



NORTH·SHORE
COMMUNITY COLLEGE

Danvers • Lynn • Beverly

Respiratory Care Program

PROGRAM HANDBOOK and CLINICAL COMPETENCY PACKET

PROGRAM FACULTY

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Welcome!

Welcome and congratulations on your acceptance to the Respiratory Care program at North Shore Community College. We are pleased that you have chosen to pursue your education in this exciting and rewarding field.

This handbook is provided to assist you as you progress through the program. It contains program specific information that is vital to your educational experience and it supplements the information provided to you in the college's course catalog. It is expected that you keep this handbook as a resource referring to it whenever necessary. All Respiratory Care students are required to adhere to the policies and procedures contained in this handbook.

The faculty looks forward to assisting you in attaining the career goals that you have established for yourself.

Sincerely,

Geraldine Twomey, MEd, RRT, RN
Leonard Leblanc, MEd, RRT
Patricia Adam, AS, RRT
Jane Schweizer, AS, RRT
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American Association for Respiratory Care
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Position Statement

Definition of Respiratory Care

Respiratory Care is the health care discipline that specializes in the promotion of optimum cardiopulmonary function and health. Respiratory Therapists apply scientific principles to prevent, identify, and treat acute or chronic dysfunction of the cardiopulmonary system. Knowledge of the scientific principles underlying cardiopulmonary physiology and pathophysiology, as well as biomedical engineering and technology, enable respiratory therapists to effectively offer preventative care to, as well as assess, educate, and treat patients with cardiopulmonary deficiencies.

As a health care profession, Respiratory Care is practiced under medical direction across the health care continuum. Critical thinking, patient/environment assessment skills, and evidence-based clinical practice guidelines enable respiratory therapists to develop and implement effective care plans, patient-driven protocols, disease-based clinical pathways, and disease management programs. A variety of venues serve as the practice site for this health care profession including, but not limited to: acute care hospitals, sleep disorder centers and diagnostic laboratories, rehabilitation, research and skilled nursing facilities, patients' homes, patient transport systems, physician offices, convalescent and retirement centers, educational institutions, field representatives and wellness centers.

Effective 12/99

Revised 12/06

Respiratory Care Program Mission

The mission of the Respiratory Care Program is to provide affordable, high quality education, with an emphasis on career preparation and intellectual development in an environment that is welcoming and supportive. The program is dedicated to the development of appropriate cognitive, psychomotor, and affective competencies in the students such that they may apply scientific understanding, technological skills, and human values within their profession.

Program Goals

To provide individuals with career preparation associated with Entry-Level and Advanced Practitioner Respiratory Care competencies with consideration of the needs and expectations of the program's communities of interest.

To provide a curriculum that leads to the Associate in Science degree, eligibility for the national credentialing process, entry into the Massachusetts licensure process, and employment in Respiratory Care.

AARC Statement of Ethics and Professional Conduct

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. Actively maintain and continually improve their professional competence and represent it accurately
- Perform only those procedures or functions in which they are individually competent and which are within their scope of accepted and responsible practice
- Respect and protect the legal and personal rights of patients they treat, 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 responsible performance of duty, 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.

Effective 12/94

Revised 12/07

American Association for Respiratory Care Cultural Diversity

The AARC embraces diversity and multi-culturalism in all of its forms and promotes a professional community established with understanding, respect and cultural competence. The AARC is enriched by the unique differences found among its diverse members, their patients/clients, and other stakeholders. The AARC encourages and promotes a culture where personal and cultural backgrounds are utilized effectively to enhance our profession. The AARC accomplishes this by:

- Demonstrating sensitivity to all forms of diversity and multiculturalism including, but not limited to: age, gender and gender identity, race, color and ethnicity, nationality and national origin, ancestry, religious affiliation and creed, sexual orientation, socio-economic status, political affiliation, physical and mental abilities, veteran and active armed service status, job responsibilities and experience, education and training.
- Acknowledging the varied beliefs, attitudes, behaviors and customs of the people that constitute its communities of interest, thereby creating a diverse and multicultural professional environment.
- Promoting an appreciation for communication between, and understanding among, people with different beliefs and backgrounds.
- Accommodating the needs of the physically disabled at events and activities.
- Using multicultural content and gender-neutral references in documents and publications.
- Promoting diversity education and cultural competence in its professional education programs.
- Recruiting candidates from under-represented groups for leadership and mentoring programs.

Effective 12/94

Revised 12/07

American Association for Respiratory Care Respiratory Care Scope of Practice

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 (excluding anesthetic 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

American Association for Respiratory Care

Tobacco and Health

The American Association for Respiratory Care is a professional organization dedicated to the protection of health through public education and the provision of the highest standards of respiratory care. By virtue of their education and health care experience, respiratory therapists are professionals who have a clear understanding of the nature of cardiopulmonary disease and are in a position to act as advocates for healthy hearts and lungs. The AARC recognizes its responsibility to the public by taking a strong position against cigarette smoking and the use of tobacco in any of its various forms. In view of the evidence, which confirms the health-threatening consequences of tobacco, the AARC strengthens its commitment toward and reaffirms its belief in the need for the elimination of smoking and the use of any tobacco products and the inhalation of any toxic substance.

The AARC acknowledges and supports the rights of non-smokers and pledges continuing sponsorship and support of initiatives, programs, and legislation to reduce and eliminate smoking. The AARC extends its concern beyond the smoking of tobacco to the use of smokeless tobacco by oral and nasal application. These products are linked to diseases of the gastrointestinal tract, mouth, and nose. There is also evidence that these products, when applied to the mucous membranes, diffuse into the circulation and cause ill effects in remote organs of the body.

Effective: 1991

Revised: 2000

Revised: 2005

AARC Statement of Ethics and Professional Conduct

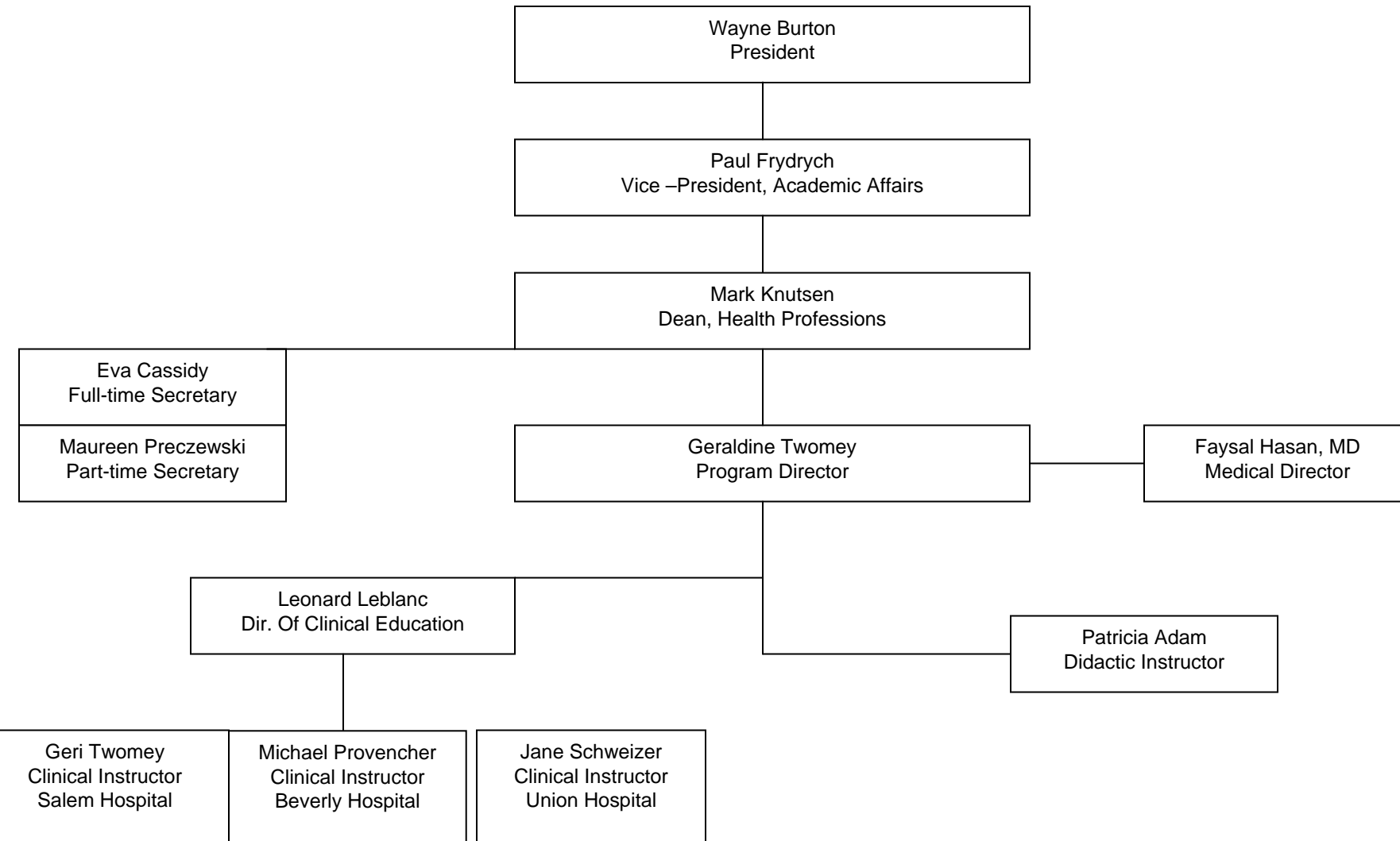
In the conduct of professional activities the Respiratory Therapist shall be bound by the following ethical and professional principles. Respiratory Therapists shall:

- Demonstrate behavior that reflects integrity, supports objectivity, and fosters trust in the profession and its professionals. Actively maintain and continually improve their professional competence and represent it accurately.
- Perform only those procedures or functions in which they are individually competent and which are within their scope of accepted and responsible practice.
- Respect and protect the legal and personal rights of patients they treat, 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 responsible performance of duty, 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 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 creates a conflict of interest and shall follow the principles of ethical business behavior.
- Promote health care delivery through improvement of the access, efficacy, and cost of patient care.
- Encourage and promote appropriate stewardship of resources.

Effective 12/94

Revised 3/00, 7/04, 12/06

Organizational Chart



Academic Policies

Each student will review a copy of the Program Handbook at the time of applying for admission to the program. Thereafter the student will receive a copy in the first week of classes in September. It is the responsibility of the student to be familiar with and abide by the policies contained in this handbook.

Attendance

All faculty members will maintain a record of attendance for each student for lecture, lab, and clinical attendance. All syllabi have specific written attendance policies.

1. A student absent from class or lab will be held responsible for any announcements and skills presented and for making arrangements to assure the acquisition of materials presented during class.
2. It is the student's responsibility to make up all missed work – see course syllabi for appropriate schedule.
3. Students who will be late reporting to class or lab should notify the faculty member and leave a message.
4. Although the faculty recognize that occasional situations arise which affect a student's ability to arrive on time, frequent tardiness is unacceptable and may result in adversely affecting the final grade. Please refer to the policy for clinical attendance and tardiness that differs from the policy described here for classroom courses.
5. Attendance in all classes and laboratory sessions is essential. The appropriateness of excused absences is determined by the individual faculty member and or the Program Director.
6. Students are expected to be present for all exams. Course syllabi contain specific information regarding absence on the day of an exam.

Professional Conduct

1. Each student is required to conduct himself/herself in a professional manner while in the class or laboratory setting. The final grade may be affected by the student's interpersonal skills.
2. Conduct that is unethical or unprofessional so as to affect or potentially affect another student or instructor's well being in the academic or clinical environment may result in immediate suspension.

Academic Progress

1. Students are required to maintain a 75 % in all RSP and ALH courses. Failure of the lab, lecture, or clinical courses will result in an interruption in the sequence of courses. According to the policy of the Division of Health Professions, "The following students must apply for readmission prior to registration: students who have not been matriculated and enrolled at the College within the previous 5 years; students who have graduated from the College; and students in selective admission programs (Nurse Education, PTA, OTA, Radiologic Technology, Respiratory Care, Medical Assisting Certificate, Veterinary Technology, Surgical Technician Certificate and Practical Nursing Certificate) who have interrupted their sequence of professional courses with a course withdrawal, course failure, and/or semester stop out. Students in health degree programs seeking readmission must meet current admission requirements and follow the specific policies

and procedures defined by individual programs. Readmission to health professions programs is not automatically guaranteed. If readmitted, students are permitted only one readmission to their program on a space available basis with approval by the Program Director.”

Students who withdraw from the program for any reason or who fail an RSP course must complete an application for re-entry into the program. If space is not available in the program the student may be placed on a wait list. The student must also submit a letter to the Program Director addressing the changes that have been made to enhance the academic success if readmitted to the program. If accepted, the student must have a current CPR certification, complete health record, liability insurance, and health insurance.

When an interruption in the sequencing of clinical courses occurs, the student will be required to demonstrate competency in the last clinical course successfully completed. A written and practical hands-on test will be administered. In order to progress to the next clinical course the student must attain at least a 75% on the test that is administered.

2. Students failing a course at mid semester will receive a midterm warning consistent with the college’s policy. Students receiving a warning are expected to meet with the instructor to review the midterm average and discuss methods of improving it.

Length of Time to Complete the Program

According to the Committee on Accreditation for Respiratory Care, “once a student is admitted to an accredited program in Respiratory Care, every effort should be expended to having the student graduate with his/her cohort. However, should circumstances dictate otherwise, the student must complete the program within two years following the graduation of his/her initial cohort/class. Should the student leave the program within the above time period and subsequently wishes to be readmitted, the student may reapply to the program if the institutional and program regulations permit. Reentry to the program should be on a space available basis and should only be allowed if the student can graduate within the above time frame (two years after graduation of his/her cohort). Should program regulations allow the student to request reentry into the program, an objective evaluation should be used to determine whether such placement of the student within the curriculum is appropriate.”

Transfer Students

Transfer students will be accepted into the second semester only. Transfer students will be required to demonstrate competency in the clinical component. A written and hands on practical test will be administered. The student must attain a 75% in order to go on to clinical. In some cases, it may be necessary for a transfer student to repeat a clinical course.

Academic Honesty

Members of the NSCC community are expected to act within the standards of academic honesty. Any dishonest behavior is subject to disciplinary action, which may range from that which the instructor imposes relative to the specific course to dismissal from the College, depending on the seriousness of the act.

Dishonest academic behavior includes but is not limited to:

Cheating – use of unauthorized notes during an exam, giving or receiving unauthorized assistance on an exam, copying from someone else’s exam, term paper, homework, or report, theft of exam materials, falsification of works or records.

Plagiarism – Using the words, data, or ideas of another as one’s own, without properly

acknowledging their source. Students should consult the college's Pipeline information for proper documentation procedures.

In addition to action taken relative to the specific course, the instructor may bring any matter related to academic dishonesty to the Dean of Health Professions for consideration if further action is warranted.

Limited Permit/Licensure

Matriculated Respiratory Care students may apply for a Limited Permit to work in the field after the first semester in the program provided RSP 101, 111, and 131 have been successfully completed with a grade of "C" or higher. After each subsequent semester in the program, the student may request an updated "Verification of Education" form from the Program Director. To be eligible for an updated permit, the lab, lecture and clinical courses must be successfully completed. Students are not permitted to perform procedures/treatments while employed unless the item has been checked off as completed. It is the student's responsibility to inform the hospital department when the updated form has been completed and stamped by the Board of Respiratory Care. All licensure forms and information can be downloaded and printed at www.mass.gov/dph/boards. There is an initial fee for a limited permit but no additional cost to update the permit after each semester in the program.

Students who take time off from Respiratory Care courses for any reason are no longer eligible to work in the field unless arrangements have been made with the program and/or licensing board.

After graduation, when the CRT exam is successfully completed, it is the graduate's responsibility to apply for a full license. The National Board of Respiratory Care (NBRC) does not communicate credentialing exam results with the state licensing boards.

Professional Liability Insurance (Malpractice)

All students must show evidence of maintaining liability insurance before being allowed in any clinical education course. Students will be given all details including the cost of the insurance at the beginning of each academic year.

Campus Pipeline

Campus Pipeline provides a secured-access Web portal to students registered at NSCC. This portal offers centralized information about campus activities as well as access to web based NSCC services including email, course registrations, transcripts, financial aid, class schedules, calendars and more. Campus Pipeline can be accessed from any computer that has Internet access or a connection to the NSCC network. To access your Campus pipeline account, open the NSCC home page at www.Northshore.edu and click on the Pipeline logo.

All email communication to students from program faculty will occur through the student's NSCC email. It is the student's responsibility to periodically check the email address for communication from the faculty.

CORI Evaluations

Students interested in participating in an academic program that involves working with children, the disabled, or the elderly, or includes a clinical affiliation internship or field placement with a private or public health care provider may be required to undergo a Criminal Offender Record Information check and/or Sex Offender Record Information (SORI) check. Depending on the contents of the student's CORI or SORI, participation in clinical, internship, or field placement may be denied.

Also in order to practice respiratory care in the state of Massachusetts, individuals must obtain a license which according to law requires that individuals must: complete an accredited respiratory care program, apply to the Board of Respiratory Care, be of good moral character, pass a licensure examination and pay the appropriate fee before licensure may be obtained. If a student is at all unsure of the potential outcome of a CORI background check, then he/she should contact the Board of Respiratory Care to determine the requirements.

Degree Evaluation

In the third semester, before meeting with an advisor, the students should perform a degree evaluation through Pipeline. This should be done before registration for final semester courses to ensure that the student is aware of all of the graduation requirements that remain.

Application to Graduate

In order for a student to graduate, a graduation application form must be completed and submitted to the Enrollment and Student records department. Students must complete the form and submit it so that a review of the student's transcript will be completed. A letter will then be sent to the student indicating what courses need to be completed in order to graduate.

Use of Calculators

The National Board of Respiratory Care (NBRC) does NOT permit the use of calculators during the credentialing examinations. Students will be permitted to use calculators during exams while in the program but are advised to use them only to check for accuracy after the problem is solved without the use of the calculator.

Health Status Changes/ Technical Standards

Students who are absent from clinical for an extended period of time due to illness or injury or who stop out of the program and return will be required to submit an updated technical standards form to the clinical coordinator or program director. A student who is unable to meet the technical standards will not be permitted to return to clinical. A copy of the technical standards can be found on the next page.

Section 2

**Clinical Competencies
And
Policies**

RATIONALE FOR COURSES:

The Clinical Experience courses are a series of four "hands-on" courses in the program. Also, Clinical Experience 5 provides an opportunity for students to gain proficiency in respiratory care procedures.

RSP111 - Clinical Experience 1:

provides an introduction to the profession of Respiratory Care, including how the Respiratory Care profession participates in the health care delivery system, so that the learners may understand their roles and responsibilities in patient/client care. The course content includes: training in emergency techniques, which the student may apply both in and out of the hospital (e.g. CPR); knowledge and skills in patient assessment, which provide crucial tools for the evaluation of the status of the patient before, during, and after therapeutic and diagnostic procedures, and training in the performance of specific therapeutic and diagnostic modalities that the learner will be responsible for in his/her role as a practicing Respiratory Care Practitioner.
(8 hours per week)

RSP112 - Clinical Experience 2:

is the second in the series of four "hands-on" courses in the program. It provides for the development of the knowledge, skills, and attitudes necessary for the role and responsibilities of a respiratory care practitioner in the areas of medical gas therapy, arterial blood gas (ABG) interpretation, humidification/aerosol therapy, IPPB therapy, and arterial blood gas sampling and analysis. The student continues to apply the techniques that were mastered in the previous courses while integrating the techniques that will be mastered during this course and the associated laboratory and lecture as he/she progresses toward "job-entry" level respiratory care.
(8 hours per week)

RSP211 - Clinical Experience 3:

is the third in the series of four "hands-on" courses in the program. It provides experience in the more advanced aspects of respiratory care such as arterial blood gas (ABG) interpretation, airway management, mechanical ventilation, and management of the ventilator patient. The learner must master the procedures that allow him/her to assume the responsibility for respiratory care techniques associated with the intensive care unit (ICU) and critically ill patients. (16 hours per week)

RSP212 - Clinical Experience 4:

is the fourth in the series of four "hands-on" courses in the program. It provides for the experience to integrate all previous knowledge, skills, and attitudes into a total respiratory care process. In addition to pulmonary function testing, airway management, and ICU experience, the student will gain experience in pediatric respiratory care and independent learning. The student must master the procedures that will allow him/her to perform at entry level for all the current respiratory care procedures as well as to provide a solid foundation for advanced respiratory care procedures. (16 hours per week)

RSP214 - Clinical Experience 5:

develops proficiency in Respiratory Care procedures through 160 clock hours of supervised respiratory care experience following completion of RSP112. Students who have a Massachusetts Limited Permit may secure employment in respiratory care, accumulate at least 160 clock hours, then convert that experience into college credit through the NSCC Center for Alternative Studies. Any student who does not anticipate accumulating the required number of hours by employment must inform the program that s/he is seeking an unpaid clinical rotation. The program will assist the student to find potential sites; however, it is the responsibility of the student to meet the affiliate's requirements and be acceptable to that affiliate. The student must hold a Massachusetts Limited Permit and a special agreement between the college, the student, and the agency must be completed. Students cannot graduate until this requirement is completed. (160 clock

hours)

UNIT COMPETENCIES:

RSP111 - Clinical Experience 1:

- (W,O) 1. Demonstrate competence in the introductory clinical objectives.
- (P/F) 2. Set up a hypothetical hospital respiratory care departmental plan complete with organizational chart, job descriptions, patient services, diagnostic tests performed, record keeping and billing procedures, and equipment cleaning/sterilization technics.
- (O) 3. Perform and/or interpret the appropriate patient assessment procedures for a given patient.
- (W*) 4. Administer, evaluate, and recommend the pharmacology regimen for a given patient.
- (O) 5. Administer, evaluate, and recommend an appropriate chest physical therapy (CPT) program for a given patient.

RSP112 - Clinical Experience 2:

- (O) 6. Administer, evaluate, and recommend the appropriate medical gas therapy for a given patient.
- (W) 7. Interpret all aspects of arterial blood gas values and describe the treatment required to correct a patient's clinical situation based on the ABG values.
- (W,O) 8. Perform arterial blood gas sampling and analysis.
- (O) 9. Administer, evaluate, and recommend appropriate humidification and aerosol therapy for a given patient.
- (O) 10. Administer, evaluate, and recommend appropriate spontaneous positive pressure therapy for a given patient.

RSP211 - Clinical Experience 3:

- (O) 11. Perform, evaluate, and recommend appropriate airway management for a given patient.
- (W*,O) 12. Establish and maintain ventilation on a patient with a given mechanical ventilator.
(Includes ICU Prep)

RSP212 - Clinical Experience 4:

- (W,O) 13. Recognize the causes of ventilatory/respiratory failure and perform, evaluate, and recommend ventilator management for a given patient.
- (W*) 14. Observe, discuss, perform, and interpret pulmonary function tests.
- (P/F) 15. Perform, evaluate, and recommend respiratory care on a pediatric patient.
- (W*) 16. Perform and/or interpret the appropriate patient assessment procedures for a given patient.
- (W,O) 17. Prepare and present a case study on a patient with a respiratory condition.
- (P/F) 18. Perform, evaluate, and recommend rehabilitative technics and respiratory home care for a given patient with chronic lung disease.

* These written evaluations are weighted as UNIT score (40%). Other written evaluations such as library assignments or periodic quizzes will be included in the semester's 20% written component.

An oral examination is optional at the instructor's discretion for Unit 15.

STANDARDS:

Students must maintain a consistent record of attendance so that the appropriate number of hours can be completed. Students who do not complete health record documentation in a timely fashion may be required to withdraw from clinical and the program.

The student must perform to a "PASSING" level for each objective of each unit; a 75% level for each unit, and a 75% level for each clinical experience course.

In order to receive a PASS, the student must consistently perform the objective according to the accepted procedure of the NSCC Respiratory Care Program **and** the clinical affiliate.

The student must be able to maintain and re-demonstrate, if necessary, passing performance on each objective for each competency throughout all clinical experience courses.

The student must complete all units in a timely manner (see EVALUATION #9) or risk suspension from clinical and/or the program.

EVALUATION:

1. Each of the objectives of each unit will be graded on a PASS/FAIL basis after observation by the evaluator.
2. Each objective with an asterisk (*) will be evaluated with the use of a Clinical Procedure Check-Off sheet.
3. The student must receive a "PASS" on an objective prior to performing that activity on a patient except under direct supervision. Students who experience consistent difficulty with clinical skills will be directed to the lab on the college campus for remediation. If the skill cannot be mastered and if clinical time is missed, the student may be required to withdraw from the course and possibly from the program.
4. Students are expected to demonstrate "PASSING" performance on objectives previously "PASSED" (i.e. from any previous clinical experience course). Unsafe performance will be handled appropriately, including possible termination from the clinical course and/or the program.
5. The student will receive formal and/or informal feedback throughout the semester on his/her clinical performance on the "Instructor/Student Clinical Activity Log" or the "Academic/Clinical Warning" form.
6. The student will receive written interpersonal relations (IPR) evaluations as needed and at final semester (see APPENDIX A). An unsatisfactory IPR evaluation for a clinical course may result in a non-passing grade for that course regardless of the other evaluations. Additional IPR evaluations may be rendered as warranted.
7. The student may wish to complete a weekly CLINICAL ACTIVITY LOG (see APPENDIX A) giving a detailed description of his/her clinical observations and activities as well as providing appropriate feedback to the Clinical Instructor. This log will not be formally evaluated.
8. A final score for each UNIT will be assigned at the end of the semester based upon the designated evaluation methods. If a failing grade (<75%) is earned on the first attempt at that UNIT exam, students may make additional attempts at that UNIT exam during the designated semester at the convenience of the Clinical Instructor. **The final score for that UNIT will be the initial score obtained.** If a passing score has not been achieved by the end of the semester for one (and only one) UNIT, the policy described in EVALUATION #9 will apply.

9. If only **one** UNIT in RSP111 and/or RSP112 is not completed during the designated semester, the student will be given an incomplete (I) for that UNIT, which must be completed by the end of the following semester.

If any UNIT in RSP211 and/or RSP212 is not completed during the designated semester, the student will receive a course grade of "IP" for that clinical experience course. *{Note: IPs must be completed by 12 weeks into the following semester or they automatically change to a grade of "F" - see College catalog for full policy.}*

10. The course grade will be determined based upon the following evaluations:

unit scores average (O, W*).....	40%
final simulation exam	40%
written quizzes (W)	20%
interpersonal relations	+/- 5 pts

11. Students who are returning to the program who have had an interruption in course sequencing will be expected to demonstrate clinical competency by successfully completing a written and practical exam based on the previous semester's clinical competencies. Attendance in clinical will not be permitted until competence is demonstrated.

12. Students who are permitted to attend clinical who are not matriculated in the program will also be required to demonstrate competency of the previous semester's check-offs.

13. Students who wish to audit a clinical course must complete all exams that are given throughout the semester.

Unit One: INTRODUCTION

Competency: DEMONSTRATE COMPETENCE IN THE INTRODUCTORY CLINICAL OBJECTIVES.

Rationale: The first 4-5 weeks of the Clinical Experience will be devoted to the presentation of a brief overview of the material of Clinical Experiences 1 and 2 so that the learner may rapidly achieve a threshold of information in order to provide perspective to future observation and practice.

Pass Date | * * OBJECTIVES * *

1. _____ | 1. Perform cardiopulmonary resuscitation (CPR).
 - ___ a. Begin training for BCLS certification.
 - ___ b. Identify equipment used in intubation.
 - ___ c. Identify manual resuscitators used in the hospital.
 - ___ d. Ventilate the intubation manikin with and without an endotracheal tube.
 - ___ e. Assemble and troubleshoot manual resuscitators.

2. _____ | 2. Discuss department organization.
 - ___ a. List all therapeutic and diagnostic procedures performed by the department.
 - ___ b. List the department personnel positions, a brief job description and identify the person presently occupying that position.
 - ___ c. Identify all paperwork involved in department record keeping and billing.

3. _____ | 3. Discuss the patient's records.
 - ___ a. Identify the different sections of the medical chart.
 - ___ b. Successfully complete 5 or more Medical Chart Surveys.

4. _____ | 4. Demonstrate and discuss infection control.
 - ___ a. Begin working the department wash room.
 - ___ b. Discuss why infection control is so important in respiratory care.
 - ___ c. List the different isolation techniques employed at the hospital.

5. _____ | 5. Discuss various medications used in Respiratory Care.
 - ___ a. _____
 - ___ b. _____
 - ___ c. _____
 - ___ d. _____
 - ___ e. _____
 - ___ f. _____

Unit One: INTRODUCTION (continued)

6. _____| 6. Discuss, observe, and demonstrate CPT.
- ___ a. Review the therapeutic components of pulmonary hygiene and deep breathing exercises.
 - ___ b. Review the goals and hazards of pulmonary hygiene and deep breathing exercises.
 - ___ c. Demonstrate proper pulmonary hygiene techniques on a mannequin or fellow student.
 - ___ d. Demonstrate the instructions involved in teaching coughing, diaphragmatic breathing, pursed lip breathing, and localized expansion.
7. _____| 7. Discuss, observe, and demonstrate oxygen therapy.
- ___ a. Assemble an oxygen set-up for patient use.
 - ___ b. Collect and fill out the appropriate paperwork for an oxygen set-up.
 - ___ c. Engage and disengage a flowmeter from the wall outlet.
 - ___ d. Prepare an H cylinder and an E cylinder for patient use.
 - ___ e. Identify all equipment and paperwork needed for an oxygen set-up.
 - ___ f. Identify all oxygen devices used at the hospital and their approximate FIO₂ delivered.
 - ___ g. Put all oxygen devices on a fellow student under simulated conditions.
 - ___ h. Review the goals and hazards of oxygen therapy.
 - ___ i. Discuss infection control techniques used in conjunction with oxygen therapy.
8. _____| 8. Discuss, observe, and demonstrate aerosol therapy.
- ___ a. Identify all equipment needed for an aerosol set-up (continuous and intermittent).
 - ___ b. Identify all aerosol devices used at the hospital.
 - ___ c. Review the goals and hazards of aerosol therapy.
 - ___ d. Assemble a heated and cool continuous aerosol set-up for patient use.
 - ___ e. Assemble a hand-held (Blount) nebulizer.
 - ___ f. Collect and fill out the appropriate paperwork for a continuous and an intermittent aerosol set-up.
 - ___ g. Put all aerosol devices on a fellow student under simulated conditions.
 - ___ h. Discuss infection control techniques used in conjunction with aerosol therapy.
9. _____| 9. Discuss, observe, and demonstrate IPPB therapy.
- ___ a. Identify the equipment needed to administer an IPPB treatment.
 - ___ b. Identify all IPPB machine models used at the hospital.
 - ___ c. Assemble and attach IPPB set-ups to each machine model.
 - ___ d. Review the goals and hazards of IPPB and hand-held (Blount) nebulizer therapies.
 - ___ e. Collect and fill out the appropriate paperwork for IPPB therapy.
 - ___ f. Give an IPPB treatment to a fellow student under simulated conditions.
 - ___ g. Discuss infection control techniques used in conjunction with IPPB therapy.

Unit Two: DEPARTMENT, HOSPITAL, AND PROFESSIONAL ORIENTATION

Competency: SET UP A HYPOTHETICAL RESPIRATORY CARE DEPARTMENTAL PLAN COMPLETE WITH ORGANIZATIONAL CHART, JOB DESCRIPTIONS, PATIENT SERVICES, DIAGNOSTIC TESTS PERFORMED, RECORDKEEPING AND BILLING PROCEDURES, AND EQUIPMENT CLEANING STERILIZATION PROCEDURES.

Rationale: At some time, all Respiratory Care Practitioners will work in a hospital based department. In order to perform job functions efficiently in such an environment, the learner must know and understand the workings of a modern respiratory care department.

Pass Date | * * OBJECTIVES * *

1. _____| 1. List and discuss the components of a given procedure in the department procedure manual.

2. _____| *2. Perform equipment rounds and define the recordkeeping and billing procedures.

3. _____| 3. Perform cleaning and sterilization techniques on given respiratory care equipment. (**All students will perform this objective at an affiliate where the department is responsible for cleaning and sterilizing its own equipment.**)

NORTH SHORE COMMUNITY COLLEGE
Respiratory Care Program - Clinical Procedure Check-Off

EQUIPMENT ROUNDS

Student Name _____ Hospital _____ Date _____

PROCEDURE	PERFORMANCE
1. REVIEWS PATIENT KARDEX	1. _____
2. GATHERS APPROPRIATE EQUIPMENT	2. _____
3. CHECKS EVERY ROOM	3. _____
4. RECORDS APPROPRIATE RESPIRATORY DEVICE TO APPROPRIATE PATIENT	4. _____
5. RECORDS APPROPRIATE LITER FLOW	5. _____
6. PERFORMS APPROPRIATE EQUIPMENT CHANGES	6. _____
7. RESOLVES DISCREPANCIES APPROPRIATELY	7. _____
8. CHECKS "Code Cart"	8. _____
9. CHECKS Cylinder Oxygen Level	9. _____
10. OTHER (specify)	10. _____

Procedure completed in a timely manner. yes no

Comments:

 Evaluator's Signature Date Pass Fail

√ = acceptable X = unacceptable O = omitted N = not applicable

Unit Three: PATIENT ASSESSMENT

Competency: PERFORM A COMPREHENSIVE PATIENT ASSESSMENT (SOAP NOTE) FOR A GIVEN PATIENT.

Rationale: The Respiratory Care Practitioner must be able to perform, locate, and interpret patient assessment procedures in order to make appropriate therapeutic recommendations, to administer therapy in the most effective manner, to evaluate progress toward predetermined therapeutic goals, and to recognize adverse reactions to therapy.

Pass Date | * * OBJECTIVES * *

1. _____ | *1. Given a medical chart, locate, obtain, and interpret (normal and abnormal) information pertinent to the case.

2. _____ | 2. Gather the pertinent *Subjective* information on a given patient.

3. _____ | 3. Gather the pertinent *Objective* information on a given patient.

4. _____ | 4. Utilize the Subjective and Objective information to interpret and develop the *Assessment* (analysis) on a given patient.

5. _____ | 5. Incorporate the Subjective and Objective information along with the Assessment to formulate an appropriate *Plan* for a given patient.

6. _____ | *6. Apply the seven decision making steps (Therapeutic Decision Making) to formulate a respiratory care treatment plan for a given patient.

**NORTH SHORE COMMUNITY COLLEGE
Respiratory Care Program - Clinical Procedure Check-Off**

MEDICAL CHART SURVEY

Page 1 of 2

Patient Name _____ Unit _____

Dx _____ MD _____

Pulm Dx _____

Student Name _____ Hosp _____ Date _____

Procedure	Performance
<p>1. RSP ORDERS _____ _____ _____ _____</p>	<p>1. _____</p>
<p>2. VITAL SIGNS</p> <p>BP _____</p> <p>P _____</p> <p>RR _____</p> <p>T _____</p>	<p>2. _____</p>
<p>3. NURSES NOTES (clinical signs, complaints, ambulating, etc.)</p> <p>_____ _____ _____ _____</p>	<p>3. _____</p>
<p>4. LAB REPORT</p> <p>WBC _____ pH _____ HCO₃ _____</p> <p>RBC _____ PaCO₂ _____ SaO₂ _____</p> <p>_____ PaO₂ _____</p>	<p>4. _____</p>
<p>5. SPUTUM REPORT</p> <p>_____ _____ _____ _____</p>	<p>5. _____</p>

MEDICAL CHART SURVEY (cont'd)

Procedure		Performance
6. CXR	_____	6. _____

7. PAST Hx	_____	7. _____
(pertinent to	_____	
resp.)	_____	
8. MD COMMENTS/RECOMMENDATIONS (Progress notes, consults)	_____	8. _____

9. THERAPY NOTES	_____	9. _____

10. STUDENT'S COMMENTS/IMPRESSIONS	_____	10. _____

Procedure completed in a timely manner. yes no

Comments:

 Evaluator's Signature Date Pass Fail

√ = acceptable X = unacceptable O = omitted N = not applicable

**NORTH SHORE COMMUNITY COLLEGE
RESPIRATORY CARE PROGRAM**

MEDICAL NECESSITY EVALUATION

Student Name _____ Date _____

1. Patient Initials only _____ Age _____ Gender _____ Rm No _____

2. Primary Dx _____ 3. Pulmonary Dx _____

4. Respiratory Care Orders _____

5. Therapeutic Objective(s) _____

6. SUBJECTIVE INFORMATION (patient statements)

7. OBJECTIVE INFORMATION (physical exam and charted data)

8. ASSESSMENT (analysis of your collected data to determine the patient's current condition)

9. PLAN (recommendations - provide a brief rationale)

Evaluation completed in a timely manner. yes no

Comments:

Evaluator's Signature Date Pass Fail
√ = acceptable X = unacceptable O = omitted N = not applicable

NORTH SHORE COMMUNITY COLLEGE
Respiratory Care Program - Clinical Procedure Check-Off

THERAPEUTIC DECISION MAKING
(seven steps of decision-making process)

Student Name _____ Hosp _____ Date _____

Procedure	Performance
1. RECOGNIZE PROBLEM(S) (a) knowledge of normal situation(s) (b) trigger of abnormal situation	1. _____
2. DEFINE PROBLEM(S) (a) gather appropriate information (Subjective and Objective) (b) analyze and interpret information (e.g. pathophysiology) (c) draw conclusions	2. _____
3. SPECIFY PATIENT GOAL(S)/THERAPEUTIC OBJECTIVE(S) (a) return patient to normal -OR- (b) return patient to baseline, if chronic condition(s)	3. _____
4. DEVELOP MODALITY ALTERNATIVES TO MEET GOAL(S) (a) match goal(s) of therapeutic modalities to goal(s) specified in STEP #3 (See AARC Clinical Practice Guidelines)	4. _____
5. SELECT MODALITIES (a) determine availability (b) evaluate benefit vs risk (risks = time, cost, pain risk morbidity, risk of mortality)	5. _____
6. IMPLEMENT DECISION(S) (a) follow applicable laws (b) follow hospital and department policies and procedures (may have Therapist Driven Protocols) (c) follow NSCC Respiratory Care Program check seat(s)	6. _____
7. EVALUATE PATIENT (a) gather appropriate information (b) evaluate for adverse reaction(s) (c) evaluate for change in patient status due to intervention (1) goal(s) accomplished (2) acceptable progress toward goal(s) (3) unacceptable, but some progress toward goal(s) (4) movement away from goal(s) IF "(1)" THEN D/C THERAPY IF "(2), (3), OR (4)", RETURN TO STEP #2	7. _____

Evaluation completed in a timely manner. yes no

 Evaluator's Signature Date Pass Fail

= acceptable X = unacceptable O = omitted N = not applicable

Unit Four: PHARMACOLOGY

Competency: ADMINISTER, EVALUATE, AND RECOMMEND THE PHARMACOLOGY REGIMEN FOR A GIVEN PATIENT.

Pass Date | * * OBJECTIVES * *

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

beclomethasone(Vanceril)	fluticasone (Flovent)
budesonide (Pulmicort)	levalbuterol (Xopenex)
triamcinolone (Azmacort)	bitolterol
isoetharine (Bronkosol)	metaproterenol (Alupent)
salmeterol (Serevent)	albuterol(Proventil)
aminophylline (Aminophylline)	racemic epinephrine (Vaponefrin)
theophylline (Theodur)	varenicline (Chantix)
hypertonic saline	nicotrol patch (Nicoderm CQ)
acetylcysteine (Mucomyst)	ipratropium (Atrovent)
xylocaine (Lidocaine)	atropine
normal saline	tiotropium (Spiriva)
nedocromil (Tilade)	montelukast (Singulair)
cromolyn sodium (Intal)	pentamidine (Nebupent)
tobramycin (Tobi)	ribavirin (Virazole)
fluticasone + salmeterol (Advair)	budesonide + formoterol (Symbicort)
ipratropium+albuterol (DuoNeb or Combivent)	

2. _____|2. Evaluate and recommend the pharmacology regimen for a given patient.

Unit Five: CHEST PHYSICAL THERAPY (CPT)

Competency: PERFORM, EVALUATE, AND RECOMMEND A CHEST PHYSICAL THERAPY PROGRAM FOR A GIVEN PATIENT.

Rationale: Completing a proper chest physical therapy program is a frequent task of the Respiratory Care Practitioner in pulmonary hygiene management. The practitioner uses CPT on patients with various pulmonary diseases, pre- and post-operative patients, incapacitated patients, and those that have difficulty mobilizing secretions.

Pass Date | * * OBJECTIVES * *

1. _____ | *1 Perform the following pulmonary hygiene techniques:
postural drainage _____ vibrations _____
percussion _____

2. _____ | 2. Perform the following deep breathing exercises:
diaphragmatic breathing _____
coughing techniques _____
pursed lip breathing _____
localized expansion _____
relaxation techniques _____

3. _____ | *3. Perform a CPT treatment on a given patient.

4. _____ | *4. Evaluate and recommend the appropriate CPT program for a given patient.

5. _____ | *5. Administer incentive spirometry (IS) or sustained maximal inspiration (SMI) in accordance with a given physician's order.

6. _____ | *6. Evaluate and recommend the incentive spirometry therapy program for a given program.

NORTH SHORE COMMUNITY COLLEGE
Respiratory Care Program - Clinical Procedure Check-Off

CHEST PHYSICAL THERAPY/INCENTIVE SPIROMETRY

Student Name _____ Hosp _____ Date _____

Procedure _____

Performance

- | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----|--|
| 1. CHECK ORDERS (frequency, DBE or pulmonary hygiene, IS) | 1. | |
| 2. PRE-THERAPY EVALUATION (chart, patient) | 2. | |
| 3. EXPLAIN TO PATIENT (purpose, goals) | 3. | |
| 4. PATIENT EVALUATION (level of coherence, cooperation, physical assessment) | 4. | |
| 5. PERFORM APPROPRIATE CPT TECHNIQUE (postural drainage, vibrations, percussion, diaphragmatic breathing, coughing

lip breathing, SMI) | 5. | |
| 6. MONITOR PATIENT (observation, general appearance, toleration WOB, auscultation, vs) | 6. | |
| 7. POST-TREATMENT EVALUATION (observation, general appearance, toleration, auscultation, cough, vs, results) | 7. | |
| 8. COMPLETE PAPERWORK (T.O., addressograph, rm, unit, Dx, pulmonary Dx, time, CXR, ABG, Rx description) | 8. | |
| 9. CHART (date, time, signature, procedure, length of time given, toleration, cough, sputum) | 9. | |
| 10. BEDSIDE MANNER | 10. | |

Comments:

Evaluation completed in a timely manner. yes no

pass fail

 Evaluator's Signature Date

= acceptable x= unacceptable o = omitted n = not applicable

Unit Six: MEDICAL GAS THERAPY

Competency: ADMINISTER, EVALUATE, AND RECOMMEND THE APPROPRIATE OXYGEN THERAPY FOR A GIVEN PATIENT.

Rationale: Oxygen is a drug commonly administered to patients for emergency life support, pulmonary disability, and post-operative states, who have developed pulmonary complications. Administration of oxygen and other medical gases is one of the duties of the Respiratory Care Practitioner, therefore, a thorough understanding of the goals, indications, contraindications, and hazards is necessary.

Pass Date | * * OBJECTIVES * *

1. _____ | 1. Locate oxygen zone valves in your affiliate hospital and demonstrate the role of the Respiratory Care Practitioner in a mock fire drill.

2. _____ | *2. Administer oxygen therapy in accordance with a given physician's order.

3. _____ | *3. Demonstrate the use of oxygen analyzer(s).

 IL _____ Hudson _____

 Other(s) _____

4. _____ | 4. Demonstrate the use of a pulse oximeter.

 Nellcor _____

 Others _____

5. _____ | *5. Evaluate and recommend the oxygen therapy for a given patient.

NORTH SHORE COMMUNITY COLLEGE
Respiratory Care Program - Clinical Procedure Check-Off

OXYGEN ANALYZERS

Device _____

Student Name _____ Hosp _____ Date _____

Procedure	<u>Performance</u>
1. COLLECT EQUIPMENT (analyzer, adaptor{s}, sensor)	1. _____
2. PERFORM PRE-USE CALIBRATIONS AND ADJUSTMENTS (check battery, inspect electrode, calibrate: to 0, to 21%, to 100%)	2. _____
3. SAMPLE AND ANALYZE GAS Specify type of sample:	3. _____
4. SET ALARMS (+/- 5 to 10%)	4. _____

Comments:

Evaluation completed in a timely manner. yes no

pass fail

 Evaluator's Signature Date
 = acceptable x= unacceptable o = omitted n = not applicable

**NORTH SHORE COMMUNITY COLLEGE
Respiratory Care Program - Clinical Procedure Check-Off**

REST/EXERCISE OXIMETRY

Device _____

Student Name _____ Hosp _____ Date _____

Procedure _____

Performance

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> 1. OBTAIN PHYSICIAN'S ORDER 2. EXPLAIN PROCEDURE TO PATIENT (purpose, rules for use) 3. GATHER NECESSARY EQUIPMENT (oximeter, portable O2 system, watch) 4. CHECK FUNCTION OF EQUIPMENT (calibration, O2) 5. GATHER BASELINE READINGS AT REST (pulse, SaO2)
{if SaO2 < 90%, notify MD, DO NOT ambulate patient} 6. AMBULATE PATIENT AS TOLERATED (level ground, stairs) 7. GATHER READINGS DURING EXERCISE (peak pulse, SaO2
subjective dyspnea level)
{if SaO2 < 90%, stop exercise, allow pt to return to
baseline before resuming} 8. GATHER READINGS AFTER EXERCISE (pulse, SaO2, recovery time) 9. DOCUMENT INFORMATION IN MEDICAL CHART (MD progress notes,
respiratory progress notes) 10. BEDSIDE MANNER | <ol style="list-style-type: none"> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Comments:

Evaluation completed in a timely manner. yes no

pass fail

Evaluators Signature Date

= acceptable x= unacceptable o = omitted n = not applicable

Unit Seven: ARTERIAL BLOOD GAS INTERPRETATION

Competency: INTERPRET ALL ASPECTS OF ARTERIAL BLOOD GAS VALUES AND DESCRIBE THE TREATMENT REQUIRED TO CORRECT A PATIENT'S CLINICAL SITUATION BASED ON THE VALUES.

Rationale: Arterial blood gases (ABGs) are an important tool in the assessment of respiratory patients. It is of critical importance that the Respiratory Care Practitioner become adept in the interpretation of these lab values. However, this expertise must go beyond simple interpretation. The therapist must also be able to describe the appropriate therapy to correct a clinical problem based on the blood gas values if he/she is to play a vital role in the care of these patients.

Pass Date | * * **OBJECTIVES** *

1. _____ | 1. Interpret several sets of arterial blood gases on given patients according to: PaO₂, PaCO₂, pH, HCO₃, AaDO₂, SaO₂, and acid-base states.

2. _____ | 2. Correlate the arterial blood gas values on a given patient to their clinical status.

3. _____ | 3. Describe the treatment required to correct a given patient's clinical problem based on the arterial blood gas values.

4. _____ | 4. Integrate and discuss a series of arterial blood gas values with respect to the total clinical course of a given patient.

Unit Eight: ARTERIAL BLOOD GAS (ABG) SAMPLING AND ANALYSIS

Competency: PERFORM ARTERIAL BLOOD GAS SAMPLING AND ANALYSIS

Rationale: In most respiratory care departments it is the responsibility of the respiratory care practitioner to sample and/or analyze arterial blood gases. Therefore, knowledge of the appropriate procedure, adverse reactions, and troubleshooting of equipment enhances patient safety and reliable information on which to base important clinical decisions.

Pass Date | * * OBJECTIVES * *

1. _____ | 1. Pass a written and/or clinical simulation ABG quiz.

2. _____ | *2. Successfully perform an arterial puncture in accordance with a given physician's order.
radial _____ femoral _____
brachial _____

3. _____ | 3. Successfully obtain a blood sample from an arterial line.

4. _____ | *4. Analyze a given arterial blood gas sample. (**All students will perform this objective at an affiliate that manages a blood gas analyzer.**)
ABL 700 series _____ co-oximeter _____
IL _____
Other _____

5. _____ | 5. Perform quality control procedures on a given blood gas machine. (**All students will perform this objective at an affiliate that manages a blood gas analyzer.**)

NORTH SHORE COMMUNITY COLLEGE
Respiratory Care Program - Clinical Procedure Check-Off

ABG SAMPLING

Student Name _____ Hosp _____ Date _____

Procedure _____

Performance

- | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> 1. CHECK ORDERS (procedure, time, FIO2) 2. PRE-THERAPY EVALUATION (anticoagulants, lab tests) 3. COLLECT AND PREPARE EQUIPMENT (syringe, swab, stopper needles, heparin, gauze, ice, heparinize syringe) 4. EXPLAIN TO PATIENT (purpose) 5. PRE-PUNCTURE EVALUATION (palpate, select site, Allen Test) 6. PREPARE SITE (position site, secure site, prep) 7. OBTAIN SAMPLE (hold syringe, puncture site, collect sample, withdraw needle) 8. POST-PUNCTURE SITE CARE (apply pres for minimum 5 minutes) 9. POST-PUNCTURE SITE EVALUATION (observe for bleeding, hematoma, check distal pulse) 10. HANDLE SAMPLE (eliminate air, apply stopper, mix place in ice) 11. COMPLETE PAPERWORK (charge slip, syringe label) 12. CHART 13. REPORT RESULTS (nurse, physician, staff) 14. FOLLOW-UP 15. BEDSIDE MANNER | <ol style="list-style-type: none"> 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. | <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Comments:

Evaluation completed in a timely manner. yes no

pass fail

 Evaluator's Signature Date

= acceptable x= unacceptable o = omitted n = not applicable

Unit Nine: HUMIDIFICATION/AEROSOL THERAPY

Competency: ADMINISTER, EVALUATE, AND RECOMMEND THE APPROPRIATE HUMIDIFICATION/AEROSOL THERAPY FOR A GIVEN PATIENT.

Rationale: Humidification/aerosol therapy are a frequent and integral part of the management of many patients with varied diseases and conditions. There are a vast number of types and brands of devices that are used in conjunction with oxygen therapy, bronchial hygiene, mechanical ventilation, and home care. The student must be competent in both the equipment and the application of humidification/aerosol therapy.

Pass Date | * * OBJECTIVES * *

1. _____ | *1. Administer aerosol therapy in accordance with a given physician's order.

USN _____ aerochambers _____

jet _____ MDI _____

Babington _____ DPI _____

hand-held _____ spin-haler _____

Other(s) _____

2. _____ | *2. Evaluate and recommend the aerosol therapy program for a given patient.

**NORTH SHORE COMMUNITY COLLEGE
Respiratory Care Program - Clinical Procedure Check-Off**

AEROSOL THERAPY

Device _____

Student Name _____ Hosp _____

Date _____

Procedure _____

Performance

1. CHECK ORDERS (device, frequency, duration, medication, FIO2)
2. PRE-THERAPY EVALUATION (chart, patient)
3. COLLECT EQUIPMENT (nebulizer, tubing, gas source, patient confection: mask, face tent)
4. EXPLAIN TO PATIENT (purpose, rules for use)
5. SET UP AND ADJUST EQUIPMENT (connect device, adjust FIO2, liter flow)
6. CHECK FUNCTION OF EQUIPMENT (mist, FIO2, pres relief valve)
7. ATTACH TO PATIENT
8. MONITOR PATIENT (observation, general appearance, how tol WOB, auscultation, HR, RR)
9. ADJUST EQUIPMENT (if necessary)
10. POST-TREATMENT EVALUATION (observation, general appearance how tol, auscultation, HR, RR, cough, results)
11. COMPLETE PAPERWORK (Tx card, Kardex card, charge slip)
12. CHART (date, time, Tx, medication, results, how tol, sig)
13. BEDSIDE MANNER

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____

Comments:

Evaluation completed in a timely manner. yes no

Evaluator's Signature Date pass fail

√= acceptable x= unacceptable o = omitted n = not applicable

Unit Ten: IPPB/BIPAP/CPAP/PEP THERAPY

Competency: ADMINISTER, EVALUATE, AND RECOMMEND APPROPRIATE IPPB/BIPAP/CPAP THERAPY ON A GIVEN PATIENT.

Rationale: IPPB remains an important tool in the care of patients with respiratory problems. The respiratory care practitioner will be called upon to administer IPPB therapy to patients who have difficulty achieving a maximum spontaneous inspiration. Since IPPB therapy is usually given in conjunction with aerosolized medications, the respiratory care practitioner must have a good understanding of the actions, preparations, dosages, and side effects of the drugs used.

Pass Date | * * OBJECTIVES * *

1. _____ | 1. Perform volumetric evaluation on a given patient.

2. _____ | *2. Administer IPPB therapy in accordance with a given physician's order.

PR-2 _____ PR-1 _____

Mark 7 _____ TV-2P _____

AP-4, 5 _____

Other _____

3. _____ | 3. Administer BIPAP/CPAP in accordance with a given physician's order.

4. _____ | 4. Administer PEP therapy in accordance with a given physician's order.

5. _____ | *5. Evaluate and recommend the IPPB and/or hand-held nebulizer therapy program for a given patient.

NORTH SHORE COMMUNITY COLLEGE
Respiratory Care Program - Clinical Procedure Check-Off

SPONTANEOUS POSITIVE PRESSURE THERAPY

Device (IPPB, BiPAP, CPAP, PEP) _____

Student Name _____ Hosp _____ Date _____

Procedure	Performance
1. CHECK ORDERS (device, frequency, duration, medication, FIO ₂ , pressure)	1. _____
2. PRE-THERAPY EVALUATION (chart, patient, vol orientation)	2. _____
3. COLLECT EQUIPMENT (device, tubing, pt connection)	3. _____
4. EXPLAIN TO PATIENT (purpose, rules for use)	4. _____
5. SET-UP AND ADJUST EQUIPMENT (connect device, settings for pressure, flow, sensitivity, FIO ₂ , nebulization, t _i , t _E)	5. _____
6. CHECK FUNCTION OF EQUIPMENT (leaks, nebulization)	6. _____
7. ATTACH TO PATIENT	7. _____
8. MONITOR PATIENT (observation, general appearance, how tol, WOB, auscultation, HR, RR, vol orientation)	8. _____
9. ADJUST EQUIPMENT (if necessary - pres, sens, flow)	9. _____
10. POST-TREATMENT EVALUATION (observation, auscultation, how tol, HR, RR, cough, results)	10. _____
11. POST-TREATMENT CARE OF EQUIPMENT	11. _____
12. COMPLETE PAPERWORK (charge slip, kardex card, liter flow tag, name tag, equipment change tag)	12. _____
13. CHART (date, time, Tx, med, results, how tol, signature)	13. _____
14. BEDSIDE MANNER	14. _____

Comments:

Evaluation completed in a timely manner. yes no

 Evaluator's Signature Date pass fail

√ = acceptable x = unacceptable o = omitted n = not applicable

Unit Eleven: AIRWAY MANAGEMENT

Competency: PERFORM, EVALUATE, AND RECOMMEND APPROPRIATE AIRWAY MANAGEMENT FOR A GIVEN PATIENT.

Rationale: A patent airway is necessary for human life and it will be the responsibility of the Respiratory Care Practitioner to maintain and care for that airway. Students are likely to encounter artificial airways for relief of airway obstruction, facilitation of bronchial hygiene, and prolonged artificial ventilation.

Therefore, it is necessary that the student become adept in all aspects of airway management.

Pass Date | * * OBJECTIVES * *

1. _____ | 1. Demonstrate competency in the management of artificial airways by completing the following:

oropharyngeal _____	trach tube _____
nasopharyngeal _____	fenestrated TT _____
oral endotracheal _____	trach button _____
naso endotrach _____	Passy-Muir _____
laryngeal mask airway _____	
other(s) _____	

2. _____ | *2. Perform suctioning techniques on an intubated patient.

3. _____ | *3. Perform suctioning techniques on a non-intubated patient.

4. _____ | *4. Evaluate and recommend airway management of a given patient.

NORTH SHORE COMMUNITY COLLEGE
Respiratory Care Program - Clinical Procedure Check-Off

NASOTRACHEAL SUCTIONING

Student Name _____ Hosp _____ Date _____

<u>Procedure</u>	<u>Performance</u>
1. CHECK ORDERS	1. _____
2. COLLECT EQUIPMENT (complete suction set-up, O2 equipment)	2. _____
3. ASSEMBLE EQUIPMENT (maintain sterility, pres = -80 to -120)	3. _____
4. PRE-OXYGENATE PATIENT (2-4 minutes)	4. _____
5. EXPLAIN TO PATIENT (purpose)	5. _____
6. MAKE FIRST PASS WITH CATHETER (no suction in, proper depth, rotate catheter, intermittent suction moving out slowly)	6. _____
7. MONITOR PATIENT (general appearance, EKG)	7. _____
8. REPEAT OXYGENATION AND SUCTION PASSES AS NECESSARY	8. _____
9. ASSESS SPUTUM (color, amount, consistency)	9. _____
10. INSTILLATION TECHNIQUES (NS, acetylcysteine, coordinate w/ pt)	10. _____
11. OVERALL INFECTION CONTROL TECHNIC	11. _____
12. POST-PROCEDURE CARE OF EQUIPMENT (proper disposal, shut off O2 & suction, re-connect patient, cover manual resuscitator and connect tubing)	12. _____
13. CHART (pt tol, sputum assessment, date, time, signature)	13. _____
14. BEDSIDE MANNER	14. _____

Comments:

Evaluation completed in a timely manner. yes no

pass fail

 Evaluator's Signature Date

√= acceptable x= unacceptable o = omitted n = not applicable

Unit Twelve: VENTILATORY SUPPORT

Competency: ESTABLISH AND MAINTAIN VENTILATION ON A PATIENT WITH A GIVEN MECHANICAL VENTILATOR.

Rationale: The Respiratory Care Practitioner must be proficient in all aspects of mechanical ventilators (e.g. controls, alarms, tubing circuits, and troubleshooting) in order to effectively, efficiently, and safely carry out prescribed ventilator therapy.

Pass Date | * * OBJECTIVES * *

1. _____ | 1. Identify and describe the function of each of the ventilator controls and prepare a given ventilator for patient use.

VENTILATOR BRAND	ASSIST/CNTRL	SIMV
NPB 840		
PB 7200		
Siemens B/C		
portable/home care		
other		

2. _____ | 2. Perform a ventilator check procedure and routine ventilator maintenance procedures.

3. _____ | 3. Perform a ventilator tubing change at the patient's bedside.

4. _____ | 4. Troubleshoot and correct a given malfunction in a given ventilator.

Unit Thirteen: MANAGEMENT OF THE PATIENT ON VENTILATORY SUPPORT

Competency: RECOGNIZE THE CAUSES OF VENTILATORY/RESPIRATORY FAILURE AND PERFORM, EVALUATE, AND RECOMMEND VENTILATOR MANAGEMENT FOR A GIVEN PATIENT.

Rationale: Determining the proper ventilator settings for a given patient is a frequent task of the Respiratory Care Practitioner, which requires a total awareness of the patient's clinical status. Once the patient's condition is stabilized, the Respiratory Care Practitioner must use the appropriate weaning procedures to allow the patient to breathe and function according to his/her baseline daily life.

Pass Date | * * OBJECTIVES * *

- 1. _____ | *1. Establish initial mechanical ventilation on a given patient in accordance with a given physician's order and/or department standard operating procedure.
- 2. _____ | 2. Recommend the ventilator changes to correct the clinical condition of a given patient.
- 3. _____ | *3. Evaluate the parameters that are used to monitor all modes of mechanical ventilation on a given patient.

vital signs	_____	Swan-Ganz measurements	_____
auscultation	_____	PAP	_____
CXR	_____	dynamic compliance	_____
ABG's	_____	static compliance	_____
I & O	_____	PCWP	_____
CVP	_____	sputum	_____
body weight	_____	PIP	_____
wave forms	_____		

- 4. _____ | 4. Administer adjunct ventilatory techniques such as CPAP, PEEP, pressure support ventilation (PSV), flow-by to a given patient, and BiPAP.
- 5. _____ | 5. Perform endotracheal extubation on a given patient.
- 6. _____ | 6. Perform tracheal cuff pressure measurements and evaluate the results.
- 7. _____ | 7. Demonstrate competence in the use of the HME (artificial nose).
- 8. _____ | *8. Evaluate the entire clinical course of a mechanical ventilator patient.

**NORTH SHORE COMMUNITY COLLEGE
Respiratory Care Program - Clinical Procedure Check-Off**

INITIATING VENTILATOR CARE

Device _____

Student Name _____ Hosp _____ Date _____

Procedure

Performance

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1. CHECK ORDERS (device, parameters, mode) | 1. _____ |
| 2. SET-UP AND ADJUST EQUIPMENT (connect gas source, connect power, fill humidifier, set parameters: TV, RR, V, FIO2, SV, SR, sensitivity, pres limits, alarms) | 2. _____ |
| 3. CHECK FUNCTION OF EQUIPMENT (leaks) | 3. _____ |
| 4. EXPLAIN TO PATIENT | 4. _____ |
| 5. ATTACH TO PATIENT | 5. _____ |
| 6. MONITOR PATIENT (observation, how tol, auscultation) | 6. _____ |
| 7. ADJUST EQUIPMENT (if necessary) | 7. _____ |
| 8. COMPLETE PAPERWORK (vent card, vent sheet, ABG card) | 8. _____ |
| 9. BEDSIDE MANNER | 9. _____ |

Comments:

Evaluation completed in a timely manner. yes no

pass fail

Evaluators Signature Date

√= acceptable x= unacceptable o = omitted n = not applicable

NORTH SHORE COMMUNITY COLLEGE
Respiratory Care Program - Clinical Procedure Check-Off

VENTILATOR PATIENT ASSESSMENT

Student Name _____ Hosp _____ Date _____

Pt Name _____ MD _____ Rm No _____ Vent Mode _____

CXR:

Comments:

SPUTUM REPORT:

Comments:

LAB REPORT: Na _____ Cl _____ WBC _____ Creat _____
K _____ Gluc _____ Hb _____ BUN _____

Comments:

HEMODYNAMIC: P _____ BP _____ RR _____ T _____
PA Dias _____ PCWP _____ QT _____ Qs/Qt _____
C(a-v)O₂ _____ I _____ O _____

Comments:

VENTILATOR PATIENT ASSESSMENT (cont)

Student Name _____

Patient Name _____

VENT REPORT: VT _____ f _____ FIO2 _____ VD _____

 FLOW _____ COMPL _____ VC _____ SPON VT _____

 SPON RR _____ IF _____ VE _____

Comments:

AUSCULTATION:

ABG REPORTS:

pH _____ PaCO2 _____ PaO2 _____ HCO3 _____ SaO2 _____

pH _____ PaCO2 _____ PaO2 _____ HCO3 _____ SaO2 _____

pH _____ PaCO2 _____ PaO2 _____ HCO3 _____ SaO2 _____

 AaDO2 _____ CaO2 _____

MEDS:

MD REPORT AND PLAN:

COMMENTS:

Evaluation completed in a timely manner. yes no

 Evaluator's Signature Date pass fail

√= acceptable x= unacceptable o = omitted n = not applicable

Unit Fourteen: PULMONARY FUNCTION TESTING

Competency: OBSERVE, DISCUSS, PERFORM, AND INTERPRET PULMONARY FUNCTION TESTS

Rationale: Pulmonary function tests provide valuable information to assist in the diagnosis, evaluation, and management of many patients. Both simple and sophisticated tests may be performed at the bedside or in the pulmonary function laboratory. The respiratory therapist must be able to understand and integrate the pulmonary function assessment data into the total clinical picture of the patient.

Pass Date | * * OBJECTIVES * *

1. _____ | 1. Using a nomogram, determine the pulmonary function test values for patients given their age, sex, height, and weight.
2. _____ | 2. Demonstrate the use of water-seal, wedge, or electronic spirometers, and verbalize the patient testing procedure.
3. _____ | 3. Perform the following tests and determinations on a given patient: VC, FVC, FEV1, FEV3, MVV, FEVt%, FEF25-75%, and FEF200-1200.
4. _____ | 4. Calculate volumes and capacities and flows from spirometer tracings or readouts, and compute the percent predicted values.
5. _____ | 5. Discuss the servicing of the spirometer with respect to sterilizing, changing tubing, and calibrating.
6. _____ | 6. Observe helium dilution testing.
7. _____ | 7. Verbalize the concept of helium equilibration for volume measurement.
8. _____ | 8. Verbalize the concept of diffusion testing.
9. _____ | 9. Discuss and perform flow-volume loops.
10. _____ | 10. Discuss the role of pulmonary function tests and their values in the management and evaluation of patients.
11. _____ | 11. Interpret PFT values in accordance with standard procedure.
12. _____ | 12. Discuss bronchoprovocation testing.

Unit Fifteen: PEDIATRIC/NEONATAL RESPIRATORY CARE

Competency: PERFORM, EVALUATE, AND RECOMMEND RESPIRATORY CARE ON A PEDIATRIC/NEONATAL PATIENT.

Rationale: Pediatric/neonatal emergencies and routine therapy are increasingly the responsibility of the respiratory care practitioner. In addition to major medical centers, community hospitals are managing more neonatal/pediatric cases. The knowledge and expertise of these procedures is necessary for all respiratory care practitioners in order to give safe and effective treatment.

Pass Date | * * OBJECTIVES * *

1. _____ | *1. Establish environmental therapy on a given patient in accordance with a physician's order.
2. _____ | 2. Set-up an appropriate nebulizer for a given croup tent.
3. _____ | 3. Administer pediatric respiratory medications to a given patient in accordance with a physician's order.
4. _____ | *4. Administer chest physiotherapy to a pediatric patient in accordance with a physician's order.
6. _____ | 5. Administer aerosol therapy to a pediatric patient in accordance with a given physician's order.
7. _____ | 7. Attend and describe Pediatric Code Cart orientation.
8. _____ | 8. Participate in physician rounds.
9. _____ | 9. Set-up and troubleshoot a neonatal manual resuscitator bag and demonstrate proper manual ventilation.
10. _____ | 10. Set-up and troubleshoot a pediatric ventilator.
11. _____ | 11. Perform a pediatric ventilator safety check.
12. _____ | 12. Analyze the delivered FIO2 on a pediatric patient.
13. _____ | 13. Perform and interpret transcutaneous oxygen monitoring.
14. _____ | 14. Perform and interpret oximetry.
15. _____ | 15. Interpret ABG's on a given pediatric patient.
16. _____ | *16. Evaluate and recommend a respiratory care program for a given pediatric patient.

**NORTH SHORE COMMUNITY COLLEGE
Respiratory Care Program - Clinical Procedure Check-Off**

CHEST PHYSICAL THERAPY

Student Name _____ Hosp _____ Date _____

<u>Procedure</u>	<u>Performance</u>
1. CHECK ORDERS (frequency, DBE or pulmonary hygiene, IS)	1. _____
2. PRE-THERAPY EVALUATION (chart, patient)	2. _____
3. EXPLAIN TO PATIENT (purpose, goals)	3. _____
4. PATIENT EVALUATION (level of coherence, cooperation, physical assessment)	4. _____
5. PERFORM APPROPRIATE CPT TECHNIC (postural drainage, vibrations, percussion, diaphragmatic breathing, coughing techniques, localized expansion, relaxation techniques, purse lip breathing, SMI)	5. _____
6. MONITOR PATIENT (observation, general appearance, toleration, WOB, auscultation, vs)	6. _____
7. POST-TREATMENT EVALUATION (observation, general appearance, toleration, auscultation, cough, vs, results)	7. _____
8. COMPLETE PAPERWORK (T.O., addressograph, rm, unit, Dx, pulmonary Dx, time, CXR, ABG, Rx description)	8. _____
9. CHART (date, time, signature, procedure, length of time given, toleration, cough, sputum)	9. _____
10. BEDSIDE MANNER	10. _____

Comments:

Evaluation completed in a timely manner. yes no

Evaluator's Signature Date pass fail

√= acceptable x= unacceptable o = omitted n = not applicable

Unit Sixteen: PATIENT ASSESSMENT 2

Competency: PERFORM AND/OR INTERPRET THE APPROPRIATE PATIENT ASSESSMENT DATA/
PROCEDURES FOR A GIVEN PATIENT.

Rationale: The respiratory care practitioner must be able to perform, locate, and interpret patient data and procedures in order to make appropriate therapeutic recommendations, to administer therapy in a most effective manner, to evaluate progress toward pre-determined therapeutic objectives, and to recognize adverse reactions to therapy.

Pass Date | * * OBJECTIVES * *

1. _____ | *1. Demonstrate competency with respiratory assessment.

ABG's	_____	bronchoscopy	_____
PFT's	_____	biopsy	_____
thoracentesis	_____		

2. _____ | *2. Demonstrate competency with laboratory assessment.

CBC	_____	EOS	_____
Hct	_____	sputum	_____
Hb	_____	C & S	_____
WBC	_____	AFB	_____
RBC	_____	cytology	_____

3. _____ | *3. Demonstrate competency with radiology assessment.

CXR	_____	vent scans	_____
bronchography	_____	perf scans	_____
tomography	_____		

4. _____ | *4. Demonstrate competency with EKG/cardiac monitor assessment.

ventricular tachycardia	_____	PVCs	_____
ventricular fibrillation	_____	nodal rhythms	_____
atrial arrhythmias	_____	others	_____

5. _____ | 5. Interpret a given patient's PFTs.

NORTH SHORE COMMUNITY COLLEGE
Respiratory Care Program - Clinical Procedure Check-Off

PATIENT ASSESSMENT 2

Student Name _____ Hosp _____ Date _____

Procedure _____ Performance _____

- | | |
|----------------------------------------------------------------------------------------------|----------|
| 1. GENERAL ASSESSMENT (vital signs, Hx, observation palpation, percussion, auscultation) | 1. _____ |
| 2. RESPIRATORY ASSESSMENT (ABG's, PFT's, thoracentesis, bronchoscopy, biopsy) | 2. _____ |
| 3. LABORATORY ASSESSMENT (CBC, Hct, Hb, WBC, RBC, EOS, sputum, C & S, AFB, cytology) | 3. _____ |
| 4. RADIOLOGY ASSESSMENT (bronchography, tomography, ventilation scans, perfusion scans, CXR) | 4. _____ |
| 5. EKG ASSESSMENT (waves, segments, intervals) | 5. _____ |

Comments:

Evaluation completed in a timely manner. yes no

Evaluator's Signature Date pass fail

√ = acceptable x = unacceptable o = omitted n = not applicable

Unit Seventeen: CASE STUDY

Competency: PREPARE AND PRESENT A 30-MINUTE ORAL AND A WRITTEN CASE STUDY DEMONSTRATING UNDERSTANDING OF A RESPIRATORY RELATED CONDITION MANAGED WITH A MECHANICAL VENTILATOR.

Rationale: The respiratory care practitioner is frequently called upon to explain a procedure to a patient, a patient's family, and/or hospital staff; to give an inservice talk, and/or to recommend therapy to physicians. This assignment is to familiarize the student with the aspects of organizing, preparing, and presenting the clinical course of a mechanical ventilation patient as well as to study the disease state and how it is managed both in its classical presentation and in the particular case.

Grade: Case studies will be presented in the lab, but will be graded as a clinical unit and will count as part of the grade for Clinical Experience 4.

CASE STUDY OUTLINE

The case study should be organized into three parts: the classical manifestation of the disease; the patient's manifestation of the disease, and the comparison of the two manifestations.

I. Classical Manifestations

- A. Etiology and pathology
- B. Clinical manifestations
- C. Radiology and laboratory findings
- D. Treatment

II. Primary Disease (patient)

- A. Pathogenesis (etiology) and pathology
- B. Clinical manifestations
- C. Radiography and laboratory findings
- D. Treatment

III. Case Presentation (Compare the patient's case to the classical)

- A. Admission history and work-up
- B. Clinical course
 - 1. pre-mechanical ventilation
 - 2. during mechanical ventilation
 - a. drugs and their actions
 - b. laboratory work
 - c. rationale for treatments
- C. Short-term goals
- D. Long-term goals
- E. Conclusions

Unit Eighteen: PULMONARY REHABILITATION

Competency: PERFORM, EVALUATE, AND RECOMMEND REHABILITATIVE TECHNIQUES FOR A GIVEN PATIENT.

Rationale: Many patients with chronic obstructive pulmonary disease cannot perform simple activities of daily living and adapting to a new lifestyle challenges them and their families. Through education about their disease and exercise programming, the respiratory care practitioner can help to improve their lifestyle and potentially reduce frequent hospital admissions.

Pass Date | * * **OBJECTIVES** * *

1. _____ | 1. Describe the importance of a patient questionnaire and assessment for a pulmonary rehab patient.
2. _____ | 2. Observe interviewing of a patient for inclusion into the pulmonary rehab program.
3. _____ | 3. Observe patient education sessions in one or more of the following areas:
 - _____ A & P, What is COPD?
 - _____ breathing, retraining exercises
 - _____ medication teaching
 - _____ energy conservation
 - _____ home therapy
 - _____ relaxation exercises
 - _____ environmental hazards
4. _____ | 4. Observe patient exercise sessions on a stationary bicycle or treadmill (level and graded).
5. _____ | 5. Discuss the role of target heart rate in exercise monitoring of the pulmonary rehab patient.
6. _____ | 6. Observe involvement by ancillary departments such as occupational therapy, dietary.
7. _____ | 7. Define "rhythmic breathing" and "EOE".
8. _____ | 8. Explain the importance of the 12 minute walk test.
9. _____ | 9. Observe rest and exercise oximetry during:
 - _____ ambulation
 - _____ stair climbing
 - _____ "body mechanic" movements
10. _____ | 10. Recommend appropriate oxygen therapy for patients who desaturate with exercise.
11. _____ | 11. Discuss the importance of a multidisciplinary approach to pulmonary rehabilitation programs.
12. _____ | 12. Observe charting procedures for the educational and exercise rehabilitation sessions.

Respiratory Care Program

Interpersonal Relations Evaluation

Name _____ mid-term final CE 1 2 3 4 19_____

APPEARANCE

- A. always dressed appropriately with appropriate personal appearance, competency packet, and stethoscope, and no inappropriate paraphernalia (e.g. jewelry, smoking items).
- B. chronic inappropriate dress, inappropriate personal appearance, and inappropriate paraphernalia prevalent.
- C. usually dressed appropriately with appropriate personal appearance, competency packet, and stethoscope. No inappropriate paraphernalia in patient's presence.
- D. always sets an outstanding example with dress, personal appearance, and paraphernalia.
- E. usually dressed appropriately, but inappropriate paraphernalia in patient's presence.

Comments:

ATTENDANCE

- A. frequent absences with or without appropriate excuses or occasionally absent without appropriate excuse.
- B. rarely absent, has appropriate excuse when absent.
- C. chronic absences with poor or no excuse.
- D. perfect attendance
- E. absent occasionally with reasonable excuse.

Comments:

PROMPTNESS

- A. seldom tardy, but does have appropriate excuse.
- B. always on time.
- C. chronic tardiness with poor or no excuse.
- D. tardy occasionally with reasonable excuse.
- E. frequently tardy with or without appropriate excuse or occasionally tardy without appropriate excuse.

Comments:

Interpersonal Relations Evaluation (continued)

PREPARATION

- A. usually prepared, may take slightly additional time or effort, but can rectify the situation without adversely affecting performance or outcome.
- B. always prepared for all activities.
- C. never prepared for activities and forgetful of necessary items.
- D. almost always prepared. Unpreparedness does not need rectifying in order to accomplish task to required standards.
- E. frequently unprepared. Rectifying situation requires additional time or effort which adversely affects the performance or outcome of tasks.

Comments:

INITIATIVE

- A. always demonstrates exceptional initiative. Completes work, assists others, or finds other productive activities for spare time. Utilizes time to the fullest.
- B. generally lacks initiative, procrastinates, frequently cannot complete assigned tasks. Requires frequent direction and supervision. Poor use of free time.
- C. always completes work comfortably and frequently ahead of time. Has no difficulty finding additional appropriate activities.
- D. occasionally lacks initiative. Can complete work, but fails to seek out other activities during spare time. Needs occasional direction.
- E. satisfactory initiative. Completes work comfortably and generally seeks out additional activities.

Comments:

PRODUCTIVITY

- A. above average productivity. Can usually complete tasks ahead of time.
- B. chronically poor productivity. Very unorganized or requires exceptionally large amounts of time to carry out tasks.
- C. excellent productivity, highly organized, almost always finishes tasks ahead of time, usually assists others after completion of own tasks.
- D. below average productivity, generally needs additional time to complete assignments.
- E. acceptable productivity, takes acceptable amounts of time to complete assigns tasks.

Comments:

Interpersonal Relations Evaluation (continued)

COMMUNICATION SKILLS

- A. reports accurately and concisely most of the time. Can follow verbal instructions, but may require occasional clarification. Gives clear explanations most of the time. May occasionally use non-verbal signs inappropriately.
- B. always reports accurately with occasional extraneous information. Understands intent of verbal instructions and follows them. Explanations are clear almost all of the time. Rarely uses inappropriate non-verbal signs.
- C. frequently gives inaccurate information. Includes extraneous information that sometimes confuses the message. Able to understand and follow verbal instructions only after several explanations. Often uses inappropriate non-verbal signs.
- D. usually gives inaccurate information. Gives much extraneous information that often confuses the message. Rarely able to follow verbal instructions. Explanations are usually unclear. Often uses very inappropriate non-verbal signs.
- E. always reports accurately and very concisely. Readily able to understand and clarify intent of verbal instructions and follow them. Gives excellent explanations. Always uses appropriate non-verbal signs.

Comments:

COOPERATION

- A. usually functions cooperatively with instructors/students/other members of health care team. Effective at negotiating crucial differences with others.
- B. always functions cooperatively with instructors/students/other members of health care team. Highly effective at negotiating all differences with others.
- C. occasionally uncooperative with instructors/students/other members of health care team at first, but able to cooperate after explanations. At times can be effective at negotiating differences with others.
- D. usually uncooperative with instructors/students/other members of health care team. Always wants it his/her way. Unable/unwilling to negotiate differences with others.
- E. Almost always functions cooperatively with instructors/students/other members of health care team. Able to negotiate most differences with others.

Comments:

Interpersonal Relations Evaluation (continued)

CHANGE

- A. can usually improve by self-evaluation, may be advised occasionally, readily accepts and incorporates comments.
- B. does not change poor habits or inappropriate behavior after repeated suggestions.
- C. able to discover better ways to do things and initiates appropriate change within scope of training without being told.
- D. changes poor habits reluctantly after being spoken to several times.
- E. appropriately modifies behavior after weaknesses are pointed out.

Comments:

GENERAL ATTITUDE

- A. just "putting in the time".
- B. almost always demonstrates genuine interest in learning.
- C. usually treats the course as "necessary", occasionally shows genuine interest in learning.
- D. always enthusiastic and interested in pursuing learning. Frequently able to motivate and stimulate interest in others.
- E. always demonstrates genuine interest in learning. Frequently demonstrates enthusiasm in learning.

Comments:

KNOWLEDGE

- A. lacks significant knowledge, but seeks assistance appropriately.
- B. lacks significant knowledge, fails to seek assistance appropriately.
- C. has all necessary knowledge to perform within scope of practice, rarely seeks assistance.
- D. has appropriate knowledge, seeks assistance appropriately.
- E. has most necessary knowledge, seeks assistance appropriately.

Comments:

Student's Signature

Date

Evaluator's Signature

Date

**North Shore Community College
Respiratory Care Program**

Counseling/Advising Form

This form serves as documentation of a counseling/advising meeting with _____ held on _____
Student name

Date

If applicable, his/her performance/status in the course _____ may not be consistent with successful completion of this component of the program .

Counseling/Advising issues discussed:

The student was advised to seek assistance from:

- | | |
|-------------------------------------------------|--------------------------------------------|
| <input type="checkbox"/> Clinical Coordinator | <input type="checkbox"/> Program Director |
| <input type="checkbox"/> Student Support Center | <input type="checkbox"/> Counseling Center |
| <input type="checkbox"/> Clinical Instructor | <input type="checkbox"/> Other _____ |

Instructor _____ Date: _____

I have read the above regarding my performance status in the Respiratory Care Program.

Student _____ Date: _____

MEDICAL NECESSITY EVALUATION

Student Name _____ Date _____

1. Pt. Stats: Initials _____ Age _____ Gender _____ Rm No _____

2. Primary Dx _____ 3. Pul Dx _____

Respiratory Care Orders _____

5. Therapeutic Objective(s) _____

6. SUBJECTIVE INFORMATION (patient statements)

7. OBJECTIVE INFORMATION (physical exam and charted data)

8. ASSESSMENT (analysis of your collected data to determine the patient's current condition)

9. PLAN (recommendations - provide a brief rationale)

Evaluation completed in a timely manner. yes no

Evaluator's Signature Date pass fail

√ = acceptable x = unacceptable o = omitted n = not applicable

NORTH SHORE COMMUNITY COLLEGE
Respiratory Care Program - Clinical Procedure Check-Off

THERAPEUTIC DECISION MAKING
(seven steps of decision-making process)

Student Name _____ Hosp _____ Date _____

Procedure

Performance

1. RECOGNIZE PROBLEM(S)
 - (a) knowledge of normal situation(s)
 - (b) trigger of abnormal situation

2. DEFINE PROBLEM(S)
 - (a) gather appropriate information (Subjective and Objective)
 - (b) analyze and interpret information (e.g. pathophysiology)
 - (c) draw conclusions

3. SPECIFY PATIENT GOAL(S)/THERAPEUTIC OBJECTIVE(S)
 - (a) return patient to normal -OR-
 - (b) return patient to baseline, if chronic condition(s)

4. DEVELOP MODALITY ALTERNATIVES TO MEET GOAL(S)
 - (a) match goal(s) of therapeutic modalities to goal(s) specified in STEP #3 (See AARC Clinical Practice Guidelines)

5. SELECT MODALITIES
 - (a) determine availability
 - (b) evaluate benefit vs risk (risks = time, cost, pain, risk | of morbidity, risk of mortality)

6. IMPLEMENT DECISION(S)
 - (a) follow applicable laws
 - (b) follow hospital and department policies and procedures (may have Therapist Driven Protocols)
 - (c) follow NSCC Respiratory Care Program check sheet(s)

7. EVALUATE PATIENT
 - (a) gather appropriate information
 - (b) evaluate for adverse reaction(s)
 - (c) evaluate for change in patient status due to intervention|
 - (1) goal(s) accomplished
 - (2) acceptable progress toward goal(s)
 - (3) unacceptable, but some progress toward goal(s)
 - (4) movement away from goal(s)

IF "(1)" THEN D/C THERAPY
 IF "(2), (3), OR (4)", RETURN TO STEP #2

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

Comments:

Evaluation completed in a timely manner. yes no

pass fail

 Evaluator's Signature Date

√= acceptable x= unacceptable o = omitted n = not applicable

**NORTH SHORE COMMUNITY COLLEGE
Respiratory Care Program**

Clinical Experience Unit Exam Summary

Student Name _____

CE 1 2 3 4

Unit _____:

Instructor's Comments:

FINAL SCORE _____

I have seen and discussed this evaluation: No comments Comments below

Student Comments: (indicate if an additional sheet has been used) Yes No

Evaluator's Signature Date Pass Fail

_ = acceptable X = unacceptable O = omitted N = not applicable

Respiratory Care Program

Diagnostic Learning Log

Student Name _____ Hospital _____ CE 1 2 3 4

Date _____

After completing a clinical day, spend a few moments reflecting on your experiences and observances. Take a couple of minutes to respond to the following questions. Be prepared to share your experiences with the other students.

1. What is the ONE *most important* thing that you experienced today?

2. What remains *unclear* from today's experience?

3. Which medical terms or phrases did you learn today?

NORTH SHORE COMMUNITY COLLEGE
Respiratory Care Program

Instructor/Student Clinical Activity Log

Student Name _____ Hospital _____ CE 1 2 3 4

The instructor and/or student will write notes and comments on his/her clinical activity during the semester.

DATE	COMMENTS	RESPONSE

Student's Signature _____ Date _____

Evaluator's Signature _____ Date _____

Respiratory Care Program

Clinical Progress Report

Student Name _____ Hospital _____ CE 1 2 3 4

Unit____: _____ Final Score _____

Unit____: _____ Final Score _____

Unit____: _____ Final Score _____

Unit____: _____ Final Score _____

Unit____: _____ Final Score _____

Unit____: _____ Final Score _____

Unit____: _____ Final Score _____

COMPETENCIES SCORES AVERAGE (40%) _____

FINAL SIMULATION EXAM SCORE (40%) _____

WRITTEN QUIZ-EXAM AVERAGE (20%) _____

FINAL AVERAGE _____

TOTAL CLINICAL HOURS _____ FINAL GRADE _____

COMMENTS:

Instructor's Signature _____ Date _____

Copies of this report should be forwarded to the Clinical Instructors, Clinical Coordinator, and Program Director.

RESPIRATORY CARE PROGRAM

Clinical Attendance Policy

1. The student must complete the required number of clinical hours as evidenced by the Clinical Progress Report. Students who are absent due to illness or injury beyond one week may be required to withdraw from the clinical course.
2. If the student is unable to report to the hospital at the required time, then he/she must notify the hospital at least one half (1/2) hour prior to that required time, **and MUST CALL THE CLINICAL INSTRUCTOR BY 11:00 am THAT DAY.**
3. An assignment will be given for all missed clinical days including the first one. Make up time will be required after the first missed day. Make-up time for missed clinical days will only be available at the convenience of the clinical instructor. Students may be required to pay an additional clinical instructor fee for make-up time. In some instances an IP will be given until the missed clinical time is made up. This may impact the student's standing in the program if it occurs in the fall semester and there is limited time during semester break to complete the make up time.
4. Upon the FIRST UNEXCUSED* absence from a clinical session, the student will be immediately suspended from the Clinical Experience.
5. Repeated tardiness (more than 2 times) is sufficient cause for suspension from Clinical Experience. A verbal warning will occur upon the first instance of tardiness. On the second occurrence a written warning will occur and any further occurrences during the semester will result in dismissal from clinical.
6. Following suspension, the student may continue the Clinical Experience only after reaffirming his/her commitment in the Respiratory Care Program to the satisfaction of the Program Director, Clinical Coordinator and the appropriate Clinical Instructor.
7. IPR points will be deducted for tardiness in excess of 2 days.
8. Some clinical sites may begin the shift earlier or later than 7:00 am. The student will be required to adhere to the policies and procedures of the department.

* An "UNEXCUSED ABSENCE" occurs when a student misses a significant portion of the clinical day:

1) without prior approval of the Clinical Instructor

- OR -

2) without personally notifying the Clinical Instructor before 11:00 am on the day of absence.

RESPIRATORY CARE PROGRAM

MEMORANDUM

DATE:

TO:

FROM:

RE:

Upon reviewing your clinical attendance record, I find that you have missed _____ clinical hours to date. You are required to complete all scheduled, supervised clinical time each semester. Without completion of all these hours, you will not receive a passing grade and will not be able to proceed to next semester's Respiratory Care courses.

Since make-up days are difficult to schedule and are at the discretion of the Clinical Instructor, please make an appointment with your instructor by _____ to resolve this situation.

Please refer to the Attendance Policy in your competency packet for further details.

cc: Program Director

RESPIRATORY CARE PROGRAM

Dress Code

The *required* dress code for all students for Clinical Experience will consist of a short white lab jacket, a navy blue polo type jersey, white twill pants, white sneakers, identification badge, stethoscope, and watch with a second hand. The company that is used by students in the program to purchase the uniform is McGill's Inc., Manchester, N.H. (603) 627-3472. Additionally, due to safety concerns, earrings on parts of the body, other than the earlobe, that are within view or grasp of a patient are not allowed to be worn during clinical hours. An appropriate selection of earring to be worn in the earlobe is a stud type only. Students will not be permitted to wear artificial fingernails or extenders. Natural nails must be clean and should be no longer than 1/4 inch long.

With regards to the identification badge, Massachusetts General Law Chapter 112, section 23 V allows the practice of respiratory care by "any person pursuing a supervised course of study leading to a degree or certificate in respiratory care as part of an accredited and approved educational program, if the person is so designated by a title which clearly indicates his status as a student .An employment identification badge does **NOT** satisfy this statutory requirement.

Students are not allowed to carry personal pagers or cell phones.

Due to the close professional relationship that Respiratory Therapists have with patients, upon which the success of the therapy often depends, smoking paraphernalia, gum, candy, or other personal items should not be brought to the patient care area. Students are required to refrain totally from smoking while in clinical because some noxious odors such as cigarette smoke that may linger on clothing or heavy perfumes/colognes can be a trigger that may put some patients into acute bronchospasm and respiratory distress.

All participants in Clinical Experience are required to bring a stethoscope, a watch with a second hand, and the competency packet to each clinical day. Students will be sent home and not permitted to participate in the clinical experience if any portion of the clinical uniform is missing. This absence from the clinical experience will have an impact on the student's standing in the course and the program.

RESPIRATORY CARE PROGRAM

Communication Policy

Students who wish to discuss an issue of academic or professional concern should adhere to the following procedure:

1. The student should **first** have a discussion with the instructor who is responsible for the course in which there is a concern. Most circumstances that arise can and should be addressed with the instructor directly involved. Rarely will situations occur that need any more than a calm, open, and professional discussion between the student and his/her instructor.
2. However, if the student does not believe that the issue has been resolved in a reasonable and satisfactory way, the student may discuss it with the faculty member who supervises the instructor. The supervisor will attempt to gather all necessary information from all available sources in order to determine the appropriate resolution.

If another faculty member is contacted before any discussion with the instructor, then the student will be immediately referred back to the instructor for the appropriate discussion/resolution.

RESPIRATORY CARE PROGRAM

Professional Conduct Policy

The student must demonstrate appropriate conduct becoming a Health Care Professional. Professional conduct includes but is not limited to:

1. Adhering to the dress code of the program.
2. Behaving courteously towards patients, faculty, hospital staff, and peers.
3. Adhering to the attendance policy of the program.
4. Performing procedures, administering therapy, and completing assigned work in accordance with established policies and procedures in a timely manner.
5. Demonstrating the ability to work independently and utilizing free clinical time effectively.
6. Displaying appropriate bedside manner including identifying self and status, stating instructions clearly and concisely with appropriate pronunciation, using a friendly and pleasant tone of voice. [*Be aware that some patients are hard of hearing and you may need to adjust your voice level in order to be heard. Do not assume that all elderly people are hard of hearing.*]
7. Maintaining patient confidentiality at all times both in and out of the hospital.
8. Following the Scope of Practice. The duties and responsibilities of the Respiratory Care Practitioner are well defined and outlined in the Clinical Competency Packet, the hospital Procedure Manual, and the Laws/Regulations of the Board of Respiratory Care of the Commonwealth of Massachusetts. The student must not perform any procedures and/or assessments that are outside these defined duties.

Under most circumstances, if a student fails to adhere to the appropriate standards of professional conduct:

- .. Upon a first occurrence the student will receive a verbal warning (#1) by the Instructor and the student will be required to write a satisfactory essay on Professional Behavior as assigned by the Instructor.
- .. Upon a second occurrence the student will receive a written warning (#2) with a follow-up meeting with the Program Director, The Clinical Coordinator, and the Instructor. The student must satisfactorily complete an assigned project on Professional Behavior. This may require the student to perform additional hours *outside of clinical/class* to complete the project. The student will be placed on probation until completion of the project **AND** the end of the current academic year.
- .. Upon the third occurrence the student will be immediately suspended from clinical/class. This, of course, will prevent the student from continuing on in the sequence and will delay graduation. S/he must write a ten (10) page paper on what it means to be a "Professional"; or complete a college level course (with a grade of ~~"C"~~ or better) on professional behavior in order to be considered in good standing in the Respiratory Care Program.
- .. If the student is re-admitted to the program, any future infraction will receive an "F" grade for the course, and be immediately dismissed from the Respiratory Care Program.

In the instance of a serious infraction, the disciplinary process may progress immediately to a written warning or immediate suspension from the program.

Professional Conduct Policy (cont.)

In order to be considered for re-instatement the student must:

1. Re-apply for admission to the Program. Readmission to the program will not be guaranteed and will be on a space available basis in the following academic year.
2. Meet with the Division Review Board consisting of the Division Dean, the Program Director (or his/her designee), and at least one other faculty member.
3. Present to the Review Board a typed, written explanation as to why s/he should be re-instated to the Program.
4. The Division Review Board may:
 - a. re-instate the student with or without probation and/or
 - b. require additional activities and/or
 - c. continue the suspension for a designated period of time and/or
 - d. dismiss the student permanently from the Program.

Change in Health Status of Student

Any student with a change in their health status i.e. accidental injury, pregnancy must provide documentation to the program that attendance in clinical or return to clinical is permitted.

RESPIRATORY CARE PROGRAM
Normal Values

<u>Test</u>	<u>Normal Value</u>	<u>Normal Range</u>
ALARM VALUES		
Oxygen analyzer .....	.....	+/- 5-10% from set FIO ₂
Ventilator pressure limit.....	.....	+/- 15 cmH ₂ O from PIP
Atmospheric Values		
Oxygen 20.95%		
Nitrogen 78.08%		
CO ₂ .03%		
Blood Gas Values		
<i>Arterial</i>		
pH.....	7.40.....	7.35-7.45
PaCO ₂	40mmHg.....	35-45 mmHG
PaO ₂	95mmHg.....	80-100 mmHg
SaO ₂ @ PaO ₂ = 95 mmHg.....	97%.....	95-100%
@ PaO ₂ = 60 mmHg.....	90%	
@ PaO ₂ = 40 mmHg.....	75%	
HCO ₃	24mEq/L.....	22-26mEq/L
A-a DO ₂	10mmHg on room air.....	5-15 mmHg on room air less than 100mmHg on 100% O ₂
CaO ₂	20 vol%.....	
CvO ₂	15 vol%.....	
CaO ₂ -CvO ₂	5 vol%.....	
P50.....	27mmHg.....	
Tot CO ₂	25.....	
BE.....	0 mEq/L.....	-2 to +2 mEq/L
<i>Venous</i>		
PH.....	7.36.....	7.31 – 7.41
PvCO ₂	46 mmHg.....	41 – 51 mmHg
PvO ₂	40 mmHg	
HCO ₃	26 mEq/L	
PULMONARY VALUES		
Lung compliance (static).....	0.2 L/cmH ₂ O	
Lung & chest wall compliance	0.1 L/cmH ₂ O	
R _{aw}	1.5 cmH ₂ O/L/sec	
V _d /V _t	0.3	
FEV ₁ /FVC.....	80%	
Dlco.....	25 ml/min/torr	
PECO ₂	25 mmHg	
MVV.....	170 L/min	
VO ₂	250 ml/min	
VCO ₂	200ml/min	
V _A	4L/min.....	4-6 L/min
V _E	6 L/min.....	6-8 L/min

CARDIAC VALUES

CI.....	.....	3.2 +/-0.2 L/min/M2
SV.....	70 ml/beat.....	50-80 ml/beat
Q _s /Q _t.....	.....	2-5%
PAP.....	25/10 mmHg.....	20-30/6-15 mmHg
CVP.....	.....	3-8 cmH2O
PCWP.....	.....	6-12 mmHg
Q.....	5L/min.....	4-6 L/min
PVR.....	<250 dynes/sec/cm5.....	
SVR.....	.....	800-1200 dynes/sec/cm5
SVI.....	.....	33-47 ml/beat/m2
EF.....	67%.....	65-75%
RA.....	.....	2-6 mmHg
RV.....	.....	20-30/0-5 mmHg
LA.....	.....	4-12 mmHg
LV.....	.....	100-140/0-5 mmHg

LABORATORY VALUES

K+.....	.....	3.5-5.0 mEq/L
Cl.....	.....	95-105 mEq/L
Na.....	.....	135-145 mEq/L
Mg.....	.....	1.3-2.5 mEq/L
Ca.....	.....	4.5-5.8 mEq/L
Hb males.....	.....	13-18gm%
Hb females.....	.....	12-16 gm%
HCT males.....	.....	39-55%
HCT females.....	.....	36-48%
WBC.....	.....	5,000-10,000/mm3
RBC males.....	.....	4.6-6.2 million/mm3
RBC females.....	.....	4.2-5.4 million/mm3
Glucose.....	.....	60-110 mg%
BUN.....	.....	8-25 mg%
Bilirubin.....	.....	0.1-1.2 mg%
Creatinine.....	.....	0.6-1.5 mg%
Albumin.....	.....	3.5-5.5 gm%

VITAL SIGNS

RR.....	14 breaths/min.....	12-20 breaths/min
T oral.....	37.0° C (98.6° F)	
Axillary.....	36.5° C (97.6° F)	
Rectal.....	37.5° C (99.6° F)	
BP.....	120/80 mmHg.....	100-140/60-90 mmHg
HR.....	72 beats/min.....	60-100 beats/min

APPROXIMATE F₁O₂s:

DEVICE	1 lpm	2 lpm	3 lpm	4 lpm	5 lpm	6 lpm	7 lpm	8 lpm	10 lpm
nasal cannula	24%	28%	32%	36%	40%	44%			
simple mask					35% to 55%				
part rebr mask						Up to 60% properly adjusted			
non-rebr mask	close to 100%, tight fitting mask, properly adjusted flow								

Approximate Air:Oxygen Ratios for Common Oxygen Concentrations (according to Mosby's Respiratory Care, 6th Edition)

Percent Oxygen	Air:Oxygen ratio	Total Ratio Parts
100	0:1	1
70	0.6:1	1.3
60	1:1	2
50	1.7:1	2.7
40	3:1	4
35	5:1	6
28	10:1	11
24	25:1	26

Please Note: average. Normal values are not exact numbers, but are meant to be guideposts. Normal values frequently vary according to characteristics such as height, weight, age, gender, etc. As practitioners become more experienced, they are better able to "adjust" their expectation of normal values to the specific patient in a specific situation. In addition to the values listed above, this program will consider any other values cited in recognized references.

Student Responsibility for Program Handbook

It is the responsibility of each student to read the Program Handbook. Failure to read the information contained in the Program Handbook will not be considered an excuse for non-compliance or lack of understanding.

The Respiratory Care Program may change policies or revise information due to institutional and/or program circumstances. When indicated, changes will be made known to students and the Program Director will distribute the updated information.

Each student is required to read, understand, and agree to comply with all policies stated in this handbook. An acknowledgement form is provided on the next page and must be signed by the student to indicate his or her agreement. This signed form will be maintained by the Program Director.

Respiratory Care Program

Program Handbook Acknowledgement Form

I, _____, have received, reviewed, and understand the content in this Program Handbook. I am aware of and accept my responsibility to both the college and the program with regard to rules and regulations governing student performance. As a student of North Shore Community College's Respiratory Care Program, I understand that I am to maintain the attitudes and behaviors reflected in these guidelines. My signature below indicates my commitment to abide by the policies and procedures within this handbook.

Student's Signature

Date

Student's Printed Name