachelor of Science degree in Cardiopulmonary Science, students are required to take a fifth clinical course during their final spring semester. This course is designed to give the student an opportunity to rotate through a sleep lab and pulmonary outpatient clinics, provide community outreach in the forms of respiratory services and education related to pulmonary disease management and the respiratory therapy profession, and serve as a teaching assistant. In addition, students improve their time management skills as they take on full patient workloads in an adult intensive care setting. Through patient contact in a sleep lab, students acquire the clinical experiences necessary to develop the psychomotor skills and clinical competence associated with advanced-level polysomnographic technology. Students also gain teaching and leadership skills as teaching assistants to junior respiratory therapy students who are attending their second clinical course, as described above. Students will rotate between clinical sites spending approximately 207 hours in clinics (day-, evening-, and overnight-sleep lab, 60 hours, adult critical care, 120 hours composed of 12-hour shifts, teaching assistant in adult critical care, 15 hours, and pulmonary outpatient clinics, 12 hours).

The Student-Clinic Relationship

As faculty and students, we are guests of the various clinical institutions and therefore must abide by the policies and practices of our host institution. The institution may ask for the removal of any student based on violation of any of the recommendations below.

I. Standards of Dress

The student must realize that patients and hospital workers view him or her as a segment of a professional health care team and therefore, expect him or her to present a professional appearance. When a member of the public perceives him or her to be unprofessional, then that professional’s ability to interact and work with that patient is compromised. The hospital itself expects the people who are acting as agents of the hospital to adhere to its standards. For respiratory care clinics, refer to your clinical packet for general guidelines and lead instructors for specific information regarding your assigned affiliate.

Dress code:

1. Navy blue scrub top and pants. Style of top and pants will be the student’s choice.

2. Scrub top must have LSUHSC–School of Allied Health Professions patch on left shoulder and Cardiopulmonary Science embroidered above the pocket.

3. School I.D. badge must be worn at all times.

4. Clean, white leather tennis shoes shall be permitted.
5. Hair and beards must be clean and neatly trimmed.

6. Required supplies (Not supplied by Program) for respiratory care clinics include:
   a. stethoscope
   b. a watch capable of indicating seconds
   c. safety goggles
   d. bandage scissors
   e. hemostats
   f. black ink pen

7. The student must maintain a clean, neat, professional appearance at all times. The instructor may send a student home who is not properly attired. This will result in an unexcused absence.

II. Standards of Grooming

Like dress, grooming is an underlying and important factor in your ability to act effectively with patients. The hospital’s standards here again are to be followed. In general, the following recommendations are made:

1. Fingernails should be clean and short within reason. Nail polish is according to hospital standards. Artificial fingernails cannot be worn when providing hands-on patient care.

2. Jewelry is appropriate to society’s expectations. It should be minimal and in all cases out of the way if it interferes or distracts.

3. Colognes are not recommended. Certain smells can be distressing to patients and will make it difficult for you to work with them.

III. Standards of Patient Interaction

The way you conduct yourself with patients is an essential component of effective therapy. Patience and understanding are necessary to interact with people who are perhaps not at their best. the rights to courtesy, dignity, and privacy of patients should be respected at all times.

1. The student is to wear his or her School I.D. badge at all times and upon having patient contact indentify himself or herself as a respiratory therapy student from LSUHSC.

2. Allied health professionals do not solicit, expect or accept material or monetary gifts or favors for the services they provide.
3. The student will be expected to abide by the code of ethics as outlined by the AARC. As an individual, you will sift through the various moral and ethical situations and form your own sense of professionalism.

4. Students must maintain confidentiality at all times. There should be no discussion of patient affairs in public areas such as hallways, elevators, cafeteria, etc. Patient affairs should be discussed in appropriate areas and only as necessary for proper patient care.

5. Students must be ethical. They must strive to provide the maximum benefit to the patient for any treatment performed. Students are subject to dismissal for shoddy work or falsification of documents.

6. Students should be reassuring, kind, and considerate to patients at all times. Arguing with patients cannot be tolerated. Students should not allow personal problems, prejudices or attitudes to affect the way they treat patients.

7. The patient has the right to know what therapy or diagnostic test you are giving him or her, who ordered it and why he or she is receiving it. Try to explain in non-technical terms.

8. DO NOT release any information to the patient that relates to his condition, diagnosis, prognosis or any therapy that you do not administer. Refer all those questions to the patient’s nurse and/or physician.

9. The patient has the right to refuse any therapy. The refusal must be recorded on the chart along with the reason given by the patient and reported to your instructor.

10. When you become an allied health professional, you must realize and accept that you represent the group to the public and are therefore responsible to maintain professional standards within the clinic and without.

11. Always, respect the morals, privacy, and ideas of both your patients and co-workers. At no time should one violate the privilege of knowledge of their personal lives in any way other than dealing with medical care. Idle chatter and gossip are just not acceptable.

IV. Standards of Co-worker Interaction

The allied health student is a guest of the hospital, the department, and the administration. As a guest, he or she is to behave at all times in the following manner in order not to jeopardize his/her learning opportunities.

1. The student is to wear his/her School I.D. badge at all times and upon first meeting a clinical affiliate staff member should identify himself/herself as a respiratory therapy student from LSUHSC.
2. Conform to standards of dress and grooming as outlined above. Attendance and punctuality guidelines are found below under **Clinical Policies and Procedures**.

3. Accept that some therapists and technicians may feel threatened by the presence of students within their departments. This may exhibit itself as jealousy, ambivalence, or ridicule. Keep in mind that every person has his worth and knowledge and none of us know everything.

4. Be responsible about complying with department paperwork, procedures, coffee breaks, meal breaks, etc. All of these things have reasons for being done in a certain way. Find out why and be responsible to conform to them. Do not criticize. If you have valid suggestions, bring them to the attention of clinical instructors in **private**.

5. Keep in mind that there are several ways to do any procedure. Even though you may have knowledge of a way to do something that may appear to be better, approach the subject tactfully and in **private** with your clinical instructor. You are encouraged to make suggestions that are appropriate to the improvement of patient care. You are not encouraged to criticize in a random or inappropriate manner.

6. Accept the responsibility that has been given to you. Always follow established Department and School policies. You are responsible for completing all treatments (respiratory) assigned to you. If you cannot complete your assignment, notify the instructor well in advance of the completion of your shift.

7. Always, attempt to conserve and protect hospital or school supplies and equipment.

8. Accept constructive criticism. It is offered as guidance and advice, not as an admonishment. You should seek clarification if the rationale or content is not understood. The clinical situation can be very stressful and upsetting. Everyone feels nervous or upset at some point. Students are expected to perform to the best of their ability under duress. When individuals become overly nervous under stress, patient safety may be affected. If you cannot function, ask for help from your instructor or clinical coordinator.

**Clinical Policies and Procedures**

I. **Attendance and Background Check**

Prior to attending clinics, all students are responsible for obtaining a background check that is to be made available to clinical sites upon request. The student is required to attend all days of a clinical rotation. For respiratory clinics, each day lasts
from the time report begins until report has been given to the next shift. Students are required to log in attendance in Moodle, as described on course syllabi.

II. **Excused and Unexcused Absences**

1. A request for an excused absence must be made **prior** to the beginning of clinic on the day to be missed. Such a request can only be granted by the Director of Clinical Education. If an excused absence is granted, you must notify the lead clinical instructor of your impending absence. Failure to request the absence or notify the affiliate of the absence will result in the assignment of an unexcused absence.

2. Extra work may be assigned if an unexcused absence is assessed. This will be at the discretion of the Director of Clinical Education.

3. All absences will be made up on a 1 to 1 basis. Make-up time will be set up with the Director of Clinical Education and the department head or lead instructor of the assigned clinical affiliate. Generally, make-up time is during the week before finals and may include evenings, weekends or holidays. Make-up time must be completed prior to the last day grades are to be reported to Students Affairs, which is usually a week following final exams.

4. Unexcused absences will have the greatest impact on grades:

   1. Written warning from Director of Clinical Education
   2. Conference with Director of Clinical Education and Program Director
   3. Will result in failing grade

5. Leaving the clinic or assigned area without prior approval will result in a failing grade. No questions asked. No excuses accepted! Prior approval must be obtained from the Director of Clinical Education if known in advance or the lead instructor if an emergency occurs. Once time permits, the Director of Clinical Education should be notified of leaving the clinic due to an emergency. Report must be given to the lead instructor before the student may leave.

III. **Late Arrivals**

1. Students are required to notify the Director of Clinical Education and lead instructor if they are going to be late or may be late. Late is arriving 1 minute after the scheduled report time of each clinical site, as specified in the student’s clinical specifics document. If a personal emergency arises (such as illness, family emergency, car trouble, etc.) contact the Director of Clinical Education first and then the lead instructor at your assigned affiliate second.
2. After properly notifying the Director of Clinical Education and lead instructor, students may still attend clinic if they arrive no later than 15 minutes after report time. **If a student arrives more than 15 minutes after clinic report time he/she will not be given credit for having attended clinic and therefore should not attend clinic that day.** The student must also notify the DCE and lead instructor at your assigned affiliate that you will not be attending clinic. The student will receive an absence according to the absence policy above.

3. A student arriving late without properly notifying the Director of Clinical Education and lead instructor will not be given credit for having attended clinic and therefore should not attend clinic that day. The student must notify the DCE and lead instructor at your assigned affiliate that you will not be attending clinic. The student will receive an unexcused absence.

4. For late arrivals:

   1st  Verbal warning  
   2nd  Written warning from Director of Clinical Education  
   3rd  Conference with Director of Clinical Education and Program Director  
   4th  Failing grade  

**IV. Evaluation: Respiratory Clinics**

1. Grading is based on three components: clinical packet, case reports, and clinical evaluation. Minimum competency is as follows:

   a. **Packet.** All procedures must be 100% complete. All procedures must be performed at or above the stated criteria (“S” or 3, 4, 5). No major errors in performing procedures will be allowed with a sign-off. Any procedures not available at your assigned affiliate must be brought to the attention of the Director of Clinical Education by the student. The Director of Clinical Education will try to find these procedures for the student at another facility. If not available, the Director of Clinical Education will sign off N/A.

   b. **Case Reports.** The case report must achieve a grade of 75% or greater to meet minimum criteria. All content areas requested on the case study form as described in the clinical course syllabi must be addressed. Allowances for some incomplete areas will be based on the particular patient. The student’s ability to answer questions will be used in grading the case report.

   c. **Clinical Evaluations.** Minimum score of three (3) in all areas. Both competency and professionalism are required.

2. Failure to achieve a passing score in ALL three components of the grading system will result in a failing grade.
3. All students will receive a formative evaluation within the first half of any rotation lasting more than one week. Counseling will be provided by the Director of Clinical Education to the student if deficiencies are reported. Students should be given the opportunity to correct any problems as soon as possible. Students must sign all evaluation forms.

4. Comprehensive evaluations will be given each time a student completes a rotation or leaves a clinical site. For example, during the fall semester, students will spend three weeks at one facility and then go on to another. An evaluation will be completed at that time by the clinical instructor/preceptor at the first hospital. Counseling will be provided by the Director of Clinical Education to the student if deficiencies are reported. Any deficiencies are to be improved during the second three-week session.

5. All counseling sessions with the student by the Director of Clinical Education will be written up by the Director of Clinical Education and signed by all parties involved. If a problem persists, the Program Director will be involved in future counseling sessions.

6. Persistent problems after counseling with the Program Director will result in a failing grade or disciplinary actions according to the **SAHP Student Conduct Policy and Procedures**.

V. Clinical Affiliation Assignments

The Director of Clinical Education (DCE) is responsible for assigning students to clinical affiliation sites. Clinical site placement is determined by many factors including, but not limited to, availability of placements, suitability of the clinical site to student competency and need, experience of clinical instructors, and the ability of the clinical site to provide quality learning experiences.

Requests by the student will be given consideration; however, all placements will be determined by the DCE based upon criteria established by the Program.

VI. Clinical Assignments to Persons with Infectious Processes

The following guidelines will be used for clinical assignments to persons with infectious processes:

- Students in the clinical area have the responsibility to care for all patients regardless of their diagnosis.

- Students must rigorously comply with the Centers for Disease Control and Prevention (CDC) guidelines for preventing the transmission of HIV, Hepatitis B, and other blood-borne pathogens in health care settings. *(see Universal Precautions section of handbook)* **All patients should be considered as**
potentially infected. Current information concerning Universal Precautions must be reviewed at the beginning of each clinical course.

- Students who have been exposed to HIV or who are HIV/HBV/HCV infected, and who perform exposure prone procedures are encouraged to self-identify to the Chancellor (or designee) of LSU Health Sciences Center, to their immediate supervisor, who would then report to the Chancellor (or designee) of LSU Health Sciences Center, or directly to the Expert Review Panel (ERP). In reporting their status to the Health Sciences Center, HIV/HBV/HCV infected individuals are assured that every effort will be made by the LSUHSC Administration to maintain confidentiality, as determined by the Expert Review Panel (ERP), and that a mechanism is in place, through the HIV/HBV Policy/Procedure and Expert Review Panel (ERP), to maintain balance between the individual's job-related responsibilities and the institution's responsibilities to faculty, staff, students, patients and the community. There is a need to protect the HIV/HBV infected individuals, faculty, staff, and patients. The Expert Review Panel (ERP) in conjunction with the Administration is working to assure a system is in place to fulfill this need. Students should refer to CM-25 - LSUHSC Policy on AIDS (HIV) and Hepatitis Virus (HBV) for more information.

VII. Service Work Statement for Students and Clinical Supervisors/Preceptors

Respiratory care students must not be substituted for paid staff. This does not prohibit a paid internship but is designed to assure that students gain experience to reinforce the competencies and skill sets, and are not used simply for backlog work in the absence of appropriate staff.

Students may work in clinical setting outside of formal educational activities. Students must notify the Program Director upon employment that involves working in clinical setting and are required to submit work schedules during times of clinicals.

- According to the Louisiana Respiratory Care Practice Act, the practice of respiratory care by students is allowed only as a part of their prescribed curriculum; therefore, no Respiratory Care student may accept employment as a Respiratory Therapist.

- Students are not allowed to work in a role that requires therapeutic intervention. Employment in support role (ex: department secretary, equipment technician, infection control aid, ward clerk) is permissible; however students who work in these roles must be on guard to limit their responsibilities to those that do not require a licensed, credentialed respiratory therapist.

Students with specific prior knowledge, experiences and skills may assist faculty in didactic and laboratory sessions to share their knowledge and skills. Students are not to be the primary instructor of record for any component of the Respiratory Therapy Program’s curriculum.
VIII. **Student Responsibilities**

1. Students are expected to meet the Technical Standards of the Department of Cardiopulmonary Science.

2. Students are expected to retain the level of competency gained in previous clinical courses. Students are accountable for any real/potential violation of critical elements on every skill taught in preceding semesters. If the instructor prevents an error, the student remains accountable and is still in error.

3. The student should become familiar with the clinical department’s policy and procedure manual including emergency disaster plans.

4. Students should be ethical and professional at all times. Students are subject to **dismissal** for shoddy work, unsafe conduct or any unprofessional behavior.

5. Students should not be idle. The majority of the time should be focused on patient care skills. Time between patient care periods should be used to review charts, prepare case reports, or review for classes and evaluation.

6. Students are responsible for the proper completion of all assigned procedures.

7. Any conflicts in orders for therapy should be discussed with the preceptor, shift supervisor or clinical faculty prior to starting treatments. Students should **observe all procedures prior to performing** them for the first time.

8. **Students shall not provide patient care without a hospital staff member, preceptor, or LSUHSC Cardiopulmonary Science faculty member at the bedside.**

9. It is the students’ responsibility to ask the clinical preceptor to sign their packets upon the completion of an observed procedure.

10. Students are not allowed to have cell phones in clinic.

11. Students should not count on a morning break for breakfast. Lunch is to be scheduled around scheduled treatments/procedures and patient meal times.

12. Prior to attending each semester’s clinicals, students must sign the Clinical Guidelines and Rules Sign-off Sheet attesting to have read and understand the student-clinical relationship and clinical policies and procedures, as outlined in the Respiratory Therapy Program’s Student Handbook.

IX. **Clinical Affiliate Staff Responsibilities**

1. Provide time for students to **observe procedures prior to doing hands-on**
2. Provide students with **direct supervision of procedures** as they are being performed

3. Provide students adequate time to develop hands-on skills

4. Provide students time to perform patient assessment before, during, and after procedures

5. Allow students adequate time to develop chart reading skills

6. Allow students to participate/attend appropriate in-service or continuing education programs

7. Evaluate and provide feedback to students on their professionalism and understanding and delivery of procedures.

8. Communicate with the LSUHSC faculty as indicated

**X. Program Faculty Responsibilities**

1. Ensure adequate student understanding of the indications, contra-indications, and side effects of critical care therapies as tested on written exams

2. Prior to each clinical rotation, provide the student with exposure and practice to the procedures that the student be required to complete during clinical rotations.

3. Provide students with BLS, ACLS, PALS and NRP training

4. Counsel students on all questions/problems with attendance

5. Counsel students on all questions/problems with professional behavior

6. Continue to observe students in the clinical setting

7. In the clinical setting, evaluate and provide feedback to students on their professionalism and understanding and delivery of procedures

8. Notify the clinical affiliates in any change in schedule

9. Communicate with the clinical affiliates as indicated

**Procedure Guidelines for Unsatisfactory Clinical Behavior**

When an unsatisfactory behavior in the clinical setting is identified, the faculty and student will adhere to the following procedures:
1. The student will be counseled by the clinical instructor regarding the clinical behavior in question. The student will be advised that the behavior will be discussed with the faculty to validate the unsatisfactory clinical behavior. The instructor will document the behavior on the appropriate area of the clinical evaluation form.

2. The student is given the opportunity to meet with the course faculty and Program Director to discuss the clinical behavior.

3. A student conference with the clinical instructor and Director of Clinical Education will be held to review the incident.

4. When unsatisfactory behavior has been documented in which a student manifests behavior in the clinical area, which negatively affects a patient’s status, the Program Director will counsel the student. At this time, the student will be informed in writing that they are being charged with professional misconduct and will be reported to the Office of the Associate Dean for Academic Affairs within 5 days for procedural matters. The student will not be allowed to attend clinics and a grade of “I” (incomplete) will be assigned, until a decision has been rendered.

5. Sanctions imposed on the student may include one or more of the following disciplinary actions:

   - Be required to show active participation in the work of counseling
   - Disciplinary Warning: verbal or written notification that the student has not met the School’s standards of conduct, and that a repeat offense will result in more serious disciplinary action. It is not the case that first offenses automatically receive a warning; most first offenses receive a stricter response, with warnings reserved for cases with unusual mitigating circumstances
   - Reprimand: a written statement censuring a student for violating School regulations, and stating that another offense will result in more serious action. This is normally considered a lenient response, even for first offenses
   - Restitution: requirement that the student compensate the School or other persons for damages, injuries, or losses. Failure to comply results in canceled registration and a hold on future registration
   - Disciplinary Probation: an action that places conditions on the student’s continued enrollment in the School, including the statement that further violation of School policies will likely result in dismissal. The Committee fixes the term and conditions of academic probation. First offenses often result in probation
   - Suspension from the School of Allied Health Professions. Period of time to be determined by the Dean
   - Dismissal from the School of Allied Health Professions

6. If the student chooses to appeal, the student may continue to attend class (but not clinical), pending results of the appeal process (if utilized). However, progression policies will still apply.

7. Student behaviors that may be indicative of psychological maladjustments may result in immediate removal of the student from the clinical setting and mandatory counseling.
Student "At Risk" Incidents (i.e., needle stick, puncture or cut from a potentially contaminated source)

Excerpt from CM-25 LSUHSC Policy on AIDS (HIV) and Hepatitis Virus (HBV)

The student must immediately report the incident to his/her immediate supervisor as determined by each school/department. The supervisor is responsible for reporting the incident and following procedures to ensure proper testing and health care are provided.

If the incident occurs at an off-campus location, the student should be referred to the institutional infection control office (usually, their employee health service).

For on-site occurrences, the student should be referred to Student Health at 3700 St. Charles Avenue, 2nd floor, New Orleans, LA (504-412-1100). The CDC and OSHA guidelines for risk exposure will be followed and appropriate reporting provided. Follow up lab studies for all students should be handled through LSUHSC Student Health. During hours when the Student Health Clinic is not open, students should seek emergency care at the Fast Track emergency room at the Interim LSU Public Hospital at 2021 Perdido Street New Orleans, LA 70112 - (504) 903-3000.) The student is entitled to seek his/her health care of choice. Health care will be made available if requested by the student at either the LSUHSC-NO Student Health Clinic, or if contracted to another facility or location, from that satellite location following their policy for "at risk" incidents. Injured students may also seek treatment from their personal health care provider. In all cases, the First Report of Injury and Supervisor's Accident Investigation Report must be filed with the Louisiana Office of Risk Management for eligibility under Student Health Needlestick Insurance. The health care provider treating the student must be notified that the student has had an "at risk" incident for HIV/HBV/HCV and that proper testing must be performed. Based on the initial testing, additional testing or treatment may be warranted and must be recommended by the examining health care provider at time of treatment. A form entitled First Report of Injury must be promptly completed and forwarded to the Office of Human Resource Management within 30 days. The Supervisor's Accident Investigation Report must also be completed. All students have a limited amount of insurance to cover costs of lab work that may be necessary as a result of exposure. Specifics about this insurance may be obtained directly from the Student Health Office.

Counseling for LSUHSC-NO students is available through the LSUHSC-NO Student Health Mental Health Counselors or the Campus Assistance Program. The Student Health Clinic can also provide access to the Expert Review Panel (ERP) on behalf of students.

Summary of steps to be taken when an "at risk" incident occurs:
1. Report incident to supervisor
2. Provide immediate attention, testing
3. File required paperwork
4. Seek counseling and access to ERP, if necessary.
Acknowledgment of Policies and Procedures Form

Copy this form and sign and return it to the Program Director for Advanced Respiratory Therapy. This form will be part of your permanent record.

By accepting admission to the Department of Cardiopulmonary, Advanced Respiratory Therapy Program at LSUHSC, I accept the policies of the Respiratory Therapy Program, and the responsibilities associated with my duties in a student status. I have read the Respiratory Therapy Program Student Handbook and I am aware of what will be required of me, both academically and professionally.

I understand that LSU Health Sciences reserves the right to dismiss a student for incompetence, misconduct, or violation of the policies and procedures of the Respiratory Therapy Program, School of Allied Health Professions, and the LSUHSC.

Student signature ________________________________

Print name ________________________________

Date ________________________________
Appendix

Clinical Guidelines and Rules Sign-off Sheet

I have read and understand all the Cardiopulmonary Science Clinical Guidelines as outlined in the packet of materials. The following rules are clearly understood:

1. **All absences** will be made up at a ratio of 1:1.

2. **Three unexcused absences** will result in an “F” which will prevent me from continuing in this program.

3. **Four total late arrivals** will result in an “F” which will prevent me from continuing in this program.

4. Students are required to log into and out of Moodle as part of their daily clinical attendance. Failure to log in or out of clinic will result in an absence. **Five failed log in or out** will result in an “F” which will prevent me from continuing in this program.

4. **Leaving clinic without permission** from an LSUHSC-CPS faculty member will result in an “F” which will prevent me from continuing in this program.

5. Students are required to leave cell phones / pagers in the student’s car during clinic time. There are to be **NO CELL PHONES IN CLINIC**.

6. **Respectful, professional behavior and appropriate language is REQUIRED in all areas of the hospital**, including patient rooms, corridors, cafeteria, elevators, and breakroom. Failure to conform to this standard will result in an “F” which will prevent me from continuing in this program.

7. In order to **successfully complete** this clinical rotation, a **minimum score of three (3)** is required in all areas of an evaluation.

I have also read and understand the information contained in the “Student-Clinical Relationship” handout. I understand that the clinic may refuse to allow me to provide patient care if my behavior is unprofessional or my clinical skills are below their standards.

_________________________________________   ________________
Student name          Date

_________________________________________
Student signature                   A - 1
Important Addresses

**American Association for Respiratory Care**
9425 N. MacArthur Blvd. Suite 100
Irving, TX 75063-4706, USA
Phone: 1.972.243.2272

**Commission on Accreditation for Respiratory Care**
1248 Harwood Road
Bedford, TX 76021-4244
Phone: 817.283.2835
Fax: 817.354.8519

**National Board for Respiratory Care Executive Office**
18000 W. 105th Street
Olathe, KS 66061-7543
Toll-Free: 888.341.4811
Phone: 913.895.4900
Fax: 913.895.4650

**Louisiana State Board of Medical Examiners**
1515 Poydras Street, Suite 2700
New Orleans, LA 70112
Phone: 504.568.6820
Fax: 504.568.3176

**Louisiana State University Health Sciences Center**
School of Allied Health Professions
Department of Cardiopulmonary Science
1900 Gravier Street
New Orleans, LA 70112-2262
Phone: 504.568.4227
Fax: 504.568.4249
[http://alliedhealth.lsuhs.edu/cardiopulmonary/](http://alliedhealth.lsuhs.edu/cardiopulmonary/)
UNIVERSAL (STANDARD) PRECAUTIONS

Universal Precautions are intended to prevent parenteral, mucous membrane and non-intact skin exposures of health-care workers to blood borne pathogens. In addition, immunization with HBV vaccine is recommended as an important adjunct to Universal Precautions for health-care workers who have been exposed to blood. The following is a summary of the CDC’s recommendations

Body Fluids to Which Universal Precautions Apply

Universal precautions apply to blood and other body fluids. Blood is the single most important source of HIV, HBV, and other blood borne pathogens in the health-care facility. Infection control efforts for HIV, HBV, and other blood borne pathogens must focus on both preventing exposures to blood and delivering HBV immunization.

General Precautions

- Use Universal Precautions for all patients.
- Use appropriate barrier precautions routinely when contact with blood or other body fluid of any patient is anticipated.
- Wear gloves when touching blood and body fluids, mucous membranes, or non-intact skin; when handling items or surfaces soiled with blood or body fluids; and when performing arterial puncture or venipuncture and other vascular access procedures.
- Change gloves after each contact with patients.
- Wear masks and protective eyewear or face shields during procedures that are likely to generate drops of blood or other body fluids to prevent exposure of mucous membranes of mouth, nose and eyes.
- Wear gowns or aprons during procedures that are likely to generate splashes of blood or other body fluids.
- Wash hands and other skin surfaces immediately and thoroughly if contaminated with blood or body fluids.
- Wash hands immediately after gloves are removed.
- Take precautions to prevent injuries caused by needles, scalpels, and other sharp instruments or devices during procedures; when cleaning used instruments; during disposal of used needles; and when handling sharp instruments after procedures.
- Discard needle units uncapped and unbroken after use.
- Place disposable syringes and needles, scalpel blades, and other sharp items in puncture-resistant containers.
- Although saliva has not been implicated, to minimize the need for emergency mouth-to-mouth resuscitation, make mouthpieces, resuscitation bags, or other ventilation devices available for use in areas where the need for resuscitation is predictable.
If you have exudative lesions or weeping dermatitis, refrain from all direct patient care and from handling patient-care equipment until the condition resolves.

Precautions for Invasive Procedures

- If you participate in invasive procedures, use appropriate barrier methods: gloves, surgical masks, protective eyewear, face shields, gowns, and aprons.
- If you perform or assist in vaginal or cesarean deliveries, wear gloves and gowns when handling the placenta or the infant until blood and amniotic fluid have been removed from the infant’s skin.
- If a glove is torn or a needle stick or other injury occurs, remove the gloves and use a new glove as promptly as patient safety permits; remove the needle or instrument used in the incident from the sterile field.

Environmental Considerations

- Standard sterilization and disinfection procedures currently recommended for use in health-care settings are adequate.
- Use chemical germicides approved as hospital disinfectants to decontaminate spills of blood and other body fluids.

Precautions with Soiled Linen

- Observe hygienic and common-sense storage and processing of clean and soiled linens.
- Handle soiled linen as little as possible and with minimum agitation.
- Bag all soiled linen at the location where it is used.
- Place and transport linen soiled with blood or body fluids in bags that prevent leakage.

Infective Waste

It is practical to identify those wastes with the potential for causing infection during handling and disposal and for which some special precautions seem prudent (e.g., microbiology laboratory waste, pathology waste, and blood specimens or blood products).

From Guidelines for Prevention of Transmission of Human Immunodeficiency Virus and Hepatitis B Virus to Health-Care and Public Safety Workers. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Atlanta, GA, February 1989;
Respiratory Care Scope of Practice
American Association for Respiratory Care

Position Statement*

Respiratory Therapists are health care professionals whose responsibilities include the diagnostic evaluation, management, education, rehabilitation and care of patients with deficiencies and abnormalities of the cardiopulmonary system. The scope of practice includes the application of technology and the use of treatment protocols across all care sites including, but not limited to, the hospital, clinic, physician’s office, rehabilitation facility, skilled nursing facility and the patient’s home.

The practice of respiratory care encompasses activities in diagnostic evaluation, therapy, and education of the patient, family and public. These activities are supported by education, research and administration. Diagnostic activities include but are not limited to:

1. Obtaining and analyzing physiological specimens
2. Interpreting physiological data
3. Performing tests and studies of the cardiopulmonary system
4. Performing neurophysiological studies
5. Performing sleep disorder studies

Therapy includes but is not limited to the application and monitoring of:

1. Medical gases and environmental control systems
2. Mechanical ventilator support
3. Artificial airway care
4. Bronchopulmonary hygiene
5. Pharmacological agents related to respiratory care procedures
6. Cardiopulmonary rehabilitation
7. Hemodynamic cardiovascular support

The focus of patient and family education activities is to promote knowledge and understanding of the disease process, medical therapy and self help. Public education activities focus on the promotion of cardiopulmonary wellness.

*Effective 8/87
*Revised 12/07
*Revised 12/10
AARC Statement of Ethics and Professional Conduct
American Association for Respiratory Care

Position Statement*

In the conduct of professional activities the Respiratory Therapist shall be bound by the following ethical and professional principles. Respiratory Therapists shall:

- Demonstrate behavior that reflects integrity, supports objectivity, and fosters trust in the profession and its professionals.
- Promote and practice evidence-based medicine.
- Seek continuing education 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 the 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 as 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, which 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.
- Work to achieve and maintain respectful, functional, and beneficial relationships with all health professions.

*Effective 12/94
*Revised 12/07
*Revised 07/09
*Revised 07/12
A Patient’s Bill of Rights*

These rights can be exercised on the patient’s behalf by a designated surrogate or proxy decision maker if the patient lacks decision-making capacity, is legally incompetent, or is a minor.

1. The patient has the right to considerate and respectful care.

2. The patient has the right to and is encouraged to obtain from physicians and other direct caregivers relevant, current, and understandable information concerning diagnosis, treatment, and prognosis.

   Except in emergencies when the patient lacks decision-making capacity and the need for treatment is urgent, the patient is entitled to the opportunity to discuss and request information related to the specific procedures and/or treatments, the risks involved, the possible length of recuperation, and the medically reasonable alternatives and their accompanying risks and benefits.

   Patients have the right to know the identity of physicians, nurses, and others involved in their care, as well as when those involved are students, residents, or other trainees. The patient also has the right to know the immediate and long-term financial implications of treatment choices, insofar as they are known.

3. The patient has the right to make decisions about the plan of care prior to and during the course of treatment and to refuse a recommended treatment or plan of care to the extent permitted by law and hospital policy and to be informed of the medical consequences of this action. In case of such refusal, the patient is entitled to other appropriate care and services that the hospital provides or transfer to another hospital. The hospital should notify patients of any policy that might affect patient choice within the institution.

4. The patient has the right to have an advance directive (such as a living will, health care proxy, or durable power of attorney for health care) concerning treatment or designating a surrogate decision maker with the expectation that the hospital will honor the intent of that directive to the extent permitted by law and hospital policy.

5. Health care institutions must advise patients of their rights under state law and hospital policy to make informed medical choices, ask if the patient has an advance directive, and include that information in patient records. The patient has the right to timely information about hospital policy that may limit its ability to implement fully a legally valid advance directive.
6. The patient has the right to every consideration of privacy. Case discussion, consultation, examination, and treatment should be conducted so as to protect each patient's privacy.

7. The patient has the right to expect that all communications and records pertaining to his/her care will be treated as confidential by the hospital, except in cases such as suspected abuse and public health hazards when reporting is permitted or required by law. The patient has the right to expect that the hospital will emphasize the confidentiality of this information when it releases it to any other parties entitled to review information in these records.

8. The patient has the right to review the records pertaining to his/her medical care and to have the information explained or interpreted as necessary, except when restricted by law.

9. The patient has the right to expect that, within its capacity and policies, a hospital will make reasonable response to the request of a patient for appropriate and medically indicated care and services. The hospital must provide evaluation, service, and/or referral as indicated by the urgency of the case. When medically appropriate and legally permissible, or when a patient has so requested, a patient may be transferred to another facility. The institution to which the patient is to be transferred must first have accepted the patient for transfer. The patient must also have the benefit of complete information and explanation concerning the need for, risks, benefits, and alternatives to such a transfer.

10. The patient has the right to ask and be informed of the existence of business relationships among the hospital, educational institutions, other health care providers, or payers that may influence the patient's treatment and care.

11. The patient has the right to consent to or decline to participate in proposed research studies or human experimentation affecting care and treatment or requiring direct patient involvement, and to have those studies fully explained prior to consent. A patient who declines to participate in research or experimentation is entitled to the most effective care that the hospital can otherwise provide.

12. The patient has the right to expect reasonable continuity of care when appropriate and to be informed by physicians and other caregivers of available and realistic patient care options when hospital care is no longer appropriate.

13. The patient has the right to be informed of hospital policies and practices that relate to patient care, treatment, and responsibilities. The patient has the right to be informed of available resources for resolving disputes, grievances, and
14. conflicts, such as ethics committees, patient representatives, or other mechanisms available in the institution. The patient has the right to be informed of the hospital's charges for services and available payment methods

*American Hospital Association, first adopted in 1973, revised October 21, 1992

**Cardiopulmonary Science Curriculum (Respiratory Therapy Track)**

Cardiovascular Technology students also attend courses italicized.

**Summer Semester (JUNIOR YEAR)**
- CPSC 3100 Introduction to the Clinical Cardiopulmonary Sciences (1 credit)
- CPSC 3130 Cardiopulmonary Human Gross Anatomy (5 credits)
- CPSC 3220 Cardiopulmonary Physiology (3 credits)

**Total (9 credits)**

**Fall Semester (JUNIOR YEAR)**
- CPSC 3270 Patient Assessment (3 credits)
- CPSC 3280 Cardiopulmonary Pathophysiology (3 credits)
- CPSC 3290 Principles of Cardiac Electrophysiology (2 credits)
- CPSC 3200 Respiratory Therapy Fundamentals (3 credits)
- CPSC 3285 Respiratory Clinics I (3 credits)

**Total (14 credits)**

**Spring Semester (JUNIOR YEAR)**
- CPSC 3210 Cardiopulmonary Pharmacology (2 credits)
- CPSC 3360 Medical Ethics (1 credit)
- CPSC 3362 Critical Care Concepts I (3 credits)
- CPSC 3300 Neonatology and Pediatrics (4 credits)
- CPSC 3370 Advanced Pulmonary Pathophysiology (1 credit)
- CPSC 3395 Respiratory Clinics II (3 credits)

**Total (14 credits)**

**Summer Semester (SENIOR YEAR)**
- CPSC 4115 Geriatric Respiratory Care (1 credit)
- CPSC 4135 Critical Care Concepts II (4 credits)
- CPSC 4145 Respiratory Clinics III (4 credits)

**Total (9 credits)**
Fall Semester (SENIOR YEAR)

CPSC 4205 Health Care Management (1 credit)
CPSC 4215 Pulmonary Rehabilitation and Home Care (3 credits)
CPSC 4225 Pulmonary Diagnostic Tests (2 credits)
CPSC 4235 Respiratory Clinics IV (5 credits)
CPSC 4245 Respiratory Seminar (1 credit)
CPSC 4255 CRT Review (2 credits)

Total (14 credits)

Spring Semester (SENIOR YEAR)

CPSC 4222 Senior Thesis (2 credits)
CPSC 4300 RRT Review (2 credits)
CPSC 4310 Polysomnography (4 credits)
CPSC 4320 Respiratory Clinics V (4 credits)

Total (12 credits)

TOTAL CREDITS (72 credits)
TO: Faculty/Course Coordinator (or designee)

From: Assistant Dean of Student Services

RE: ____________________________
    (Student’s Name)

☐ A Medical Release-Fitness for School Form has been received and data is on file in the student’s record stating that the student may return to class and/or clinical experience giving direct patient care on
    ____________________________
    (Date)

☐ Health/medical care has been given in Student Health Services and the student may return to class and/or experience giving direct patient care on
    ____________________________
    (Date)

_____________________________________________ ____________________________
    (Signature)                  (Date)

TO FACILITATE STUDENT’S RETURN TO CLASS/CLINICAL, PLEASE FAX
Information to 504 568-4249 Attention: Assistant Dean for Student Services

Revised 8/8/11
# Content Outlines

**Certification Examination for Entry-Level Respiratory Therapists (CRT)**

## CRT Examination Matrix

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<th>Number of Items</th>
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<td></td>
<td></td>
</tr>
<tr>
<td>A. Review Data in the Patient Record</td>
<td>11 14 1</td>
<td>26</td>
</tr>
<tr>
<td>B. Collect and Evaluate Additional Pertinent Clinical Information</td>
<td>4 0 0</td>
<td>4</td>
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<td>6 11 1</td>
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<td></td>
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<td>B. Ensure Infection Control</td>
<td>4 10 8</td>
<td>22</td>
</tr>
<tr>
<td>C. Perform Quality Control Procedures</td>
<td>0 2 1</td>
<td>3</td>
</tr>
<tr>
<td>D. Maintain Records and Communicate Information</td>
<td>1 3 0</td>
<td>4</td>
</tr>
<tr>
<td>E. Maintain a Patent Airway Including the Care of Artificial Airways</td>
<td>2 2 3</td>
<td>7</td>
</tr>
<tr>
<td>F. Remove Bronchopulmonary Secretions</td>
<td>1 3 0</td>
<td>4</td>
</tr>
<tr>
<td>G. Achieve Adequate Respiratory Support</td>
<td>2 5 1</td>
<td>8</td>
</tr>
<tr>
<td>H. Evaluate and Monitor Patient’s Objective and Subjective Responses to Respiratory Care</td>
<td>3 7 5</td>
<td>15</td>
</tr>
<tr>
<td>I. INDEPENDENTLY MODIFY Therapeutic Procedures Based on the Patient’s Response</td>
<td>2 9 7</td>
<td>18</td>
</tr>
<tr>
<td>J. RECOMMEND Modifications in the Respiratory Care Plan Based on the Patient’s Response</td>
<td>3 10 4</td>
<td>17</td>
</tr>
<tr>
<td>K. Determine the Appropriateness of the Prescribed Respiratory Care Plan and Recommend Modifications When Indicated by Data</td>
<td>1 3 0</td>
<td>4</td>
</tr>
<tr>
<td>L. Initiate, Conduct, or Modify Respiratory Care Techniques in an Emergency Setting</td>
<td>1 1 1</td>
<td>3</td>
</tr>
<tr>
<td>M. Act as an Assistant to the Physician Performing Special Procedures</td>
<td>1 1 0</td>
<td>2</td>
</tr>
<tr>
<td>N. Initiate and Conduct Pulmonary Rehabilitation and Home Care</td>
<td>1 1 0</td>
<td>2</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>35 74 31</td>
<td>140</td>
</tr>
</tbody>
</table>
I. PATIENT DATA EVALUATION AND RECOMMENDATIONS

A. Review Data in the Patient Record

<table>
<thead>
<tr>
<th>I. PATIENT DATA EVALUATION AND RECOMMENDATIONS</th>
<th>Recall</th>
<th>Application</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Patient history e.g., present illness, admission notes, respiratory care orders</td>
<td>11</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>2. Physical examination relative to the cardiopulmonary system e.g., vital signs, physical findings</td>
<td>11</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>3. Laboratory data e.g., CBC, electrolytes, culture and sensitivities</td>
<td>11</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>4. Pulmonary function results</td>
<td>11</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>5. Blood gas results</td>
<td>11</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>6. Imaging studies e.g., radiograph, CT, MRI</td>
<td>11</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>7. Monitoring data</td>
<td>11</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>a. fluid balance</td>
<td>11</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>b. pulmonary mechanics e.g., maximum inspiratory pressure, vital capacity</td>
<td>11</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>c. respiratory e.g., rate</td>
<td>11</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>d. pulmonary compliance, airways resistance, work of breathing</td>
<td>11</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>e. noninvasive e.g., pulse oximetry, capnography, transcutaneous O₂ / CO₂</td>
<td>11</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>8. Cardiac monitoring</td>
<td>11</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>a. ECG data results e.g., heart rate, rhythm</td>
<td>11</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>b. hemodynamic monitoring results e.g., blood pressure, PA pressure, CVP</td>
<td>11</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>9. Maternal and perinatal / neonatal history and data</td>
<td>11</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>a. Apgar scores</td>
<td>11</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>b. L / S ratio, gestational age</td>
<td>11</td>
<td>14</td>
<td>1</td>
</tr>
</tbody>
</table>

B. Collect and Evaluate Additional Pertinent Clinical Information

<table>
<thead>
<tr>
<th>B. Collect and Evaluate Additional Pertinent Clinical Information</th>
<th>Recall</th>
<th>Application</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Assess a patient’s overall cardiopulmonary status by inspection to determine</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>a. general appearance e.g., venous distention, edema, accessory muscle activity</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>b. airway assessment e.g., macroGLOSSIA, neck range of motion</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>c. cough, sputum amount and character</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>d. Apgar score, gestational age, transillumination of chest</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>2. Assess a patient’s overall cardiopulmonary status by palpation to determine</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>a. pulse, rhythm, force</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>b. asymmetrical chest movements, tactile fremitus, crepitations, tenderness, secretions in the airway, and tracheal deviation</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>3. Assess a patient’s overall cardiopulmonary status by percussion</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>4. Assess a patient’s overall cardiopulmonary status by auscultation to determine presence of</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>a. breath sounds</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>b. heart sounds and rhythm</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>c. blood pressure</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>5. Interview a patient to determine</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>a. level of consciousness and orientation, emotional state, and ability to cooperate</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>b. level of pain</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>c. presence of dyspnea, sputum production, and exercise tolerance</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>d. nutritional status</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>e. social history e.g., smoking, substance abuse</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>f. advance directives e.g., DNR status</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>6. Assess a patient’s learning needs</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>7. Review a chest radiograph to determine</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>a. position of endotracheal or tracheostomy tube</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>b. presence of, or change in, cardiopulmonary abnormalities e.g., pneumothorax, pleural fluid, consolidation, pulmonary edema</td>
<td>6</td>
<td>11</td>
<td>1</td>
</tr>
</tbody>
</table>

* The number in each column is the number of items in that content area and cognitive level contained in each examination. For example, in category I.A., two items will be asked at the recall level, four items at the application level and no items at the analysis level. The items could be asked relative to any tasks listed (1-6) under category I.A.
C. Recommend Procedures to Obtain Additional Data

1. Radiographic and other imaging studies.
2. Diagnostic bronchoscopy e.g., evaluate hemoptysis, atelectasis.
3. Sputum Gram stain, culture and sensitivities e.g., pneumonia.
5. Pulmonary function testing.
6. Lung mechanics e.g., compliance, airways resistance.
8. ECG.
10. Hemodynamic monitoring e.g., blood pressure, CVP.
11. Sleep studies.
### II. EQUIPMENT MANIPULATION, INFECTION CONTROL, AND QUALITY CONTROL

#### A. Manipulate Equipment by Order or Protocol

<table>
<thead>
<tr>
<th></th>
<th>Recall</th>
<th>Application</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Oxygen administration devices</td>
<td>5</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>a. low-flow devices e.g., nasal cannula</td>
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<tr>
<td>b. high-flow devices e.g., air entrainment mask</td>
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<tr>
<td>c. high-flow nasal cannula</td>
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<tr>
<td>2. CPAP devices – mask, nasal, or bilevel</td>
<td>4</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>3. Humidifiers</td>
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<tr>
<td>4. Nebulizers</td>
<td></td>
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<tr>
<td>5. Resuscitation devices e.g., manual resuscitator (bag-valve), mouth-to-valve mask resuscitator</td>
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<tr>
<td>6. Ventilators</td>
<td></td>
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</tr>
<tr>
<td>a. pneumatic, electric, fluidic, and microprocessor</td>
<td></td>
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<tr>
<td>b. noninvasive positive pressure</td>
<td></td>
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<tr>
<td>7. Artificial airways</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>a. oro- and nasopharyngeal airways</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>b. endotracheal tubes</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>c. tracheostomy tubes and devices</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. speaking tubes and valves</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. intubation equipment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. laryngeal mask airway (LMA)</td>
<td></td>
<td></td>
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<tr>
<td>g. esophageal-tracheal Combitube®</td>
<td></td>
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<tr>
<td>8. Suctioning devices</td>
<td></td>
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<tr>
<td>9. Gas delivery, metering, and clinical analyzing devices</td>
<td></td>
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</tr>
<tr>
<td>a. gas cylinders, regulators, reducing valves, connectors and flowmeters, and air / oxygen blenders</td>
<td></td>
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<tr>
<td>b. oxygen conserving devices e.g., reservoir cannula, pulse-dose</td>
<td></td>
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<tr>
<td>c. oxygen concentrators</td>
<td></td>
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<tr>
<td>d. air compressors</td>
<td></td>
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<tr>
<td>10. Point-of-care analyzers e.g., blood gas, electrolytes</td>
<td></td>
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<tr>
<td>11. Patient breathing circuits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. continuous mechanical ventilation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. IPPB</td>
<td></td>
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</tr>
<tr>
<td>c. CPAP and PEEP valve assemblies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. non-invasive ventilation</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>12. Environmental devices</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. aerosol (mist) tents</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>b. oxygen hoods</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>13. Incentive breathing devices</td>
<td></td>
<td></td>
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<tr>
<td>14. Airway clearance devices</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>a. percussors and vibrators</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. positive expiratory pressure (PEP) devices</td>
<td></td>
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</tr>
<tr>
<td>c. vibratory PEP devices</td>
<td></td>
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<tr>
<td>15. Manometers e.g., aneroid, digital, water</td>
<td></td>
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</tr>
<tr>
<td>16. Respirometers e.g., flow-sensing devices</td>
<td></td>
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</tr>
<tr>
<td>17. ECG monitors</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>18. ECG machines (12-lead)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>19. Vacuum systems e.g.,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• pumps</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• collection bottles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• regulators</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• pleural drainage devices</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Oximetry monitoring devices e.g., pulse oximeter, transcutaneous</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>21. Metered dose inhalers (MDI) and MDI spacers</td>
<td></td>
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<tr>
<td>22. Dry powder inhalers</td>
<td></td>
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</tr>
<tr>
<td>23. Bedside screening spirometers</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>24. CO, He, O₂, and specialty gas analyzers</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>25. Bronchoscopes</td>
<td></td>
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</tr>
</tbody>
</table>

#### B. Ensure Infection Control

1. Assure cleanliness of equipment by
   - selecting or determining appropriate agent and technique for disinfection and/or sterilization
   - performing procedures for disinfection and/or sterilization
   - monitoring effectiveness of sterilization procedures
2. Assure proper handling of biohazardous materials
3. Incorporate ventilator-associated pneumonia protocol
### II. INITIATION AND MODIFICATION OF THERAPEUTIC PROCEDURES

<table>
<thead>
<tr>
<th>C. Perform Quality Control Procedures For</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Blood gas analyzers, co-oximeters</td>
</tr>
<tr>
<td>2. Gas analyzers</td>
</tr>
<tr>
<td>3. Point-of-care analyzers</td>
</tr>
<tr>
<td>4. Pulmonary function equipment</td>
</tr>
<tr>
<td>5. Mechanical ventilators</td>
</tr>
<tr>
<td>6. Gas metering devices e.g., flowmeter</td>
</tr>
<tr>
<td>7. Noninvasive monitors e.g., transthoracic</td>
</tr>
<tr>
<td>8. Record and monitor QC data using accepted statistical methods</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>III. INITIATION AND MODIFICATION OF THERAPEUTIC PROCEDURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Maintain Records and Communicate Information</td>
</tr>
<tr>
<td>1. Record therapy and results using conventional terminology as required in the health care setting and/or by regulatory agencies</td>
</tr>
<tr>
<td>a. specify therapy administered, date, time, frequency of therapy, medication, and ventilatory data</td>
</tr>
<tr>
<td>b. note and interpret patient’s response to therapy</td>
</tr>
<tr>
<td>1) effects of therapy, adverse reactions, patient’s subjective and objective response to therapy</td>
</tr>
<tr>
<td>2) verify computations and note erroneous data</td>
</tr>
<tr>
<td>3) auscultatory findings, cough and sputum production and characteristics</td>
</tr>
<tr>
<td>4) vital signs</td>
</tr>
<tr>
<td>5) pulse oximetry, heart rhythm, capnography</td>
</tr>
<tr>
<td>2. Communicate information</td>
</tr>
<tr>
<td>a. regarding patient’s clinical status to appropriate members of the health care team</td>
</tr>
<tr>
<td>b. relevant to coordinating patient care and discharge planning</td>
</tr>
<tr>
<td>3. Accept and verify patient care orders</td>
</tr>
<tr>
<td>4. Apply computer technology to</td>
</tr>
<tr>
<td>a. document patient management</td>
</tr>
<tr>
<td>b. monitor workload assignments</td>
</tr>
<tr>
<td>c. patient safety initiatives e.g., drug dispensing, order entry</td>
</tr>
<tr>
<td>5. Communicate results of therapy and alter therapy by protocol(s)</td>
</tr>
<tr>
<td>6. Explain planned therapy and goals to a patient in understandable terms to achieve optimal therapeutic outcome</td>
</tr>
<tr>
<td>7. Educate a patient and family concerning smoking cessation and health management</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Maintain a Patent Airway Including the Care of Artificial Airways</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Properly position a patient</td>
</tr>
<tr>
<td>2. Insert or- and nasopharyngeal airways</td>
</tr>
<tr>
<td>3. Perform endotracheal intubation</td>
</tr>
<tr>
<td>4. Maintain position in the airway and appropriate cuff inflation of</td>
</tr>
<tr>
<td>a. LMA</td>
</tr>
<tr>
<td>b. esophageal-tracheal Combitube®</td>
</tr>
<tr>
<td>c. endotracheal tube</td>
</tr>
<tr>
<td>d. tracheostomy tube</td>
</tr>
<tr>
<td>5. Assess tube placement</td>
</tr>
<tr>
<td>6. Perform tracheostomy care</td>
</tr>
<tr>
<td>7. Change tracheostomy tubes</td>
</tr>
<tr>
<td>8. Maintain adequate humidification</td>
</tr>
<tr>
<td>9. Perform extubation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C. Remove Bronchopulmonary Secretions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Perform</td>
</tr>
<tr>
<td>a. postural drainage, percussion, or vibration</td>
</tr>
<tr>
<td>b. nasotracheal suctioning</td>
</tr>
<tr>
<td>c. oropharyngeal suctioning</td>
</tr>
<tr>
<td>d. airway clearance using mechanical devices e.g., high frequency chest wall oscillation, vibratory PEP</td>
</tr>
<tr>
<td>2. Suction artificial airways</td>
</tr>
<tr>
<td>3. Administer aerosol therapy with prescribed drugs</td>
</tr>
<tr>
<td>4. Instruct and encourage bronchopulmonary hygiene techniques</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D. Achieve Adequate Respiratory Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Instruct a patient in</td>
</tr>
<tr>
<td>a. deep breathing and incentive spirometry techniques</td>
</tr>
<tr>
<td>b. inspiratory muscle training techniques</td>
</tr>
</tbody>
</table>
E. Evaluate and Monitor Patient’s Objective and Subjective Responses to Respiratory Care

1. Recommend and review a chest radiograph.
2. Obtain a blood gas sample
   a. by puncture
   b. from an arterial or pulmonary artery catheter
   c. from arterialized capillary blood
3. Perform
   a. transcutaneous monitoring
   b. pulse oximetry
   c. blood gas and hemoximetry analyses
   d. capnography
   e. hemodynamic assessment
4. Interpret results of
   a. blood gases
   b. hemoximetry e.g., carboxyhemoglobin
   c. hemodynamics
   d. pulse oximetry
   e. capnography
5. Observe for
   a. changes in sputum characteristics
   b. signs of patient-ventilator dysynchrony
6. Measure and record vital signs, monitor cardiac rhythm, and evaluate fluid balance – intake and output.
7. Perform and interpret results of pulmonary function testing
   a. spirometry
   b. compliance and airways resistance
   c. lung volumes
   d. \( \text{D}_{\text{LCO}} \)
   e. exercise
   f. bronchoprovocation studies
8. Recommend blood tests e.g., hemoglobin, potassium.
9. Monitor airway pressures, and adjust and check alarm systems.
10. Measure \( F_\text{O}_2 \) and/or oxygen flow.
11. Auscultate the chest and interpret changes in breath sounds.

F. INDEPENDENTLY MODIFY Therapeutic Procedures Based on the Patient’s Response

1. Terminate treatment based on patient’s response to therapy
2. Modify treatment techniques
   a. IPPB
   b. incentive breathing devices
   c. aerosol therapy
      1) modify patient breathing patterns
      2) change type of equipment and change aerosol output
      3) change dilution of medication
      4) adjust temperature of the aerosol
   d. oxygen therapy
      1) change mode of administration, flow, and \( F_\text{O}_2 \)
      2) set up or change an \( O_2 \) blender
      3) set up an \( O_2 \) concentrator or liquid \( O_2 \) system
### G. RECOMMEND Modifications in the Respiratory Care Plan Based on the Patient’s Response

1. **Recommend**
   a. institution of bronchopulmonary hygiene procedures
   b. treatment of pneumothorax
   c. sedation and/or use of muscle relaxant(s)
   d. adjustment of fluid balance
   e. adjustment of electrolyte therapy
   f. insertion or change of artificial airway
   g. weaning from mechanical ventilation
   h. extubation
   i. discontinuing treatment based on patient response

2. **Recommend changes in**
   a. patient position
   b. inhaled drug dosage or concentration
   c. \( F_{O_2} \) and oxygen flow

3. **Recommend changes in mechanical ventilation to**
   a. improve patient synchrony
   b. enhance oxygenation
   c. improve alveolar ventilation
   d. adjust I : E settings
   e. modify ventilator techniques
   f. adjust noninvasive positive pressure ventilation
   g. monitor and adjust alarm settings
   h. adjust ventilator settings based on ventilator graphics
   i. change type of ventilator
   j. change patient breathing circuitry
   k. reduce auto-PEEP
   l. reduce plateau pressure

4. **Recommend pharmacologic interventions including use of**
   a. bronchodilators
   b. antiinflammatory drugs e.g., 
      - corticosteroids
      - leukotriene modifiers
   c. mucolytics and proteolytics e.g., 
      - acetylcysteine
      - RhDNAse
      - hypertonic saline
<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Recall</th>
<th>Application</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H. Determine the Appropriateness of the Prescribed Respiratory Care Plan and Recommend Modifications When Indicated by Data</strong></td>
<td>1. Analyze available information to determine the pathophysiological state.</td>
<td>1</td>
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<td></td>
<td>2. Review</td>
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<tr>
<td></td>
<td>a. planned therapy to establish therapeutic plan</td>
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<td>b. interdisciplinary patient and family plan</td>
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<td></td>
<td>3. Determine appropriateness of prescribed therapy and goals for identified pathophysiological state</td>
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<td>4. Recommend changes in therapeutic plan when indicated</td>
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<td>5. Perform respiratory care quality assurance</td>
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<td>6. Develop</td>
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<td></td>
<td>a. quality improvement program</td>
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<td></td>
<td>b. respiratory care protocols</td>
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<td>7. Monitor outcomes of</td>
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<tr>
<td></td>
<td>a. quality improvement programs</td>
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<td>b. respiratory care protocols</td>
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<td></td>
<td>8. Apply respiratory care protocols</td>
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</tr>
<tr>
<td><strong>I. Initiate, Conduct, or Modify Respiratory Care Techniques in an Emergency Setting</strong></td>
<td>1. Treat cardiopulmonary emergencies according to</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>a. BCLS</td>
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<td>b. ACLS</td>
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<td></td>
<td>c. Pediatric Advanced Life Support (PALS)</td>
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<td></td>
<td>d. Neonatal Resuscitation Program (NRP)</td>
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<td></td>
<td>2. Treat a tension pneumothorax</td>
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<td>3. Participate in</td>
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<tr>
<td></td>
<td>a. land / air patient transport</td>
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<td>b. intra-hospital patient transport</td>
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<td></td>
<td>c. disaster management</td>
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<td>d. medical emergency team (MET) e.g., rapid response team</td>
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<tr>
<td><strong>J. Act as an Assistant to the Physician Performing Special Procedures</strong></td>
<td>1. Intubation</td>
<td>1</td>
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<tr>
<td></td>
<td>2. Bronchoscopy</td>
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<tr>
<td></td>
<td>3. Thoracentesis</td>
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<td>4. Tracheostomy</td>
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<td></td>
<td>5. Chest tube insertion</td>
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<td></td>
<td>6. Moderate (conscious) sedation</td>
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<td></td>
<td>7. Cardioversion</td>
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<tr>
<td></td>
<td>8. Ultrasound</td>
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<tr>
<td><strong>K. Initiate and Conduct Pulmonary Rehabilitation and Home Care</strong></td>
<td>1. Monitor and maintain home respiratory care equipment</td>
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<tr>
<td></td>
<td>2. Explain planned therapy and goals to a patient in understandable terms to achieve optimal therapeutic outcome</td>
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<td>3. Educate a patient and family in health management</td>
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<td>4. Interact with a case manager</td>
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<td></td>
<td>5. Counsel a patient and family concerning smoking cessation</td>
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<td>6. Instruct patient and family to assure safety and infection control</td>
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<td></td>
<td>7. Modify respiratory care procedures for use in home</td>
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</table>

**TOTALS**

23 | 35 | 74 | 31
## Registry Examination for Advanced Respiratory Therapists (RRT)

### RRT Examination Matrix

<table>
<thead>
<tr>
<th>Content Area</th>
<th>Cognitive Level</th>
<th>Application</th>
<th>Recall</th>
<th>Analysis</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. PATIENT DATA EVALUATION AND RECOMMENDATIONS</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>A. Review Data in the Patient Record</td>
<td>4</td>
<td>7</td>
<td>17</td>
<td>28</td>
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</tr>
<tr>
<td>B. Collect and Evaluate Additional Pertinent Clinical Information</td>
<td>1</td>
<td>4</td>
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<tr>
<td>C. Recommend Procedures to Obtain Additional Data</td>
<td>2</td>
<td>2</td>
<td>14</td>
<td>18</td>
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<tr>
<td><strong>II. EQUIPMENT MANIPULATION, INFECTION CONTROL, AND QUALITY CONTROL</strong></td>
<td>1</td>
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<tr>
<td>A. Manipulate Equipment by Order or Protocol</td>
<td>2</td>
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<tr>
<td>B. Ensure Infection Control</td>
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<tr>
<td>C. Perform Quality Control Procedures</td>
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<tr>
<td><strong>III. INITIATION AND MODIFICATION OF THERAPEUTIC PROCEDURES</strong></td>
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<tr>
<td>A. Maintain Records and Communicate Information</td>
<td>0</td>
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<td>B. Maintain a Patent Airway Including the Care of Artificial Airways</td>
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<tr>
<td>C. Remove Bronchopulmonary Secretions</td>
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<tr>
<td>D. Achieve Adequate Respiratory Support</td>
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<td>E. Evaluate and Monitor Patient’s Objective and Subjective Responses to Respiratory Care</td>
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<tr>
<td>F. INDEPENDENTLY MODIFY Therapeutic Procedures Based on the Patient’s Response</td>
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<td>G. RECOMMEND Modifications in the Respiratory Care Plan Based on the Patient’s Response</td>
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<td>H. Determine the Appropriateness of the Prescribed Respiratory Care Plan and Recommend Modifications When Indicated by Data</td>
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<td>2</td>
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<tr>
<td>I. Initiate, Conduct, or Modify Respiratory Care Techniques in an Emergency Setting</td>
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<tr>
<td>J. Act as an Assistant to the Physician Performing Special Procedures</td>
<td>0</td>
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<td>2</td>
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<tr>
<td>K. Initiate and Conduct Pulmonary Rehabilitation and Home Care</td>
<td>0</td>
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<td>1</td>
<td>2</td>
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<tr>
<td><strong>Totals</strong></td>
<td>6</td>
<td>15</td>
<td>79</td>
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</table>
Open cells show an examination could include items from indicated cognitive levels. Shaded cells prevent appearance of items on examinations.

### I. PATIENT DATA EVALUATION AND RECOMMENDATIONS

#### A. Review Data in the Patient Record

<table>
<thead>
<tr>
<th>Recall</th>
<th>Application</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>7</td>
<td>17</td>
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<tr>
<td>1</td>
<td>4</td>
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</tr>
</tbody>
</table>

1. Patient history e.g.,
   - present illness
   - admission notes
   - respiratory care orders
   - medication history
   - progress notes
   - patient education (previous)
   - diagnoses

2. Physical examination relative to the cardiopulmonary system e.g., vital signs, physical findings
   - CBC
   - coagulation studies
   - culture and sensitivities
   - sputum Gram stain

3. Laboratory data e.g.,
   - pulmonary mechanics e.g., maximum inspiratory pressure, vital capacity
   - tidal and minute volume
   - I/E
   - capnography
   - transcutaneous O₂ / CO₂

4. Pulmonary function results
5. Imaging studies e.g.,
   - radiograph
   - CT
   - MRI

7. Monitoring data
   - fluid balance
   - pulmonary mechanics e.g., maximum inspiratory pressure, vital capacity
   - respiratory e.g.,
     - rate
     - tidal and minute volume
     - I/E
   - pulmonary compliance, airways resistance, work of breathing
   - noninvasive e.g.,
     - pulse oximetry
     - V̇₀₂ / V̇ₜₐₚ

8. Cardiac monitoring
   - ECG data results e.g., heart rate, rhythm
   - hemodynamic monitoring results e.g.,
     - blood pressure
     - PA pressure
     - CVP
     - cardiac output / index

9. Maternal and perinatal / neonatal history and data
   - Apgar scores
   - gestational age
   - L / S ratio

10. Sleep study results e.g., diagnosis, treatment

#### B. Collect and Evaluate Additional Pertinent Clinical Information

<table>
<thead>
<tr>
<th>Recall</th>
<th>Application</th>
<th>Analysis</th>
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<tbody>
<tr>
<td>4</td>
<td>7</td>
<td>17</td>
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<tr>
<td>1</td>
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</tbody>
</table>

1. Assess a patient’s overall cardiopulmonary status by inspection to determine
   - general appearance e.g.,
     - venous distention
     - edema
     - accessory muscle activity
     - chest wall movement
     - diaphoresis
     - clubbing
   - airway assessment e.g., macroglossia, neck range of motion
   - cough, sputum amount and character
   - Apgar score, gestational age, transillumination of chest

2. Assess a patient’s overall cardiopulmonary status by palpation to determine
   - pulse, rhythm, force

3. Assess a patient’s overall cardiopulmonary status by percussion

4. Assess a patient’s overall cardiopulmonary status by auscultation to determine presence of
   - breath sounds
   - heart sounds and rhythm
   - blood pressure

5. Interview a patient to determine
   - level of consciousness and orientation, emotional state, and ability to cooperate
   - level of pain
   - presence of dyspnea, sputum production, and exercise tolerance
   - social history e.g., smoking, substance abuse
   - advance directives e.g., DNR status

6. Assess a patient’s learning needs

* The number in each column is the number of items in that content area and cognitive level contained in each examination. For example, in category I.A., no items will be asked at the recall level, one item at the application level and three items at the analysis level. The items could be asked relative to any tasks listed (1-8) under category I.A.
7. Review a chest radiograph to determine
a. quality of imaging e.g., patient positioning, exposure
b. position of endotracheal or tracheostomy tube
c. position of indwelling tubes and catheters
d. presence of foreign bodies
e. position of or change in hemidiaphragms or mediastinum

8. Review lateral neck radiographs e.g., epiglottitis, foreign body

9. Perform procedures
a. 12-lead ECG
b. transcutaneous monitoring
c. pulse oximetry and capnography
d. tidal volume, minute volume, vital capacity, and peak flow measurements
e. bedside spirometry e.g., FVC, FEV₁
f. arterial sampling – percutaneous or line
g. arterialized capillary blood sampling
h. timed walk test e.g., 6-minute
i. oxygen titration with exercise
j. blood gas / hemoximetry analysis
k. exhaled nitric oxide
l. hemodynamic monitoring e.g., blood pressure, CVP

10. Interpret procedure results including
a. 12-lead ECG e.g.,
   • rate
   • irregular rhythm
   • artifacts
b. transcutaneous monitoring
c. pulse oximetry and capnography
d. tidal volume, minute volume, vital capacity, and peak flow measurements
e. bedside spirometry e.g., FVC, FEV₁
f. arterial sampling – percutaneous or line
g. arterialized capillary blood sampling
h. timed walk test e.g., 6-minute
i. oxygen titration with exercise
j. blood gas / hemoximetry analysis
k. exhaled nitric oxide
l. hemodynamic monitoring e.g., blood pressure, CVP
m. lung mechanics e.g.,
   • plateau pressure
   • MIP
   • compliance
   • airways resistance
n. ventilator graphics e.g., pressure / volume loop
o. apnea monitoring
p. overnight pulse oximetry
q. tracheal tube cuff pressure and/or volume
r. arterial line insertion
s. stress testing e.g., ECG, pulse oximetry
t. pulmonary function laboratory studies
u. CPAP / BIPAP titration during sleep
v. auto-PEEP detection
w. auto-PEEP detection
x. auto-PEEP detection

C. Recommend Procedures to Obtain Additional Data
1. Blood tests e.g., hemoglobin, potassium.
2. Radiographic and other imaging studies.
3. Diagnostic bronchoscopy e.g., evaluate hemoptysis, atelectasis.
4. Sputum Gram stain, culture and sensitivities e.g., pneumonia.
5. Bronchoalveolar lavage (BAL).
6. Pulmonary function testing.
7. Lung mechanics e.g., compliance, airways resistance.
II. EQUIPMENT MANIPULATION, INFECTION CONTROL, AND QUALITY CONTROL

A. Manipulate Equipment by Order or Protocol
1. CPAP devices – mask, nasal, or bilevel
2. Ventilators
   a. pneumatic, electric, fluidic, and microprocessor
   b. noninvasive positive pressure
   c. high frequency
3. Artificial airways
   a. laryngeal mask airway (LMA)
   b. esophageal-tracheal Combitube®
4. Gas delivery, metering, and clinical analyzing devices
   a. oxygen concentrators
   b. portable liquid oxygen systems
   c. portable oxygen concentrators
   d. air compressors
5. Point-of-care analyzers e.g., blood gas, electrolytes
6. Incubators
7. High frequency chest wall oscillation
8. He/O2
9. Hemodynamic monitoring devices
   a. pressure transducers
   b. catheters e.g., arterial, pulmonary artery
10. CO, He, O2, and specialty gas analyzers
11. Bronchoscopes

B. Ensure Infection Control
1. Assure proper handling of biohazardous materials
2. Incorporate ventilator-associated pneumonia protocol
3. Implement infectious disease protocols e.g.,
   - avian flu
   - SARS
   - transmission prevention
4. Adhere to infection control policies and procedures e.g., Standard Precautions

C. Perform Quality Control Procedures For
1. Blood gas analyzers, co-oximeters
2. Gas analyzers
3. Point-of-care analyzers
4. Pulmonary function equipment
5. Mechanical ventilators
6. Gas metering devices e.g., flowmeter
7. Noninvasive monitors e.g., transcutaneous
8. Record and monitor QC data using accepted statistical methods

III. INITIATION AND MODIFICATION OF THERAPEUTIC PROCEDURES

A. Maintain Records and Communicate Information
1. Record therapy and results using conventional terminology as required in the health care setting and/or by regulatory agencies
   a. specify therapy administered, date, time, frequency of therapy, medication, and ventilatory data
   b. note and interpret patient’s response to therapy
      1) effects of therapy, adverse reactions, patient’s subjective and objective response to therapy
      2) verify computations and note erroneous data
      3) auscultatory findings, cough and sputum production and characteristics
      4) vital signs
      5) pulse oximetry, heart rhythm, capnography
2. Communicate information
   a. regarding patient’s clinical status to appropriate members of the health care team
   b. relevant to coordinating patient care and discharge planning
3. Accept and verify patient care orders
4. Apply computer technology to patient safety initiatives e.g., drug dispensing, order entry.
5. Communicate results of therapy and alter therapy by protocol(s).
6. Explain planned therapy and goals to a patient in understandable terms to achieve optimal therapeutic outcome.
7. Educate a patient and family concerning smoking cessation and health management.

**B. Maintain a Patent Airway Including the Care of Artificial Airways**

1. Properly position a patient.
2. Perform endotracheal intubation.
3. Maintain position in the airway and appropriate cuff inflation of
   a. LMA
   b. esophageal-tracheal Combitube®
   c. endotracheal tube
   d. tracheostomy tube
4. Perform extubation.

**C. Remove Bronchopulmonary Secretions**

1. Perform
   a. postural drainage, percussion, or vibration
   b. nasotracheal suctioning
   c. oropharyngeal suctioning
   d. airway clearance using mechanical devices e.g., high frequency chest wall oscillation, vibratory PEP
2. Suction artificial airways.
3. Administer aerosol therapy with prescribed drugs.
4. Instruct and encourage bronchopulmonary hygiene techniques.

**D. Achieve Adequate Respiratory Support**

1. Instruct a patient in deep breathing and incentive spirometry techniques.
2. Initiate and adjust
   a. IPPB therapy
   b. continuous mechanical ventilation settings
   c. noninvasive ventilation
   d. elevated baseline pressure e.g., CPAP, PEEP
3. Select ventilator graphics e.g., waveforms, scales
4. Initiate and select appropriate settings for high frequency ventilation.
5. Administer medications
   a. aerosolized
   b. dry powder preparations
   c. endotracheal instillation
6. Initiate and modify weaning procedures.
7. Position patient to minimize hypoxemia.
8. Apply disease-specific ventilator protocols (e.g. ARDS-Net protocol).

**E. Evaluate and Monitor Patient’s Objective and Subjective Responses to Respiratory Care**

1. Recommend and review a chest radiograph.
2. Obtain a blood gas sample
   a. by puncture
   b. from an arterial or pulmonary artery catheter
   c. from arterialized capillary blood
3. Perform
   a. transcutaneous monitoring
   b. blood gas and hemoximetry analyses
   c. capnography
   d. hemodynamic assessment
4. Interpret results of
   a. hemodynamics
   b. capnography
5. Observe for signs of patient-ventilator dysynchrony.
6. Measure and record vital signs, monitor cardiac rhythm, and evaluate fluid balance – intake and output.
7. Perform and interpret results of pulmonary function testing
   a. spirometry
   b. compliance and airways resistance
   c. lung volumes
   d. D_LCO
   e. exercise
   f. bronchoprovocation studies.
8. Recommend blood tests e.g., hemoglobin, potassium.
9. Auscultate the chest and interpret changes in breath sounds.

F. INDEPENDENTLY MODIFY Therapeutic Procedures Based on the Patient’s Response

1. Terminate treatment based on patient’s response to therapy.
2. Modify treatment techniques
   a. IPPB
   b. incentive breathing devices
   c. specialty gas therapy e.g., He / O₂, NO
      1) change mode of administration
      2) adjust flow or gas concentration.
   d. management of artificial airways
      1) reposition or change endotracheal or tracheostomy tube
      2) perform tracheostomy care.
   e. mechanical ventilation
      1) improve patient synchrony
      2) enhance oxygenation
      3) improve alveolar ventilation
      4) adjust I : E settings
      5) modify ventilator techniques
      6) adjust noninvasive positive pressure ventilation
      7) adjust ventilator settings based on ventilator graphics
      8) change type of ventilator
      9) alter mechanical dead space
      10) initiate procedures for weaning.
3. Recommend changes in mechanical ventilation to
   a. improve patient synchrony
   b. enhance oxygenation
   c. improve alveolar ventilation
   d. adjust I : E settings
   e. modify ventilator techniques
   f. adjust noninvasive positive pressure ventilation
   g. adjust ventilator settings based on ventilator graphics
   h. change type of ventilator
   i. alter mechanical dead space
   j. reduce auto-PEEP
   k. reduce plateau pressure
4. Recommend pharmacologic interventions including use of
   a. cardiovascular drugs e.g., ACLS protocol agents
   b. antimicrobials e.g., antibiotics
   c. sedatives
   d. analgesics
   e. paralytic agents
   f. diuretics
   g. surfactants
   h. vaccines e.g., pneumovax, influenza

G. RECOMMEND Modifications in the Respiratory Care Plan Based on the Patient’s Response

1. Recommend
   a. institution of bronchopulmonary hygiene procedures
   b. treatment of pneumothorax
   c. sedation and/or use of muscle relaxant(s)
   d. adjustment of fluid balance
   e. adjustment of electrolyte therapy
   f. insertion or change of artificial airway
   g. weaning from mechanical ventilation
   h. extubation
   i. discontinuing treatment based on patient response
2. Recommend changes in
   a. patient position
   b. inhaled drug dosage or concentration
3. Recommend changes in mechanical ventilation to
   a. improve patient synchrony
   b. enhance oxygenation
   c. improve alveolar ventilation
   d. adjust I : E settings
   e. modify ventilator techniques
   f. adjust noninvasive positive pressure ventilation
   g. adjust ventilator settings based on ventilator graphics
   h. change type of ventilator
   i. alter mechanical dead space
   j. reduce auto-PEEP
   k. reduce plateau pressure
4. Recommend pharmacologic interventions including use of
   a. cardiovascular drugs e.g., ACLS protocol agents
   b. antimicrobials e.g., antibiotics
   c. sedatives
   d. analgesics
   e. paralytic agents
   f. diuretics
   g. surfactants
   h. vaccines e.g., pneumovax, influenza

H. Determine the Appropriateness of the Prescribed Respiratory Care Plan and Recommend Modifications When Indicated by Data

1. Analyze available information to determine the pathophysiological state.
2. Review
   a. planned therapy to establish therapeutic plan
   b. interdisciplinary patient and family plan

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3. Determine appropriateness of prescribed therapy and goals for identified pathophysiological state.
4. Recommend changes in therapeutic plan when indicated.
5. Perform respiratory care quality assurance.
6. Develop
   a. quality improvement program
   b. respiratory care protocols
7. Monitor outcomes of
   a. quality improvement programs
   b. respiratory care protocols
8. Apply respiratory care protocols

I. Initiate, Conduct, or Modify Respiratory Care Techniques in an Emergency Setting
1. Treat cardiopulmonary emergencies according to
   a. ACLS
   b. Pediatric Advanced Life Support (PALS)
   c. Neonatal Resuscitation Program (NRP)
2. Treat a tension pneumothorax
3. Participate in
   a. land / air patient transport
   b. intra-hospital patient transport
   c. disaster management
   d. medical emergency team (MET) e.g., rapid response team

J. Act as an Assistant to the Physician Performing Special Procedures
1. Intubation
2. Bronchoscopy
3. Thoracentesis
4. Tracheostomy
5. Chest tube insertion
6. Insertion of venous or arterial catheters
7. Moderate (conscious) sedation
8. Cardioversion

K. Initiate and Conduct Pulmonary Rehabilitation and Home Care
1. Initiate and adjust apnea monitors
2. Explain planned therapy and goals to a patient in understandable terms to achieve optimal therapeutic outcome
3. Educate a patient and family in health management
4. Interact with a case manager
5. Counsel a patient and family concerning smoking cessation
6. Instruct patient and family to assure safety and infection control
7. Modify respiratory care procedures for use in home
8. Initiate treatment for sleep disorders e.g., CPAP

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CSE Examination Matrix

I. PATIENT DATA EVALUATION AND RECOMMENDATIONS
   A. Review Data in the Patient Record
   B. Collect and Evaluate Additional Pertinent Clinical Information
   C. Recommend Procedures to Obtain Additional Data

II. EQUIPMENT MANIPULATION, INFECTION CONTROL, AND QUALITY CONTROL
   A. Manipulate Equipment by Order or Protocol
   B. Ensure Infection Control
   C. Perform Quality Control Procedures

III. INITIATION AND MODIFICATION OF THERAPEUTIC PROCEDURES
   A. Maintain Records and Communicate Information
   B. Maintain a Patent Airway Including the Care of Artificial Airways
   C. Remove Bronchopulmonary Secretions
   D. Achieve Adequate Respiratory Support
   E. Evaluate and Monitor Patient’s Objective and Subjective Responses to Respiratory Care
   F. INDEPENDENTLY MODIFY Therapeutic Procedures Based on the Patient’s Response
   G. RECOMMEND Modifications in the Respiratory Care Plan Based on the Patient’s Response
   H. Determine the Appropriateness of the Prescribed Respiratory Care Plan and Recommend Modifications
      When Indicated by Data
   I. Initiate, Conduct, or Modify Respiratory Care Techniques in an Emergency Setting
   J. Act as an Assistant to the Physician Performing Special Procedures
   K. Initiate and Conduct Pulmonary Rehabilitation and Home Care
I. PATIENT DATA EVALUATION AND RECOMMENDATIONS

A. Review Data in the Patient Record

1. Patient history e.g., present illness, admission notes, respiratory care orders, medication history

2. Physical examination relative to the cardiopulmonary system e.g., vital signs, physical findings

3. Laboratory data e.g., CBC, electrolytes, culture and sensitivities, coagulation studies

4. Pulmonary function results

5. Blood gas results

6. Imaging studies e.g., radiograph, MR, CT

7. Monitoring data
   a. fluid balance
   b. pulmonary mechanics e.g., maximum inspiratory pressure, vital capacity
   c. respiratory e.g., rate, tidal and minute volume
   d. pulmonary compliance, airways resistance, work of breathing
   e. noninvasive e.g., pulse oximetry, capnography, transcutaneous O₂ / CO₂

8. Cardiac monitoring
   a. ECG data results e.g., heart rate, rhythm
   b. hemodynamic monitoring results e.g., blood pressure, PA pressure, cardiac output / index

9. Maternal and perinatal / neonatal history and data
   a. Apgar score, gestational age, transillumination of chest

10. Sleep study results e.g., diagnosis, treatment

B. Collect and Evaluate Additional Pertinent Clinical Information

1. Assess a patient’s overall cardiopulmonary status by inspection to determine
   a. general appearance e.g., venous distention, edema, accessory muscle activity, chest wall movement
   b. airway assessment e.g., macroglossia, neck range of motion
   c. cough, sputum amount and character
   d. Apgar score, gestational age, transillumination of chest

2. Assess a patient’s overall cardiopulmonary status by palpation to determine
   a. pulse, rhythm, force
   b. asymmetrical chest movements, tactile fremitus, crepitus, tenderness, secretions in the airway, and tracheal deviation

3. Assess a patient’s overall cardiopulmonary status by percussion

4. Assess a patient’s overall cardiopulmonary status by auscultation to determine presence of
   a. breath sounds
   b. heart sounds and rhythm
   c. blood pressure

5. Interview a patient to determine
   a. level of consciousness and orientation, emotional state, and ability to cooperate
   b. level of pain
   c. presence of dyspnea, sputum production, and exercise tolerance
   d. nutritional status
   e. social history e.g., smoking, substance abuse
   f. advance directives e.g., DNR status

6. Assess a patient’s learning needs

7. Review a chest radiograph to determine
   a. quality of imaging e.g., patient positioning, exposure
   b. position of endotracheal or tracheostomy tube
   c. presence of, or change in, cardiopulmonary abnormalities e.g., pneumothorax, pleural fluid, consolidation, pulmonary edema
   d. position of indwelling tubes and catheters
   e. presence of foreign bodies
   f. position of or change in hemidiaphragms or mediastinum

8. Review lateral neck radiographs e.g., epiglottitis, foreign body

9. Perform procedures
   a. 12-lead ECG
   b. transcutaneous monitoring
   c. pulse oximetry and capnography
   d. tidal volume, minute volume, vital capacity, and peak flow measurements
   e. bedside spirometry e.g., FVC, FEV₁
   f. arterial sampling – percutaneous or line
   g. arterialized capillary blood sampling
   h. timed walk test e.g., 6-minute
   i. oxygen titration with exercise
   j. blood gas / hemoximetry analysis
   k. exhaled nitric oxide
   l. cardiopulmonary calculations e.g., P(A-a)O₂, VD / VT
   m. hemodynamic monitoring e.g., blood pressure, CVP
   n. lung mechanics e.g., plateau pressure, MIP, MEP
   o. ventilator graphics e.g., pressure / volume loop
   p. apnea monitoring
   q. overnight pulse oximetry
   r. tracheal tube cuff pressure and / or volume
   s. arterial line insertion
   t. stress testing e.g., ECG, pulse oximetry
   u. pulmonary function laboratory studies
   v. CPAP / BIPAP titration during sleep
   w. auto-PEEP detection

10. Interpret procedure results including
    a. 12-lead ECG e.g., rate, irregular rhythm
b. transcutaneous monitoring
c. pulse oximetry and capnography
d. tidal volume, minute volume, vital capacity, and peak flow measurements
e. bedside spirometry e.g., FVC, FEV1
f. arterial sampling – percutaneous or line
g. arterialized capillary blood sampling
h. timed walk test e.g., 6-minute
  i. oxygen titration with exercise
  j. blood gas / hemoximetry analysis
k. exhaled nitric oxide
l. cardiopulmonary calculations e.g., P(A-a)O2, VD / VT
m. hemodynamic monitoring e.g., blood pressure, CVP
n. lung mechanics e.g., • plateau pressure • MIP • MEP
o. ventilator graphics e.g., pressure/volume loop
p. apnea monitoring
q. overnight pulse oximetry
r. tracheal tube cuff pressure and/or volume
s. arterial line insertion
t. stress testing e.g., ECG, pulse oximetry
u. pulmonary function laboratory studies
v. CPAP / BIPAP titration during sleep
w. auto-PEEP detection

C. Recommend Procedures to Obtain Additional Data
1. Blood tests e.g., hemoglobin, potassium
2. Radiographic and other imaging studies
3. Diagnostic bronchoscopy e.g., evaluate hemoptysis, atelectasis
4. Sputum Gram stain, culture and sensitivities e.g., pneumonia
5. Bronchoalveolar lavage (BAL)
6. Pulmonary function testing
7. Lung mechanics e.g., compliance, airways resistance
8. Blood gas analysis, pulse oximetry, and transcutaneous monitoring
9. ECG
10. Capnography
11. Hemodynamic monitoring e.g., blood pressure, CVP
12. Insertion of monitoring catheters e.g., arterial
13. Sleep studies
14. Thoracentesis e.g., pleural effusion

II. EQUIPMENT MANIPULATION, INFECTION CONTROL, AND QUALITY CONTROL
A. Manipulate Equipment by Order or Protocol
1. Oxygen administration devices
  a. low-flow devices e.g., nasal cannula
  b. high-flow devices e.g., air entrainment mask
  c. high-flow nasal cannula
2. CPAP devices – mask, nasal, or bilevel
3. Humidifiers
4. Nebulizers
5. Resuscitation devices e.g., manual resuscitator (bag-valve), mouth-to-valve mask resuscitator
6. Ventilators
  a. pneumatic, electric, fluidic, and microprocessor
  b. noninvasive positive pressure
  c. high frequency
7. Artificial airways
  a. oro- and nasopharyngeal airways
  b. endotracheal tubes
  c. tracheostomy tubes and devices
  d. speaking tubes and valves
  e. intubation equipment
  f. laryngeal mask airway (LMA)
  g. esophageal-tracheal Combitube®
8. Suctioning devices
9. Gas delivery, metering, and clinical analyzing devices
  a. gas cylinders, regulators, reducing valves, connectors and flowmeters, and air / oxygen blenders
  b. oxygen conserving devices e.g., reservoir cannula, pulse-dose
  c. oxygen concentrators,
  d. portable liquid oxygen systems
  e. portable oxygen concentrators
  f. air compressors
10. Point-of-care analyzers e.g., blood gas, electrolytes
11. Patient breathing circuits
  a. continuous mechanical ventilation
  b. IPPB
  c. CPAP and PEEP valve assemblies
  d. non-invasive ventilation
12. Environmental devices
  a. incubators
  b. aerosol (mist) tents
  c. oxygen hoods
13. Incentive breathing devices
14. Airway clearance devices
  a. percussors and vibrators
  b. high frequency chest wall oscillation
  c. positive expiratory pressure (PEP) devices
  d. vibratory PEP devices
15. He / O2
16. Manometers e.g., aneroid, digital, water
17. Respirometers e.g., flow-sensing devices
18. ECG monitors
19. ECG machines (12-lead)
20. Hemodynamic monitoring devices
  a. pressure transducers
  b. catheters e.g., arterial, pulmonary artery
21. Vacuum systems e.g.,
  • pumps
  • collection bottles
  • regulators
  • pleural drainage devices
22. Oximetry monitoring devices e.g., pulse oximeter, transcutaneous
23. Metered dose inhalers (MDI) and MDI spacers
24. Dry powder inhalers
25. Bedside screening spirometers
26. CO, He, O2, and specialty gas analyzers
27. Bronchoscopes
B. Ensure Infection Control
1. Assure cleanliness of equipment by
  • selecting or determining appropriate agent and technique for disinfection and/or sterilization
  • performing procedures for disinfection and/or sterilization
  • monitoring effectiveness of sterilization procedures
2. Assure proper handling of biohazardous materials
3. Incorporate ventilator-associated pneumonia protocol
4. Implement infectious disease protocols e.g.,
   - avian flu
   - transmission prevention
   - SARS
5. Adhere to infection control policies and procedures e.g., Standard Precautions

C. Perform Quality Control Procedures For
1. Blood gas analyzers, co-oximeters
2. Gas analyzers
3. Point-of-care analyzers
4. Pulmonary function equipment
5. Mechanical ventilators
6. Gas metering devices e.g., flowmeter
7. Noninvasive monitors e.g., transcutaneous
8. Record and monitor QC data using accepted statistical methods

III. INITIATION AND MODIFICATION OF THERAPEUTIC PROCEDURES

A. Maintain Records and Communicate Information
1. Record therapy and results using conventional terminology as required in the health care setting and/or by regulatory agencies
   a. specify therapy administered, date, time, frequency of therapy, medication, and ventilatory data
   b. note and interpret patient’s response to therapy
      1) effects of therapy, adverse reactions, patient’s subjective and objective response to therapy
      2) verify computations and note erroneous data
      3) auscultatory findings, cough and sputum production and characteristics
      4) vital signs
      5) pulse oximetry, heart rhythm, capnography
2. Communicate information
   a. regarding patient’s clinical status to appropriate members of the health care team
   b. relevant to coordinating patient care and discharge planning
3. Accept and verify patient care orders
4. Apply computer technology to
   a. document patient management
   b. monitor workload assignments
   c. patient safety initiatives e.g., drug dispensing, order entry
5. Communicate results of therapy and alter therapy by protocol(s)
6. Explain planned therapy and goals to a patient in understandable terms to achieve optimal therapeutic outcome
7. Educate a patient and family concerning smoking cessation and health management

B. Maintain a Patent Airway Including the Care of Artificial Airways
1. Properly position a patient
2. Insert oro- and nasopharyngeal airways
3. Perform endotracheal intubation
4. Maintain position in the airway and appropriate cuff inflation of
   a. LMA
   b. esophageal-tracheal Combitube®
   c. endotracheal tube
   d. tracheostomy tube
5. Assess tube placement
6. Perform tracheostomy care
7. Change tracheostomy tubes
8. Maintain adequate humidification
9. Perform extubation

C. Remove Bronchopulmonary Secretions
1. Perform
   a. postural drainage, percussion, or vibration
   b. nasotracheal suctioning
   c. oropharyngeal suctioning
   d. airway clearance using mechanical devices e.g., high frequency chest wall oscillation, vibratory PEP
2. Suction artificial airways
3. Administer aerosol therapy with prescribed drugs
4. Instruct and encourage bronchopulmonary hygiene techniques

D. Achieve Adequate Respiratory Support
1. Instruct a patient in
   a. deep breathing and incentive spirometry techniques
   b. inspiratory muscle training techniques
2. Initiate and adjust
   a. IPPB therapy
   b. continuous mechanical ventilation settings
   c. noninvasive ventilation
   d. elevated baseline pressure e.g., CPAP, PEEP
3. Select ventilator graphics e.g., waveforms, scales
4. Initiate and select appropriate settings for high frequency ventilation
5. Administer medications
   a. aerosolized
   b. dry powder preparations
   c. endotracheal instillation
6. Administer oxygen
7. Initiate and modify weaning procedures
8. Position patient to minimize hypoxemia
9. Prevent procedure-associated hypoxemia e.g., oxygenate before and after suctioning and equipment changes
10. Apply disease-specific ventilator protocols (e.g. ARDS-Net protocol)

E. Evaluate and Monitor Patient’s Objective and Subjective Responses to Respiratory Care
1. Recommend and review a chest radiograph
2. Obtain a blood gas sample
   a. by puncture
   b. from an arterial or pulmonary artery catheter
   c. from arterialized capillary blood
3. Perform
   a. transcutaneous monitoring
   b. pulse oximetry
   c. blood gas and hemoximetry analyses
   d. capnography
   e. hemodynamic assessment
4. Interpret results of
   a. blood gases
   b. hemoximetry e.g., carboxyhemoglobin
   c. hemodynamics
   d. pulse oximetry
   e. capnography
5. Observe for
   a. changes in sputum characteristics
   b. signs of patient-ventilator dysynchrony
6. Measure and record vital signs, monitor cardiac rhythm, and evaluate fluid balance – intake and output
7. Perform and interpret results of pulmonary function testing
   a. spirometry
   b. compliance and airways resistance
   c. lung volumes
   d. D\textsubscript{LCO}
   e. exercise
   f. bronchoprovocation studies
8. Recommend blood tests e.g., hemoglobin, potassium
9. Monitor airway pressures, and adjust and check alarm systems
10. Measure F\text{O}_2 and/or oxygen flow
11. Auscultate the chest and interpret changes in breath sounds

F. INDEPENDENTLY MODIFY Therapeutic Procedures Based on the Patient’s Response
1. Terminate treatment based on patient’s response to therapy
2. Modify treatment techniques
   a. IPPB
   b. incentive breathing devices
   c. aerosol therapy
      1) modify patient breathing patterns
      2) change type of equipment and change aerosol output
      3) change dilution of medication
      4) adjust temperature of the aerosol
   d. oxygen therapy
      1) change mode of administration, flow, and F\text{O}_2
      2) set up or change an O\textsubscript{2} blender
      3) set up an O\textsubscript{2} concentrator or liquid O\textsubscript{2} system
   e. specialty gas therapy e.g., He / O\textsubscript{2}, NO
      1) change mode of administration
      2) adjust flow or gas concentration
   f. bronchial hygiene therapy
      1) alter patient position and duration of treatment and techniques
      2) coordinate sequence of therapies e.g.,
         • chest percussion
         • PEP
         • postural drainage
   g. management of artificial airways
      1) reposition or change endotracheal or tracheostomy tube
      2) change type of humidification equipment
      3) initiate suctioning
      4) inflate and / or deflate the cuff
      5) perform tracheostomy care
   h. suctioning
      1) alter frequency and duration of suctioning
      2) change size and type of catheter
      3) alter negative pressure
      4) instill irrigating solutions
   i. mechanical ventilation
      1) improve patient synchrony
      2) enhance oxygenation
      3) improve alveolar ventilation
   4) adjust I : E settings
   5) modify ventilator techniques
   6) adjust noninvasive positive pressure ventilation
   7) monitor and adjust alarm settings
   8) adjust ventilator settings based on ventilator graphics
   9) change type of ventilator
   10) change patient breathing circuitry
   11) alter mechanical dead space
   12) initiate procedures for weaning

G. RECOMMEND Modifications in the Respiratory Care Plan Based on the Patient’s Response
1. Recommend
   a. institution of bronchopulmonary hygiene procedures
   b. treatment of pneumothorax
   c. sedation and/or use of muscle relaxant(s)
   d. adjustment of fluid balance
   e. adjustment of electrolyte therapy
   f. insertion or change of artificial airway
   g. weaning from mechanical ventilation
   h. extubation
   i. discontinuing treatment based on patient response
2. Recommend changes in
   a. patient position
   b. inhaled drug dosage or concentration
   c. F\text{O}_2 and oxygen flow
3. Recommend changes in mechanical ventilation to
   a. improve patient synchrony
   b. enhance oxygenation
   c. improve alveolar ventilation
   d. adjust I : E settings
   e. modify ventilator techniques
   f. adjust noninvasive positive pressure ventilation
   g. monitor and adjust alarm settings
   h. adjust ventilator settings based on ventilator graphics
   i. change type of ventilator
   j. change patient breathing circuitry
   k. alter mechanical dead space
   l. reduce auto-PEEP
   m. reduce plateau pressure
4. Recommend pharmacologic interventions including use of
   a. bronchodilators
   b. antiinflammatory drugs e.g.,
      • leukotriene modifiers
      • corticosteroids
   c. mucolytics and proteolytics e.g.,
      • acetylcysteine
      • hypertonic saline
      • RhDNase
   d. cardiovascular drugs e.g., ACLS protocol agents
   e. antimicrobials e.g., antibiotics
   f. sedatives
g. analgesics
h. paralytic agents
i. diuretics
j. surfactants
k. vaccines e.g., pneumovax, influenza
**H. Determine the Appropriateness of the Prescribed Respiratory Care Plan and Recommend Modifications When Indicated by Data**

1. Analyze available information to determine the pathophysiological state
2. Review
   a. planned therapy to establish therapeutic plan
   b. interdisciplinary patient and family plan
3. Determine appropriateness of prescribed therapy and goals for identified pathophysiological state
4. Recommend changes in therapeutic plan when indicated
5. Perform respiratory care quality assurance
6. Develop
   a. quality improvement program
   b. respiratory care protocols
7. Monitor outcomes of
   a. quality improvement programs
   b. respiratory care protocols
8. Apply respiratory care protocols
9. Conduct health management education

**I. Initiate, Conduct, or Modify Respiratory Care Techniques in an Emergency Setting**

1. Treat cardiopulmonary emergencies according to
   a. BCLS
   b. ACLS
   c. Pediatric Advanced Life Support (PALS)
   d. Neonatal Resuscitation Program (NRP)
2. Treat a tension pneumothorax
3. Participate in
   a. land / air patient transport
   b. intra-hospital patient transport
   c. disaster management
   d. medical emergency team (MET) (e.g., rapid response team)

**J. Act as an Assistant to the Physician Performing Special Procedures**

1. Intubation
2. Bronchoscopy
3. Thoracentesis
4. Tracheostomy
5. Chest tube insertion
6. Insertion of venous or arterial catheters
7. Moderate (conscious) sedation
8. Cardioversion
9. Ultrasound

**K. Initiate and Conduct Pulmonary Rehabilitation and Home Care**

1. Monitor and maintain home respiratory care equipment
2. Initiate and adjust apnea monitors
3. Explain planned therapy and goals to a patient in understandable terms to achieve optimal therapeutic outcome
4. Educate a patient and family in health management
5. Interact with a case manager
6. Counsel a patient and family concerning smoking cessation
7. Instruct patient and family to assure safety and infection control
8. Modify respiratory care procedures for use in home
9. Initiate treatment for sleep disorders e.g., CPAP