RSPC A195: RESPIRATORY PHARMACOLOGY

Item	Value
Curriculum Committee Approval Date	02/07/2024
Top Code	121000 - Respiratory Care/Therapy
Units	1 Total Units
Hours	18 Total Hours (Lecture Hours 18)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Open Entry/Open Exit	No
Grading Policy	Standard Letter (S)

Course Description

A study of the drugs used to treat respiratory pathologies and their administration. Includes bronchodilators, steroids, mucokinetics, antibiotics, and respiratory stimulants and depressants. COREQUISITE: RSPC A185 and RSPC A190. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Apply knowledge of pharmaceutical agents used in the clinical setting for the treatment of pulmonary pathologies including names, dosage, side effects, and precautions.

Course Objectives

- 1. Calculate drug dosage by volume, concentration, and milligrams given appropriate information. SCANS: Thinking.
- 2. Describe the pharmacologic action, indications, dosage, route of administration, duration of actions, method of breakdown, and adverse responses to drugs affecting the autonomic nervous system. SCANS: Information, Thinking.
- 3. Describe the mechanism of action, indications, route of administration and adverse reactions to agents used to treat respiratory pathologies. Agents to include steroids, mucoactive agents, and anti-infective drugs. SCANS: Information, Thinking.
- 4. List and describe the dosage, indications, mode of administration, mechanism of action, and adverse reactions of antibiotics used in the treatment of respiratory infections. SCANS: Information.
- 5. Describe the mechanism of action, indications, modes of administration and adverse reactions of specialty drugs used in respiratory to include stimulants and depressants of the CNS, smoking cessation, and special procedures. SCANS: Information.
- 6. Given clinical situations, describe the drug(s) indicated, methods of evaluating drug effectiveness, dosage and adverse reactions. SCANS: Thinking.

Lecture Content

Dosage and Calculations Determination of drug volume and concentration Determination of milligrams Changes to dosage and concentration Bronchodilator Therapy Review of action of autonomic nervous system Primary aerosolization use Pharmacologic action Indications Routes of administration Duration of action Method of administration Adverse responses Drug synergism Methods of evaluating effectiveness Pulmonary Function Tests Blood levels Steroids/Anti-Inflammatory Agents Actions and adverse reactions Primary systemic use Indications Routes of administration Primary aerosolization use Indications Method of administration Dosage Precautions Specialized drugs Pulmonary Vasodilators Primary aerosolization use Pharmacologic action Indications Method of administration and dosage Adverse responses Respiratory Stimulants and Depressants Pharmacologic action and indications Method of administration and dosage Adverse reactions Reversal agents Surfactants Pharmacologic action and indications Method of administration and dosage Adverse reactions and considerations Smoking Cessation Pharmacology Pharmacologic action and indications Method of administration and dosage Adverse responses and considerations Antimicrobial and Anti-Infective Agents Primary Systemic Use Indications Routes of administration Primary Aerosolization Use Indications Dosage Method of administration Precautions Actions as Related to Specific Types of Respiratory Infections Indications Pharmacological Action Method of Administration Dosage Special Considerations/Precautions Mucoactive Agents Classifications and Indications Pharmacological Action Method of Administration and Dosage Adverse Reactions and Special Considerations

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)

Instructional Techniques

Lecture/discussion: small group discussion of case studies

Reading Assignments

Students will spend 2 hrs/wk reading from assigned textbook.

Writing Assignments

Students will spend 2 hrs/wk completing written homework assignments to apply knowledge of respiratory pharmacology. Students will demonstrate applied knowledge through completion of in-class written quizzes and exams.

Out-of-class Assignments

Students will spend 2 hrs/wk completing homework assignments including the analysis of case studies and the drugs used to treat respiratory pathologies and their administration.

Demonstration of Critical Thinking

Critical thinking is developed by assessing the patient's signs, symptoms, and history.Written technical content examinations and quizzesTechnical case studies

Required Writing, Problem Solving, Skills Demonstration

Written technical content examinations and quizzesWritten analysis of technical case studies

Eligible Disciplines

Respiratory technician: Any bachelor's degree and two years of professional experience, or any associate degree and six years of professional experience.

Textbooks Resources

1. Required Bills, G., Rose, C.. Principles of Pharmacology for Respiratory Care, 3rd ed. Jones and Bartlett, 2019 Rationale: -