

Virginia Western Community College

NSG 170

Introduction to Health/Illness Concepts

Prerequisites: BIO 142: Anatomy & Physiology I or NAS 162: Health Science II or BIO 232: Human Anatomy and Physiology; NSG 100: Introduction to Nursing Concepts; NSG 106: Competencies for Nursing Practice; NSG 130: Professional Nursing Concepts; NSG 200: Health Promotion & Assessment

Co-requisites: BIO 150: Introductory Microbiology or BIO 205: General Microbiology; NSG 152 Health Care Participant

Course Description

Focuses on the nursing care of individuals and/or families throughout the lifespan with an emphasis on health and illness concepts. Includes concepts of nursing care for the antepartum client and clients with common and predictable illnesses. Provides supervised learning experiences in college nursing laboratories, clinical/community settings, and/or simulated environments.

Semester Credits: 6

Lecture Hours: 4

Lab/Clinical/Internship Hours: 6

Required Materials

Textbooks:

1. CoursePoint for Nursing Concepts 6 book library year one - ISBN: 9781975226060
2. vSim for Maternity/Pediatrics. Lippincott - ISBN: 9781975197841
3. Kaplan

Supplementary Materials:

Kaplan Resources

Course Outcomes

At the completion of this course, the student should be able to:

1. Accurately assess clients who are experiencing common and predictable health problems.
2. Use clinical judgement and evidence-based care related to the concepts of fluid and electrolytes, cellular regulation, metabolism, sexuality, reproduction, thermoregulation, gas exchange and perfusion.
3. Differentiate relevant cues in the care of clients who are experiencing common predictable health problems.
4. Prioritize safety measures in the care of clients with varied health problems.
5. Use evidence to support and plan appropriate nursing care.
6. Recognize the impact of personal beliefs, values and attitudes in the development of professionalism and professional behaviors.

7. Use technology and information management tools to plan and provide safe and effective patient care.
8. Compare and contrast the roles of the health team members in the planning and provision of client care.
9. Demonstrate the principles of Pharmacology and parenteral therapies throughout the lifespan.
10. Demonstrate preparation and administration of pharmacological therapies to include parental

Topical Description

Major topics to be included:

1. Fluid & Electrolytes (F&E) Concept

Basic principles of F&E; Risk factors related to imbalances in F&E

Prevention strategies of F&E

Assessment and diagnostics

Clinical judgement related to imbalances in F&E

Skills related to intravenous therapy and blood transfusion

Pharmacological interventions: types of IV fluids, electrolyte replacements

Exemplars: specific electrolyte imbalances, dehydration, fluid volume overload

Pharmacology: Isotonic, Hypertonic, Hypotonic, Sodium, Magnesium, Potassium, Phosphorus, Calcium

2. Cellular Regulation Concept

Basic principles of cellular regulation; Risk factors related to imbalances in cellular regulation

Prevention strategies

Assessment and diagnostics

Clinical judgement related to imbalances in cellular regulation

Pharmacological interventions: chemotherapy, biologic response modifiers, radiation

Exemplars: breast cancer, colon cancer, leukemia (child)

Pharmacology: Selective estrogen receptor modulator (Tamoxifen), Disease-Modifying Antirheumatic drugs (DMARDs)– (ex. Methotrexate), Alkylating Agents (cisplatin), Anti-tumor (Bleomycin, Dactinomycin), Antiemetics- 5-HT₃ Antagonist -ondansetron, Prokinetic agents- metoclopramide, Cannabinoids, Tricyclics- promethazine, Chemotherapy safety, Radiation safety, Miotic Inhibitors (ex. Vincristine), Taxanes (ex. Abraxane), Biologic Response Modifiers (Interferon, Interleukin), Colony Stimulating Factors (ex. Filgrastim), Erythropoiesis- stimulation agents, (Epoetin alpha), Gene therapy, Microtubule inhibitor (Docetaxel)

3. Metabolism Concept

Principles of metabolism

Risk factors related to alterations in metabolism
 Prevention strategies related to alterations in metabolism
 Assessment and diagnostics
 Clinical judgement related to alterations in metabolism
 Pharmacological interventions: insulins and oral hypoglycemic agents
 Exemplars: diabetes type 1 and 2 (across the lifespan), gestational diabetes
Pharmacology: Glucagon, Biguanides (ex. Metformin), Thiazolidinedione, ex. Rosiglitazone, pioglitazone), Sulfonylurea (ex. Chlorpropamide, glipizide), Serotonin 2 inhibitor, PPT4 inhibitor (ex. Sitagliptin), GLP-1, Alpha glucoside inhibitor- (ex. Acarbose), meglitinides

4. Sexuality Concept

Basic principles of sexuality
 Risk factors related to alterations in sexuality
 Prevention strategies related to altered sexuality Assessment and diagnostics
 Clinical judgement related to alterations in sexuality
 Pharmacological interventions: contraceptives, hormone replacement, men's health drugs
 Exemplars: family planning, Sexually Transmitted Infections (STI's), erectile dysfunction, menopause
Pharmacology: Estrogen, Progesterone, Contraceptives, Testosterone, Phosphodiesterase, Routes of administration for contraceptive devices, Spermicides

5. Reproduction Concept

Basic principles of reproduction
 Risk factors related to alterations in reproduction Prevention strategies related to altered reproduction Assessment and diagnostics
 Clinical judgement related to alterations in reproduction
 Pharmacological interventions: teratogenic agents, folic acid
 Exemplar: antepartum
Pharmacology: Uterine stimulants
 Misoprostol
 Prostaglandin E2
 Beta Adrenergic agonist -Tocolytics (Terbutaline)
 Opioids
 Epidural (administration of medication during labor and post-partum)
 Corticosteroids (betamethasone)
 RhoGam
 Newborn medications:
 Vitamin K
 Hepatitis B vaccine
 Erythromycin ophthalmic ointment

6. Thermoregulation Concept

Principles of thermoregulation

Risk factors related to alterations in thermoregulation

Prevention strategies related to altered thermoregulation Assessment and diagnostics

Clinical judgement related to alterations in thermoregulation

Pharmacological interventions: anti-pyretics, fluid and electrolyte replacement, Exemplars: fever, environmental hypothermia, preterm and newborn hypothermia

Pharmacology: Aspirin, Acetaminophen, Non-steroidal anti-inflammatory drugs, (NSAIDS), Skeletal Muscle Relaxants (Dantrolene)

7. Gas Exchange Concept

Principles of gas exchange

Risk factors related to alterations in gas exchange

Prevention strategies related to altered gas exchange Assessment and diagnostics

Clinical judgement related to alterations in gas exchange

Pharmacological interventions: decongestants, expectorants/antitussives, corticosteroids, sympathomimetics, anti-cholinergics, beta-adrenergic agonists, zanthines, colony stimulating factors

Exemplars: asthma - child, COPD - adult, anemias

Pharmacology: Decongestants (ex. Pseudoephedrine, phenylephrine),

Expectorants (ex. Guaifenesin), Antitussives (ex. Benzonatate),

Corticosteroids (ex. Prednisolone), Sympathomimetic drugs (ex.

Dopamine, dobutamine, epinephrine), Anticholinergics (ex.

Benztropine), B- adrenergic agonist drugs- (ex. Albuterol, salmeterol),

Xanthine's (ex. theophylline), Colony Stimulating Factors (ex.

Neupogen), Mast cell stabilizers (ex. Loratadine), Methods of

administration (inhalers), Bronchodilators (ex. Albuterol)

8. Perfusion Concept

Principles of perfusion

Risk factors related to alterations in perfusion

Prevention strategies related to altered perfusion

Assessment and diagnostics

Clinical Judgement related to alterations in perfusion

Pharmacological interventions: diuretics, alpha and beta blockers, calcium channel blockers, ACE inhibitors, angiotension receptor blockers, vasodilators, magnesium sulfate

Exemplars: hypertension, peripheral vascular disease, preeclampsia

Pharmacology: Alpha Adrenergic, B Adrenergic blockers (ex. Atenolol, metoprolol),

Angiotensin Converting, Enzyme Inhibitors (ex. Lisinopril), Angiotensin II Receptor

Blockers (ex. Losartan, valsartan), Calcium Channel Blockers (ex. Diltiazem, Cardizem),

Vasodilators (Nitrates), Diuretics (Loop, Potassium sparing, Thiazide), Magnesium

Sulfate

Note to Instructors