

**Mt. San Antonio College**  
**Associate Degree Nursing Program**  
**Curricular Threads**

**Pharmacology**

Pharmacology is the study of drugs actions on human being. It involves examining the interactions of chemical substances with living systems, with a view to understanding the properties of drugs and their actions, including the interactions between drug molecules and drug receptors and how these interactions elicit an effect. Nurses have the responsibility to safely administer medications prescribed by primary care providers. Nurses are also responsible for patient teaching regarding the medications and their actions and for assessment of therapeutic outcomes and adverse effects. The Pharmacology content in Mt.SAC Nursing Program comprises two major parts; one is the introductory concept of pharmacology, including dosage calculation and different classes of drugs. Those are covered in the course of NURS 2. The second part is integrated into nursing course. Different medication treatments with detailed description of drug action, how they are used therapeutically, adverse effects, and nursing implication are integrated into different nursing subjects throughout the curriculum, including Medical Surgical Nursing, Maternity Nursing, Pediatric Nursing, and Psychiatric Nursing.

**Medication Calculation Test Policy**

Each student *must pass, with 85 %*, a medication (drug) calculation test prior to week 3 of the course. Any student who is not successful on the first attempt may take a second test. Students will be advised regarding remediation and tutorial services available. Failure to pass the second calculation test will prevent the student from achieving success (i.e., passing) in the course because the student will not meet the medication objective(s) and critical element(s).

**NURS 1A - The Nursing Process I**

**Pharmacology Objectives**

1. Identifies the importance of the “6 rights” and Mt. Sac “4 rights” of medication Administration.

***6 Rights of Medication Administration***

- Right Client
- Right Medication
- Right Dose
- Right Time
- Right Route
- Documentation

### ***Mt. Sac 4 Rights***

- Medication Allergies
  - Medication Teaching
  - Medication Interaction
  - Medication History
2. Demonstrate proper use of drug resource books to obtaining information about medication that are ordered for assigned client.
  3. Demonstrates knowledge of medication by stating the expected drug action, usual dosage range, possible side effects and reason why drug is prescribed for each client.
  4. Identifies different drug classifications.
  5. Demonstrate two patient identifiers.
  6. Start orienting self to the medication administration system.
  7. Using MAR to check medications.
  8. Becomes familiar with medication cart.
  9. Medication Skills check-off will be preformed in the HCRC with 100% accuracy.

## **Medication Discussed in N1A Lecture**

### **Fecal Elimination:**

1. Laxatives=DSS, Correctol & Enemas-Retention & Cleansing
2. Anti-diarrhea= Immodium
3. Anti-Flatulent= Mylicon, GasX
4. Iron
5. ASA
6. Narcotic- MS, Dilaudid, Codien
7. Electrolytes

### **Urinary Elimination:**

1. Diuretics= Lasix
2. Electrolytes

## **Week 8 – Medication Administration**

On week 8 on N1A, the students have a Medicating Administration Lecture and Rotation Skill Stations. Rotation for skills Demonstration and Practice of: IM, ID, SQ including drawing ups the medication from vials and ampules.

### **Week 8 Medications Objectives:**

1. Define selected terms related to the administration of medications.
2. Describe legal aspects of administering medication.

3. Identify physiologic factors and individual variables affecting medication action.
4. Describe various routes of medication administration.
5. Identify essential parts of a medication order.
6. List examples of various types of medication orders.
7. State system of measurement that are used in the administration of medication.
8. List six essential steps to follow when administering medication.
9. State the “rights” to accurate medication administration.
10. Describe physiologic changes in older adults that alter medication administration and effectiveness.
11. Outline steps required to administer oral medication safely.
12. Outline steps required for nasogastric and gastrostomy tube medication administration
13. Identify equipment required for parenteral medications.
14. Describe how to prepare selected drugs from ampules and vials.
15. Identify sites used for intradermal, subcutaneous, and intramuscular injections.
16. Describe essential steps for safely administering parenteral medications by intradermal, subcutaneous, and intramuscular injections.
17. Describe essential steps in safely administering topical medications: dermatologic, ophthalmic, otic, nasal,vaginal, respiratory inhalation, and rectal preparations.

### Week 8 Schedule

0700 – 0715	Administration
0715 – 0800	Medication Administration Introduction
0800 – 0915	Administer oral, topical, suppository & Inhalants Video Safe Medication Administer
0915 – 0930	Break
0930 – 1100	Administering IM, ID, SQ medication Video Injections IM, Z-track, ID, SQ
1100 – 1200	Lunch
1200 – 1500	Station Rotation for skills Demonstration and Practice of : IM, ID, SQ including drawing up the medication from vial and ampule. (Skills check-off will be in HCRC with RN)

**\* Times may change due to unknown circumstances**



#### 4. Drawing up two types of insulin (NPH & regular) into one syringe

**Procedure:**

S \_\_\_\_ U \_\_\_\_ NI \_\_\_\_

1. Check the 9 rights of medication administration.
2. Gather the supplies.
3. Wash your hands.
4. Gently roll the NPH insulin vial between the hands to mix the particles into suspension.
5. Clean the tops of the vials with alcohol wipes.
6. Remove the needle cap and withdraw the plunger until an amount of air equal the total insulin doses are within the syringe.
7. Carefully inject the amount of air equal to the number of units to be taken from the NPH insulin into the vial. Inject the remaining air (equal to the regular insulin dose) into the regular insulin vial. (Do not inject air into the solution itself because doing so may produce air bubbles that can alter the dose.) Without removing the needle, invert the vial of regular insulin and withdraw exactly the number of units of regular insulin needed. Double check with an RN.
8. Insert the needle into the vial of NPH insulin. Invert the vial, and withdraw the correct amount of units of NPH insulin. (The medication is now mixed in one syringe and ready for injection.) Double check with an RN.

#### 5. Administering intradermal injections

S \_\_\_\_ U \_\_\_\_ NI \_\_\_\_

**Procedure:**

1. Check the 9 rights of medication administration.
2. Gather the supplies.
3. Wash your hands.
4. Identify the injection site on the ventral forearm of the patient.
5. Prepare the injection site with an alcohol wipe.
6. With the nondominant hand, pull the skin taut at the injection site.
7. Insert the needle at a 15 degree angle with the bevel up.
8. Inject the drug slowly and gently to form a wheal in the skin.
9. When the injection is completed, withdraw the needle, being careful not to massage the injection site.
10. Document the medication name, date, dose, site, route, and time.

#### 6. Administering a subcutaneous injection

S \_\_\_\_ U \_\_\_\_ NI \_\_\_\_

**Procedure:**

1. Check the 9 rights of medication administration.
2. Gather the supplies.
3. Wash your hands.
4. Identify and prepare the injection site using an alcohol wipe.
5. In the dominant hand, hold the syringe like a pencil with the bevel of the needle up. Hold the syringe at a 45-degree angle to the skin fold. (90 degree may also be appropriate)



## 9. Administering oral medications

S \_\_\_\_ U \_\_\_\_ NI \_\_\_\_

### *Procedure:*

1. Check the 9 rights of medication administration.
2. Gather the supplies.
3. Wash your hands.
4. When using a multi-dose container, place the correct number of tablets or capsules into the lid, then transfer them into a soufflé or medicine cup. (Do not touch the medication.)
5. Instruct the patient to place the tablets in the mouth and swallow them with water.
6. Remain at the bedside until the patient swallows all of the medication.
7. Document the medication name, date, dose, route, and time.

## 10. Administering a liquid medication by mouth

S \_\_\_\_ U \_\_\_\_ NI \_\_\_\_

1. Check the 9 rights of medication administration.
2. Gather the supplies.
3. Wash your hands.
4. If administering a suspension, shake the preparation to thoroughly mix it. This ensures uniformity throughout the liquid.
5. Pour an approximate amount of medication into a medicine cup.
6. Draw up slightly more than the desired amount of medication into an appropriate size syringe.
7. Remove the air and extra medication from the syringe.
8. Instill the medication into the pocket between the patient's cheek and gum.
9. Remain at the bedside until the patient swallows all of the medication.
10. Document the medication name, date, dose, route, and time.

## NURS 1B - The Nursing Process II

### Pharmacology Objectives

1. State components of a legal M.D. medication order and detect any errors in the order.
2. Explain the use of therapeutic measures such as artificial airways, medications, oxygen therapy, inhalation therapy, pharyngeal suction, and chest drainage to promote respiratory function.
3. Identify potential problems of safety related to oxygen therapy and takes action to correct the hazard.
4. State outcome criteria for evaluating client responses to measures that promote adequate oxygenation.
5. Inspect I.V. solutions for clarity, absence of precipitates and incompatible additives. Use aseptic technique in preparation/administration of parenteral medications. Implement universal/standard precautions for disposal of sharps and use correct technique to avoid needle sticks to self and others.
6. Calculate drip rates for I.V. solutions and report drip rates that are incorrect to team leader and instructor.
7. Administer medications only under the direct supervision of professor, never independently.
8. Demonstrate timely use of drug resource books in obtaining data about individual drugs being administered to assigned clients.
9. Observe and apply "10 Rights" when assigned to administer medications to clients.
10. State the expected drug action, usual dosage range, possible side effects and reason why drug is prescribed for each client, before administering drug.
11. Withhold administration and consult proper personnel when in doubt about any aspect of the administration of medications.
12. Use the identa-band for the accurate identification of the client name and MR # before every administration of medications.
13. Remain with client until medication is completely taken.
14. Record medications after administration per the policy of the health care agency.
15. Evaluate the effectiveness of administered medication(s) in the appropriate time period and chart the assessed response.
16. Demonstrate awareness of pathophysiological processes that are affecting the client and associate these with the prescribed medication(s).
17. Report observations and interventions in a timely/appropriate manner to the appropriate persons.
18. Demonstrate awareness of influence of pathophysiology as well as how therapeutic agents influence states of anorexia, nausea and vomiting.
19. Demonstrate knowledge of drug, method of administration, expected action, side/toxic effects, symptoms of overdose and any contradictions for each medication to be administered.



20. Check medication sheet with M.D. order sheet and/or validate order is correct according to agency's specified protocol.
21. Evaluate effectiveness of administered medications and chart-assessed response.
22. Identify life cycle changes that influence medication dosage, metabolism of drugs, and excretion.
23. Identify and correctly administer commonly used analgesics and narcotics for pain relief.
24. Observe hospital policy regarding handling, dispensing and recording of controlled medications, including narcotics.
25. Administers oral and topical medications with supervision.
26. Plan for potential fluid/ electrolyte problems in clients on various drug therapies (e.g., diuretics, corticosteroids) and assess client for signs/symptoms of problems.
27. Observe policies/procedures for administering medications, including stop orders for antibiotics, anticoagulants, narcotics, and sedatives.
28. Evaluate incompatibilities when mixing drugs with foods and/or other drugs; calls attention to contraindications and incompatibilities by reporting them to team leader and professor.

## **Medication Discussed in N1B Lecture**

### **Circulation Medications**

- Nitrates
- Calcium Channel Blockers
- ACE
- Digitalis
- Beta Blockers
- Low molecular weight heparin

### **Oxygenation Medications**

- Help client understand the purposes, effects, and side effects
- Assess effects of medications and potential complications
- Assess intake and output and potassium levels, if appropriate, for clients receiving diuretics
- Assess BP, HR, peripheral pulses, and lung sounds for clients receiving positive inotropic medications
- Monitor BP (including postural blood pressure) for client receiving antihypertensive medications

- Interventions
- **Bronchodilators**
- **Anti-inflammatory drug**
- **Expectorants**
- **Cough Suppressants**
- Patient Teaching
- Oxygen Safety/ Home care
- Using Cough Medicine
- Using Inhalers

### **Pain Management**

**As pain impulses stimulate regions of the midbrain, descending nerve fibers conduct impulses from the brain to the spinal cord, where ascending impulses are inhibited by the release of endogenous opioids, serotonin, and norepinephrine.**

- Modulation
- Other substances amplify = increase pain
- Tricyclics, ketamine, dextromethorphan decrease pain
- **General Guidelines for Analgesic Medication Orders**
- Administer medications routinely, not PRN
- Use the least invasive route of administration first
- Begin with a low dose. Titrate carefully until comfort is achieved
- Reassess and adjust dose frequently to optimize pain relief while monitoring and managing side effects

### **Pharmacologic Pain Management**

- Non-Opioids/NSAIDS
- Opioid Analgesic
- Equianalgesic

- Coanalgesics (Adjuvant)
- Placebos
- Routes of Administration
- Oral
- Transnasal
- Transdermal
- Transmucosal
- Rectal
- Topical
- Subcutaneous
- IM
- IV
- Intraspinial
- Continuous Local Anesthetics
- PCA

### **Periop Medications**

- Anticoagulants
- Tranquilizers
- Antibiotics – aminoglycosides
- Diuretics
- Antihypertensives

### **Long-term steroid therapy**

### **Preoperative Medications**

- Sedatives & tranquilizers
- Narcotics

- Anticholinergics
- H2 antagonist
- Neuroleptanalgesic

## **Sleep**

- Factors Affecting Sleep
- Arthritis, back pain, respiratory conditions, endocrine disturbances, elevated temperature, nocturia
- Caffeine / ETOH
- Nicotine
- Hypnotics, B-blockers, narcotics, tranquilizers, antidepressants
- Stimulants / ETOH

## Medications

- Disruptive Drugs
- Drugs Disrupting Sleep
- ETOH
- Amphetamines
- Antidepressants
- B-blockers/Bronchodilators
- Caffeine
- Decongestants
- Narcotics
- Steroids

(Disrupt REM, delay onset of sleep or ↓ sleep time)

- Drugs Causing Excessive Sleep
- Antidepressants
- Antihistamines

- B-blockers
- Narcotics

### **Solutions to Insomnia**

- Hypnotic medications (questionable, do not deal with the problem/dependency)
- Antihistamines (Benadryl) – (side effects: dizziness, sedation and hypotension, asthma, ↑ intraocular pressure, hyperthyroidism, cardiovascular disease, HTN)

## **NURS 3 – Medical-Surgical Nursing - Locomotion/Sensation/Integument/Oncology/Immunology**

### **Pharmacology Objectives**

1. Safely administer drugs, IV solutions/piggybacks, and gases and observe the client's reaction to these agents.
2. Discuss the role of the nurse in the assessment and management of clients with common eye and ear disorders, including administration of ophthalmic and otic medications.
3. List commonly used pharmacological agents used in the management of HIV and AIDS.
4. Describe the special nursing needs of clients receiving radiation and/or chemotherapy.
5. Discuss the special pain and nutritional needs of cancer clients, including assessment, medications, side effects, and interventions for pain/nutritional management during debilitating or dying processes.
6. Explain the purposes of therapeutic and pharmacologic interventions for common dermatologic conditions.
7. Demonstrate correct technique for application of topical medications and dermatologic patches.
8. Demonstrate knowledge of drug, side effects and reason client is receiving agent and adheres to the “10 Rights” of medication administration each time prevention is implemented.
9. Perform medication-related calculations with 100% accuracy before administering medicine to client.
10. Check accuracy of medication order, prepares, administers medication within 20 minutes and charts medication within 10 minutes.
11. Prepare and administers oral, N/G, G/T, IM, SQ, otic, ophthalmic, topical and intravenous piggyback medications using appropriate equipment and technique.
12. Follow Universal Precautions for disposal of sharps and uses correct technique to avoid needle sticks to self and others.
13. Verify accuracy of IV meds/fluids. Calculates IV flow rate(s) in mL/hr and gtts/min.
14. Check for patency of IV site, other complications, and clears tubing of air prior to initiating flow for IV meds/fluids.
15. Appropriately operate IV controllers and pumps.
16. Administer designated IV fluids/meds within prescribed time frame according to instructional guidelines and agency policy.
17. Teach client or significant other(s) re: medication regime as indicated by care plan.

## Medication Discussed in N3 Lecture

<p><b>Antibiotics</b></p> <ul style="list-style-type: none"> <li>Zosyn</li> <li>Flagyl</li> <li>Vancomycin</li> <li>Rocephin</li> <li>Levaquin</li> <li>Azithromycin</li> </ul> <p><b>Anti-viral</b></p> <ul style="list-style-type: none"> <li>Tami flu</li> </ul> <p><b>Urinary tract antispasmodic</b></p> <ul style="list-style-type: none"> <li>Oxbutynin</li> </ul> <p><b>Analgesic</b></p> <ul style="list-style-type: none"> <li>Vicodin</li> <li>Motrin</li> <li>Tylenol</li> <li>MS contin</li> <li>Dilaudid</li> </ul> <p><b>Skeletal muscle relaxants</b></p> <ul style="list-style-type: none"> <li>Soma</li> <li>Neurontin</li> </ul> <p><b>Anticonvulsant</b></p> <ul style="list-style-type: none"> <li>Dilantin</li> <li>Keppra</li> </ul> <p><b>Antihyperglycemic</b></p> <ul style="list-style-type: none"> <li>Metformin</li> <li>Regular Insulin</li> <li>NPH Insulin</li> <li>Lantus Insulin</li> <li>Novolog Insulin</li> <li>Novolin 70/30 Insulin</li> </ul>	<p><b>Anti-anemic/hormone</b></p> <ul style="list-style-type: none"> <li>Epogen</li> <li>Ferrlecit</li> </ul> <p><b>Lipid lowering agents</b></p> <ul style="list-style-type: none"> <li>Zocor</li> <li>Mevacor</li> </ul> <p><b>Diuretics</b></p> <ul style="list-style-type: none"> <li>Lasix</li> <li>Dyazide</li> </ul> <p>(Hydrochlorothiazide/triamterene)</p> <p><b>Antidepressants</b></p> <ul style="list-style-type: none"> <li>Prozac</li> </ul> <p><b>Anti-Psychotic</b></p> <ul style="list-style-type: none"> <li>Haldol</li> </ul> <p><b>Sedative/hypnotic</b></p> <ul style="list-style-type: none"> <li>Restoril</li> <li>Ativan</li> </ul> <p><b>Laxative/Stool softeners</b></p> <ul style="list-style-type: none"> <li>Colace</li> <li>Dulcolax</li> <li>Milk of Magnesia</li> </ul> <p><b>Anti-diarrheal</b></p> <ul style="list-style-type: none"> <li>Imodium</li> </ul> <p><b>Antiulcer</b></p> <ul style="list-style-type: none"> <li>Pepcid</li> <li>Protonix</li> <li>Reglan</li> <li>Omeprazole</li> </ul> <p><b>Probiotics</b></p> <ul style="list-style-type: none"> <li>Culturelle (Lactobacillus)</li> <li>Florastor</li> </ul>
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<p><b>Cardio</b></p> <ul style="list-style-type: none"> <li>Nitroglycerin</li> <li>Lisinopril</li> <li>Atenolol</li> <li>Coreg</li> <li>Lopressor</li> <li>Catapress</li> <li>Vasotec</li> <li>Procardia</li> <li>Amiodarone</li> <li>Apresoline</li> </ul> <p><b>Anticoagulant</b></p> <ul style="list-style-type: none"> <li>Fragmin</li> <li>Coumadin</li> <li>Heparin</li> <li>Aspirin</li> </ul>	<p><b>Steroid</b></p> <ul style="list-style-type: none"> <li>Decadron</li> <li>Solu-medrol</li> </ul> <p><b>Thyroid meds</b></p> <ul style="list-style-type: none"> <li>Synthroid</li> </ul> <p><b>Lipid Lowering Agents</b></p> <ul style="list-style-type: none"> <li>Zocor</li> <li>Mevacor</li> </ul> <p><b>Electrolyte modifier/phosphate binder</b></p> <ul style="list-style-type: none"> <li>Renagel</li> </ul> <p><b>Antiemetic</b></p> <ul style="list-style-type: none"> <li>Kytril</li> <li>Reglan</li> <li>Antivert</li> </ul> <p><b>Allergy/cold meds</b></p> <ul style="list-style-type: none"> <li>Benadryl</li> <li>Claritin</li> <li>Singulair</li> <li>Mucinex</li> </ul> <p><b>Respiratory meds</b></p> <ul style="list-style-type: none"> <li>Albuterol</li> <li>Atrovent</li> <li>Advair Diskus</li> </ul>
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## NURS 4 – Maternity Nursing

### Pharmacology Objectives

1. Demonstrate knowledge of medications, rationale for administration, intended results, side effects, and nursing implication.
2. Calculate and administer medications and IV fluids to women of childbearing age with 100% accuracy, safe technique and appropriate documentation.
3. Calculate and administer medications to well-newborns with 100% accuracy, safe technique and appropriate documentation.

### Medication Discussed in N4 Lecture

The following is a partial list of the drugs most commonly used in each of the Maternal/Newborn settings.

Labor & Delivery	Postpartum	Nursery
Nubain Vistaril Duramorph Oxytocin/Pitocin Methergine Magnesium Sulfate Phenergan Terbutaline Cervidil Cytotec Nifedipine Fentanyl Stadol Hemabate Bicitra	Tucks Lanolin cream Dermoplast Tylenol # 3  Darvon Narcan Empirin # 3 Vicodin Percocet Percodan Colace Morphin Phenergan Meruvax Ibuprofen Rhogam (D) immune globulin Restoril Benedryl Dulcolax Proctosol Milk of Magnesia	Vitamin K Erythromycin Ophthalmic Hepatitis B Immunoglobulin Hepatitis vaccine Narcan

## NURS 5 – Psychiatric Nursing

### Pharmacology Objectives

1. Differentiate between current legal versus medical definitions of mental disorders and explain their impact on treatment types and availability (Including pharmacological treatment).
2. Describe the therapeutic use and effects of psychopharmacology.
3. Demonstrate knowledge of therapeutic, side and toxic effects of medications the client is receiving; observe for expected and untoward signs and symptoms and report findings to appropriate member of the mental health team.
4. Demonstrate knowledge of psychotropic medications, rationale for administration, intended results, side effects, and nursing implication.
5. Describe specific safety precautions associated with medication administration on a psychiatric unit.

### Medication Discussed in N5 Lecture

1. Antipsychotic drugs

#### Traditional /Standard/Conventional (First-Generation)

- a. chlorpromazine (Thorazine)
- b. fluphenazine (Prolixin)
- c. haloperidol (Haldol)

#### Atypical- 2nd Generation (Newer Generation)

- d. clozapine (Clozaril)
- e. risperidone (Risperdal)
- f. olanzapine (Zyprexa)
- g. quetiapine (Seroquel)
- h. ziprasidone (Geodon)
- i. aripiprazole (Abilify)

2. Mood stabilizers

- a. Lithium

3. Antiepileptics/anticonvulsants

- a. Carbamazepine (Tegretol)
- b. Divalproex (Depakote)
- c. Lamotrigine (Lamictal)
- d. Gabapentin (Neurontin)
- e. Topiramate (Topamax)
- f. Clonazepam (Klonopin)

#### 4. Antidepressants

Typical or standard antidepressants

- a. Tricyclic antidepressants (TCAs)
  - i. Amitriptyline (Elavil)
  - ii. Imipramine (Tofranil)
  - iii. Nortriptyline (Pamelor)
- b. Selective serotonin reuptake inhibitors (SSRIs)
  - i. Fluoxetine (Prozac)
  - ii. Sertraline (Zoloft)
  - iii. Paroxetine (Paxil)
  - iv. Citalopram (Celexa)
  - v. Escitalopram (Lexapro)
- c. Monoamine oxidase inhibitors (MAOIs)
  - i. Isocarboxazid (Marplan)
  - ii. Phenelzine (Nardil)
  - iii. Tranylcypromine (Parnate)

#### 5. Atypical or novel antidepressants = 3rd generation

- a. Serotonin-norepinephrine reuptake inhibitor (SNRIs)
- b. Venlafaxine (Effexor)
- c. Duloxetine (Cymbalta)
- d. Mirtazapine (Remeron)
- e. Trazodone (Desyrel)

#### 6. Dopamine-norepinephrine reuptake inhibitor

- a. Bupropion (Wellbutrin/Zyban)

#### 7. Antianxiety drugs

- a. Benzodiazepines
  - i. Depress activity in the brainstem and limbic system
- b. Antihistamines
  - i. Depress CNS by sedation
  - ii. Primarily used for allergic conditions
- c. Misc. drug: buspirone (BuSpar)
  - i. Nonsedating and non-habit forming

#### 8. Benzodiazepines

- a. Diazepam (Valium)
- b. Clonazepam (Klonopin)

- c. Alprazolam (Xanax)
  - d. Flurazepam (Dalmane)
  - e. Triazolam (Halcion)
9. midazolam (Versed)\*

### **Common Psych Drugs List**

- ✓ haloperidol (Haldol)
- ✓ clozapine (Clozaril)
- ✓ lithium (Lithobid)
- ✓ fluphenazine (Prolixin)
- ✓ chlorpromazine (Thorazine)
- ✓ clozapine (Clozaril)
- ✓ risperidone (Risperdal)
- ✓ olanzapine (Zyprexa)
- ✓ quetiapine (Seroquel)
- ✓ ziprasidone (Geodon)
- ✓ aripiprazole (Abilify)
- ✓ Carbamazepine (Tegretol)
- ✓ Divalproex (Depakote)
- ✓ Lamotrigine (Lamictal)
- ✓ Gabapentin (Neurontin)
- ✓ Topiramate (Topamax)
- ✓ Clonazepam (Klonopin)

## NURS 6 – Pediatric Nursing

### Pharmacology Objectives

1. Demonstrate knowledge of medications, rationale for administration, intended results, side effects, and nursing implication.
2. Adhere to the “6 rights” and Mt. SAC “4 rights” of pediatric medication administration.
3. Using the mg/kg and microdrop methods describe the process for calculation of pediatric dosages/IV fluids and the special considerations for pediatric pharmacology and IV therapy (i.e. absorption, excretion, potential complications etc).
4. Administer designated IV fluids/meds, using correct technique and within prescribed time-frame according to instructional guidelines and agency policy.
5. Check for patency of IV site, other complications, and clears tubing of air prior to initiating flow for IV meds/fluids.
6. Teach client, parent(s), caregiver(s) or significant other(s) regarding medication regime as indicated by care plan.

### Medication Discussed in N6 Lecture

1. Gentamicin
2. Rocephin
3. Zosyn
4. Pepcid
5. Zantac
6. Protonix
7. Tylenol
8. Tylenol with Codeine Elixir
9. Decadron
10. Benadryl
11. Robinul
12. Baclofen
13. Miralax
14. Klonopin
15. Polyvisol
16. Ferrous sulfate
17. Phenobarbital
18. Calcium Carbonate
19. Ativan
20. Ampicillin
21. Unasyn
22. Gentamicin
23. Vancomycin
24. Rocephin
25. Clindamycin

26. Zosyn
27. Pepcid
28. Zantac
29. Protonix
30. Flagyl
31. Tylenol
32. Motrin
33. Tylenol with Codeine Elixir
34. Morphine
35. Decadron
36. Zithromax
37. Benadryl
38. Phenobarbital

### **Other Medications**

1. ALL vaccines for communicable diseases
2. Penicillin
3. Erythromycin
4. Amantadine hydrochloride
5. Amoxicillin
6. Epinephrine
7. Ribavirin
8. Syngis
9. IVIG
10. INH
11. LTBI
12. Rifampin
13. PZA
14. Asthma: Long-term, short-term, and rescue meds, Corticosteroids, B-adrenergic agonists, long-acting agonist, theophylline, cromolyn sodium, leukotrienes, anticholinergics
15. pancreatic enzymes
16. GI: H2-receptor antagonists, PPI's
17. Mucosal protective agents
18. digoxin
19. prostaglandin E1
20. Lasix
21. Iron
22. Desferal
23. DDAVP
24. Chemotherapeutic agents=just describe the 4 phases
25. Seizure meds
26. GH

27. Vasopressin
28. TH replacement
29. Vitamin D
30. Cortisol
31. Aldosterone
32. Diabetic Meds: rapid-acting, short-acting, intermediate-acting, long-acting insulin
33. pediculicides
34. Zinc oxide
35. NSAIDS

## **NURS 7 – Medical-Surgical Nursing – Nutrition / Elimination / Surgical Asepsis**

### **Pharmacology Objectives**

1. Demonstrate knowledge of medications, rationale for administration, intended results, side effects, and nursing implication.
2. Administer designated IV fluids/meds within prescribed time frame according to instructional guidelines and agency policy.
3. Administer IV push medications under supervision, as permitted by agency policy.
4. Identifies and follows standards of practice for administration of NG/GT/J-tube meds.
5. Verifies accuracy of IV meds/fluids, flow rate(s) +1-5 drops/minute within 20 minutes after implementation of care and adjusts as needed.
6. Check for patency of IV site for real/potential complications.
7. Appropriately operate IV controllers and pumps.
8. Teach client and/or significant other(s) regarding medication regime as indicated by plan of care.

### **Medication Discussed in N7 Lecture**

#### **Preoperative Medications**

1. Herbal Supplements – Echinacea, Feverfew, Garlic, Ginger, Ginko Biloba, Goldenseal, Kava, Licorice , Saw palmetto, St John’s Wort, Valerian, Vitamin E

#### **Preoperative Medications (Commonly Used)**

1. Antibiotics – Cefazolin
2. Anticholinergics – Atropine, Scopolamine
3. Antidiabetics – Insulin
4. Antiemetics – Metoclopramide, Ondansetron
5. Benzodiazepines – Midazolam, Diazepam, Lorezepam
6. Beta blockers – Labetalol
7. Histamine (H2) – receptor antagonists – Famotidine, Ranitidine
8. Opioids – Morphine, Fentanyl

#### **Intraoperative**

##### **Anesthesia**

1. Barbituates – Thiopental, Methohexital
2. Nonbarbiturate Hypnotics – Etomidate, Propofol
3. Inhalation Agents



4. Volatile Liquids – Isoflurane, Desflurane, Sevoflurane, Halothane
5. Gaseous Agents – Nitrous Oxide
6. Dissociative Anesthetics – Ketamine
7. Opioids – Fentanyl, Sufentanil, Morphine Sulfate, Hydromorphone, Alfentanil, Remifentanil, Methadone, Meperidine
8. Benzodiazepines – Midazolam, Diazepam, Lorazepam
9. Neuromuscular Blocking Agents –
10. Depolarizing Agents – Succinylcholine
11. Nondepolarizing agents – Vecuronium, Pancuronium, Pipecuronium, Doxacurium, Rocuronium
12. Antiemetics – Ondansetron, Dolasetron, Granisetron, Metoclopramide, Prochlorperazine, Promethazine, Scopolamine, Diphenhydramine
13. Dexamethasone

## **Pain**

### **Selected Nonopioid Analgesics**

1. Nonsalicylate – Acetaminophen
2. Salicylates – Aspirin, Choline magnesium trisalicylate
3. Nonsteroidal Antiinflammatory Drugs (NSAIDs) – Ibuprofen, Naproxen, Ketorolac, Diclofenac K, Celecoxib

### **Opioid Analgesics**

1. Mu Agonists – Morphine, hydromorphone, methadone, levorphanol, fentanyl, oxycodone, hydrocodone, codeine
2. Mixed Agonist-antagonists – pentazocine, pentazocine plus naloxone, butorphanol
3. Partial Agonists – buprenorphine, buprenorphine plus naloxone

### **Adjuvant Drugs Used for Pain Management**

1. Corticosteroids – dexamethasone, prednisone, methylprednisolone
2. Antidepressants
3. Tricyclic Antidepressants – amitriptyline, doxepin, imipramine, nortriptyline, desipramine
4. Serotonin norepinephrine reuptake inhibitor (SNRI) Antidepressants – Venlafaxine, duloxetine, bupropion
5. Antiseizure Drugs – carbamazepine, phenytoin, gabapentin, pregabalin, lamotrigine
6. Muscle relaxant – baclofen
7.  $\alpha_2$  – adrenergic agonist – clonidine
8. Anesthetics (oral or systemic) – mexiletine, 5% lidocaine impregnated transdermal patch
9. Anesthetics (local) – lidocaine 2.5% + prilocaine 2.5%, capsaicin

## Urinary System

### Potentially Nephrotoxic agents

1. Antibiotics – amikacin, amphotericin, bacitracin, cephalosporines, gentamycin, kanamycin, neomycin, polymyxin B, streptomycin, sulfonamides, tobramycin, vancomycin
2. Other Drugs – captopril, cimetidine, cisplatin, cocaine, cyclosporine, ethylene glycol, heroin, lithium, methotrexate, nitrosoureas, NSAIDS, phenacetin, quinine, rifampin, salicylates

### Patients with Renal and Urologic Problems

1. Antibiotics – trimethoprim/sulfamethozazol, nitrofurantoin, ciprofloxacin, levofloxacin. Ampicillin, vancomycin, gentamycin, tobramycin
2. Antifungals – amphotericin, fluconazole, clotrimazole, nystatin
3. Antidepressants – amitriptyline, nortriptyline
4. Pentosan
5. Deimethyl sulfoxide
6. Bacille calmette-Guerin
7. Cholestyramine
8. Calcium lactate
9. Diuretics – furosemide
10. a-interferon
11. theotepa, valrubicin
12. Drugs Influencing Lower Urinary Tract Function (brief overview)
13. a-adrenergic receptor agonists – pseudophedrine, ephedrine, prazosin, terazosin, doxazosin
14. ACE inhibitors – captopril, lisinopril, enalapril

## **NURS 8– Medical-Surgical Nursing – Circulation and Oxygenation**

### **Pharmacology Objectives**

1. Describe and evaluate the variables that adversely affect the maintenance of circulation and oxygenation in body cells, and plan and implement secondary prevention techniques including pharmacologic intervention aimed at solving circulation and oxygenation problems.<sup>1</sup>
2. Safely administer drugs and gases and observe the client's reaction to these medicinal agents.
3. Evaluate and report the effects of drugs and gases on the physiological functions of clients who have oxygenation and circulation problems, including fluid-electrolyte and acid-base problems.
4. Utilize principles involved in the safe administration of medications via oral, parenteral, topical and instillation methods.
5. Describe pain accurately [location, intensity, quality, duration, type, presence or absence of radiation to arm, jaw, neck, teeth, back] and provide the Neuman Model prevention technique according to situation [medicates, oxygenates, provides psychological support, uses touch, notifies physician or charge nurse.
6. Calculate dosages of drugs/solutions [including I.V. flow rates] quickly and with 100% accuracy.
7. Observe I.V. for flow rate; know flow rate desired/prescribed; report deviations to team leader/charge nurse.
8. Observe I.V. site for inflammation or infiltration and report findings to team leader/charge nurse.
9. Complete all charting, including all supporting flow sheets, medication records, narcotic records; initials are used where indicated; signature appears in specified places; charting performed before post-conference.
10. Identify common abnormal rhythms [eg., sinus bradycardia, sinus tachycardia, PAC'S, atrial flutter, atrial tachycardia, atrial fibrillation], is aware of usual therapy for these

arrhythmias; differentiate life-endangering from non-threatening arrhythmias; report changes

11. Demonstrate knowledge of physiologic actions, side effects, toxic effects, contraindications, normal doses, routes of administration, routes of elimination of ALL MEDICATIONS THE CLIENT IS RECEIVING; observe client for toward and untoward signs/symptoms relative to medications.
12. Recognize/describe respiratory difficulty/distress; apply oxygen per mask, cannula, nasal catheter, as ordered; can regulate flow rate as ordered; state the rationale for use of each and for oxygen therapy in cardiovascular-hematologic disorders.
13. Point out location of emergency drugs/equipment and obtain equipment when needed in an emergency.
14. Identify common abnormal rhythms [eg., PVC'S, PNC'S, ventricular tachycardia, ventricular fibrillation, junctional rhythm,]; is aware of usual therapy for these arrhythmias; differentiate supraventricular tachyarrhythmias with aberration from ventricular arrhythmias, and differentiate life-endangering from non-threatening arrhythmias; report changes in rate/rhythm promptly.
15. Identify therapy for client in cardiorespiratory arrest with underlying rationale for pharmacologic, as well as physiologic support.
16. Identify age-related variables in clients with problems of respiration and implement primary, secondary, and tertiary preventions specific to the client in the geriatric age group.
17. Describe rationale for oxygen therapy, as well as therapy with other gases.
18. Apply and regulate oxygen via mask, cannula, nasal catheter.
19. Describe medications being administered to assigned client, the reasons for their being administered to this client, their actions, dosage range, method of administration, side effects, contraindications, and any necessary precautions for safe administration.
20. Explain blood gas analysis and its relationship to client who has respiratory problem.
21. Demonstrate knowledge of assigned client's condition, its underlying cause, its usual therapy, the therapy that client is receiving, the nursing care implications with underlying rationale.
22. Demonstrate awareness, through nursing care, of problems of clients with chronic pulmonary disease with regard to age and developmental tasks.

23. Explain the concepts of aging, life cycle events, and dominant concerns of the client with respect to the setting and life situations including potential for client abuse
24. Identify primary, secondary, and tertiary preventions for clients in the geriatric stage of development.
25. Identify and describe drugs commonly administered via nebulization
26. Identify the physiological and developmental stage of the client and contrast the observed physiology and developmental stage with that of the theoretical state for someone in the client's age range.
27. Identify the common types of cancer of the lower airways and describe/explain the common interventions for them.
28. Identify drugs and treatments used in respiratory emergencies, such as pulmonary emboli, respiratory acidosis, pneumothorax, acute airway obstruction, acute asthma, atelectasis, chest trauma, and drug overdose.
29. Identify the physiological and developmental stage of the client and contrast the observed physiology and developmental stage with that of the theoretical state for someone in the client's age range.

### **Medication Discussed in N8 Lecture**

The following drugs are among the most common in current use in caring for clients with cardiorespiratory problems. You are expected to begin to research these drugs and make medication cards on them, so that you will be knowledgeable in regards to their **actions, uses, routes of excretion, side effects, toxic manifestations, contraindications, routes/rates of administration and usual dosages**. The list is not conclusive, and other drugs will be encountered in the client care setting.

## Cardiovascular Drug List

1. Adenosine
2. Adrenalin
3. Aldactazide
4. Aldactone
5. Aldomet
6. Aminophylline
7. Amiodarone (Cardarone)
8. Apresoline
9. Aramine
10. Atromid
11. Atropine
12. Brevibloc (Esmolol)
13. Blocadrin
14. Bumex
15. Calcium (cardiac& hematologic action)
16. Capoten
17. Coumarin derivatives
18. Demerol
19. Digitalis preparations (all) Digoxin, Digitoxin, Ouabain, Cedilanid
20. Dilantin
21. Dilaudid
22. Diuril
23. Dopamine
24. Dyazide
25. Dyrenium
26. Edecrin
27. Encainide (Encaid)
28. Ephedrine
29. Flecainide (Tambocor)
30. Folic Acid
31. Furosemide (Lasix)
32. Heparin
33. Hydrodiuril
34. Hyperstat
35. Inderal
36. Inocar
37. Isordil
38. Isuprel
39. Levophed
40. Librium
41. Mexiletine
42. Minipress
43. Morphine
44. NaHCO<sub>3</sub>
45. Nifedapine
46. Nipride
47. Nitroglycerin
48. Norpace
49. Papaverine
50. Potassium
51. Pronestyl
52. Propafenone (Rhythmol)
53. Protamine SO<sub>4</sub>
54. Quinidine SO<sub>4</sub>
55. Reserpine
56. Tenormin
57. Thrombolytic agents (all)
58. Tocainide
59. Tranxene
60. Valium
61. Vasodilan
62. VasoxyI
63. Verapamil
64. Vitamin K
65. Wyamine
66. Xylocaine (lidocaine)

## Respiratory Drug List

1. Acetylcysteine (Mucomyst)
2. Afrin Nasal Solution
3. Albuterol
4. Aminophylline
5. Ampicillin
6. Beclomethasone
7. Benadryl
8. Benylin Expectorant
9. Carbenicillin
10. Cephalosporin
11. Chlortrimeton
12. Choledyl
13. Codeine
14. Cromolyn sodium
15. Dexamethasone
16. Dimetane
17. Diprovan
18. Doxapram
19. Ephedrine
20. Epinephrine
21. Gentamicin
22. Hycodan
23. Hycotuss
24. Isoproterenol
25. Marex
26. Medrol
27. Metaproterenol
28. Mycostatin
29. Mylanta, Maalox, other antacids
30. Neosynephrine
31. Ornade
32. Oxacillin
33. Pavulon
34. Penicillin
35. Phenergan expectorant
36. Potassium Iodide (SSKI)
37. Prednisolone
38. Prednisone
39. Robitussin
40. Solu Medrol
41. Sudafed(Pseudoephedrine)
42. Terbutaline
43. Terpin Hydrate Elixir
44. Tetracycline
45. Theofedral

46. Theophylline
47. Tracrium
48. Tuberculostatic Agents –PAS, Viomycin, Kanamycin, Capreomycin, Pyrazinamide, Pyridoxine, INH, Cycloserine, Streptomycin, Rifampin, Ethambutol, Ethionamide
49. Vibramycin
50. Viokase
51. Vitamins A,D,E,K (H<sub>2</sub>O soluble form)

<b>Atnicar (Aminocaproic Acid)</b>	<b>Amrinone Lactate (Inocor)</b>	<b>Atracurium Besylate(Tracrium)</b>	<b>Cordarone(Amiodarone)</b>
10gm/250	250/250	50/100	450/250 or 900/500
g/hr	mcg/kg/min	mcg/kg/min	mg/min (1' give 150mg bolus)
.04	1 or 1000 (for calculations)	.5 or 500 (for calculations)	33.3 cc/hr then 16.6 cc/hr x 18hrs
1 - 1.25 g/hr	5 - 10 mg/kg/min	2 - 15 mcg/kg/min	1 mg for 6hrs, then 0.5
Manages bleeding	Improves CO/reduces wedge	Skeletal muscle relaxant	Ventricular Dysrhythmias
NS, D5W	NS		D5W
<b>Diltiazem (Cardizem)</b>	<b>Diprivan</b>	<b>Dobutamine (Dobutrex)</b>	<b>Dopamine (Intropin)</b>
250/250	500 mg/50cc	250/250	400/250
mg/hr	mcg/kg/min	mcg/kg/min	mcg/kg/min
1 or 1000 (for calculations)	10 or 10000 (for calculations)	2 or 2000 (for calculations)	1.6 or 1600 (for calculations)
5 - 15 mg/hr	5-50 mcg/kg/min	2.5 - 10 mcg/kg/min	maximum of 20 mcg/kg/min
Control of Afib/Aflutter/S\ Ts	Sedation	Increases BP, CO	Increases BP
NS, D5W	Premixed	D5W or NS	D5W or NS
<b>Epinephrine (Adrenalin)</b>	<b>Esmolol (Brevibloc)</b>	<b>Fentanyl</b>	<b>Isoproterenol (Isuprel)</b>
8/500	5g/250	250mg/250	3/250
mcg/min	mcg/kg/min	mcg/hr	mcg/min
.02 or 20 (for calculations)	20 or 20000 (for calculations)	1:1	0.012 or 12 (for calculations)
1 - 10 mcg/min	50 - 200 mcg/kg/min	up to 50 mcg/hr	0.5 - 10 mcg/min
Many indications	Control of Afib/flutter/HTN	Analgesic	Improves CO, PE's, torsades
D5W	D5W or NS	D5W or NS	D5W
<b>Lebetalol (Normodyne)</b>	<b>Lidocaine</b>	<b>Milrinone (Primacor)</b>	<b>Natrecor (Nesiritide)</b>
200mg/200	1g/250	20mg/ 100	
mg/min	mg/min	mcg/kg/min	mcg/kg/min (1 <sup>st</sup> : 2mcg/kg bolus)
1	4	0.2 or 200 (for calculations)	
1 - 2 mg/min	1 - 4 mg/min	0.375 – 0.75 mcg/kg/min	0.01-0.03 mcg/kg/min
Management of HTN	Irritable ventricles	CHF, lowers BP	acutely decompensated CHF
D5W or NS	D5W	D5W or NS	
<b>Neosynephrine (Phenylephrine)</b>	<b>Nitroglycerin</b>	<b>Norepinephrine (Levophed)</b>	<b>Nipride (Sodium Nitroprusside)</b>
15mg/250 cc	50/250	1.5/250	50/250
mcg/min	mcg/min	mcg/min	mcg/kg/min
0.06 or 60 (for calculations)	0.2 or 200 (for calculations)	0.006 or 6 (for calculations)	0.2 or 200 (for calculations)
40-60 mcg/min	3 - 100 mcg/min	2 -4 mcg/min	0.3 - 10 mcg/kg/min
Raises BP, controls SVT's	Lowers BP, ischemic pain, CHF	Increase BP, cardiac stimulation	HTN
D5W or NS	(Premixed)	D5W or NS	D5W (wrap w/alumin. covering)



<b>Procainamide (Pronestyl)</b>	<b>Propranolol (Inderal)</b>	<b>Rheomacrodex (Dextran 10)</b>	<b>Vecuronium (Norcuron)</b>
1g/250	15/250	30cc/hr	100/250
mg/min	mg/hr	plasma expander	mcg/kg/min
4	0.06 (just mg desired / 0.06)	(usually given during IABP)	0.4 or 400 (for calculations)
2 – 6 mg/min	1 - 3 mg/hr		0.8 - 1.67 mcg/kg/min
Dysrhythmias	angina, HTN, SVT's		skeletal muscle relaxant

### D5W Calculations

**mcg/kg/min**

$$(kg \times mcg \text{ desired} \times 60 \text{ minutes}) / \text{constant} = cc/hr$$

or

$$(\text{constant} \times cc/hr) / (kg \times 60 \text{ minutes}) = mcg \text{ infusing}$$

**mcg/min**

$$(60 \text{ minutes} \times mcg \text{ desired}) / \text{constant} = cc/hr$$

or

$$(\text{constant} \times cc/hr) / 60 \text{ minutes} = mcg$$

## N8 Examples of Oxygenation Administration

MT. SAN ANTONIO COLLEGE  
ASSOCIATE DEGREE NURSING PROGRAM  
NURSING 8: CIRCULATION-OXYGENATION  
CLINICAL OBJECTIVES FOR RESPIRATORY THERAPY, PULMONARY FUNCTIONS EXPERIENCE

During this clinical experience of one or two laboratory days, the student will make rounds with a therapist *and* will participate in pulmonary functions studies and blood gas laboratory activities.

The student will:

- \_\_\_\_\_ Apply principles of assessment of respiratory and ventilatory status by auscultation, palpation, inspection and percussion and identify normal and abnormal breath sounds.
- \_\_\_\_\_ Apply and regulate oxygen flow via mask, cannula, aerosol mask, venti-mask and be able to state rationale for use of each.
- \_\_\_\_\_ Compare and contrast therapists protocol versus Doctor's orders.
- \_\_\_\_\_ Discuss the efficacy of IPPB therapy and assist in performing the IPPB treatment (incentive spirometer and BiPAP).
- \_\_\_\_\_ Discuss hand-held nebulization of agents and assist in performing HHN treatment.
- \_\_\_\_\_ Identify the components of the order for the ventilator.
- \_\_\_\_\_ Observe ventilator setup and identify/name the components of the ventilator.
- \_\_\_\_\_ State the meaning of and the values for the ventilator controls.
- \_\_\_\_\_ Use the oxygen analyzer to determine oxygen concentration.
- \_\_\_\_\_ Assess client readiness for weaning from the ventilator, and identify parameters, measurements/volumes.
- \_\_\_\_\_ Identify and describe drugs commonly administered via nebulization.
- \_\_\_\_\_ Identify and report client responses to medications via insufflation, inhalation, and nebulization.
- \_\_\_\_\_ State principles of postural drainage and assist the client to perform postural drainage, including positioning, percussion and vibration techniques, when ordered.
- \_\_\_\_\_ Assemble and identify the parts of the laryngoscope, the use of the Ambu-bag
- \_\_\_\_\_ Identify and explain the use of the endotracheal tube and its insertion.

- \_\_\_\_\_ Explain blood gas analysis and its relationship to clients with respiratory problems.
- \_\_\_\_\_ Observe a client undergoing pulmonary function studies; a client undergoing bronchoscopy procedure.
- \_\_\_\_\_ Explain indications for and purposes of pulmonary functions tests.
- \_\_\_\_\_ Identify stressors and resistance factors for clients with ventilation problems and implement primary, secondary and/or tertiary preventions as indicated.
- \_\_\_\_\_ Identify the phase of the life-cycle and the dominant concern for each client needing ventilatory assistance; plan and implement primary, secondary, or tertiary preventions based upon assessment findings.
- \_\_\_\_\_ Identify pathophysiological factors that are present in each client, including those related to aging, and plan and implement primary, secondary, or tertiary preventions based upon identified findings.

## **NURS 10 – Medical-Surgical Nursing – Integration/Regulation**

### **Pharmacology Objectives**

1. Safely administer drugs and gases and observe the client's reaction to these medicinal agents.
2. Evaluate and report the effects of drugs and gases on the physiological functions of clients who have integration and regulatory problems, including fluid-electrolyte and acid-base problems.
3. Utilize basic principles involved in the safe administration of medications via oral, parenteral, topical and instillation methods. Medication related objectives must be met at 100% level in the clinical situation.
4. Describe pain accurately (location, intensity, quality, duration, type, presence or absence of radiation) and intervene according to situation (medicates, provides support, uses touch, notifies others).
5. Calculate dosages of drugs/solutions (including I.V. rates) within 3-5 minutes with 100% accuracy.
6. Observe I. V. site for inflammation or infiltration and report findings to team leader/charge Nurse
7. Observe I. V. for flow rate; know flow rate desired/ordered; report deviations to team leader/charge nurse
8. Observe I.V. for solution and/or medication; know solution and/or medication ordered; report deviations to team leader/charge nurse.
9. Demonstrate knowledge of physiologic actions, side effects, toxic effects, contraindications, normal doses, routes of administration, routes of elimination all medications the client is receiving. Observe client for toward and untoward signs/symptoms relative to medications.
10. Point out location of emergency drugs/equipment and obtain equipment when needed in emergency.

### **Medication Discussed in N10 Lecture**

1. mannitol [Osmitrol]
2. dexamethasone [Decadron]

3. ranitidine [Zantac]
4. omeprazole [Prilosec]
5. pantoprazole [Protonix]
6. pentobarbital [Nembutal]
7. phenytoin [Dilantin]
8. morphine
9. propofol [Diprivan]
10. vecuronium [Norcuron]
11. haloperidol [Haldol]
12. lorazepam [Ativan]
13. prednisone
14. methylprednisolone [Solumedrol]
15. carmustine [BCNU]
16. lomustine [CCNU]
17. temozolomide [Temodar]
18. ampicillin
19. penicillin
20. vancomycin
21. cefuroxime [Ceftin]
22. cefotaxime [Claforan]
23. ceftriaxone [Rocephin]
24. ceftizoxime [Cefizox]
25. ceftazidime [Fortaz]
26. codeine
27. acetaminophen [Tylenol]
28. aspirin
29. acyclovir [Zovirax]
30. vidarabine [Vira A]
31. ticlopidine [Ticlid]
32. clopidogrel [Plavix]
33. dipyridamole [Persantine]
34. dipyridamole asa [Aggrenox]
35. warfarin [Coumadin]
36. furosemide [Lasix]
37. tissue plasminogen activator
38. heparin
39. nimodipine [Nimotop]
40. phenylephrine [Neo-synephrine]
41. dopamine [Intropin]
42. butalbital asa [Fiorinal]
43. sumatriptan [Imitrex]
44. rizatriptan [Maxalt]
45. almotriptan [Axert]
46. frovatriptan [Frova]
47. zolmitriptan [Zomig]
48. eletriptan [Relpax]

49. topiramate [Topamax]
50. propranolol [Inderal]
51. atenolol [Tenormin]
52. amitriptyline [Elavil]
53. fluoxetine [Prozac]
54. verapamil [Isoptin]
55. divalproex [Depakote]
56. clonidine [Catapres]
57. botox [BoNT-A]
58. ibuprofen [Motrin]
59. carbamazepine [Tegretol]
60. phenobarbital
61. ethosuximide [Zarontin]
62. clonazepam [Klonopin]
63. gabapentin [Neurontin]
64. lamotrigine [Lamictal]
65. tiagabine [Gabitril]
66. levetiracetam [Keppra]
67. zonisamide [Zonegran]
68. felbamate [Felbatol]
69. diazepam [Valium]
70. azathioprine [Imuran]
71. methotrexate
72. cyclophosphamide [Cytosan]
73. baclofen [Lioresal]
74. dantrolene [Dantrium]
75. levodopa/carbidopa [Sinemet]
76. bromocriptine [Parlodel]
77. ropinirole [Requip]
78. pramipexole [Mirapex]
79. diphenhydramine [Benadryl]
80. amantadine [Symmetrel]
81. selegiline [Eldepryl]
82. entacapone [Comtan]
83. trimethobenzamide [Tigan]
84. ondansetron [Zofran]
85. neostigmine [Prostigmin]
86. pyridostigmine [Mestinon]
87. lithium
88. donepezil [Aricept]
89. rivastigmine [Exelon]
90. galantamine [Razadyne]
91. memantine [Namenda]
92. risperidone [Risperdal]
93. olanzapine [Zyprexa]
94. quetiapine [Seroquel]

95. sertraline [Zoloft]
96. enoxaparin [Lovenox]
97. oxybutynin [Ditropan]
98. tolterodine [Detrol]
99. lispro [Humalog]
100. aspart [Novolog]
101. glulisine [Apidra]
102. insulin regular
103. insulin NPH
104. glargine [Lantus]
105. detemir [Levemir]
106. glipizide [Glucotrol]
107. glyburide [Diabeta]
108. glimepiride [Amaryl]
109. repaglinide [Prandin]
110. nateglinide [Starlix]
111. metformin [Glucophage]
112. pioglitazone [Actos]
113. sitagliptin [Januvia]
114. pramlintide [Symlin]
115. exenatide [Byetta]
116. demeclocycline [Declomycin]
117. desmopressin [DDAVP]
118. vasopressin [Pitressin]
119. hydrochlorothiazide [Diuril]
120. indomethacin [Indocin]
121. levothyroxine [Synthroid]
122. alendronate [Fosamax]
123. hydrocortisone
124. norepinephrine [Levophed]
125. dobutamine [Dobutrex]
126. epinephrine [Adrenalin]
127. nitroglycerin [Tridil]
128. nitroprusside [Nipride]
129. drotrecogin alpha [Xigris]
130. atropine [Atropen]

## NURS 11 – Preceptorship in Nursing

### Objectives

In addition to laboratory objectives from previous courses (which include personal hygiene, human sexuality, cultural diversity, nutrition, pharmacology, legal aspects, social/ethical aspects, management/leadership threads) the laboratory objectives are as follows:

1. Utilizing nursing knowledge, skills and protocols to assure an environment conducive to restoration and maintenance of clients in clinical settings, including medical surgical settings and any areas where clinical objectives can be met, the preceptee will:
  - a. Apply theoretical base to clinical practice
  - b. Demonstrate effective interpersonal communication skills
  - c. Demonstrate skills in written communication
  - d. Demonstrate professional accountability
  - e. Demonstrate application of the nursing process
  - f. Demonstrate clinical skills appropriate to entry level practitioner
  - g. Demonstrate increasing skills in decision making, priority setting, problem solving and organization
  - h. Demonstrate leadership skills
  - i. Demonstrate problem solving and skill attainment
  - j. Demonstrate critical thinking