



Lakeshore Technical College

10-543-103 Nursing Pharmacology

Course Outcome Summary

Course Information

Alternate Title 10-543-103

Description ...introduces the principles of pharmacology, including drug classifications and their effects on the body. Emphasis is on the use of the components of the nursing process when administering medications. Student must be admitted to the Nursing program. Course requires a minimum grade of "C" or better. Do not register for this class until you are assigned a clinical slot in 543-104 in current or next semester.

Total Credits 2

Total Hours 54

Pre/Corequisites

CONDITION 10-543-1 Nursing-Associate Degree Admissions Requirements Met

Prerequisite Admission to the nursing program

Pre/Corequisite General Anatomy and Physiology or Anatomy and Physiology I. For stand alone PN programs, Body, Structure, and Function may also be substituted

Corequisite 10-806-196 Anat & Phys 2 or 10-806-177 or 10-806-177OL or 10-806-177SA Gen Anat & Phys

Course Competencies

1. Apply basic pharmacology principles to medication management

Linked Core Abilities

Apply learning
Integrate technology

Linked Program Outcomes

ADN1. Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving professional identity as a nurse committed to evidence-based practice, caring, advocacy and quality care
ADN2. Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts
ADN3: Integrate social, mathematical, and physical sciences, pharmacology, and pathophysiology in clinical decision making
ADN4: Provide patient centered care by utilizing the nursing process across diverse populations and health care settings
ADN5: Minimize risk of harm to patients, members of the healthcare team and self through safe individual performance and participation in system effectiveness
ADN7: Use information and technology to communicate, manage data, mitigate error, and support decision-making

Linked External Standards

QSEN: Patient-Centered Care

QSEN: Evidence Based Practice

QSEN: Quality Improvement

QSEN: Safety

QSEN: Informatics

National Patient Safety Goals

Healthy People 2020: Health across life stages

Healthy People 2020: Health communication

Healthy People 2020: Health information technology

Healthy People 2020: Medical product safety

NCLEX: Integrated Processes: Nursing Process

NCLEX: Integrated Processes: Communication and Documentation

NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

NCLEX: Physiological Integrity: Reduction of Risk Potential

NCLEX: Physiological Integrity: Physiological Adaptation

ANA 1: Assessment: The registered nurse collects comprehensive data pertinent to the patient's health or the situation.

ANA 3: Outcomes Identification: The registered nurse identifies expected outcomes for a plan individualized to the patient or the situation.

ANA 5: Implementation: The registered nurse implements the identified plan.

NLN Integrating Concept: Human flourishing

NLN Integrating Concept: Knowledge and science

NLN Integrating Concept: Nursing judgment

NLN Integrating Concept: Quality and safety

NLN Integrating Concept: Spirit of Inquiry

Assessment Strategies

- 1.1. Computerized Test
- 1.2. Class Participation
- 1.3. Quiz
- 1.4. Written Assignment

Criteria

Your performance will be successful when you:

- 1.1. discuss the processes of pharmacokinetics
- 1.2. use multiple professional resources including technology to identify pertinent information related to drugs
- 1.3. describe the processes of pharmacodynamics
- 1.4. consider pharmacodynamic differences across the life span
- 1.5. support your analysis with relevant evidence
- 1.6. use correct medical terminology
- 1.7. differentiate among prescription drugs, over the counter drugs, herbals, and dietary supplements
- 1.8. Identify the significance of the nursing process to medication administration

Learning Objectives

- 1.a. Define common terms and abbreviations used in pharmacology.
- 1.b. Identify common types of medication information resources.

- 1.c. Compare the significance of the chemical name, generic name, and brand name of a medication.
- 1.d. Identify the component parts used in a written prescription order.
- 1.e. Discuss the significance of the following terms in the measurements of medication concentrations in the body: minimum effective concentration (MEC), minimum toxic concentration (MTC), plateau or steady-rate concentration, peak concentration, and trough concentration.
- 1.f. Compare the the action of agonist and antagonist medications.
- 1.g. Differentiate among each of the following adverse medication reactions: side effects, toxic effect, allergic reaction, idiosyncratic reaction, and teratogenic effect.
- 1.h. Describe the importance of variables that impact each phase of pharmacokinetics; such as age, route, dose formulation, disease states, stomach acidity, the solubility of drug in fat, drug protein binding, microsomal enzymes, tubular secretion, and glomerular filtration.
- 1.i. Explain the relationship between plasma concentration of a medication and its "medication half life."
- 1.j. Describe the role of each of the following factors in determining a client's pharmacological response to a medication: age, gender, body weight, body surface area, basal metabolic rate, disease states, genetic factors, placebo effect, time of administration, and tolerance.
- 1.k. Apply the five phases of the nursing process to medication administration.
- 1.l. Discuss the nurse's role in the educational management of medication therapy.
- 1.m. Explore the use of Micromedex and the Davis Drug Guide to find drug information
- 1.n. Describe the role of herbal and dietary supplements in the complementary approach to health care.

2. Examine legal, ethical, social, and cultural issues related to medication administration

Linked Core Abilities

Apply learning
Work cooperatively

Linked Program Outcomes

ADN1. Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving professional identity as a nurse committed to evidence-based practice, caring, advocacy and quality care
ADN2. Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts
ADN3: Integrate social, mathematical, and physical sciences, pharmacology, and pathophysiology in clinical decision making
ADN4: Provide patient centered care by utilizing the nursing process across diverse populations and health care settings
ADN5: Minimize risk of harm to patients, members of the healthcare team and self through safe individual performance and participation in system effectiveness
ADN7: Use information and technology to communicate, manage data, mitigate error, and support decision-making

Linked External Standards

QSEN: Patient-Centered Care

QSEN: Evidence Based Practice

QSEN: Quality Improvement

QSEN: Safety

QSEN: Informatics

National Patient Safety Goals

Healthy People 2020: Access to health services

Healthy People 2020: DATA 2020

Healthy People 2020: Health communication

Healthy People 2020: Medical product safety

Healthy People 2020: Social determinants of health

N6

NCLEX: Integrated Processes: Nursing Process

NCLEX: Integrated Processes: Communication and Documentation

NCLEX: Psychosocial Integrity: Cultural Awareness/Cultural Influences on Health

NCLEX: Physiological Integrity: Reduction of Risk Potential

NCLEX: Safe and Effective Care Environment: Management of Care: Ethical Practice

NCLEX: Safe and Effective Care Environment: Management of Care: Information Technology

NCLEX: Safe and Effective Care Environment: Management of Care: Legal Rights and Responsibilities

NCLEX: Safe and Effective Care Environment: Management of Care: Performance Improvement (Quality Improvement)

NCLEX: Safe and Effective Care Environment: Safety and Infection Control: Accident/Error/Injury Prevention

NCLEX: Physiological Integrity: Reduction of Risk Potential - reducing the likelihood that clients will develop complications or health problems related to existing conditions, treatments or procedures.

ANA 1: Assessment: The registered nurse collects comprehensive data pertinent to the patient's health or the situation.

ANA 3: Outcomes Identification: The registered nurse identifies expected outcomes for a plan individualized to the patient or the situation.

ANA 5: Implementation: The registered nurse implements the identified plan.

NLN Core Value: Ethics

NLN Core Value: Patient Centeredness

NLN Core Value: Integrity

NLN Integrating Concept: Professional identity

NLN Integrating Concept: Human flourishing

NLN Integrating Concept: Knowledge and science

NLN Integrating Concept: Nursing judgment

NLN Integrating Concept: Quality and safety

NLN Integrating Concept: Spirit of Inquiry

Assessment Strategies

- 2.1. Computerized Test
- 2.2. Class Participation
- 2.3. Quiz

Criteria

Your performance will be successful when you:

- 2.1. support your analysis and discussion with relevant evidence
- 2.2. identify drug administration guidelines within the State Nurse Practice Act
- 2.3. identify nursing responsibility to prevent and respond to medication errors
- 2.4. identify nursing responsibilities associated with controlled substances
- 2.5. identify ethical responsibilities as they relates to medication errors
- 2.6. nursing response reflects respect for patient's rights and responsibilities with drug therapy
- 2.7. nursing actions are within the scope of nursing practice as it relates to the administration of medication.
- 2.8. demonstrate patient-centered care by respecting patient's gender, psychosocial and cultural needs
- 2.9. identify nursing responsibilities associated with safe medication administration
- 2.10. identify nursing responsibilities associated with patient medication education

Learning Objectives

- 2.a. Describe the differences between the federal legislation governing the promotion and sale of prescription drugs and the legislation governing OTC drugs, herbals and dietary supplements.

- 2.b. Examine the Nurse Practice Act for medication administration implications
- 2.c. Provide examples of the scheduled categories for controlled substances.
- 2.d. Examine the Code of Ethics and discuss the ethical aspects of medication administration.

- 2.e. Discuss the role of the multidisciplinary team (primary provider, pharmacist, nurse) and patient in relation to medication administration.
- 2.f. Explain the effect of socio-cultural factors on a patient's response to and compliance with medication therapy.
- 2.g. Discuss the role of the Pregnancy Safety Categories in relation to safe medication administration for the pregnant woman
- 2.h. Discuss the significance of the "6 Rights of Medication Administration" in preventing medication errors.
- 2.i. Discuss the use of established national safety standards to promote medication safety
- 2.j. Discuss safe disposal of medications in the home and healthcare setting
- 2.k. Discuss the nurses' responsibilities to prevent, respond, report and document medication errors
- 2.l. Discuss the importance of patient education in the safe and efficient administration of drugs.

3. Apply components of the nursing process to the administration of antimicrobial drugs

Linked Core Abilities

Apply learning

Linked Program Outcomes

ADN1. Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving professional identity as a nurse committed to evidence-based practice, caring, advocacy and quality care

ADN2. Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts

ADN3: Integrate social, mathematical, and physical sciences, pharmacology, and pathophysiology in clinical decision making

ADN4: Provide patient centered care by utilizing the nursing process across diverse populations and health care settings

ADN5: Minimize risk of harm to patients, members of the healthcare team and self through safe individual performance and participation in system effectiveness

ADN7: Use information and technology to communicate, manage data, mitigate error, and support decision-making

Linked External Standards

QSEN: Patient-Centered Care

QSEN: Evidence Based Practice

QSEN: Quality Improvement

QSEN: Safety

National Patient Safety Goals

Healthy People 2020: Healthcare associated infections

Healthy People 2020: Health communication

Healthy People 2020: Immunizations

Healthy People 2020: Infectious diseases

Healthy People 2020: Medical product safety

Healthy People 2020: Social determinants of health

N6

NCLEX: Integrated Processes: Nursing Process

NCLEX: Integrated Processes: Communication and Documentation

NCLEX: Psychosocial Integrity: Cultural Awareness/Cultural Influences on Health

NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

NCLEX: Physiological Integrity: Reduction of Risk Potential

NCLEX: Safe and Effective Care Environment: Management of Care: Ethical Practice

NCLEX: Safe and Effective Care Environment: Safety and Infection Control: Accident/Error/Injury Prevention

NCLEX: Physiological Integrity: Reduction of Risk Potential - reducing the likelihood that clients will develop complications or health problems related to existing conditions, treatments or procedures.

ANA 1: Assessment: The registered nurse collects comprehensive data pertinent to the patient's health or the situation.

ANA 3: Outcomes Identification: The registered nurse identifies expected outcomes for a plan individualized to the patient or the situation.

ANA 5: Implementation: The registered nurse implements the identified plan.

NLN Core Value: Patient Centeredness

NLN Integrating Concept: Professional identity

NLN Integrating Concept: Human flourishing

NLN Integrating Concept: Knowledge and science

NLN Integrating Concept: Nursing judgment

NLN Integrating Concept: Quality and safety

NLN Integrating Concept: Spirit of Inquiry

Assessment Strategies

- 3.1. Computerized Test
- 3.2. Class Participation
- 3.3. Article Review
- 3.4. Quiz
- 3.5. Written Assignment
- 3.6. Written Exam

Criteria

Your performance will be successful when you:

- 3.1. cite the classifications and actions of antimicrobial drugs
- 3.2. give examples of when, how and to whom antimicrobial drugs may be administered
- 3.3. identify the side effects and special considerations associated with antimicrobial therapy
- 3.4. identify considerations and implications of using antimicrobial medications across the life span
- 3.5. apply evidence-based concepts when using the nursing process
- 3.6. identify indications, side effects and potential drug interactions associated with the use of herbal supplements
- 3.7. identify and interpret related laboratory tests
- 3.8. pronounce the generic drug names

Learning Objectives

- 3.a. Apply the knowledge of general principles of antimicrobial therapy when discussing medication.
- 3.b. Identify the major classes of antimicrobial agents and the drugs found in each class.
- 3.c. Explain how antibiotics, antivirals, antituberculars, and antifungals work to rid the body of infections.
- 3.d. Describe the significance of antibiotic resistance and strategies for prevention.
- 3.e. Differentiate between narrow and broad spectrum antimicrobial agents
- 3.f. Apply the appropriate nursing actions in the administration of each class of antimicrobial agents.
- 3.g. Discuss the indications, cautions, contraindications, mechanisms of action, side effects, toxicity, and therapeutic effects related to antimicrobial agents.
- 3.h. List the information clients should be taught about their antimicrobial therapy.
- 3.i. Discuss the significance of monitoring lab data (CBD, ALT, AST, BUN and creatinine) when

administering antimicrobial agents.

3.j. Discuss principles and significance of using evidence-based recommendations in healthcare.

4. Apply components of the nursing process to the administration of autonomic nervous system drugs

Linked Core Abilities

Apply learning

Linked Program Outcomes

ADN1. Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving professional identity as a nurse committed to evidence-based practice, caring, advocacy and quality care

ADN2. Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts

ADN3: Integrate social, mathematical, and physical sciences, pharmacology, and pathophysiology in clinical decision making

ADN4: Provide patient centered care by utilizing the nursing process across diverse populations and health care settings

ADN5: Minimize risk of harm to patients, members of the healthcare team and self through safe individual performance and participation in system effectiveness

ADN7: Use information and technology to communicate, manage data, mitigate error, and support decision-making

Linked External Standards

QSEN: Patient-Centered Care

QSEN: Evidence Based Practice

QSEN: Quality Improvement

QSEN: Safety

National Patient Safety Goals

Healthy People 2020: Health communication

Healthy People 2020: Medical product safety

Healthy People 2020: Social determinants of health

N6

NCLEX: Integrated Processes: Nursing Process

NCLEX: Integrated Processes: Communication and Documentation

NCLEX: Psychosocial Integrity: Cultural Awareness/Cultural Influences on Health

NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

NCLEX: Physiological Integrity: Reduction of Risk Potential

NCLEX: Safe and Effective Care Environment: Management of Care: Ethical Practice

NCLEX: Safe and Effective Care Environment: Safety and Infection Control: Accident/Error/Injury Prevention

NCLEX: Physiological Integrity: Reduction of Risk Potential - reducing the likelihood that clients will develop complications or health problems related to existing conditions, treatments or procedures.

ANA 1: Assessment: The registered nurse collects comprehensive data pertinent to the patient's health or the situation.

ANA 3: Outcomes Identification: The registered nurse identifies expected outcomes for a plan individualized to the patient or the situation.

ANA 5: Implementation: The registered nurse implements the identified plan.

NLN Core Value: Patient Centeredness

NLN Integrating Concept: Professional identity

NLN Integrating Concept: Human flourishing

NLN Integrating Concept: Knowledge and science

NLN Integrating Concept: Nursing judgment

NLN Integrating Concept: Quality and safety

NLN Integrating Concept: Spirit of Inquiry

Assessment Strategies

- 4.1. Written Exam
- 4.2. Class Participation
- 4.3. Quiz

Criteria

Your performance will be successful when you:

- 4.1. cite the classifications and actions of autonomic nervous system drugs
- 4.2. give examples of when, how and to whom autonomic nervous system drugs may be administered
- 4.3. identify the side effects and special considerations associated with autonomic nervous system drugs
- 4.4. nursing response evidences considerations and implications of using autonomic nervous system drugs across the life span
- 4.5. apply evidence-based concepts when using the nursing process
- 4.6. identify indications, side effects and potential drug interactions associated with the use of herbal supplements
- 4.7. identify and interpret related laboratory tests

Learning Objectives

- 4.a. Apply the knowledge of the functions of the autonomic nervous system when discussing medication.
- 4.b. Define the medical terms related to components of the autonomic nervous system.
- 4.c. Explain how medications that mimic and block the sympathetic and parasympathetic nervous systems have opposite effects and similar effects on organ tissue.
- 4.d. Discuss the mechanism of action, therapeutic effects, uses, and adverse and toxic effects, and antidotes to overdose for adrenergic agonist medications.
- 4.e. Discuss the mechanism of action, therapeutic effects, uses, and adverse and toxic effects, and antidotes to overdose for adrenergic blocking medications.
- 4.f. Discuss the mechanism of action, therapeutic effects, uses, and adverse and toxic effects, and antidotes to overdose for cholinergic medications.
- 4.g. Discuss the mechanism of action, therapeutic effects, uses, and adverse and toxic effects, and antidotes to overdose for cholinergic blocking medications.
- 4.h. Discuss the mechanism of action, therapeutic effects, uses, and adverse and toxic effects, and antidotes to overdose for antispasmodic medications.
- 4.i. Apply the nursing process as it relates to clients receiving autonomic nervous system medications.
- 4.j. Identify situations in which autonomic nervous system medications may and may not be administered.

5. Apply components of the nursing process to the administration of respiratory system drugs

Linked Core Abilities

Apply learning

Linked Program Outcomes

ADN1. Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving professional identity as a nurse committed to evidence-based practice, caring, advocacy and quality care

ADN2. Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts

ADN3. Integrate social, mathematical, and physical sciences, pharmacology, and pathophysiology in clinical decision making

ADN4: Provide patient centered care by utilizing the nursing process across diverse populations and health care settings

ADN5: Minimize risk of harm to patients, members of the healthcare team and self through safe individual performance and participation in system effectiveness

ADN7: Use information and technology to communicate, manage data, mitigate error, and support decision-making

Linked External Standards

QSEN: Patient-Centered Care

QSEN: Evidence Based Practice

QSEN: Quality Improvement

QSEN: Safety

National Patient Safety Goals

Healthy People 2020: Health communication

Healthy People 2020: Medical product safety

Healthy People 2020: Social determinants of health

N6

NCLEX: Integrated Processes: Nursing Process

NCLEX: Integrated Processes: Communication and Documentation

NCLEX: Psychosocial Integrity: Cultural Awareness/Cultural Influences on Health

NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

NCLEX: Physiological Integrity: Reduction of Risk Potential

NCLEX: Safe and Effective Care Environment: Management of Care: Ethical Practice

NCLEX: Safe and Effective Care Environment: Safety and Infection Control: Accident/Error/Injury Prevention

NCLEX: Physiological Integrity: Reduction of Risk Potential - reducing the likelihood that clients will develop complications or health problems related to existing conditions, treatments or procedures.

ANA 1: Assessment: The registered nurse collects comprehensive data pertinent to the patient's health or the situation.

ANA 3: Outcomes Identification: The registered nurse identifies expected outcomes for a plan individualized to the patient or the situation.

ANA 5: Implementation: The registered nurse implements the identified plan.

NLN Core Value: Patient Centeredness

NLN Integrating Concept: Professional identity

NLN Integrating Concept: Human flourishing

NLN Integrating Concept: Knowledge and science

NLN Integrating Concept: Nursing judgment

NLN Integrating Concept: Quality and safety

NLN Integrating Concept: Spirit of Inquiry

Assessment Strategies

- 5.1. Computerized Test
- 5.2. Article Review
- 5.3. Class Participation
- 5.4. Quiz
- 5.5. Written Assignment

Criteria

Your performance will be successful when you:

- 5.1. cite the classifications and actions of respiratory system drugs
- 5.2. give examples of when, how and to whom respiratory system drugs may be administered
- 5.3. identify the side effects and special considerations associated with respiratory system medications
- 5.4. identify the considerations and implications of using respiratory systems medications across the life span
- 5.5. apply evidence-based concepts when using the nursing process

- 5.6. identify indications, side effects and potential drug interactions associated with the use of herbal supplements
- 5.7. identify and interpret related laboratory tests
- 5.8. pronounce the generic names of the respiratory drugs

Learning Objectives

- 5.a. Classify the medications used in the treatment of upper and lower respiratory system disease processes.
- 5.b. Apply the knowledge of anatomy and physiology of the upper and lower respiratory system when discussing medications.
- 5.c. Define the medical terms that are related to respiratory medications.
- 5.d. Discuss indications and contraindications for administering medications in the most common upper and lower respiratory disorders; colds, allergies, asthma, bronchitis, emphysema.
- 5.e. Identify the most commonly used classifications of medications for treating upper and lower respiratory disorders and discuss evidence-based recommendations for selection.
- 5.f. Describe the action, therapeutic effects and side effects of the most commonly used medications on the respiratory system across the lifespan.
- 5.g. Apply knowledge of respiratory rate, oxygen saturation and lung sound normal findings when making clinical decisions related to administration of respiratory medications.
- 5.h. Identify relevant lab values and diagnostic tests that are considered when making clinical decisions related to the administration of respiratory medications.
- 5.i. Apply the nursing process as it related to administering medications to patients with upper and lower respiratory tract disease.
- 5.j. Discuss the differences and efficacy in delivery methods for asthma inhaler medications.
- 5.k. Compare the safety and effectiveness of herbal and dietary supplements used for upper airway respiratory disorders.

6. Apply components of the nursing process to the administration of cardiovascular and renal systems drugs

Linked Core Abilities

Apply learning

Linked Program Outcomes

- ADN1. Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving professional identity as a nurse committed to evidence-based practice, caring, advocacy and quality care
- ADN2. Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts
- ADN3. Integrate social, mathematical, and physical sciences, pharmacology, and pathophysiology in clinical decision making
- ADN4. Provide patient centered care by utilizing the nursing process across diverse populations and health care settings
- ADN5. Minimize risk of harm to patients, members of the healthcare team and self through safe individual performance and participation in system effectiveness
- ADN7. Use information and technology to communicate, manage data, mitigate error, and support decision-making

Linked External Standards

QSEN: Patient-Centered Care

QSEN: Evidence Based Practice

QSEN: Quality Improvement

QSEN: Safety

National Patient Safety Goals

Healthy People 2020: Health communication

Healthy People 2020: Medical product safety

Healthy People 2020: Social determinants of health

N6

NCLEX: Integrated Processes: Nursing Process

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NCLEX: Physiological Integrity: Reduction of Risk Potential

NCLEX: Safe and Effective Care Environment: Management of Care: Ethical Practice

NCLEX: Safe and Effective Care Environment: Safety and Infection Control: Accident/Error/Injury Prevention

NCLEX: Physiological Integrity: Reduction of Risk Potential - reducing the likelihood that clients will develop complications or health problems related to existing conditions, treatments or procedures.

ANA 1: Assessment: The registered nurse collects comprehensive data pertinent to the patient's health or the situation.

ANA 3: Outcomes Identification: The registered nurse identifies expected outcomes for a plan individualized to the patient or the situation.

ANA 5: Implementation: The registered nurse implements the identified plan.

NLN Core Value: Patient Centeredness

NLN Integrating Concept: Professional identity

NLN Integrating Concept: Human flourishing

NLN Integrating Concept: Knowledge and science

NLN Integrating Concept: Nursing judgment

NLN Integrating Concept: Quality and safety

NLN Integrating Concept: Spirit of Inquiry

Assessment Strategies

- 6.1. Computerized Test
- 6.2. Class Participation
- 6.3. Quiz
- 6.4. Written Assignment

Criteria

Your performance will be successful when you:

- 6.1. cite the classifications and actions of renal system drugs and cardiovascular drugs
- 6.2. cite the classifications and actions of cardiovascular drugs
- 6.3. give examples of when, how and to whom cardiovascular system drugs may be administered
- 6.4. give examples of when, how and to whom renal system drugs may be administered
- 6.5. identify the side effects and special considerations associated with cardiovascular and renal system drug therapy
- 6.6. identify considerations and implications of using cardiovascular system medications across the life span
- 6.7. identify considerations and implications of using renal system medications across the life span
- 6.8. apply evidence-based concepts when using the nursing process
- 6.9. identify indications, side effects and potential drug interactions associated with the use of herbal supplements
- 6.10. identify and interpret related laboratory tests
- 6.11. pronounce the generic names of renal and cardiovascular drugs

Learning Objectives

- 6.a. Apply the knowledge of the function and physiology of the cardiovascular and renal system when discussing medications.
- 6.b. Define the medical terms that are related to cardiovascular medications.
- 6.c. Describe the indication and contraindications for administering medications in the most common cardiovascular disorders: hyperlipidemia, hypertension, heart failure, angina, myocardial infarction and thrombophlebitis.
- 6.d. Describe the action, therapeutic effects and side effects of the most commonly used medications on the cardiovascular and renal system across the lifespan.

- 6.e. Identify the most commonly used classifications of medications for regulating blood pressure and discuss evidence-based recommendations for selection.
- 6.f. Apply knowledge of blood pressure and pulse normal values when making clinical decisions related to administration of antihypertensive medications.
- 6.g. Identify relevant lab values that are considered when making clinical decisions related to the administration of cardiovascular medications.
- 6.h. Apply the nursing process as it related to administering medications to patients with cardiovascular disorders.
- 6.i. Explain the nursing process as it relates to clients with cardiovascular disorders.
- 6.j. Compare the indications, cautions, contraindications, drug interactions, adverse effects, routes of administration, reversal agents of various coagulation modifier drugs: aspirin, heparin, low molecular weight heparin, warfarin.
- 6.k. Discuss the significance of the lab tests used with the administration of warfarin, heparin and low molecular weight heparin to assess for therapeutic and adverse effects.
- 6.l. Compare the safety and effectiveness of herbal and dietary supplements used for hyperlipidemia.

7. **Apply components of the nursing process to the administration of gastrointestinal system drugs**

Linked Core Abilities

Apply learning

Linked Program Outcomes

ADN1. Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving professional identity as a nurse committed to evidence-based practice, caring, advocacy and quality care

ADN2. Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts

ADN3: Integrate social, mathematical, and physical sciences, pharmacology, and pathophysiology in clinical decision making

ADN4: Provide patient centered care by utilizing the nursing process across diverse populations and health care settings

ADN5: Minimize risk of harm to patients, members of the healthcare team and self through safe individual performance and participation in system effectiveness

ADN7: Use information and technology to communicate, manage data, mitigate error, and support decision-making

Linked External Standards

QSEN: Patient-Centered Care

QSEN: Evidence Based Practice

QSEN: Quality Improvement

QSEN: Safety

National Patient Safety Goals

Healthy People 2020: Health communication

Healthy People 2020: Medical product safety

Healthy People 2020: Social determinants of health

N6

NCLEX: Integrated Processes: Nursing Process

NCLEX: Integrated Processes: Communication and Documentation

NCLEX: Psychosocial Integrity: Cultural Awareness/Cultural Influences on Health

NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

NCLEX: Physiological Integrity: Reduction of Risk Potential

NCLEX: Safe and Effective Care Environment: Management of Care: Ethical Practice

NCLEX: Safe and Effective Care Environment: Safety and Infection Control: Accident/Error/Injury Prevention

NCLEX: Physiological Integrity: Reduction of Risk Potential - reducing the likelihood that clients will develop complications or health problems related to existing conditions, treatments or procedures.

ANA 1: Assessment: The registered nurse collects comprehensive data pertinent to the patient's health or the situation.

ANA 3: Outcomes Identification: The registered nurse identifies expected outcomes for a plan individualized to the patient or the situation.

ANA 5: Implementation: The registered nurse implements the identified plan.

NLN Core Value: Patient Centeredness

NLN Integrating Concept: Professional identity

NLN Integrating Concept: Human flourishing

NLN Integrating Concept: Knowledge and science

NLN Integrating Concept: Nursing judgment

NLN Integrating Concept: Quality and safety

NLN Integrating Concept: Spirit of Inquiry

Assessment Strategies

- 7.1. Computerized Test
- 7.2. Class Participation
- 7.3. Quiz
- 7.4. Written Assignment

Criteria

Your performance will be successful when you:

- 7.1. cite the classifications and actions of gastrointestinal system drugs
- 7.2. give examples of when, how and to whom gastrointestinal system drugs may be administered
- 7.3. identify the side effects and special considerations associated with gastrointestinal system drug therapy
- 7.4. identify considerations and implications of using gastrointestinal system medications across the life span
- 7.5. apply evidence-based concepts when using the nursing process
- 7.6. identify indications, side effects and potential drug interactions associated with the use of herbal supplements
- 7.7. identify and interpret related laboratory tests
- 7.8. pronounce the generic names of gastrointestinal drugs

Learning Objectives

- 7.a. Apply the knowledge of the function and physiology of the gastrointestinal system when administering medications.
- 7.b. Define the medical terms that are related to GI medications.
- 7.c. Discuss indications and contraindications for administering medications in the most common GI disorders; peptic ulcer disease, gastrointestinal reflux disease, nausea/emesis, constipation & diarrhea.
- 7.d. Describe the action, therapeutic effects and side effects of the most commonly used classification of GI medications across the life span.
- 7.e. Apply knowledge of abdominal assessment findings when making clinical decisions related to administration of GI medications.
- 7.f. Identify interventions commonly used in emergency treatment of poisoning.
- 7.g. Identify relevant lab values and diagnostic tests that are considered when making clinical decisions related to the administration of GI medications.
- 7.h. Discuss the drug-drug & drug-food interactions with GI medications.
- 7.i. Compare the safety and effectiveness of herbal and dietary supplements used for GI disorders.
- 7.j. Apply the nursing process as it relates to medication administration to patients with GI disorders.

8. Apply components of the nursing process to the administration of central nervous system drugs

Linked Core Abilities

Apply learning

Linked Program Outcomes

ADN1. Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving professional identity as a nurse committed to evidence-based practice, caring, advocacy and quality care
ADN2. Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts
ADN3: Integrate social, mathematical, and physical sciences, pharmacology, and pathophysiology in clinical decision making
ADN4: Provide patient centered care by utilizing the nursing process across diverse populations and health care settings
ADN5: Minimize risk of harm to patients, members of the healthcare team and self through safe individual performance and participation in system effectiveness
ADN7: Use information and technology to communicate, manage data, mitigate error, and support decision-making

Linked External Standards

QSEN: Patient-Centered Care

QSEN: Evidence Based Practice

QSEN: Quality Improvement

QSEN: Safety

National Patient Safety Goals

Healthy People 2020: Health communication

Healthy People 2020: Medical product safety

Healthy People 2020: Social determinants of health

N6

NCLEX: Integrated Processes: Nursing Process

NCLEX: Integrated Processes: Communication and Documentation

NCLEX: Psychosocial Integrity: Cultural Awareness/Cultural Influences on Health

NCLEX: Physiological Integrity: Pharmacological and Parenteral Therapies

NCLEX: Physiological Integrity: Reduction of Risk Potential

NCLEX: Safe and Effective Care Environment: Management of Care: Ethical Practice

NCLEX: Safe and Effective Care Environment: Safety and Infection Control: Accident/Error/Injury Prevention

NCLEX: Physiological Integrity: Reduction of Risk Potential - reducing the likelihood that clients will develop complications or health problems related to existing conditions, treatments or procedures.

ANA 1: Assessment: The registered nurse collects comprehensive data pertinent to the patient's health or the situation.

ANA 3: Outcomes Identification: The registered nurse identifies expected outcomes for a plan individualized to the patient or the situation.

ANA 5: Implementation: The registered nurse implements the identified plan.

NLN Core Value: Patient Centeredness

NLN Integrating Concept: Professional identity

NLN Integrating Concept: Human flourishing

NLN Integrating Concept: Knowledge and science

NLN Integrating Concept: Nursing judgment

NLN Integrating Concept: Quality and safety

NLN Integrating Concept: Spirit of Inquiry

Assessment Strategies

8.1. Computerized Test

- 8.2. Class Participation
- 8.3. Quiz
- 8.4. Written Assignment

Criteria

Your performance will be successful when you:

- 8.1. cite the classifications and actions of central nervous system drugs
- 8.2. cite the classifications and actions of drugs used to treat psychiatric disorders
- 8.3. give examples of when, how and to whom central nervous system drugs may be administered
- 8.4. identify the side effects and special considerations associated with central nervous system drug therapy
- 8.5. identify considerations and implications of using central nervous system medications across the life span
- 8.6. apply evidence-based concepts when using the nursing process
- 8.7. identify indications, side effects and potential drug interactions associated with the use of herbal supplements
- 8.8. identify and interpret related laboratory tests
- 8.9. pronounce the generic names of the central nervous system drugs

Learning Objectives

- 8.a. Apply the knowledge of the function of the Central and Autonomic Nervous Systems to medication administration.
- 8.b. Define the medical terms that are related to CNS medications.
- 8.c. Discuss indications and contraindications for administering medications in the most common CNS disorders; sleep disorders, anxiety, depression, bipolar, schizophrenia, Parkinson's disease, & epilepsy.
- 8.d. Describe the action, therapeutic effects and side effects of the most commonly used classification of CNS medications across the life span.
- 8.e. Discuss the effects of hypnotics on REM sleep.
- 8.f. Apply knowledge of mental status assessments, respiratory rate, oxygen saturation and blood pressure findings when making clinical decisions related to administration of CNS medications.
- 8.g. Identify relevant lab values and diagnostic tests that are considered when making clinical decisions related to the administration of CNS medications.
- 8.h. Apply the nursing process as it relates to administering medications to patients with CNS disorders.
- 8.i. Discuss the drug-drug & drug-food interactions with CNS medications.
- 8.j. Compare the safety and effectiveness of herbal and dietary supplements used for CNS disorders.
- 8.k. Determine the reversal agents used for benzodiazepenes and the safety implications when using reversal agents.
- 8.l. Identify safety considerations related to the administration of CNS medications.
- 8.m. Apply the nursing process as it relates to medication administration to patients with CNS and mental health disorders.

9. Apply components of the nursing process to the administration of endocrine system drugs

Linked Core Abilities

Apply learning

Linked Program Outcomes

ADN1. Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving professional identity as a nurse committed to evidence-based practice, caring, advocacy and quality care

ADN2. Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts

ADN3: Integrate social, mathematical, and physical sciences, pharmacology, and pathophysiology in clinical decision making

ADN4: Provide patient centered care by utilizing the nursing process across diverse populations and health care settings

ADN5: Minimize risk of harm to patients, members of the healthcare team and self through safe individual performance and participation in system effectiveness

ADN7: Use information and technology to communicate, manage data, mitigate error, and support decision-making

Linked External Standards

QSEN: Patient-Centered Care

QSEN: Evidence Based Practice

QSEN: Quality Improvement

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Assessment Strategies

- 9.1. Computerized Test
- 9.2. Class Participation
- 9.3. Quiz
- 9.4. Written Assignment
- 9.5. Article Review

Criteria

Your performance will be successful when you:

- 9.1. cite the classifications and actions of endocrine system drugs
- 9.2. give examples of when, how and to whom endocrine system drugs may be administered
- 9.3. identify the side effects and special considerations associated with endocrine system drug therapy
- 9.4. identify and explain the considerations and implications of using endocrine system medications across the life span
- 9.5. apply evidence-based concepts when using the nursing process
- 9.6. identify indications, side effects and potential drug interactions associated with the use of herbal supplements
- 9.7. identify and interpret related laboratory tests

- 9.8. pronounce the generic names of endocrine drugs

Learning Objectives

- 9.a. Apply the knowledge of the normal function and physiology of the endocrine system related to medication administration.
- 9.b. Define medical terms that are related to endocrine medications.
- 9.c. Describe the endocrine negative feedback system.
- 9.d. Differentiate between Type 1 & Type 2 diabetes and treatments for same.
- 9.e. Discuss indications and contraindications for administering medications in the most common endocrine disorders; diabetes, hyper/hypothyroidism, inflammatory/adrenal disorders.
- 9.f. Identify the most commonly used classifications of medications for endocrine disorders and discuss evidence-based recommendations for selection.
- 9.g. Describe the action, therapeutic effects and side effects of the most commonly used medications on the endocrine system across the lifespan.
- 9.h. Apply knowledge hypo/hyperglycemic symptoms when making clinical decisions related to administration of diabetic medications.
- 9.i. Apply knowledge hypo/hyperthyroid symptoms when making clinical decisions related to administration of thyroid medications.
- 9.j. Identify relevant lab values and diagnostic tests that are considered when making clinical decisions related to the administration of endocrine medications.
- 9.k. Apply the nursing process as it relates to medication administration to patients with endocrine disorders.
- 9.l. Compare the safety and effectiveness of herbal and dietary supplements used for endocrine disorders.

10. Apply components of the nursing process to the administration of analgesic and musculoskeletal system drugs

Linked Core Abilities

Apply learning

Linked Program Outcomes

ADN1. Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving professional identity as a nurse committed to evidence-based practice, caring, advocacy and quality care

ADN2. Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts

ADN3: Integrate social, mathematical, and physical sciences, pharmacology, and pathophysiology in clinical decision making

ADN4: Provide patient centered care by utilizing the nursing process across diverse populations and health care settings

ADN5: Minimize risk of harm to patients, members of the healthcare team and self through safe individual performance and participation in system effectiveness

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Linked External Standards

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QSEN: Safety

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NLN Integrating Concept: Human flourishing

NLN Integrating Concept: Knowledge and science

NLN Integrating Concept: Nursing judgment

NLN Integrating Concept: Quality and safety

NLN Integrating Concept: Spirit of Inquiry

Assessment Strategies

- 10.1. Computerized Test
- 10.2. Class Participation
- 10.3. Quiz
- 10.4. Written Assignment

Criteria

Your performance will be successful when you:

- 10.1. cite the classifications and actions of analgesics
- 10.2. cite the classifications and actions of musculoskeletal system drugs
- 10.3. give examples of when, how and to whom analgesics and musculoskeletal system drugs may be administered
- 10.4. identify the side effects and special considerations associated with analgesics
- 10.5. identify the side effects and special considerations associated with musculoskeletal system drugs
- 10.6. identify the considerations and implications of using analgesics across the life span
- 10.7. identify the considerations and implications of using musculoskeletal system medications across the life span
- 10.8. apply evidence-based concepts when using the nursing process
- 10.9. pronounce the generic names of analgesic and musculoskeletal drugs

Learning Objectives

- 10.a. Apply the knowledge of the autonomic and central nervous system to the administration of analgesic and musculoskeletal medication.
- 10.b. Define the medical terms that are related to analgesic and musculoskeletal medications.
- 10.c. Examine personal biases and fallacies related to pain management including management of pain in patients with substance abuse.
- 10.d. Discuss indications and contraindications for administering analgesic and musculoskeletal medications.
- 10.e. Describe the action, therapeutic effects and side effects of the most commonly used classification of analgesic and musculoskeletal medications across the life span.
- 10.f. Apply knowledge of mental status assessments, respiratory rate, oxygen saturation and blood pressure findings when making clinical decisions related to administration of analgesic and musculoskeletal medications.
- 10.g. Identify relevant lab values that are considered when making clinical decisions related to the administration of analgesic and musculoskeletal medications.
- 10.h. Determine the reversal agents used for opioids and the safety implications when using reversal agents.
- 10.i. Identify safety considerations related to the administration of analgesic and musculoskeletal medications.

- 10.j. Discuss the application of using equianalgesic dosing when administering opioids.
- 10.k. Apply the use of the Controlled Substance Schedule when administering opioids.
- 10.l. Identify correct disposal of opioids and transdermal patches.
- 10.m. Apply the nursing process as it relates to medication administration to patients with pain and musculoskeletal disorders.