The Ryerson University, Centennial College and George Brown College Collaborative Baccalaureate Nursing Program

NSE 22A/B Nursing Practice II

LEARNING MODULES
September – April
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Professional Association Resources
Suggested Additional Reading Resource

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Conference Discussion
Required Resources
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Skills checklist to be completed (available from Evolve Skills-on-line)
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Professional Association Resources

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Module Questions
Part 2: Postoperative Care
Module Questions
Conference Discussion
Required Resources
Skills checklist to be completed:
Additional Resources
Audiovisual Resources
Internet Resources (Scholarly)

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Required Readings
Module Questions
Conference Discussion
Additional Resources
Audiovisual Resources
Internet Resources (Scholarly)
Professional Association Resources
Suggested Additional Reading Resource

MODULE 11 – CPAP/BIPAP, Tracheostomy and Chest Tubes
This nursing practice course uses learning modules to assist the students in the development of nursing knowledge. This design recognizes the unique learning needs/styles of the adult learners' who attend university programs. While the modules give direction to course content, they allow for students and teachers to individualize their approach to the modular content. Sequencing of modules is highly dependent on the learning opportunities available in each practice setting. Therefore, each nursing practice group may approach the learning modules differently. The following guide outlines the skill content expectations.

**What is Modular Learning?**

Modular learning provides a learner with an interactive learning environment where answers to questions can be derived from a variety of sources. The learner works through each of the modules at their own pace or at a time when the knowledge discussed in the module is most appropriate to acquire. For example if the student is placed on a nursing unit where there are several clients receiving enteral feeding then this module may be one of the first to be considered. This self-directed adult learning approach allows the student to learn the fundamentals of nursing practice in a timely and meaningful way.

**What is a Learning Module?**

A module represents the fundamental nursing knowledge and psychomotor skills required to meet the basic need of clients with acute and/or chronic illness. To complete a learning module, it is necessary for the student to integrate prior learning from year 1 and extend their understanding beyond what was previously understood. This new nursing knowledge will be explored across cultures and throughout the lifespan. Each learning module builds on required reading, key terms, and critical thinking activities found in the assigned chapters of your nursing fundamentals textbook.

**What is the purpose of a Learning Module?**

The purpose of a learning module is to assist the learner to understand the fundamental nursing knowledge needed to provide a skill in a safe, competent and caring way to clients. The combination of knowledge and skills is the basis for establishing a therapeutic, culturally sensitive milieu in response to the presenting needs of clients (individual, group, family, community).
Expectations with Modular Learning

The student learner is responsible for the required reading and preparing the module questions for discussion that will occur in the practice setting or in a laboratory day. It is expected that students will review and incorporate content from year 1 courses (NSE11, NSE12, and NSE13). It is an expectation that all students participate equally during discussion of the modular content. In keeping with the principles of adult learning, the teacher and/or students will facilitate discussion to ensure that knowledge is applied to the care of clients. The teacher will highlight relevant nursing issues pertaining to the care of clients in current practice settings. Student learners and the teacher will apply this new nursing knowledge to specific problem-based clinical situations relevant to nursing practice settings either in group or one-to-one discussions.

The student is responsible for practicing the psychomotor and communication skills identified in each module.

How to use and complete the modules:

You are expected to complete required readings in:


You are expected to utilize Nursing Skills on Line (included in your year 1 package) in order to enhance your understanding of the modular content and then complete the quizzes and module exams to self-determine your knowledge and comprehension. You will be tested on modular content.

Additional resources students may use include:

1. Audio-Visual Resources
2. Internet Sources (Scholarly)
3. Professional Association Resources including (not inclusive):
   a. College of Nurses of Ontario (CNO)
   b. Registered Nurses Association of Ontario (RNAO)
The CNO Compendium of Standards assists in guiding students in their practice.


Introduction
- You and Your College (#45002 – 2009)
- Am I Practicing Nursing (#44007 – 2011)
- Developing Practice Standards and Guidelines (#41046 – 2009)

Practice Standards
- Confidentiality and Privacy – Personal Health Information (#41069 - 2009)
- Decisions About Procedures and Authority (#41071 - 2011)
- Documentation (#41001 - 2009)
- Ethics (#41034 - 2009)
- Infection Prevention and Control (#41002 - 2009)
- Medication (#41007 - 2011)
- Nurse Practitioner (#41038 - 2011)
- Professional Standards (#41006 - 2009)
- Restraints (#41043 - 2009)
- Therapeutic Nurse-Client Relationship (#41033 - 2009)

Practice Guidelines
- Authorizing Mechanisms (#41075 - 2011)
- Complementary Therapies (#41029 - 2009)
- Conflict Prevention and Management (#47004 - 2009)
- Consent (#41020 - 2009)
- Culturally Sensitive Care (#41040 - 2009)
- Directives (#41019 - 2011)
- Disagreeing with the Plan of Care (#41017 - 2009)
- Guiding Decisions About End-of-Life Care (#43001 – 2009)
- Independent Practice (#41011 – 2009)
- Influenza Vaccinations – Fact Sheet (#41053 - 2009)
- Preparing for an Influenza Pandemic (#41072 - 2009)
- Refusing Assignments and Discontinuing Nursing Services (#41070 - 2009)
- Supporting Learners (#44034 - 2009)
- Telepractice (#41041 – 2009)
- RN and RPN Practice: The Client, the Nurse and the Environment (#41062 - 2009)
- Working in Different Roles (#45027 – 2009)
• Working with Unregulated Care Providers (#41014 - 2011)

Legislation and Regulation
• An Introduction to the Nursing Act, 1991 (#410640 - 2011)
• RHPA: Scope of Practice, Controlled Acts Model (#41052 - 2011)

CNO also has developed learning modules designed to help nurses understand College Practice Standards and other related documents, see http://www.cno.org/learn-about-standards-guidelines/educational-tools/learning modules
MODULE 1 – Protection and Safety

Included are sections on preventing accidents through falls risk assessment, preventing and controlling infection, caring for sensory and cognitively impaired clients, abuse, restraints, and fire policy. On completion of this module, the student will demonstrate knowledge of:

- the key terms used with protection and safety,
- assessment, planning, implementation, and evaluation of care to meet the safety needs of culturally diverse clients,
- learning/teaching needs of clients and family members related to safety issues,
- cultural influences on the way the client and family experiences, interprets, and responds to safety issues,
- documentation of protection and safety issues.

Required Reading


Part 1: Accidents and their Prevention

Module Questions

1. Explain the falls risk assessment tools.
2. Identify how data from falls risk assessment can be used to design falls prevention programs.

Part 2: Prevention and Control of Infection

Module Questions

1. Explain the role of vaccines in the prevention of infection and personal responsibility in relation to infection at work including agency specific guidelines.
2. Define and explain H1N1, SARS, C-Difficile, ESBL, MRSA, VRE, TB in relation to:
   a. history of exposure,
b. mode of transmission (i.e. airborne, droplet & contact),
c. laboratory screening tests,
d. the implications for health care personnel, clients, and visitors in both hospital and community settings.

3. Explain importance of hand hygiene/hand washing and review procedure for hand washing.
4. Differentiate between regular and biohazard wastes and identify agency specific disposal procedures.
5. Explain the first aid response to exposure to blood and body fluids and/or sharps and follow-up reporting and assessment procedures.
6. Explain the learning/teaching needs of clients and family members related to isolation.
7. Explain the psychological needs of the client in isolation.
8. State what equipment should be “dedicated” for an isolation room.
9. Explain the rationale for Personal Protective Equipment and demonstrate the technique of:
   a. putting on personal protective apparel: gown, gloves, goggles, mask, face shield.
   b. handling equipment while in an isolation room.
   c. removing equipment, linens, and waste from an isolation room.
   d. removing personal protective apparel when leaving the room.
10. Describe how you would transport a client to a test or appointment who is on isolation precautions.
11. Identify the precautions used when a client requires protective/reverse isolation.
12. Identify your agency’s policies for isolation.

Part 3: Caring for Sensory and Cognitively Impaired Clients

Module Questions

1. Explain the nursing assessment, planning, and interventions in caring for clients with cognitive and sensory impairment(s).

Part 4: Abuse in Nursing Practice

Module Questions

1. Identify abusive verbal, physical, psychological, and institutional behaviours that may occur in nursing practice.
2. Review the position taken by the College of Nurses of Ontario.

Part 5: The Use of Restraints

Module Questions
1. Review the pros and cons of the use of restraints. Include the legal, ethical, nursing, and medical issues involved.

2. Review the College of Nurses of Ontario’s practice expectations regarding the use of restraints.

3. Identify alternatives to restraints.

Conference Discussion

You are caring for Mr. Huang who is on VRE isolation precautions and has a large decubitus ulcer on his coccyx. You notice another health care worker in Mr. Huang’s room providing morning care without wearing PPE. When you question the health care worker regarding this practice, the person says, “don’t worry, I’m only doing morning care, not touching the dressing”. How would you respond to this comment? What would your next steps be to follow up after this incident?

Required Resources

Evolve Nursing Skills on Line


Nursing Skills Online: Module 2
  Lesson 1: Overview of Infection Control
  Lesson 2: Hand Hygiene

Nursing Skills Online: Module 7
  Lesson 1: Safety Equipment and Fall Prevention
  Lesson 2: Applying Physical Restraints
  Lesson 3: Moving and Transferring Clients

Additional Resources

Audiovisual Resources

Internet Resources (Scholarly)


Professional Resources

Canadian Nurses Association  http://www.cna-nurses.ca

http://www.cno.org/pubs/compendium.html

College of Nurses of Ontario: Infection Prevention and Control Module  

http://rnao.ca/bpg/guidelines/caregiving-strategies-older-adults-delirium-dementia-and-depression

http://www.rnao.org/Page.asp?PageID=924&ContentID=798

http://rnao-ca.rnao-dev.org/sites/rnao-ca/files/imagecache/bpg_thumbnail/Crisis-Intervention

http://www.rnao.org/Page.asp?PageID=924&ContentID=801


Suggested Additional Reading Resource


MODULE 2 – Oxygen and Oxygen Therapy

This learning module addresses oxygenation, specifically the assessment and care of clients with supplemental oxygen. On completion of this module, the student will demonstrate knowledge of:

- structure and function of the upper and lower respiratory tracts and the chest wall,
- factors that can affect oxygenation,
- the key terms used with oxygen and oxygen therapy,
- diagnostic tests related to oxygen and oxygen therapy,
- identify the signs and symptoms of inadequate oxygenation and the implications of these findings,
- assessment, planning, implementation, and evaluation of care to meet the oxygen needs of diverse clients,
- documentation of oxygen, oxygen therapy and oxygenation.

Required Reading


Module Questions

1. Explain the structure and function of the upper and lower respiratory tracts and the chest wall.
2. What are the factors that can affect oxygenation?
3. Identify what other assessments must be included when interpreting the results of pulse oximetry (example: hemoglobin).
4. Identify and define the characteristics of the major causes of inadequate oxygenation (examples: airway obstruction, anemia, ARDS, COPD, emphysema, pneumonia, pulmonary edema, pneumothorax).
5. Identify and define the lung sounds associated with inadequate oxygenation (crackles, wheeze, stridor, absent breath sounds, pleural friction rub).
6. Explain the purpose of the following nursing interventions:
   a. positioning
   b. purse lip breathing
   c. incentive spirometry
d. deep breathing and coughing  
e. percussion  
f. vibration  
g. postural drainage

7. Explain the purposes of the following diagnostic tests and the nurses' responsibilities with each:  
a. arterial blood gases (ABG’s),  
b. complete blood count (CBC),  
c. pulmonary function tests (PFT’s),  
d. chest x-ray (CXR),  
e. sputum studies (C&S, AFB).

8. Explain low flow and high flow oxygen delivery systems.

9. Explain the following methods and procedure for oxygen delivery. Include the flow rate range, amount of oxygen delivered, when each would be utilized and the key nursing interventions for each oxygen delivery system and key nursing interventions for:  
a. nasal cannula,  
b. simple face mask,  
c. partial rebreathing mask,  
d. non-rebreathing mask,  
e. venturi mask.

10. Describe the nurse’s role when caring for a client who is receiving oxygen.

11. Explain possible unexpected outcomes and related interventions of providing supplemental oxygen (safety, oxygen toxicity).

12. Identify data that must be documented when clients receive oxygen.

Conference Discussion

1. Mr. Chen Lee, age 72, is on a medical unit for a recent diagnosis of COPD. He uses his call bell to indicate that he feels short of breath. His respiratory rate is 32 breathes per min. and oxygen saturation is 86% on room air. In report this morning it was identified that his hemoglobin (HGB) was 92 and white blood cell count (WBC) was 22.0. What immediate nursing assessments and interventions would you initiate?

2. Mrs. Jane White, age 82, is on your complex continuing care unit with a diagnosis of stroke. She is receiving enteral feedings through a gastrostomy feeding tube. When you enter the room in the morning, you notice that she is lying supine with the bed flat. Her enteral feedings are running. She has a respiratory rate of 28 and an oxygen saturation of 82%. You can hear audible crackles. What immediate nursing assessments and interventions would you initiate? What might be the cause of her respiratory difficulty?
Required Resources

Evolve Nursing Skills on Line


Nursing Skills Online: Module 8
Lesson 1: Overview of Airway Management
Lesson 2: Pulse Oximetry

Skills checklist to be completed (available from Skills-on-line)
Skill 31-4 Measuring Oxygen Saturation (pulse oximetry)
Skill 39-4 Applying a Nasal Cannula or Oxygen Mask

Additional Resources

Audiovisual Resources


Internet Resources (Scholarly)

- Asthma Society of Canada http://www.asthma.ca/adults/
- Canadian Lung Association http://www.lung.ca/home-accueil_e.php

Professional Association Resources


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http://rnao.ca/bpg/guidelines/promoting-asthma-control-children

MODULE 3 – Skin Integrity, Wound Management and Surgical Asepsis

This learning module addresses the assessment and care of clients at risk for changes in skin integrity and those requiring wound management, including those with surgical wounds. On completion of this module, the student will demonstrate knowledge of:

- the key terms used with skin integrity, wound management and surgical asepsis,
- the risks for skin breakdown and wound development,
- the pathophysiology of ulcer development,
- the most commonly used wound classification systems,
- the principles of wound healing,
- products and interventions that promote wound healing,
- the principles of surgical asepsis when providing care involving incisions, drains, packing, wound irrigation, staples, sutures,
- management of wound drainage systems,
- assessment, planning, implementation evaluation and teaching of care to meet the needs of culturally diverse clients:
  - at risk for impaired skin integrity,
  - with wounds and surgical incisions.
- documentation of skin integrity, wound management and surgical incision care.

Required Reading


Part A: Skin Integrity and Wound Management

Module Questions

1. Review the structure and functions of the skin.
2. Identify the normal changes in aging skin.
3. Identify the risk factors for:
   a) impaired skin integrity,
b) pressure ulcer development,
c) common sites for pressure ulcer formation.
4. Identify the forces of pressure, shear, and friction and their role in impairment of skin integrity.
5. Review the pathophysiology of pressure ulcer development.
6. Review the use of a risk assessment tool such as the Braden Scale.
7. Explain the most common types of wounds and ulcers.
8. Discuss the classification of pressure ulcers according to
   a) staging of the wound (Stages I, II, III, IV),
   b) colour of the wound (red, yellow, black, or mixed).
9. Describe the differences between wounds that heal by primary, secondary, or tertiary intention.
10. Identify the principles of moist wound healing.
11. Discuss the need for pain management prior to wound care packing.
12. Discuss the steps in obtaining a wound culture.
13. Review factors that impair and promote incision and wound healing.
14. Identify the types of dressings used for management of wounds. Include the functions and rationale for the use of each dressing.
15. List appropriate nursing interventions for a client with impaired skin integrity.
16. Discuss documentation regarding incision and wound care: location, size, evidence of healing, characteristics of drainage, cleaning solutions used, dressing/packing material used, and client response to the procedure.

Part B: Surgical Asepsis

Module Questions

1. Define and discuss the principles of surgical asepsis.
2. Review the assessment of surgical incisions. Compare this with the assessment of wounds.
3. Describe the purpose of drains and wound drainage devices:
   a. penrose,
   b. hemovac,
   c. jackson-Pratt.
4. What is the expected progression (outcomes) for post-operative drainage?
5. What are the complications that can occur with surgical incisions?
6. Describe the assessment and interventions if incision dehiscence or evisceration occurs.
7. Discuss how you would use the principles of asepsis to clean an incision that includes:
   a. packing,
   b. drains,
   c. staples,
   d. sutures.
8. Describe the additional materials used for incision care that is available on your patient care unit.
9. Explain the purpose and application process of binders (eg. abd, breast).

Conference Discussion

1. Mr. Frank Jones, aged 69, has been admitted to your surgical floor after suffering a fractured hip. He has had a left hip arthroplasty (hip replacement surgery). He was in the emergency room (ER) for 72 hours waiting for surgery. You enter the room to complete your morning assessment. You notice redness on the right heel and a blistered and reddened area on the left heel.
   a. What immediate nursing assessments and interventions would you initiate?
   b. What is the probable cause of these pressure areas?
   c. What is the stage of these ulcers?
   d. How would you prevent the worsening of the ulcers?

2. You return to clinical practice the following week. You are assigned to Mr. Jones. You complete your assessment and with your teacher begin to change the dressings on his heels. The right heel has a stage II ulcer and the left heel has a stage III. What interventions would you anticipate initiating?

3. Mrs. Sarah Roberts, aged 32, has been admitted to your surgical floor after having abdominal surgery. You begin your morning assessment. Mrs. Roberts takes some deep breaths and coughs. She complains of pain 8/10 in her abdomen. You notice the dressing has sanguineous drainage. You notify your teacher. When you open the dressing, you notice that the wound is not approximated and a number of staples are not in place.
   a. What immediate nursing assessments and interventions would you initiate?
   b. What would be the appropriate dressing in this situation?
   c. What is the separation of a new operative incision called?

Required Resources

Evolve Nursing Skills on Line


Nursing Skills Online: Module 2
   Lesson 3: Creating and Maintaining a Sterile Field
   Lesson 4: Sterile Gloving

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Nursing Skills Online: Module 14
   Lesson 5: Obtaining a Wound Drainage Specimen for Culture

Nursing Skills Online: Module 17
   Lesson 1: Overview of Wound Care
   Lesson 2: Wound Drainage Systems
   Lesson 3: Dressings
   Lesson 4: Pressure Ulcer Risk Assessment, Prevention Strategies, and Treatment

Skills checklist to be completed (available from Skills-on-line)

Skill 33-2 Preparation of a Sterile Field
Skill 33-3 Surgical Hand Hygiene: Preparing for gowning
Skill 33-5 Open Gloving
Skill 47-1 Assessment for Risk of Pressure Ulcer Development
Skill 47-2 Treating Pressure Ulcers
Skill 47-4 Performing Wound Irrigations
Skill 47-3 Applying Dry and Wet-to-Dry Moist Dressings
Skill 47-7 Implementation of Negative Pressure (Vacuum-Assisted) Wound Closure
Skill 47-5 Applying an Abdominal, or Breast Binder
Skill 47-6 Applying an Elastic Bandage
Skill 47-8 Applying a Warm, Moist Compress to an Open Wound

Additional Resources

Audiovisual Resources


Internet Resources (Scholarly)

- Canadian Association of Wound Care http://www.cawc.net/
- KCI Medical http://www.kci-medical.com/kci/corporate
- World Wide Wounds http://www.worldwidewounds.com
Professional Association Resources


http://rnao.ca/bpg/guidelines/reducing-foot-complications-people-diabetes


Suggested Additional Readings


MODULE 4 – Medication Administration

This learning module addresses the safe administration of medications. On completion of this module, the student will demonstrate knowledge of:

- the key terms and abbreviations used with medication administration,
- the legal and ethical responsibilities inherent in medication administration,
- the roles and responsibilities of members of the health care team with respect to medication management,
- physiological mechanisms of medication actions and its relationship to client's condition,
- the safe administration of medications using the rights of medication administration,
- assessment, planning, implementation, and evaluation of medication administration and client responses,
- learning/teaching needs of clients and family members related to medications,
- the nurse's responsibility for reporting and documenting medication adverse incidents,
- accurate documentation of medication administration.

Required Reading


Part 1: General Guidelines in Medication Administration

*Note: Please check your clinical agency's Policy and Procedure Manual for agency specific medication administration protocols.*
Module Questions

1. The CNO Identifies eight rights of medication administration. Identify the eight rights and the rationale for each.
2. Name the various routes of medication administration.
3. Define the common terms used in pharmacology.
4. Identify and describe standard medication abbreviations.
5. State the formula for performing medication calculations.
6. Discuss the principles of documentation related to medication administration and responses.
7. Explain what is involved in recording a medication that has been: held, unavailable, refused, vomited, or wasted.
8. Identify the three major routes of drug elimination.
9. Identify the factors that determine the action and effects of any medication.
10. Identify the components of a doctor’s order for a medication.
11. What knowledge is required prior to the administration of any medication.
12. Describe the legal implications when administering an opioid or controlled substance. Include in your discussion the responsibilities of RNs/RPNs and student nurses; the Controlled Drug and Substances Act (CDSA) and Narcotic Control Regulations; and filling out the narcotic control sheet.

Part 2: Administration of Non-parenteral Medications

Module Questions

1. Describe the different forms of medications which are administered by the oral route (i.e. capsules, tablets, syrup, elixir etc.).
2. Discuss how to administer an oral medication to a client who has difficulty swallowing and/or cognitive impairment.
3. Describe the factors to consider when administering medications by the non-parenteral routes.
4. Explain how you would teach clients and families to use metered-dose inhalers (MDI) utilizing an aerochamber.
5. Discuss implications of and guidelines for medication administration for clients with enteral tubes.
6. Identify the supplies required when administering non-parenteral medications (i.e. oral, buccal, sublingual, topical, eye (ophthalmic), ear, inhalant, enteral, vaginal, rectal).
7. Differentiate between topical and transdermal medications with regard to purpose and absorption.
8. Identify the standard precautions required when administering medication.
9. Identify the purpose and procedure and possible concerns for the administration of an enema, rectal or vaginal suppository.
Part 3: Administration of Parenteral Medications

Module Questions

1. Identify and describe various types of syringes and needles and indications for their use.
2. Explain the routes, advantages, disadvantages and anatomical landmarks for:
   a. subcutaneous (SC, sub-Q),
   b. intramuscular (IM),
   c. intradermal (ID).
3. Identify and explain the principles relevant to the safe administration of parenteral medications.
4. Explain the following aspects of preparing a parenteral medication:
   a. policy regarding maximum volume of fluid for injection,
   b. situations when massaging is contraindicated,
   c. disposal of needles, syringes, glass ampoules,
   d. mixing two drugs in the same syringe,
   e. changing needles.
5. What is the procedure for mixing two types of Insulin in one syringe?
6. Discuss how you would:
   a. minimize the discomfort associated with injections,
   b. administer a medication using Z-track technique,
   c. administer 10 units of insulin to an obese client.
7. Locate and discuss injection sites for children. State how you would alter your approach in administering an IM injection to children in the following age groups: infant, toddler, school age, and adolescent.
8. Consider the following situations when giving an injection. State what you should do if:
   a. blood appears as the plunger is aspirated,
   b. your needle hits a bone,
   c. your needle hits a bone, breaks off, and is left in the client,
   d. you stick yourself as you withdraw the needle from the client.
9. Discuss factors and issues around stop dates for certain medications (eg. narcotics, antibiotics, anticoagulants).
10. Discuss policies and necessary considerations about reusing a multidose vial. (eg labelling, expiry date)

Conference Discussion

1. Mrs. Nguyen, a 84-year-old woman has recently experienced a stroke and has right-sided weakness and mild cognitive impairment. The physician wrote orders to start oral medications today.
   a. What steps do you take to ensure that this client can safely receive her oral medications?
b. What would you do if Mrs. Nguyen refused her medications?

2. After assessing your client, you found several pills in the bed sheets. What would be the appropriate follow up to this?

3. Mr. Franks is your client who has chronic obstructive respiratory disease. He has been taking inhalant medications for several years.
   a. How would you assess his understanding of his medications?
   b. He has not been using an aerochamber prior to this admission. What would you need to teach him about this and how would you determine his understanding of this new procedure?
   c. When you go to administer these medications, you find that he has gone for a CT scan of the chest. He returns to the unit two (2) hours after the time the medication was due. What would be your next steps?

4. Elaine is a 25 year old, 80 KG (176 lb) woman who delivered a healthy infant (P1G1). She has been ordered to receive RhoGAM 300 mcg IM today. The client is asking why she needs to take this medication.
   a. How would you explain this to her?
   b. What is the rationale for this medication?
   c. What size needle and which injection site and technique do you use to administer this medication?
   d. If Elaine weighed 160 KG (350 lb), would this dosage still be appropriate?
   e. What size needle and which injection site and technique do you use to administer this medication to a morbidly obese client?

5. Mr. Singh is in his second post-operative day following a TKA (total knee arthroplasty). He has been receiving patient controlled analgesia (PCA) Morphine with good effects. He is also receiving Ketorolac 40 mg IV Q6H, and Acetaminophen 325 mg 2 tabs PO Q6H. The pain care physician has ordered the PCA pump to be discontinued and to start the client on Oxycodone CR 10mg po now and Q12H and Oxycodone 5mg IR Q2H PRN.
   a. Discuss the multimodal analgesic management for this client.
   b. Mr. Singh asks to have Codeine instead of Oxycodone – what would you do in this situation?
   c. Mr. Singh states he has no pain and is refusing the medication. He has been lying quietly in the bed, and does not want to get up for his exercises. What would be your next steps?

Required Resources

Evolve Nursing Skills on Line

NSE 22A/B June 8, 2012

Nursing Skills Online: Module 3
- Lesson 1: Overview of Safe Medication Administration
- Lesson 2: Preparing for Medication Administration: Applying the 6 Rights
- Lesson 3: Preparing for Medication Administration: Calculating Drug Dosages
- Lesson 4: Preventing Medication Errors
- Lesson 5: Administering Oral Medications

Nursing Skills Online: Module 4
- Lesson 1: Overview of Non-Parenteral Medication Administration
- Lesson 2: Applying Medications to the Skin
- Lesson 3: Instilling Eye Medications
- Lesson 4: Instilling Ear Medications
- Lesson 5: Using Metered-Dose Inhalers or Dry Powder Inhalers
- Lesson 6: Inserting Rectal and Vaginal Medications

Nursing Skills Online: Module 13:
- Lesson 5: Administering Medication through a Feeding Tube

Nursing Skills Online: Module 5
- Lesson 1: Administration of Injections
- Lesson 2: Preparing Injections from Ampoules and Vials
- Lesson 3: Administration of Subcutaneous Injections
- Lesson 4: Administration of Intradermal Injections
- Lesson 5: Administration of Intramuscular Injections

Skills checklist to be completed (available from Skills-on-line)

<table>
<thead>
<tr>
<th>Skill</th>
<th>34-1</th>
<th>Administering Oral Medications</th>
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</thead>
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<tr>
<td>Skill</td>
<td>34-2</td>
<td>Administering Ophthalmic Medications</td>
</tr>
<tr>
<td>Skill</td>
<td>34-3</td>
<td>Using Metered-Dose or dry powdered Inhalers</td>
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<tr>
<td>Skill</td>
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<td>Preparing Injections</td>
</tr>
<tr>
<td>Skill</td>
<td>34-5</td>
<td>Administering Injections</td>
</tr>
</tbody>
</table>

Additional Resources

Audiovisual Resources


Internet Resources - Scholarly


Professional Association Resources


College of Nurses of Ontario: Medication Module  

http://rnao.ca/bpg/guidelines/bpg-subcutaneous-administration-insulin-adults-type-2-diabetes

http://rnao.ca/bpg/guidelines/nursing-management-hypertension

http://rnao.ca/bpg/courses/nursing-management-hypertension

Suggested Additional Reading


MODULE 5 – Intravenous Therapy and Blood Transfusion

This learning module addresses the safe administration of intravenous (IV) therapy, intravenous (IV) medications, and blood transfusion therapy. On completion of this module, the student will demonstrate knowledge of:

- the purposes of intravenous therapy and blood transfusion,
- preparing, monitoring, and maintaining an IV infusion and blood transfusion on and off an infusion pump,
- the use of needleless safety IV systems,
- common complications and problem-solving approaches to IV infusions and blood transfusions,
- intermittent venous access (saline lock),
- discontinuing a peripheral IV infusion,
- preparing and administering IV medications:
  - reconstituting powder medications,
  - calculating IV medication flow rates,
  - advantages and disadvantages of giving medications IV,
  - complications of IV medications,
- learning/teaching needs of clients and family members related to IV therapy and blood transfusion,
- crystalloid, colloid, hypodermoclysis, intravenous, total parenteral nutrition.
- differences between peripheral and central veins naming the most commonly used veins and their locations,
- purposes, potential complications, nursing care requirements and scope of practice for clients with central vascular access devices and central venous catheters – (examples: PICC lines, midlines, CVC, Cook, Hickman, Port-O-Cath),
- documentation of intravenous therapy and blood transfusions.

Required Readings


Module Questions

1. Explain the purposes of IV therapy, and identify the common IV solutions.
2. Explain the use of isotonic, hypotonic, hypertonic solutions, colloids, crystalloids, and total parenteral nutrition.
3. Explain the rationale for the use of hypodermoclysis and the types of patients who may be eligible for this type of fluid administration.
4. Identify the equipment needed to set up an IV infusion including the types of tubing. Consider the use of a needless IV system in determining the required equipment.
5. How to prepare/prime the various IV tubing.
6. Define drop factor. State the drop factor for your agency’s IV tubing.
7. Explain how you would calculate the required flow rate, the volume per hour, and drops per minute. What factors can alter flow rates?
8. Explain what you would include in a systematic assessment of a client, prior to, during and following an IV infusion.
9. Discuss signs and symptoms of complications and nursing interventions for clients receiving IV therapy (including culturally diverse clients) for the following:
   a. accidental removal,
   b. signs of infections,
   c. infiltration,
   d. phlebitis,
   e. bleeding,
   f. pain,
   g. fluid volume excess.
10. Describe the equipment needed and the procedure of changing an IV dressing and discontinuing a peripheral IV infusion.
11. Discuss the rationale for changing of IV solution, IV dressing, IV site and IV tubing. What is the frequency of these changes and does the agency have specific policies related to this?
12. Discuss the rationale for the use of a saline lock. Identify the procedure and nursing management associated with caring for a client with a saline lock.
13. Identify common peripheral and central veins and nursing considerations related to site selection.
14. Define and describe central vascular access devices and central venous catheters differentiating between:
   a. central venous catheters (CVC),
   b. long-term tunnelled catheters (e.g. Hickman),
   c. implantable catheters (e.g. Port-o-Cath),
d. peripherally inserted central catheters (PICC).

15. Discuss the purposes, advantages, disadvantages and potential complications of the central venous catheters cited above and the corresponding nursing implications, including the limitations in the role of the student nurse in caring for clients with these catheters.
16. Identify information to be included in the documentation record and fluid balance sheet.

**Part 2: Administration of Intravenous Medications**

**Module Questions**

1. Identify the various delivery systems for intravenous medications (primary or secondary infusions).
2. Review reconstitution of a powdered medication, and the withdrawing of medications from a vial or ampoule.
3. Explain nursing management of the following:
   a. potential incompatibilities when two drugs are mixed,
   b. vascular irritation,
   c. allergies and drug sensitivities which occur during or after IV medication administration.
4. Identify information to be included on a medication label prior to applying it to the solution container.
5. What is the information needed to calculate the infusion time and flow rate for an IV medication in a secondary infusion system (mini bag) and the procedure for administration of the secondary infusion.
6. What is the nursing care related to before, during and after administration of the IV medication?
7. Identify information to be included in the documentation record and fluid balance sheet.

**Part 3: Blood Transfusion Therapy**

**Module Questions**

1. Discuss reasons for administering blood or blood components.
2. Describe the components of:
   a. whole blood,
   b. packed red blood cells,
   c. platelets,
   d. plasma.
3. Name the four blood groups in the ABO system and the corresponding compatible donor.
4. Discuss why more autologous transfusions are now being administered.
5. Discuss the procedure and equipment that is required to administer a blood transfusion. Why normal saline (NS), not dextrose in water (D5W), is used to prime the tubing for blood administration?

6. What are the pre-transfusion assessments that are required prior to the administration of any blood product?

7. Discuss the client assessment, monitoring and documentation required before, during, and after blood product administration.

8. Discuss client and family education before, during, and after blood product administration.

9. Discuss potential transfusion reactions. For each reaction discuss:
   a. the cause,
   b. clinical manifestations,
   c. management,
   d. prevention.

10. Discuss cultural influences on the way the client and family experiences, interprets, and responds to blood product transfusion.

**Conference Discussion**

**Clinical Situations**

1. Mr. Smythe has an IV of 2/3 & 1/3 at 125ml/hr. He is ordered to receive Cefazolin 1GM IV Q6H. In order to administer the medication:
   a. What solution and size of mini-bag would you use?
   b. How would you determine the length of time for the infusion?
   c. What would be the rate/hour and the drip rate?
   d. If you are using an infusion pump, what would be the rate and volume set?
   e. What are the nursing responsibilities associated with the medication administration before, during and after the infusion?

2. A 36 year old male client has an IV order of N/S 20 meq KCL/l @ 125 cc/hr. At 0730, 600 ml is TBA. At 0830 you read the IV bag and note that only 25 ml has infused. The client’s arm is swollen and cool to touch.
   a. Identify and describe the complications associated with the IV therapy infusion.
   b. List major signs and symptoms for the client related to each complication.
   c. Identify the appropriate nursing interventions for each complication.

3. A 72 year old female with known Alzheimer’s disease is now 2 days post-op total (L) hip replacement. Her present IV order is 2/3 & 1/3 with 20 mmol KCL/Litre at 100 ml/hr. You walk into her room at 0530 hours, and find her IV tubing has become disconnected from the IV cannula. The
client, her gown, and bed linens are soaked with a large amount of fresh blood and IV solution. What are your PRIORITY nursing interventions?

a. Identify and describe the complications associated with the IV therapy infusion.
b. List major signs and symptoms for the client related to each complication.
c. Identify the appropriate nursing interventions for each complication.

Blood Transfusion

1. Nathan Osmond is a 2 month old pre-term infant presently weighing 1500 grams. His hemoglobin is a 76 and his heart rate has been elevated above his normal of 150/min. His oxygen requirements have been increasing over the past 24 hours. The physician has ordered 15ml/kg (22.5 ml) of blood to be administered. The physician speaks to the parents and when she leaves, you notice that the parents are having an argument. When you discuss this with the mother and father, they identify that they have recently converted to the Jehovah Witness faith and do not wish the blood to be administered.

a. Discuss the ethical issues associated with this?
b. What are your values and beliefs and how might they impact on your ability to provide care to the infant and their family?
c. What are some of the ways of minimizing blood loss and what might be alternative options?
d. A court order has been obtained to administer the blood and the parents are distressed over this. What are your nursing responsibilities and how might you help the family?

2. You are caring for a client who is a type 2 diabetic. He is 68 years of age, and lives occasionally in a homeless shelter. He has developed venous ulcers on his left leg and two toes on the left foot are infected. He was admitted with a fever of 39.5, HR 122 and BP 108/64. He is on IV therapy and antibiotics. He is generally non-compliant with his medications, although occasionally takes his diabetic medications. His hemoglobin on admission was 69 and the physician orders two (2) units of packed red blood cells (PRBC’s). The client has many questions including a fear of contracting HIV or hepatitis.

a. How would you respond to his concerns about contracting HIV or hepatitis?
b. What would you monitor in this client as he receives his blood transfusion?
c. The physician told the client that he would die if he did not take the blood. What is your response in this situation?
Required Resources

Evolve Nursing Skills on Line (Required)


Nursing Skills Online: Module 10
Lesson 1: Overview of IV Fluid Administration
Lesson 2: Insertion of a Peripheral Intravenous Device
Lesson 3: Troubleshooting Intravenous Infusions
Lesson 4: Discontinuing Peripheral IV Access

Nursing Skills Online: Module 11
Lesson 1: Overview of Maintenance of Intravenous Site
Lesson 2: Regulating Intravenous Infusion Flow Rates
Lesson 3: Changing Infusion Fluid/Tubing
Lesson 4: Changing a Peripheral IV Dressing

Nursing Skills Online: Module 12
Lesson 1: Overview of Vascular Access Devices
Lesson 2: Blood Drawing & Fluid Administration
Lesson 3: Dressing Change
Lesson 4: Troubleshooting Vascular Access Devices

Nursing Skills Online: Module 6
Lesson 1: Overview of IV Medication Administration
Lesson 2: Administering IV Medications
Lesson 3: Administering Medications by IV Bolus
Lesson 4: Adding Medications to Intravenous Fluid Containers

Skills checklist to be completed (available from Evolve Skills-on-line)

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<td>40-3</td>
<td>Maintenance of an IV System</td>
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<td>40-4</td>
<td>Changing a Peripheral Intravenous Dressing</td>
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<td>34-6</td>
<td>Adding Medications to Intravenous Fluid Containers</td>
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<td>34-7</td>
<td>Administering Medication by Intravenous Bolus</td>
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<td>34-8</td>
<td>Administering Intravenous Medications by Piggyback, Intermittent Intravenous Infusion Sets, and Mini-Infusion Pumps</td>
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Audiovisual Resources


NSE 22A/B June 8, 2012

Centennial

Professional Association Resources


Internet Resources - Scholarly


Suggested Additional Resources

MODULE 6 – Nutrition and Enteral Needs

This learning module addresses the assessment and care of clients with changes in nutritional status. On completion of this module, the student will demonstrate knowledge of:

- the key terms used with gastrointestinal function, nutrition and enteral needs,
- GI assessment and function, swallowing ability, and diagnostic tests related to the GI tract
- alterations in nutritional status and dysphagia and related to cause, assessment, planning, implementation, and evaluation of clients (including culturally diverse clients),
- enteral nutrition therapy (review types of formulas)
- assessment, insertion, removal and evaluation of clients with: nasogastric tube and enteric tube (G-tube, PEG, Jejunostomy tube),
- pro’s and con’s of intermittent and continuous enteral nutrition,
- the cultural influences on the way the client and/or family experiences, interprets, and responds to changes in nutritional needs,
- documentation of nutritional issues and enteral tubes.

Required Readings


Module Questions

1. Review the components of a thorough nutritional nursing assessment (including cultural considerations).
2. Identify the unique nutritional issues of the aging client.
3. Define and discuss nursing interventions for each condition: malnutrition, gastroesophageal reflux disease (GERD), nausea and vomiting (N&V), anorexia, malabsorption, paralytic ileus.
4. Identify the dietary changes required for clients with dysphagia.
5. Identify nursing interventions that facilitate swallowing and prevent aspiration for clients with dysphagia.
6. Identify information to be documented related to nutritional requirements and enteral tubes.

**Enteral Nutrition**

1. Discuss the indications for enteral nutrition.
2. Describe the types of enteral feeding tubes, the placement, and the purpose(s) of each.
3. Discuss the process of nasogastric and nasoenteric tube insertion, maintenance, and removal. Identify the health team members qualified to insert a nasoenteric tube. State how you would verify the position of these tubes.
4. Discuss enteral nutrition formulas.
5. Describe the assessment and nursing interventions to ensure safe care for clients with intermittent or continuous enteral tube feeding: prior to, during, and after feeding.
6. Identify complications with enteric tubes, possible causes, and nursing interventions to deal with each.

**Gastrointestinal Decompression**

7. State the indications for gastrointestinal decompression.
8. Discuss the assessment of the client prior to, during, and after gastric decompression.
9. Discuss complications that can occur with decompression.

**Conference Discussion**

1. Mrs. Rogers is a 45-year-old woman who is on your long term care floor. She was admitted after a prolonged cardiac arrest and subsequent brain damage. She is receiving enteral feedings through a PEG tube. You enter the room to do your morning care. You find her in a supine position with her feedings infusing. She appears to have some difficulty breathing. What are your initial actions? What do you think has happened and how would you prevent this situation in the future?

2. You are caring for Mrs. Rogers (above) and need to administer her medications via her PEG tube. You have the following medications to administer:
   
   a. Tylenol elixir 600 mg Q6H
   b. Colace elixir 100 mg BID
   c. Coversyl 4mg daily
   d. Pantoprazole 40mg daily
   e. Enteric coated ASA 81mg daily
f. Lasix 40mg daily  
g. Potassium chloride 20 mmol daily  
h. Metoprolol 25mg daily  
i. Glyburide 5 mg BID

The nurse told you to crush all the meds, put them in a cup and dilute with 20ml of water. You are uncertain as to this protocol. Based on this information, do you have any concerns about the types of medications? How should you administer these medications?

**Required Resources**

**Evolve Nursing Skills on Line**


**Nursing Skills Online: Module 7**  
Lesson 4: Feeding the Dependent Client

**Nursing Skills Online Module: 13**  
Lesson 1: Overview of Enteral Nutrition  
Lesson 2: Inserting a Small-Bore Nasogastric or Nasointestinal Feeding Tube  
Lesson 3: Verifying Feeding Tube Placement  
Lesson 4: Administering Tube Feedings  
Lesson 5: Administering Medication Through a Feeding Tube

**Skills checklist to be completed (available from Evolve Skills-on-line)**

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<tr>
<th>Skill</th>
<th>Description</th>
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<td>Inserting a Small Bore Nasoenteric Tube for Enteral Feedings</td>
</tr>
<tr>
<td>43-3</td>
<td>Administering Enteral Feedings via Nasoenteric Tubes</td>
</tr>
<tr>
<td>43-4</td>
<td>Administering Enteral Feedings via Gastrostomy or Jejunostomy Tube</td>
</tr>
<tr>
<td>45-2</td>
<td>Inserting and Maintaining a Naso-Gastric Tube</td>
</tr>
</tbody>
</table>

**Additional Resources**

**Audiovisual Resources**


Professional Association Resources

MODULE 7 – Bowel Elimination

This learning module addresses the assessment and care of clients with changes in bowel elimination. On completion of this module, the student will demonstrate knowledge of:

- the key terms used with bowel elimination,
- the role of the gastrointestinal organs in the process of ingestion, digestion, absorption and elimination (normal and abnormal),
- discuss the psychological and physiological factors that influence the elimination process,
- the physiological alterations in elimination (ie: constipation, impaction, diarrhea, etc),
- assessment (physical and diagnostic), planning, interventions, evaluation and documentation of care to meet the needs of diverse clients with normal and abnormal elimination,
- continent and incontinent bowel diversions,
- learning/teaching needs of clients and family members related to bowel elimination.

Required Readings


Module Questions

1. Describe the process involved in ingestion, digestion, absorption and elimination.

2. Describe the assessment (physical and diagnostic), planning, interventions, evaluation and documentation of care to meet the needs of diverse clients with normal and abnormal elimination.

3. Review and discuss how factors may affect bowel elimination.

4. Describe the common bowel elimination problems and related nursing interventions.

5. Explain the nurses’ role in preparing clients for diagnostic procedures (eg: endoscopy). Discuss nursing assessment and client teaching pre and post procedure.

6. Identify and discuss the strategies to promote defecation.

7. Identify and discuss the types of enemas and the specific indications.

8. Discuss the principles and procedure for the administration of an enema.

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Bowel Diversions

1. Identify the indications for a client to have a bowel diversion.
2. Identify the types of bowel diversions, the indications for each and the changes in stool consistency with each.
3. Differentiate between continent and incontinent bowel diversions. Give examples of each.
4. Identify the assessment, planning, interventions, evaluation and documentation of care to meet the needs of diverse clients with a bowel diversion.
5. Discuss the procedure for pouching an ostomy.
6. Discuss the physiological, psychosocial and learning needs of the client and family with a newly created bowel diversion.

Conference Discussion

You are to teach two clients to change their colostomy bags.

a) The first client is an active 72-year-old male Wal-Mart greeter who has had his colon and rectum removed because of cancer.

b) The second client is a 23-year-old female university student who had a portion of her bowel removed because of a chronic inflammatory bowel disease.

Outline the teaching plan for each of these clients. What would you anticipate as the barriers to learning for each of the clients? Consider the developmental stage of each of these clients and how this may affect body image and acceptance of a bowel diversion. Compare and contrast both physical and psychosocial concerns.

Required Resources

Evolve Nursing Skills on Line


Nursing Skills Online: Module 14
   Lesson 4: Obtaining a Stool Sample for Hemoccult Testing

Nursing Skills Online: Module 16
   Lesson 1: Overview of Bowel Elimination
   Lesson 2: Enema Administration
   Lesson 3: Ostomy Overview
Lesson 4: Pouching an Ostomy

Skills checklist to be completed (available from Skills-on-line)

Skill 45-1 Administering a Cleansing Enema
Skill 45-3 Pouching an Ostomy

Additional Resources

Audiovisual Resources


Internet Resources (Scholarly)

- Crohn’s and Colitis Foundation of Canada http://www.cccf.ca/site/c.ajlRK4NLLhJ0E/b.6319851/k.BDBF/Home.htm
- Ostomy Wound Management http://www.o-wm.com/supplements

Professional Association Resources


Suggested Additional Reading Resource

MODULE 8 – Urinary Elimination

This learning module addresses the assessment and care of clients with changes in urinary elimination. On completion of this module, the student will demonstrate knowledge of:

- the key terms used with urinary elimination,
- the following assessment measures:
  - measuring urinary output,
  - determining abnormal urine constituents,
  - collecting urine specimens,
  - diagnostic tests related to the urinary tract,
- factors that commonly influence urinary elimination (e.g. positioning, fluid volume status, etc) and identify the assessment, planning, implementation and evaluation of care in order to meet the needs of clients,
- the common causes of alterations in urinary function/elimination (e.g. urinary tract infections, urinary retention, acute/chronic renal disease),
- two modalities of renal replacement therapy (RRT),
- the assessment, planning, implementation and evaluation of care for clients with a urinary diversion,
- measures to prevent and reduce urinary tract infection,
- learning/teaching needs of clients and family members related to urinary elimination,
- documentation of urinary elimination.

Required Readings


Module Questions

1. Review and discuss the various factors that influence urination: (eg. privacy, culture etc). Explain the assessment and documentation requirements for clients with alterations in urinary function.
2. Discuss nursing strategies that promote optimal urinary functioning and prevent potential urinary problems.
3. Identify and explain the common symptoms of urinary alterations.
4. Identify and explain the types of urinary catheters and drainage devices and their indications: (ie: indwelling, intermittent, suprapubic, nephrostomy, condom).
5. Discuss diagnostic tools/tests relevant to urinary elimination (ie: urinalysis, bladder scan). Include client preparation and teaching. Identify factors that can produce changes in urine (eg. medications).
6. Identify and explain the alterations in urinary elimination (ie: UTI, incontinence, dysuria, nocturia, retention, diversions), and related nursing interventions and care.
7. Identify the guidelines/procedure for the selection, insertion, maintenance and removal of a straight and indwelling urinary catheter.
8. Discuss the differences between continent and incontinent urinary diversions. Include the ileal conduit and Kock pouch (continent ileostomy). Discuss the care of clients with continent and incontinent urinary diversions.
9. State what characteristics would be signs of urinary tract dysfunction.
10. Discuss the indications for, principles of, and nursing care for clients with intermittent or continuous bladder irrigation.

Conference Discussion

1. Mr. Shiva, 85 yrs of age, has been admitted to hospital with an enlarged prostate and is scheduled to have a Transurethral Resection of Prostate (TURP). You are caring for him on post-operative day 1. He has continuous bladder irrigation (CBI) to keep urine clear.
   a. How would you measure urine output?
   b. You notice some frank blood after Mr. Shiva ambulates. What would be the cause of this and what would be your treatment for this?
   c. Mr. Shiva uses the call bell. When you enter the room, he complains of severe localized discomfort in his bladder. What would you assess in this situation?
   d. On post-op day 2, you notice large blood clots in the catheter drainage bag. What would be your assessment and treatment?
   e. Mr. Shiva has his catheter discontinued. What would you monitor?

Required Resources

Evolve Nursing Skills on Line


Nursing Skills Online: Module 14
Lesson 2: Urine Specimen Collection-Midstream, Sterile Urinary Catheter
Nursing Skills Online: Module 15
Lesson 1: Overview of Urinary Catheterization
Lesson 2: Inserting a Straight or Indwelling Urinary Catheter
Lesson 3: Applying a Condom Catheter
Lesson 4: Catheter Specimen Collection
Lesson 5: Care and Removal of the Indwelling Catheter

Skills checklist to be completed (available from Evolve Skills-on-line)

Skill 44-1 Collecting Midstream (Clean-Voided) Urine Specimen
Skill 44-2 Inserting a Straight or Indwelling Catheter
Skill 44-3 Indwelling Catheter Care
Skill 44-4 Closed and Open Catheter Irrigation

Additional Resources

Audiovisual Resources


Professional Association Resources

http://rnao.ca/bpg/guidelines/decision-support-adults-living-chronic-kidney-disease

http://rnao.ca/bpg/guidelines/promoting-continence-using-prompted-voiding


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MODULE 9 – Pre-operative and Post-operative Management

This learning module focuses on the assessment and care of preoperative and postoperative clients. On completion of this module, the student will demonstrate knowledge of:

- assessment, planning, implementation, evaluation and documentation of care to meet the needs of clients in the preoperative, intraoperative and postoperative phase,
- the role of the nurse in the physical, psychological and educational care during the phases of surgery,
- classification of surgical procedures,
- surgical risk factors (include current drugs with special implications for the surgical client, herbal products),
- lab work and diagnostic tests ordered in the pre and postoperative phases,
- informed consent,
- medication classifications common to the pre and postoperative period,
- types of anesthesia (local, general, spinal etc),
- nursing interventions to prevent postoperative complications and promote recovery.

Required Readings


Part 1: Preoperative Care

Module Questions

1. Discuss the classification of surgical procedures and the physical status classifications of anesthesiologists.
2. Discuss the meaning of the following suffixes: ectomy, lysis, oscopy, ostomy, otomy, plasty.
3. Describe the nurses' role in preoperative assessment and completion of the preoperative checklist.
4. Identify factors that increase clients’ risk of complications during surgery.
5. Discuss the health teaching that must be included preoperatively. Discuss how the family can be included in this process.
6. Discuss the common diagnostic tests, their measurement, normal values and interpretation. Include: CBC, electrolytes, BUN, Creatinine, ECG, type and cross-match, coagulation studies, blood glucose.
7. Discuss the issue of informed consent. Identify who obtains consent. Describe the process followed if the client is unable to give consent.
8. Compare the preoperative preparation for ambulatory (outpatient day surgery) and inpatient surgery.
9. Discuss the patient preparation for the day of surgery.
10. Describe other factors that can influence clients and families beliefs about the outcome of surgery. Consider cultural diversity in your discussion.

Part 2: Postoperative Care

Module Questions

1. Discuss the components of a thorough postoperative assessment. Include assessment, planning, implementation, evaluation and documentation of care to meet the needs of clients in the postoperative phase.
2. Identify and discuss common postoperative complications in the following: respiratory, cardiovascular, neurological, pain, temperature, gastrointestinal, genitourinary, integumentary and psychological.
3. Discuss nursing interventions and teachings in order to prevent and treat each complication.
4. Identify the complications of anaesthesia in the post-operative phase.
6. Discuss classifications and implications of medications commonly ordered for the postoperative client: Opioid and non-opioid analgesics, NSAIDs (eg. Celebrex), antiemetics, antibiotics, antihistamines, H2 receptor blockers, and laxatives.
7. Discuss the effects of stress on the emotional needs of clients and families in the postoperative phase.
8. Discuss the impact of the “sick role” on the physiological, self-concept, role function, and interdependence modes of clients and families.
9. Discuss the nurses' role in meeting the discharge learning/teaching needs of clients and families (eg: hygiene, activity, lifting, nutrition, incision, wound, drain care, sexual activity, home-care needs, return to work, follow-up appointments).
Conference Discussion

1. Discuss preoperative procedure and checklists in your institution.

2. Discuss the effects of physiological stress on insulin and corticosteroid levels in the postoperative client.

3. Mrs. Malli is a 56 year old who had a vaginal hysterectomy and bilateral salpingoopherectomy for menorrhagia. She is first day postop and is experiencing abdominal distension and gas like pain. She rates her pain as 7 out of 10 and is very tired. She does not want to get up to the washroom or assist in her morning care. She has a PCA pump for pain control which she is using every 10-15 minutes and is upset and teary that the doctor has ordered it to be discontinued and oral medication started. Her foley catheter is to be discontinued. She wants you to leave the catheter and PCA pump insitu and to let her rest.
   a. You understand that Mrs. Malli’s pain is causing her distress, however what other factors may be leading to her emotional state?
   b. What nursing measures can help to treat or prevent abdominal distension and its related gas pain?
   c. What are some of the nursing interventions that you can employ to assist Mrs. Malli?

4. You have discontinued Mrs. Malli’s foley catheter. You noted scant rubra vaginal discharge and her catheter urine was clear. After one hour Mrs. Malli rings the call bell and asks for assistance to go to the bathroom, however she is unable to void.
   a. What are some of the nursing interventions that you can use to help Mrs. Malli to void?
   b. Mrs. Malli returns to bed and states she feels a need to void but is unable to do so. She is becoming distressed. The nurse asks you to do a bladder scan to determine urine volume in the bladder. How would you explain this procedure to Mrs. Malli?
   c. The bladder scan shows 1200ml of urine in the bladder and you need to re-insert the catheter. Mrs. Malli is distressed about this – how would you explain this post-operative complication to her?

5. Mr. Morphus had a left hip arthroplasty 2 days ago. He has a hemovac drain in the left hip which has been draining small amounts of serosanguineous drainage. His incisional dressing is dry and intact. He has an IV 2/3 & 1/3 at 50 cc/hr. He has been eating and drinking well. His 0800 vital signs are: HR 74, BP 132/78, RR 18, SpO2 96% on room air. Physiotherapy assisted him into the chair after breakfast and he
ambulated with moderate difficulty. You go into his room to administer his 1000 medications and to check his vital signs prior to administration of his antihypertensive medications and Fragmin (enoxaparin). You notice that he is pale, diaphoretic and is complaining of chest pain and shortness of breath (SOB).

a. What are the immediate nursing interventions?
b. His vital signs are: HR 124, BP 98/68, RR 32, SpO2 88% on room air – what are your immediate nursing interventions?
c. The physician assesses the client and notices a positive Homan’s sign on the left leg and calf tenderness. What may have occurred with Mr. Morphus to cause him to develop chest pain and SOB?
d. What would be the anticipated treatment plan and your nursing responsibilities?

Required Resources

Skills checklist to be completed:

No module
Skill 49-1 Demonstrating Postoperative Exercises

Additional Resources

Audiovisual Resources


Internet Resources (Scholarly)

- Dermatones and Spinal Anesthesia
  http://www.nda.ox.ac.uk/wfsa/html/u12/u1208_01.htm
- Edheads Virtual Knee Surgery
  http://www.edheads.org/activities/knee/index.htm
- Ontario Association of Community Care Access Centers
  http://www.oaccac.on.ca/functions.php
MODULE 10 – Pain Management

This learning module addresses the assessment and care of clients with pain. On completion of this module, the student will demonstrate knowledge of:

- the key terms used with pain management,
- common misconceptions about pain which may impact on effective pain management,
- physiology of pain,
- the factors (dimensions) influencing the pain experience,
- etiology and types of pain,
- issues in pain management throughout the life cycle,
- assessment, planning, implementation, evaluation and documentation of the client living with pain,
- cultural influences on the way the client and family experiences, interprets, and responds to pain,
- pharmacological and nonpharmacological methods of pain management,
- learning/teaching needs of clients and family members related to pain management.

Required Readings


Module Questions

1. Define pain.
2. Explain the dimensions of pain:
   a. Physiologic – transduction, transmission, perception, modulation
   b. Sensory – pattern, area, intensity, nature (PAIN)
   c. Affective – emotional responses
   d. Behavioural – observable actions
   e. Cognitive – beliefs, attitudes, memories and meaning
   f. Cultural – individual responses
3. Define nociceptive, neuropathic, and referred pain.
4. Describe the Gate-Control Theory.
5. Describe the three types of pain: acute, chronic non-cancer (CNCP), and cancer (malignant) pain.
6. Describe the components of a pain assessment. Identify the assessment, planning, implementation, evaluation and documentation of the client living with pain.
7. Discuss the potential sources for error when assessing pain.
8. Identify special considerations in pain management throughout the life cycle.
9. Describe factors that potentially increase or decrease responses to pain.
10. Explain how the attitudes and beliefs of clients, family, and caregivers influence the pain experience.
11. Explain how culture influences the pain experience.
12. Discuss nonpharmacological pain relief interventions such as, acupuncture, heat, relaxation, guided imagery, distraction, music, therapeutic touch etc.
13. Discuss pharmacological pain relief interventions.
14. Discuss the three types of analgesics:
   - nonopioid and non-steroidal anti-inflammatory (NSAIDs),
   - opioid,
   - adjuvant or coanalgesic.
15. Explain what is meant by an equianalgesic dose.
16. Define the terms physical dependence, tolerance, and addiction. Explain how these may be barriers to effective pain management.
17. Discuss the principles of:
   - patient controlled analgesia (PCA),
   - epidural analgesia.
18. Discuss the nursing responsibilities, including the student role, in assessing and caring for clients with PCA. Identify your agency’s policy regarding PCA.
19. Discuss the nursing responsibilities, including the student role, in assessing and caring for clients with epidural analgesia. Identify your agency’s policy regarding epidural analgesia.
20. Discuss the guiding principles in managing cancer pain.

**Conference Discussion**

1. You have been assigned to care for a 32 yr old woman who has ovarian cancer. She is in palliative care. She consistently stating her pain is rated as an 8-10 out of 10 despite the administration of her Morphine CR and her PRN Morphine IR. Her mother and husband state that she always complains and that you should ignore her whining.
   a. How would you proceed with her mother and husband with respect to managing the client’s pain?
   b. You approach the client to discuss some strategies to address her pain. What would you discuss with her?
   c. Identify some non-pharmacological methods of pain control that might be of help.
d. Consider a multi-modal approach to pain management. What would you consider appropriate for this client?

2. You are caring for a man, 87 yrs of age after a radical retropubic prostatectomy. He has a patient controlled analgesia (PCA) with a dosage of 0.5mg Morphine administered with each dose. There is a 6-minute lock out for each dosage administration. His daughter has been staying with him at his bedside. When you assess the client at 0800 he is sleeping, but rouses when you check his blood pressure (HR 98, BP 132/78, RR 18, SpO2 95% on room air). At 1200, you check his PCA doses, you note that in the past 4 hours the PCA button had been pushed 80 times and he has received 20mg. of Morphine. When you check on the client, you notice that he is difficult to arouse, his HR is 114, BP is 100/58, RR 10 and SpO2 89% on room air.

a. What would be the probable cause of his LOC and vital sign change?
b. What is the treatment plan for this?
c. You noted that the client was sleeping when you checked on him each hour. You wonder if the daughter was activating the PCA pump. How would you approach her to discuss this? What teaching would you provide to the daughter about the use of the PCA pump.

Additional Resources

Audiovisual Resources


Internet Resources (Scholarly)

- International Association for the Study of Pain (IASP®)  http://www.iasp-pain.org/
- PainOnline  http://www.painonline.org/

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Professional Association Resources


Suggested Additional Reading Resource


MODULE 11 – CPAP/BIPAP, Tracheostomy and Chest Tubes

This learning module addresses specifically the assessment and care of clients with tracheostomy or chest tubes. On completion of this module, the student will demonstrate knowledge of:

- structure and function of the respiratory system,
- assessment, planning, implementation, evaluation and documentation of the client who utilizes nasal CPAP/BIPAP,
- assessment, planning, implementation, evaluation and documentation of the client with a tracheostomy or chest tube,
- principles and procedures for oropharyngeal and tracheal suctioning,
- nurses role in tracheostomy care including corking and decannulation,
- chest tube care and chest drainage units (CDU),
- the nurses role in insertion and removal of chest tubes,
- nursing management of emergency situations related to tracheotomies’ and chest tubes.

Required Readings


Module Questions

**Part 1: Obstructive Sleep Apnea, Suctioning and Tracheostomy Care**

1. Describe the condition of obstructive sleep apnea and the rational for the use of Nasal CPAP.
2. Describe the assessment, planning, implementation, evaluation and documentation of care for the client utilizing nasal CPAP.
3. Identify the differences between CPAP and BIPAP.
4. Describe the indications, equipment and procedure for suctioning via the oropharyngeal, nasopharyngeal, and tracheal routes.
5. Discuss the process of pre-oxygenation and when it is indicated during the suctioning process.
6. Discuss the process of obtaining a sputum specimen when the client can expectorate, and when the client has to be suctioned.
7. Discuss differences in suctioning an adult and a child.
8. Define tracheostomy and state the indications for a tracheostomy.
9. Describe the assessment, planning, implementation, evaluation and
documentation of care for the client with a tracheostomy.
10. Discuss the indications for use of each of the following types of
tracheostomy tubes: cuffed, un-cuffed, fenestrated.
11. Discuss alternative communication strategies for clients with
tracheostomies.
12. Discuss the equipment needed and procedure involved for tracheostomy
care.
13. Explain the process of corking a tracheostomy. Discuss indications for
corking. Discuss the criteria for removal of a tracheostomy tube
(decannulation). Explain the nurses’ role in this process.
14. Discuss complications that can occur with tracheostomy tubes, include
discussion about the accidental dislodgment of a tube.
15. Discuss specific hospital policies regarding suctioning and tracheostomy
care at your agency.

Part 2: Chest Tubes

Module Questions

1. Review the structure and function of the respiratory system.
2. Explain the following: pleural effusion, empyema, hemothorax,
pneumothorax, chylothorax, subcutaneous emphysema, pleurodesis.
3. What are the indications for the insertion of a chest tube?
4. Discuss the assessment, planning, implementation, and evaluation of a
client with a chest tube. Include the care during chest tube insertion,
maintenance and removal of the tube.
5. Discuss the rationale for NOT clamping or stripping chest tubes.
6. Discuss the procedure for changing a chest drainage collection system
when the collection chamber is full or if the unit becomes damaged.
Explain the rationale for this procedure.
7. Discuss the principles of chest drainage systems:
   a. disposable chest drainage systems (eg. Pleur-Evac, Oasis),
   b. Heimlich Valve.
8. Explain the difference between having a chest drainage system with a wet
water suction versus a dry suction.
9. Discuss the nursing and medical interventions undertaken when a chest
tube becomes accidentally disconnected from the collection unit.
10. Describe symptoms that would indicate a tension pneumothorax. Discuss
the nurses’ responsibilities in this emergency situation.

Conference Discussion

1. You are assigned to receive a client being transferred from the high acuity
unit who has a tracheostomy (Shiley cuffless #8) and PEG tube. Your
clinical teacher asks you to prepare the room for this new client. List the supplies and equipment that you will need to provide care to a client with a tracheostomy and identify the rationale for use in this client.

2. You are caring for a client post right upper lobe lung resection via a video assisted thoracoscopy (VAT). He has two chest tubes inserted in the right chest.
   a. Why does the client have 2 chest tubes?
   b. The chest tubes are attached to a dual chamber chest drainage unit (CDU). How does this work?
   c. You notice that one of the chest tubes has drained 400 ml sanguineous drainage in the past hour. What would you do with this information?
   d. When the client goes for a walk, the CDU tips over, spilling drainage into all the chambers. In order for the drainage to be accurately measured, the nurse tells you the CDU needs to be changed. What would be the procedure for this? How would you explain it to your client?

Required Resources


Evolve Nursing Skills on Line

Nursing Skills Online: Module 8
Lesson 1: Overview of Airway Management
Lesson 2: Pulse Oximetry
Lesson 3: Oropharyngeal Suctioning
Lesson 4: Nasopharyngeal and/or Nasotracheal Suctioning
Lesson 5: Open Artificial Airway Suctioning
Lesson 6: Artificial Airway Inline Closed Suctioning
Lesson 7: Endotracheal Tube Care
Lesson 8: Tracheostomy Tube Care

Nursing Skills Online: Module 9
Lesson 1: Chest Tube Principles
Lesson 2: Chest Tube Drainage Systems
Lesson 3: Chest Tube Insertion and Maintenance Care
Lesson 4: Assisting With Removal of Chest Tubes

Skills checklist to be completed (available from Skills-on-line)

Skill 35-1 Suctioning

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Skill 35-2 Care of an Artificial Airway

Skills checklist to be completed (available from Skills-on-line)

Skill 35-3 Care of Clients with Chest Tubes

Additional Resources

Audiovisual Resources


Ryerson

Pt. 1 Introduction and upper airway [CD-ROM, 15 min].
Pt. 2 Lower airway [CD-ROM, 23 min].

Internet Resources (Scholarly)

- Atrium Medical Products, Chest Drainage Education http://www.atriummed.com/Products/Chest_drains/education.asp#ocean