DATE OF LAST REVIEW: 02/2013
CIP CODE: 51.0812
SEMESTER: Departmental Syllabus
COURSE TITLE: Technical Intervention II
COURSE NUMBER: RSCR0234
CREDIT HOURS: 3 credits
INSTRUCTOR: Departmental Syllabus
OFFICE LOCATION: Departmental Syllabus
TELEPHONE: Departmental Syllabus
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PREREQUISITE(S): RSCR0124 Technical Interventions I, or RSCR0224 Therapeutic Interventions I, or permission of the instructor

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, http://www.kckccbookstore.com/, for the required texts for your particular class

COURSE DESCRIPTION:

Students study interventions for acute and chronic cardiopulmonary conditions. Pharmacology is a key component of this class. Mechanical ventilation concepts and principles are developed as well.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, and panels, conferencing, learning experiences, and performances outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

I. Physical Assessment and Monitoring
   A. Indications for pharmacological interventions
   B. Goals for pharmacological interventions
   C. Responses to pharmacological interventions
   D. Indications for mechanical ventilation
   E. Goals for mechanical ventilation
F. Responses to mechanical ventilation

II. Pharmacology
   A. terms
   B. calculations
   C. doses
   D. measures
   E. pharmacodynamics
   F. sympathetic nervous system
   G. parasympathetic nervous system
   H. mucokinetcs
   I. mucolytics
   J. bronchodilator classifications
   K. corticosteroids
   L. non-steroidal anti-inflammatories
   M. surfactants
   N. anti-infective agents
   O. anti-microbial agents
   P. cold and cough agents
   Q. smoking cessation drugs
   R. nitric oxide
   S. indications for medication
   T. desired effects
   U. side effects
   V. adverse reactions

III. Positive Pressure Breathing
   A. intermittent positive pressure breathing
      a. indications
      b. clinical goals
      c. documenting effectiveness
   B. precautions
   C. categories for universal application
      a. initiating positive pressure ventilation
      b. recording response to positive pressure ventilation
      c. pulmonary hygiene issues
      d. positive and expiratory pressure
      e. pulmonary effects
      f. cardiac effects
      g. continuous positive airway pressure
      h. I:E ratio
      i. peak flow rates

EXPECTED LEARNER OUTCOMES:

A. The student will be able to discuss patient assessment techniques.
B. The student will be able to differentiate medication administration devices.
C. The student will be able to explain pharmacodynamics.
D. The student will be able to describe mucus clearing medications.
E. The student will be able to describe bronchodilators.
F. The student will be able to describe anti-inflammatory drugs.
G. The student will be able to describe anti-infective medications.
H. The student will be able to discuss mechanical ventilation concepts and principles.

COURSE COMPETENCIES:

The student will be able to discuss patient assessment techniques.
1. The student will be able to list patient assessment methods.
2. The student will be able to explain steps of assessment.
3. The student will be able to interpret assessment results.
4. The student will be able to identify appropriate interventions from assessment results.

The student will be able to differentiate medication administration devices.
5. The student will be able to calculate metric units.
6. The student will be able to calculate percent-strength solutions.
7. The student will be able to instruct a patient in MDI use.
8. The student will be able to instruct a patient in DPI use.
9. The student will be able to instruct a patient in SVN use.
10. The student will be able to explain equivalent dosing.
11. The student will be able to explain aerosol deposition in the lungs.
12. The student will be able to differentiate routes of drug administration.

The student will be able to explain pharmacodynamics.
13. The student will be able to describe sympathomimetic receptor responses.
14. The student will be able to describe parasympathomimetic receptor responses.
15. The student will be able to describe drug tolerance.
16. The student will be able to define drug half life.
17. The student will be able to define drug onset.
18. The student will be able to define drug peak effect.
19. The student will be able to define drug additive effect.
20. The student will be able to define drug synergy effect.

The student will be able to describe mucus clearing medications.
21. The student will be able to explain mucokinetic medication procedures.
22. The student will be able to explain mucolytic medication procedures.

The student will be able to describe bronchodilators.
23. The student will be able to explain sympathomimetic bronchodilator procedures.
24. The student will be able to explain xanthine bronchodilator procedures.
25. The student will be able to explain parasympatholytic bronchodilator procedures.

The student will be able to describe anti-inflammatory drugs.
26. The student will be able to explain corticosteroid procedures.
27. The student will be able to explain non-steroidal anti-inflammatory procedures.

The student will be able to describe anti-infective medications.
28. The student will be able to explain antibiotics.
29. The student will be able to explain antivirals.
30. The student will be able to explain antifungals.
The student will be able to discuss mechanical ventilation concepts and principles.

31. The student will be able to list indications for mechanical ventilation.
32. The student will be able to select initial tidal volume on MV.
33. The student will be able to select initial frequency of breathing on MV.
34. The student will be able to select initial oxygen percent on MV.

ASSESSMENT OF LEARNER OUTCOMES:

Student progress is evaluated by means that include, but are not limited to, exams, written assignments, and class participation.

SPECIAL NOTES:

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student’s progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

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