

N322 Introduction to Pharmacology
Proctored ATI Remediation Template

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Assessment Name: RN Pharmacology 2023
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Instructions:

- Download the report from your ATI product for the assessment you are completing this remediation template for
- The report will be broken down into three (3) aspects:
 - Categories
 - These categories mimic the NCLEX-RN categories and include the following:
 - Management of Care
 - Safety and Infection Control
 - Health Promotion and Maintenance
 - Psychosocial Integrity
 - Basic Care and Comfort
 - Pharmacological and Parenteral Therapies
 - Reduction of Risk Potential
 - Physiological Adaptation
 - Subcategories
 - Topics
 - Complete the template on the following page by doing the following:
 - Main Category
 - Subcategories for each main category
 - Topics for each subcategory → these will be the content areas you will be remediating on
 - Provide three (3) critical points to remember for each topic → these will come from the Focused Review module(s) within your ATI product
 - NOTE: You must remediate on all subcategories AND topics within the main categories listed under the "Topics to Review" section of the ATI report for this assessment.***
 - In the event you need additional space within the table, please add rows into the table to accommodate this
 - In the event, you need less space within the table than what is provided, you may delete those rows from the table to accommodate this OR put "N/A" → There may be main categories that you don't have to remediate on and that is OK – you can either delete the table OR put "N/A"
 - An example is provided below:

SAMPLE Main Category: Management of Care
SAMPLE Subcategory: Case Management
SAMPLE Topic: Anemias: Discharge Teaching for a Client Who is Recovering from Sick Cell Crisis <ul style="list-style-type: none">SAMPLE Critical Point #1: Anemia is the abnormally low amount of circulation RB, Hgb concentration, or both.SAMPLE Critical Point #2: When a patient is going through sickle crisis, the nurse should monitor oxygen saturation to determine a need for oxygen therapy.SAMPLE Critical Point #3: A patient should have their hemoglobin checking in 4 to 6 weeks to determine efficacy.

- Once the template is completed **and** at least the minimum remediation time has been completed within the Focused Review module(s) in ATI, upload the template to the corresponding dropbox in E360.

Main Category: Psychosocial Integrity

Subcategory: Chemical and Othe Dependencies/Substance Abuse Disorder

Topic: Opioid Agonists and antagonists: Following Naloxone Adminstration

- Obtain baseline vital signs. If the respiratory rate is less than 12/min, withhold the medication an let the doctor know.
- Have naloxone and resuscitation equipment available.
- Assess clients for opioid dependence before administration. Agonist-antagonists can trigger withdrawal manifestations.

Main Category: Pharmacological and Parenteral Therapies

Subcategory: Adverse Effects/Contraindications/Side Effects

Topic: Adverse Effects- Assessing for Medication/Food interaction

- Medications are chemicals that affect the body. When more than one medication is given, Medications can interact with foods, herbal medicines, or other unconventional remedies.
- grapefruit juice seems inhibits medication metabolism in the small bowel, thus increasing the amount of medication available for absorption of certain oral medications. This increases either the therapeutic effects or the adverse reactions. Instruct clients to not drink grapefruit juice if they are taking such a medication.
- Food often decreases the rate of medication absorption. However, some foods increase the rate of absorption of certain medications.

Topic: Cardiac Glycosides and Heart Failure: Digoxin Toxicity

- Antacids decrease absorption of digoxin and can decrease its effectiveness.
- Verapamil increases plasma levels of digoxin
- ACE inhibitors and ARBs increase the risk of hyperkalemia, which can lead to decreased therapeutic effects of digoxin.

Topic: Chronic Neurologic Disorders: Contraindications of anticholinergic medication

- **Anticholinergic medications** block the muscarinic receptors, which assist in maintaining balance between dopamine and acetylcholine receptors in the brain.
- Dopamine agonists, COMT inhibitors, MAO-B inhibitors, dopamine releasers, and centrally acting anticholinergic antagonists are used concurrently to increase the beneficial effects of levodopa/carbidopa.
- Carbidopa is used to augment levodopa by decreasing the amount of levodopa that is converted to DA in the intestine and periphery. This results in larger amounts of levodopa reaching the CNS.

Topic: endocrine disorders: potential interactions with levothyroxine

- Increases cardiac responsiveness to catecholamines (epinephrine, dopamine, dobutamine) thereby increasing the risk of dysrhythmias.
- Can increase requirements for insulin and digoxin
- Binding agents, antiulcer medications, calcium and iron supplements, magnesium salts, and food reduce levothyroxine absorption with concurrent use.

Topic: gastrointestinal disorders: monitoring high dose metoclopramide

- Adverse effects include restlessness, anxiety, and spasms of the face and neck.
- Medication has the potential for sedation.
- Contraindicated in clients who have a seizure disorder due to an increased risk of seizures.

Topic: immunizations: contraindication for receiving varicella vaccine

- Varicella vaccine is contraindicated for pregnant clients
- Varicella vaccine is contraindicated for individuals with certain cancers, and hypersensitivity to neomycin and gelatin
- The vaccine is not recommended for clients who have HIV, congenital immune deficiencies, or those taking immunosuppressive drugs.

Topic: medications affecting coagulation: herbal supplements contraindications for client taking warfarin

- Foods high in vitamin K (dark green leafy vegetables [lettuce, cooked spinach], cabbage, broccoli, Brussels sprouts, mayonnaise, and canola and soybean oil) can decrease anticoagulant effects.
- Coenzyme Q-10 (CoQ-10) can decrease warfarin effectiveness due to a similar structure to vitamin K.
- Resveratrol and saw palmetto increase the risk of bleeding through antiplatelet effects.

Dosage Calculation

Topic: Calculating IV rate for Cefazolin

- If the prescription reads 1,500 mL to infuse over 10 hr (600 min) administer 38 gtt/min. The nurse should adjust the manual IV infusion to deliver LR 1,500 mL IV at 38 gtt/min.
- Total volume x drop factor/time
- Round if necessary.

Expected Actions/Outcomes

Topic: airflow disorders: evaluating the effectiveness of theophylline

- Oral theophylline is used for long-term control of chronic asthma or COPD.
- Monitor theophylline blood levels to keep within the therapeutic range (5 to 15 mcg/mL). Adverse effects are unlikely to occur at levels less than 20 mcg/mL.
- If manifestations occur, stop the medication. Activated charcoal is used to decrease absorption, lidocaine is used to treat dysrhythmias, and diazepam is used to control seizures.

Topic: growth factors: evaluating the therapeutic effect of filgrastim

- eukopoietic growth factors stimulate the bone marrow to increase the production of neutrophils.
- Decreases the risk of infection in clients who have neutropenia, from cancer and other conditions
- To build up numbers of hematopoietic stem cells before harvesting for autologous transplant
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Topic: safe med adm and error reduction: preparing the right medication

- Verify clients' identification before each medication administration. The Joint Commission requires two client identifiers.
- Check for allergies by asking clients, looking for an allergy bracelet or medal, and reviewing the MAR
- Read medication labels and compare them with the MAR three times: before removing the container, when removing the amount of medication from the container, and in the presence of the client before administering the medication.

Medication Administration

Topic: meds affecting blood pressure: titrating continuous nitroprusside infusion

- Administer medication slowly because rapid administration will cause blood pressure to go down rapidly.
- Monitor blood pressure and ECG continuously.

- Keep client supine during administration.

Topic: meds affecting coagulation: reviewing lab tests before administering warfarin

- Obtain baseline prothrombin time (PT) and monitor levels of PT and international normalized ratio (INR) periodically. In the case of warfarin toxicity, discontinue administration of warfarin, and administer vitamin K₁.
- Monitor vital signs.
- Advise clients to observe for bleeding (increased heart rate, decreased blood pressure, bruising, petechiae, hematomas, black tarry stools).

Topic: older adults: client teaching about insulin administration

- Insulin administration can be via **subcutaneous, intravenous, and intramuscular routes**.
- The subcutaneous route is the most widespread route of administration and is preferred by most patients due to its ease and convenience in administration.
- Draw the short- or rapid-acting insulin into the syringe first. This insulin is clear

Topic: Safe med adm and error reduction: preparing the right medication

- Know the med
- Know the strength, dose, route
- Know side effects/adverse effect/ contraindications
- Check for allergies

Parenteral/Intravenous Therapies

Topic: Intravenous therapy: actions for IV infusion infiltration

- Stop infusion
- Elevate extremity
- Encourage active range of motion

Pharmacological Pain Management

Topic: Safe med adm and error reduction: priority action when administering a controlled substance

- Legal mandates for controlled substances
- Verify client two times
- Right dose, right client, all the rights of med administration

Main Category: Reduction of Risk Potential

Subcategory: changes/abnormalities in vital signs

Topic:

- Supine position if BP is low
- Change positions slowly
- Start with a low dosage

Subcategory: therapeutic procedures

Topic: sedative/hypnotics: monitoring adverse effects of propofol

- Monitor for fever after surgery
- Use vial within 6 hours
- bradycardia

Main Category: Physiological Adaptation

Subcategory: fluid and electrolyte imbalances

Topic: gastrointestinal disorders: identify meds for severe vomiting

- Dexamethasone-for chemotherapy vomiting
- Scopolamine- for motion sickness
- Metoclopramide- suppresses emesis

Topic: medications affecting urinary output: monitor for fluid volume deficit

- **Monitor for dehydration**
- **Monitor for lethargy**
- **Monitor for dry mouth**

Check weight

Subcategory: medical emergencies

Topic: medications affecting coagulation: priority finding for a client who is taking warfarin

- Stomach pain
- nausea
- Unusual pain, swelling, or discomfort

Main Category: Clinical Judgement

Subcategory: Analyze cues

Topic: chronic neurologic disorders: identifying findings that require follow up

- dyskinesias
- psychosis
- **Sudden inability to stay awake**

Subcategory: Generate solutions

Topic: vitamins and minerals: caring for a client who has deficient anemia

- Administer ferrous sulfate with orange juice
- Administer without food to help with absorption
- **Don't take antacids within 1 hour after administration of iron**

Subcategory: Take actions

Topic: Chronic neurologic disorders: teaching about levodopa/carbidopa

- Carbidopa helps levodopa reach the CNS
- Most effective for parkinsons but effectiveness decreases after 5 years
- **Wearing off happens between doses**

Subcategory: evaluate outcomes

Topic: chemotherapy agents: education on adverse effects of medication

- Mouth sores
- Loss of appetite
- Therapy kills good and bad cells
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ATI RN Pharmacology for Nursing (9.0). (2023). Assessment Technologies Institute, LLC.