VATI RN COMPREHENSIVE PREDICTOR FOCUSED REVIEW

- Management of Care – (9)
  - Advance Directives – (1)
    - Legal Responsibilities: Purpose of a Living Will (RM FUND 9.0 Chp 4)
      - A living will is a legal document that expresses the client's wishes regarding medical treatment in the event the client becomes incapacitated and is facing end-of-life issues. Most state laws include provisions that protect health care providers who follow a living will from liability.
  - Assignment, Delegation and Supervision – (2)
    - Delegation and Supervision: Delegating Tasks to an Assistive Personnel (RM FUND 9.0 Chp 6)
      - Examples of tasks nurses may delegate to Aps (provided the facility's policy and state's practice guidelines permit)
        - Activities of daily living (ADLs) – bathing, grooming, dressing, toileting, ambulating, feeding (without swallowing precautions), positioning
        - Routine tasks – bed making, specimen collection, intake and output, vital signs (for stable clients)
    - Managing Client Care: Delegation Strategy for Effective Task Management (RM Leadership 7.0 Chp 1)
      - Consideration for selection of an appropriate delegate include the following: education, training, and experience; knowledge and skill to perform the task; level of critical thinking required to complete the task; ability to communicate with others as it pertains to the task; demonstrated competence; the delegatee's culture; agency policies and procedures and licensing legislation (state nurse practice acts)
  - Case Management – (1)
    - Cardiovascular Disorders: Tetralogy of Fallot (RM NCC RN 10.0 Chp 20)
      - Tetralogy of Fallot – four defects that result in mixed blood flow: Pulmonary stenosis, ventricular septal defect, overriding aorta, right ventricular hypertrophy
        - Cyanosis at birth: progressive cyanosis over the first year of life. Systolic murmur. Episodes of acute cyanosis and hypoxia (blue or "Tet" spells)
      - Surgical procedures – shunt placement until able to undergo primary repair; complete repair within the first year of life
  - Collaboration with Interdisciplinary Team – (1)
    - Communicable Diseases, Disasters, and Bioterrorism: CDC Reportable Diagnoses (RM CH RN 7.0 Chp 6)

      - Anthrax. Botulism. Cholera. Congenital rubella syndrome (CRS). Diphtheria. Giardiasis. Gonorrhea. Hepatitis A, B, C. HIV infection. Influenza-associated pediatric mortality. Legionellosis/Legionnaires' disease. Lyme disease. Malaria. Meningococcal disease. Mumps. Pertussis (whooping cough). Poliomyelitis, paralytic. Poliovirus infection, nonparalytic. Rabies (human or animal). Rubella (German measles). Salmonellosis. Severe acute respiratory syndrome-associated coronavirus disease (SARS-CoV). Shigellosis. Smallpox. Syphilis. Tetanus/C. tetani. Toxic shock syndrome (TSS) (other than Streptococcal). Tuberculosis

(TB). Typhoid fever. Vancomycin-intermediate and vancomycin-resistant. Staphylococcus aureus (VISA/VRSA)

- Continuity of Care – (1)
  - Information Technology: Change-of-Shift Report (RM FUND 9.0 Chp 5)
    - Nurses give this report at the conclusion of each shift to the nurse assuming responsibility for the clients.
      - Formats include face to face, audiotaping, or presentation during walking rounds in each client's room (unless the client has a roommate or visitors are present)
      - An effective report should: include significant objective information about the client's health problems; proceed in a logical sequence; include no gossip or personal opinion; relate recent changes in medications, treatments, procedures, and the discharge plan
- Establishing Priorities – (1)
  - Managing Client Care: Determining Priority Care for a Group of Clients (RM Leadership 7.0 Chp 1)
    - Prioritize systemic before local ("life before limb")
      - Prioritizing interventions for a client in shock over interventions for a client who has a localized limb injury
    - Prioritize acute (less opportunity for physical adaptation) before chronic (greater opportunity for physical adaptation)
      - Prioritizing the care of a client who has a new injury/illness (e.g. mental confusion, chest pain) or an acute exacerbation of a previous illness over the care of a client who has a long-term chronic illness
    - Prioritize actual problems before potential future problems
      - Prioritizing administration of medication to a client experiencing of medication to a client experiencing acute pain over ambulation of a client at risk for thrombophlebitis
    - Listen carefully to clients and don't assume
      - Asking a client who has a new diagnosis of diabetes mellitus what he feels is most important to learn about disease management
    - Recognize and respond to trends vs. transient findings
      - Recognizing a gradual deterioration in a client's level of consciousness and/or Glasgow Coma Scale score
    - Recognize indications of medical emergencies and complications vs. expected findings
      - Recognizing indications of increasing intracranial pressure in a client who has a new diagnosis of a stroke vs. the findings expected following a stroke
    - Apply clinical knowledge to procedural standards to determine the priority action
      - Recognizing that the timing of administration of antidiabetic and antimicrobial medications is more important than administration of some other medications
- Ethical Practice – (1)

        - Professional Responsibilities: Demonstration of Veracity (RM Leadership 7.0 Chp 3)
            - Veracity: the nurse's duty to tell the truth
    - Legal Rights and Responsibilities – (1)
        - Professional Responsibilities: Rights of Clients (RM Leadership 7.0 Chp 3)
            - Client rights are the legal guarantees that clients have with regard to their health care
                - Clients using the services of a health care institution retain their rights as individuals and citizens of the United States. The America Hospital Association (AHA) identifies client rights in health care settings in the Patient Care Partnership (www.aha.org)
                - Residents in nursing facilities that participate in Medicare programs similarly retain resident rights under statutes that govern the operation of these facilities
            - Nurse are accountable for protecting the rights of clients. Situations that require particular attention include informed consent, refusal of treatment, advance directives, confidentiality, and information security.
- Safety and Infection Control – (5)
    - Accident/Error/Injury Prevention – (2)
        - Medications Affecting Urinary Output: Indications for the Use of a Diuretic (RM Pharm RN 7.0 Chp 19)
            - High-ceiling loop diuretics work in the ascending limb of loop of Henle – block reabsorption of sodium and chloride and prevent reabsorption of water. Causes extensive diuresis even with severe renal impairment
            - They are used when there is an emergent need for rapid mobilization of fluid – pulmonary edema caused by heart failure; conditions not responsive to other diuretics, such as edema caused by liver, cardiac, or kidney disease; or hypertension
                - Unlabeled use – hypercalcemia
        - Seizures: Maintaining Seizure Precautions (RM NCC RN 10.0 Chp 13)
            - Seizure precautions for any child at risk – pad side rails of bed, crib, and wheelchair; keep bed free of objects that could cause injury; have suction and oxygen equipment available
    - Handling Hazardous and Infectious Materials – (1)
        - Cancer Treatment Options: Implanted Internal Radiation Device (RM AMS RN 10.0 Chp 91)
            - Brachytherapy describes internal radiation that is placed close to the target tissue. This is done via placement in a body orifice (vagina) or body cavity (abdomen) or delivered via IV such as with radionuclide iodine, which is absorbed by the thyroid
                - Brachytherapy provides radiation to the tumor and a limited amount to surrounding normal tissues. Waste products are radioactive until the Isotope has been completely eliminated from the body. Waste products should not be touched by anyone.
            - Nursing Considerations

        - Place the client in a private room away from other clients when possible. Keep door closed as much as possible. Place a sign on the door warning of the radiation source. Wear a dosimeter film badge that records personal amount of radiation exposure. Limit visitors to 30-min visits, and have visitors maintain a distance of 6 feet from the source. Visitors and health care personnel who are pregnant or under the age of 18 should not come into contact with the client or radiation source. Weal a lead apron while providing care keeping the front of the apron facing the source of radiation. Keep a lead container in the client's room if the delivery method could allow spontaneous loss of radioactive material. Tongs are available for placing radioactive material into this container. Follow protocol for proper removal of dressings and bed linens from the room.
    - Client Education
        - Inform the client of the need to remain in an indicated position to prevent dislodgement of the radiation implant. Instruct the client to call the nurse for assistance with elimination. Instruct the client and family about radiation precautions needed in health care and home environments.
- Standard Precautions/Transmission-Based Precautions/Surgical Asepsis – (2)
    - Acute Neurological Disorders: Priority Intervention for Meningitis (RM NCC RN 10.0 Chp 12)
        - The presence of petechiae or a purpuric-type rash requires immediate medical attention
        - Isolate the client as soon as meningitis is suspected, and maintain droplet precautions per facility protocol – droplet precautions require a private room or a room with clients who have the same infectious disease, ensuring that each client has his or her own designated equipment. Providers and visitors should wear a mask. Maintain respiratory isolation for a minimum of 24 hr after initiation of antibiotic therapy
        - Monitor vital signs, urine output, fluid status, pain level, and neurologic status
        - For newborns and infants, monitor head circumference and fontanels for presence of or changes in bulging
        - Correct fluid volume deficits and then restrict fluids until no evidence of increased ICP and serum sodium levels are within the expected range
        - Maintain NPO status if the client has a decreased level of consciousness. As the client's condition improves, advance to clear liquids and then a diet the client can tolerate
        - Decrease environmental stimuli – provide a quiet environment; minimize exposure to bright light (natural and electric)
        - Provide comfort measures – keep the room cool; position the client without a pillow, and slightly elevate the head of the bed. The client can also be positioned side-lying to reduce neck discomfort
        - Maintain safety (keep the bed in a low position, implement seizure precautions)
        - Keep the family informed of the client's condition

        - Skin Infections and Infestations: Expected Findings of Pediculosis Capitis (RM NCC RN 10.0 Chp 30)
            - Manifestations – intense itching; small, red bumps on the scalp; nits (white specks) on the hair shaft
            - Nursing interventions – 1% permethrin shampoo; Spinosad 0.9% topical suspension; Remove nits with a nit comb, repeat in 7 days after shampoo treatment; wash clothing, bedding in hot water with detergent; difficult cases; use malathion 0.5%
- Health Promotion and Maintenance – (2)
    - Health Promotion/Disease Prevention – (2)
        - Hepatitis and Cirrhosis: Client Teaching About Viral Hepatitis (RM AMS RN 10.0 Chp 55)
            - Viral hepatitis is the most common type of hepatitis. After exposure to a virus or toxin, the liver becomes enlarged from the inflammatory process. As the disease progresses, there is an increase in inflammation and necrosis, interfering with blood flow to the liver. Individuals can be infected with hepatitis and remain free of manifestations, and therefore are unaware that they could be contagious.
            - Nursing Care – most clients will be cared for in the home unless they are acutely ill. Enforce contact precautions if indicated. Provide a high-carbohydrate, high-calorie, low- to moderate-fat, and low- to moderate-protein diet, and small, frequent meals to promote nutrition and healing. Promote hepatic rest and the regeneration of tissue (administer only necessary medications; avoid over-the-counter medications or herbal supplements; avoid alcohol; limit physical activity). Educate the client and family regarding measures to prevent the transmission of the disease to others at home (avoid sexual intercourse until hepatitis antibody testing is negative; use proper hand hygiene). Provide culturally sensitive care.
        - Immunizations: Recommendation for Older Adults (RM AMS RN 10.0 Chp 85)
            - Td booster. MMR vaccine. Varicella vaccine. Pneumococcal vaccine. Hepatitis A. Hepatitis B. Influenza vaccine. Meningococcal polysaccharide vaccine (MPSV4) and Meningococcal 4-valent conjugate (MenACWY) vaccine. Human Papilloma virus HPV2, HPV4, or HPV9. Zoster vaccine
- Psychosocial Integrity – (5)
    - Abuse/Neglect – (1)
        - Family Violence: Evaluating Child Abuse (RM MH RN 10.0 Chp 32)
            - Infants – shaken baby syndrome: shaking can cause intracranial hemorrhage. Assess for respiratory distress, bulging fontanels, and an increase in head circumference. Retinal hemorrhage can be present. Any bruising on an infant before age 6 months is suspicious.
            - Preschoolers to Adolescents – assess for unusual bruising, such as on abdomen, back or buttocks. Bruising is common on arms and legs in these age groups. Assess the mechanism of injury, which might not be congruent with the physical appearance of the injury. Numerous bruises at different stages of healing can indicate ongoing bearings. Be suspicious of bruises or welts that resemble the

shape of a belt buckle or other object. Assess for burns. Burns covering “glove” or “stocking” areas of the hands or feet can indicate forced immersion into boiling water. Small, round burns can be from cigarettes. Assess for fractures with unusual features, such as forearm spiral fractures, which could be a result of twisting the extremity forcefully. The presence of multiple fractures is suspicious. Assess for human bite marks. Assess for head injuries, level of consciousness, equal and reactive pupils, and nausea or vomiting.

- Mental Health Concepts – (2)
  - Anxiety Disorders: Expected Findings for a Client who has Social Anxiety Disorder (RM MH RN 10.0 Chp 11)
    - Social anxiety disorder (social phobia) – the client experiences excessive fear of social or performance situations
      - The client reports difficulty performing or speaking in front of others or participating in social situations due to an excessive fear of embarrassment or poor performance
      - The client might report physical manifestations (actual or factitious) in an attempt to avoid the social situation or need to perform
  - Personality Disorders: Antisocial Personality Manifestations (RM MH RN 10.0 Chp 16)
    - Antisocial – characterized by disregard for others with exploitation, lack of empathy, repeated unlawful actions, deceit, and failure to accept personal responsibility; sense of entitlement, manipulative, impulsive, and seductive, nonadherence to traditional morals and values; verbally charming and engaging
- Support Systems – (1)
  - Neurocognitive Disorders: Planning Care for a Stage 2 Alzheimer’s Disease (RM MH RN 10.0 Chp 17)
    - Stage 2: Moderate
      - Forgetting events of one’s own history. Difficulty performing tasks that require planning and organizing (paying bills, managing money). Difficulty with complex mental arithmetic. Personality and behavioral changes: appearing withdrawn or subdued, especially in social or mentally challenging situations; compulsive, repetitive actions. Changes in sleep patterns. Can wander and get lost. Can be incontinent. Clinical findings that are noticeable to others.
    - Nursing Care
      - Perform self-assessment regarding possible feelings of frustration, anger, or fear when performing daily care for clients who have progressive cognitive decline. Nursing interventions are focused on protecting the client from injury, as well as promoting client dignity and quality of life. Provide for a safe and therapeutic environment – assess for potential injury, such as falls or wandering. Assign the client to a room close to the nurses’ station for close observation. Provide a room with a low level of visual and auditory stimuli. Provide for a well-lit environment, minimizing contrasts and shadows. Have

the client sit in a room with windows to help with time orientation. Have the client wear an identification bracelet. Use monitors and bed alarm devices as needed. Use restraints only as an intervention of last resort. Use caution when administering medications PRN for agitation or anxiety. Assess the client's risk for injury and ensure safety in the physical environment, such as a lowered bed.

- Cognitive support – provide compensatory memory aids, such as clocks, calendars, photographs, memorabilia, seasonal decorations, and familiar objects. Reorient as necessary. Keep a consistent daily routine. Maintain consistent caregivers. Cover or remove mirrors to decrease fear and agitation.
- Physical needs – monitor neurological status. Identify disturbances in physiologic status which can contribute to the cause of delirium. Assess skin integrity which can be compromised due to poor nutrition, bed rest or incontinence. Monitor vital signs. Tachycardia, elevated blood pressure, sweating, dilated pupils can be associated with delirium. Implement measures to promote sleep. Monitor the client's level of comfort and assess for nonverbal indications of discomfort. Provider eyeglasses and assistive hearing devices as needed. Ensure adequate food and fluid intake. Underlying causes of delirium can result in electrolyte imbalance.
- Communication – communicate in a calm, reassuring tone. Speak in positively worded phrases. Do not argue or question hallucinations or delusions. Reinforce reality. Reinforce orientation t time, place, and person. Introduce self to client with each new contact. Establish eye contact and use short, simple sentences when speaking to the client. Focus on one item of information at a time. Encourage reminiscence about happy times. Talk about familiar things. Break instructions and activities into short timeframes. Limit the number of choices when dressing or eating. Minimize the need for decision-making and abstract thinking to avoid frustration. Avoid confrontation. Approach slowly and from the front. Address the client by name. Encourage family visitation as appropriate.

- Basic Care and Comfort – (3)
  - Assistive Devices – (1)
    - Sensory Perception: Speaking to a Client Who Has a Hearing Impairment (RM FUND 9.0 Chp 45)
      - For clients who have hearing loss – sit and face the clients. Avoid covering your mouth while speaking. Encourage the use of hearing devised. Speak slowly and clearly. Do not shout. Try lowering vocal pitch before increasing volume. Use brief sentences with simple words. Write down what clients do not understand. Minimize background noise. Ask for a sign-language interpreter if necessary. Do not shout.
  - Mobility/Immobility – (1)
    - Musculoskeletal Trauma: Skeletal Traction (RM AMS RN 10.0 Chp 71)

- Nursing actions – assess neurovascular status of the affected body part every hour for 24 hr and every 4 hr after that. Maintain body alignment and realign if the client seems uncomfortable or reports pain. Avoid lifting or removing weights. Ensure that weights hang freely and are not resting on the floor. If the weights are accidentally displaced, replace the weights. If the problem is not corrected, notify the provider. Ensure the pulley ropes are free of knots, fraying, loosening, and improper positioning at least every 8-12 hr. Notify the provider if the client experiences severe pain from muscle spasms unrelieved with medications or repositioning. Move the client in halo traction as a unit, without applying pressure to the rods. This will prevent loosening of the pins and pain. Routinely monitor skin integrity and document. Use heat/massage as prescribed to treat muscle spasms. Use therapeutic touch and relaxation techniques.
- Pin Site Care – pin care is done frequently throughout immobilization (skeletal traction and external fixation methods) to prevent and to monitor for manifestations of infection (drainage and redness [color, amount, odor], loosening of pins, tenting of skin at pin site [skin rising up in]). Pin care protocols (chlorhexidine) are based on provider preference and facility policy. A primary concept of pin care is that one cotton swab is designated for each pin to avoid cross-contamination. Pin care is provided usually once a shift, 1-2 times a day, per facility protocol.

➢ Nutrition and Oral Hydration – (1)
  ▪ Renal Disorders: Dietary Prevention of Nephrolithiasis (RM Nutrition 6.0 Chp 14)
    - The most common type of kidney stone is made of calcium oxalate. Contributing factors include inadequate fluid intake, elevated urine pH, and excess excretion through the kidneys of oxalate, calcium, and uric acid. Kidney stone formation is more influenced by the amount of oxalate in the client's system than calcium. A client who has an ileostomy has an increased risk of kidney stones
    - Preventative nutrition – excessive intake of protein, sodium, calcium, and oxalates (rhubarb, spinach, beets) can increase the risk of stone formation
    - Therapeutic nutrition – increasing fluid consumption is the primary intervention for the treatment and prevention of kidney stones. Daily fluid intake should be at least 1,500 mL to 3,000 mL. At least 8-12 oz (240-360 mL) of fluid, preferably water, should be consumed before bedtime because urine becomes more concentrated at night. Recommendation for calcium oxalate stone formation is to limit animal protein, excess sodium, alcohol, and caffeine use. Low potassium can contribute to calcium stone formation. Foods high in oxalates include spinach, rhubarb, beets, nuts, chocolate, tea, wheat bran, and strawberries, and should be limited in the diet. Avoid megadoses of vitamin C, which increase the amount of oxalate excreted. Recommendation for prevention of uric acid stones is to limit foods high in purines, which include lean meats, organ meats, whole grains, and legumes.

❖ Pharmacological and Parenteral Therapies – (7)
  ➢ Adverse Effects/Contraindications/Side Effects/Interactions – (1)

- Medications for Psychotic Disorders: Screening for Extrapyramidal Adverse Effects (RM MH RN 10.0 Chp 24)
  - Acute dystonia – severe spasm of the tongue, neck, face, and back. Crisis situation that requires rapid treatment
    - Nursing considerations – begin to monitor for acute dystonia anywhere between 1-5 days after administration of first dose. Treat with an antiparkinsonian agents such as benztropine. IM or IV administration diphenhydramine can also be beneficial. Stay with the client and monitor the airway until spasms subside (usually 5-15 min)
  - Pseudoparkinsonism – bradykinesia, rigidity, shuffling gait, drooling, tremors
    - Nursing considerations – observe for pseudoparkinsonism for the first month after the initiation of therapy. Can occur in as little as 5 hr following the first dose. Treat with an antiparkisonian agent, such as benztropine or trihexyphenidyl. Implement interventions to reduce the risk for falling.
  - Akathisia – inability to sit or stand still. Continual pacing and agitation
    - Nursing considerations – observe for akathisia for the first 2 months after the initiation of treatment. Can occur in as little as 2 hr following the first dose. Manage with antiparkinsonian agents, beta blockers, or lorazepam/diazepam. Monitor for increased risk for suicide in clients who have severe akathisia
  - Tardive dyskinesia (TD) – late EPS, which can require months to years of medication therapy for TD to develop. Involuntary movements of the tongue and face, such as lip smacking and tongue fasciculations. Involuntary movements of the arms, legs, and trunk
    - Nursing considerations – evaluate the client every 3 months, if TD appears, dosage should be lowered, or the client should be switched to another type of antipsychotic agent. Once TD develops, it usually dose not decrease, even with discontinuation of the medication. There is not a treatment for TD. Teach client that purposeful muscle movement helps to control the involuntary TD.
  - Neuroendocrine effects – gynecomastia, weight gain, menstrual irregularities
    - Nursing considerations – monitor weight. Some clients gain 100 lb or more. Advise the client to observe for these manifestations and to notify the provider if they occur.
  - Neuroleptic malignant syndrome – sudden high fever, blood pressure fluctuations, diaphoresis, tachycardia, muscle rigidity, drooling, decreased level of consciousness, coma, tachypnea
    - Nursing considerations – this life-threatening medical emergency can occur within the first week of treatment or any time thereafter. Stop antipsychotic medication. Monitor vital signs. Apply cooling blankets. Administer antipyretics. Increase the client’s fluid intake. Administer dantrolene or bromocriptine to induce muscle relaxation. Administer medication as prescribed to treat arrhythmias. Assist with immediate transfer to an ICU.
  - Orthostatic hypotension

        - Nursing considerations – the client should develop tolerance in 1-2 weeks. Monitor blood pressure and heart rate for orthostatic changes. Hold medication until the provider is notified if systolic blood pressure is less than 80 mm Hg. Instruct clients about the indications of orthostatic hypotension (lightheadedness, dizziness). If these occur, advise the client to sit or lie down. Orthostatic hypotension can be minimized by getting up or changing positions slowly. Encourage the client to increase fluid intake to maintain hydration.
    - Sedation
        - Nursing considerations – inform the client that effects should diminish after about 1 week. Instruct the client to take the medication at bedtime to avoid daytime sleepiness. Advise the client not to drive until sedation has subsided.
    - Seizures – indications – greatest risk in clients who have an existing seizure disorder
        - Nursing considerations – advise the client to report seizure activity to the provider. An increase in antiseizure medication can be necessary
    - Severe dysrhythmias
        - Nursing considerations – obtain baseline ECG and potassium level prior to treatment, and periodically throughout the treatment period. Avoid concurrent use with other medications that prolong QT interval
    - Sexual dysfunction
        - Nursing considerations – advise the client of possible adverse effects. Encourage that the client report effects to the provider. The client can need dosage lowered or be switched to a high-potency agent
    - Skin effects – photosensitivity that can result in severe sunburn. Contact dermatitis from handling medications
        - Nursing considerations – Advise clients to avoid excessive exposure to sunlight, to use sunscreen, and to wear protective clothing. Advise clients to avoid direct contact with the education
    - Liver impairment
        - Nursing considerations – assess baseline liver function, and monitor periodically. Educate clients to observe for indications (anorexia, nausea, vomiting, fatigue, abdominal pain, jaundice) and to notify the provider
- Central Venous Access Devices – (1)
    - Cardiovascular Diagnostic and Therapeutic Procedures: Care of the Nontunneled Percutaneous Central Venous Catheter (RM AMS RN 10.0 Chp 27)
        - Description 18-25 cm (7-10 in) in length with one to five lumens. Length of use: short-term use only. Insertion location: subclavian vein, jugular vein, tip in the distal third of the superior vena cava. Indications: administration of blood, long-term administration of chemotherapeutic agents, antibiotics, and total parenteral nutrition.
- Expected Actions/Outcomes – (1)
    - Parkinson's Disease: Effects of Levodopa (RM AMS RN 10.0 Chp 7)

- When given orally, medications such as levodopa are converted to dopamine in the brain, increasing dopamine levels in the basal ganglia. Dopaminergics may be combined with carbidopa to decrease peripheral metabolism of levodopa, requiring a smaller dose to make the same amount available to the brain. Side effects are subsequently less. Due to medication tolerance and metabolism, the dosage, form of medication, and administration times must be adjusted to avoid periods of poor mobility
    - Nursing considerations – monitor for the "wearing-off" phenomenon and dyskinesias (problems with movement), which can indicate the need to adjust the dosage or time of administration or the need for a medication holiday

- Medication Administration – (4)
    - Bipolar Disorder: Teaching the Client About a Mood Stabilizer (RM Pharm RN 7.0 Chp 9)
        - Expected pharmacological action – lithium produces neurochemical changes in the brain, including serotonin receptor blockade. There is evidence that the use of lithium can show a decrease in neuronal atrophy and/or an increase in neuronal growth
        - Therapeutic uses – lithium is used in the treatment of bipolar disorders. Lithium controls episodes of acute mania, and helps prevent the return of mania or depression
        - Nursing Administration
            - Monitor plasma lithium levels during treatment (At initiation of treatment, monitor levels at least 5 days after starting lithium therapy and after any dosage change, until therapeutic level has been achieved; then every 1 to 3 months, depending on length of treatment and stability. Older adult clients often require more frequent monitoring. Lithium blood levels should be obtained in the morning, usually 12 hr after the last dose. During initial treatment of a manic episode, levels should be between 0.8 to 1.4 mEq/L. Maintenance level range is between 0.4 to 1.0 mEq/L. Plasma levels at or greater than 1.5 mEq/L can result in toxicity). Care for clients who have a toxic plasma lithium level in an acute care setting, and provide supportive measures. Hemodialysis can be indicated. Monitor CBC, serum electrolytes, renal function tests, and thyroid function tests during lithium therapy. Advise clients that effects begin within 7 to 14 days. Advise clients to take lithium as prescribed. Lithium must be administered in 2 to 3 doses daily due to a short half-life. Taking lithium with food will help decrease GI distress. Encourage clients to adhere to laboratory appointments needed to monitor lithium effectiveness and adverse effects. Emphasize the high risk of toxicity due to the narrow therapeutic range. Provide nutritional counseling. Stress the importance of adequate fluid and sodium intake. Instruct clients to monitor for manifestations of toxicity and when to contact the provider. Clients should withhold medication and seek medical attention if experiencing diarrhea, vomiting, or excessive sweating. Conditions that cause dehydration, such as exercising in hot weather or diarrhea, put client at risk for lithium toxicity.

- Brain Stimulation Therapies: Client Education About Electroconvulsive Therapy (RM MH RN 10.0 Chp 10)
  - Indication
    - Major depressive disorder – clients whose manifestations are not responsive to pharmacological treatment. Clients from whom the risks of other treatments outweigh the risks of ECT, such as a client who is in her first trimester of pregnancy. Clients who are suicidal or homicidal and for whom there is a need for rapid therapeutic response. Clients who are experiencing psychotic manifestations
    - Schizophrenia spectrum disorders – clients who have schizophrenia with catatonic manifestations. Clients who have schizoaffective disorder. Clients who are pregnant and have a schizophrenia spectrum disorder, therefore having an increased risk for adverse effects from medication therapy
    - Acute manic episodes – clients who have bipolar disorder with rapid cycling (four or more episodes of acute mania within 1 year). Clients who are unresponsive to treatment with lithium and antipsychotic medications.
  - Considerations – procedural care
    - The typical course of ECT treatment is two to three times a week for a total of six to 12 treatments. The provider obtains informed consent. If ECT is involuntary, the provider may obtain consent from the next of kin or a court order.
    - Medication Management
      - Thirty minutes prior to the beginning of the procedure, an IM injection of atropine sulfate or glycopyrrolate is administered to decrease secretions that could cause aspiration and to counteract any vagal stimulation effects, such as bradycardia
      - At the time of the procedure, an anesthesia provider administers a short-acting anesthetic, such as methohexital or propofol, via IV bolus
      - A muscle relaxant, such succinylcholine, is then administered to paralyze the client's muscles during the seizure activity, which decreases the risk for injury
      - Severe hypertension should be controlled because a short period of hypertension occurs immediately after the ECT procedure
      - Any cardiac conditions, such as dysrhythmias or hypertension, should be monitored and treated before the procedure
      - The nurse monitors vital signs and mental status before and after the ECT procedure
      - The nurse assess the client's and family's understanding and knowledge of the procedure and provides teaching as necessary. Many clients and family have misconceptions about ECT due to media portrayals of the procedure. Due to the use of anesthesia and muscle relaxants, the tonic-clonic seizure activity associated with the procedure in the past is no longer an effect of the treatment.

        - An IV line is inserted and maintained until full recovery. Electrodes are applied to the scalp for electroencephalogram (EEG) monitoring. The client receives 100% oxygen during and after ECT until the return of spontaneous respirations. Ongoing cardiac monitoring is provided, including blood pressure, electrocardiogram (ECG), and oxygen saturation. Clients are expected to become alert about 15 min following ECT.
    - Cystic Fibrosis: Client Teaching about Pancrelipase (RM NCC RN 10.0 Chp 19)
        - Pancrelipase treats pancreatic insufficiency associated with cystic fibrosis
            - Nursing considerations – monitor stools for adequate dosing (1-2 stools/day). Administer capsules with all meals and snacks. Client can swallow or sprinkle capsules on food. Increase dosage of enzymes when eating high-fat foods.
    - Electrolyte Imbalances: Safe Potassium Administration (RM AMS RN 10.0 Chp 44)
        - IV potassium supplementation – never administer by IV push (high risk of cardiac arrest). The maximum recommended rate is 10 mEq/hr.
- Reduction of Risk Potential – (6)
    - Potential for Complications of Diagnostic Tests/Treatments/Procedures – (2)
        - Cardiovascular Diagnostic and Therapeutic Procedures: Priority Intervention Postangiography (RM AMS RN 10.0 Chp 27)
            - Nursing Actions – assess vital signs every 15 min x 4, every 30 min x 2, every hour x 4, and then every 4 hr (Follow facility protocol). Assess the groin site at the same intervals for: bleeding and hematoma formation. Thrombosis (Document pedal pulse, color, temperature). Maintain bed rest in supine position with extremity straight for prescribed time (a vascular closure device can be used to hasten hemostasis following catheter removal. Older adult clients can have arthritis, which can make lying in bed for 4-6 hr after the procedure painful. The provider can prescribe medication). Conduct continuous cardiac monitoring for dysrhythmias. (Reperfusion following angioplasty can cause dysrhythmias). Administer antiplatelet or thrombolytic agents as prescribed to prevent clot formation and restenosis (Aspirin, Clopidogrel, ticlopidine, Heparin, Low molecular weight heparin [enoxaparin], GP IIb/IIa inhibitors, such as eptifibatide). Administer anxiolytics and analgesics as needed. Monitor urine output and administer IV fluids for hydration (Contrast media acts as an osmotic diuretic). Perform/assist with sheath removal from vessel (Apply pressure to arterial/venous sites for the prescribed period of time [varies depending upon the method used for vessel closure], observe for vagal response [hypotension, bradycardia] from compression of nerves, apply pressure dressing)
            - Client education – instruct the client to do the following (leave the dressing in place for the first 24 hr following discharge; avoid strenuous exercise for the prescribed period of time; immediately report bleeding from the insertion site, chest pain, shortness of breath, and changes in the color or temperature of the extremity; restrict lifting to less than 10 lb (4.5 kg) for the prescribed period of time). Clients who have stent placement will receive anticoagulation therapy for

6-8 weeks. Instruct the client to: (take the medication at the same time each day. Have regular laboratory tests to determine therapeutic levels. Avoid activities that could cause bleeding. (Use soft toothbrush. Wear shoes when out bed). Encourage the client to follow lifestyle guidelines (manage weight. Consume a low-fat/low-sodium diet. Exercise regularly. Stop smoking. Decrease alcohol intake)

- Complications
  - Cardiac tamponade – can result form fluid accumulation in the pericardial sac
    - Manifestations include hypotension, jugular venous distention, muffled heart sounds, and paradoxical pulse (variance of 10 mm Hg or more in systolic blood pressure between expiration and inspiration)
    - Hemodynamic monitoring reveals intracardiac and PAPs are similar and elevated (plateau pressures)
    - Nursing actions – notify the provider immediately. Administer IV fluids to combat hypotension. Obtain a chest x0ray or echocardiogram to confirm diagnosis. Prepare the client for pericardiocentesis (Verify informed consent. Gather materials. Administer medications as appropriate). Monitor hemodynamic pressures. Monitor heart rhythm. Changes indicate improper positioning of the needle. Monitor for reoccurrence of manifestations after the procedure
  - Hematoma formation – blood clots can form near the insertion site
    - Nursing actions – assess the groin at prescribed intervals and as needed. Hold pressure for uncontrolled oozing/bleeding. Monitor peripheral circulation. Notify the provider
  - Restenosis of treated vessel – clot reformation in the coronary artery can occur immediately or several weeks after procedure
    - Nursing actions – assess ECG patterns and for occurrence of chest pain. Notify the provider immediately. Prepare the client for return to the cardiac catheterization laboratory
  - Retroperitoneal bleeding – bleeding into retroperitoneal space (abdominal cavity behind the peritoneum) can occur due to femoral artery puncture
    - Nursing actions – assess for flank pain and hypotension. Notify the provider immediately. Administer IV fluids and blood products as prescribed

- Disorders of the Eye: Identifying Postoperative Risk (RM AMS RN 10.0 Chp 12)
  - Infection – infection can occur after surgery
    - Client education – manifestations of infection that the client should report include yellow or green drainage, increased redness or pain, reduction in visual acuity, increased near production, and photophobia
  - Bleeding – bleeding is a potential risk several days following surgery
    - Client education – clients should immediately report any sudden change in visual acuity or an increase in pain
  - Blindness – a potential consequence of untreated glaucoma

        - Client education – encourage adults 40 or older to have an annual examination, including a measurement of IOP
- Potential for Complications from Surgical Procedures and Health Alterations – (1)
    - Pituitary Disorders: Clinical Findings of Diabetes Insipidus (RM AMS RN 10.0 Chp 77)
        - Polyuria (abrupt onset of excessive urination, urinary output of 4-30 L/day of dilute urine); failure of the renal tubules to collect and reabsorb water. Polydipsia (excessive thirst, consumption of 2-20 L/day). Nocturia. Fatigue. Dehydration, as evidenced by extreme thirst, weight loss, muscle weakness, headache, constipation, and dizziness.
        - Physical assessment findings – sunken eyes, tachycardia, hypotension, loos or absence of skin turgor, dry mucous membranes, weak, poor peripheral pulses, decreased cognition
- System Specific Assessments – (1)
    - Head Injury: Assessing Decerebrate Posturing (RM AMS RN 10.0 Chp 14)
        - An abnormal body posture that involves the arms and legs being held straight out, the toes being pointed downward, and the head and neck being arched backward. The muscles are tightened and held rigidly. This type of posturing usually means there has been severe damage to the brain.
- Therapeutic Procedures – (2**)**
    - Cancer Disorders: Client Discharge Education for Ileal Conduit (RM AMS RN 10.0 Chp 92)
        - Client Education – instruct the client to self-catheterize and plan procedure at timed intervals since there is no sensation of bladder fullness (neobladder, continent pouch). Teach the client to monitor peristomal skin for redness, excoriation, or infection (ileal conduit, continent pouch).
            - Ureter diversion – ileum
            - Portal of exit – abdominal stoma
            - Urinary elimination – continuous drainage into external pouch
    - Skin Infections and Infestations: Home Care of Pediculosis Capitis (RM NCC RN 10.0 chp 30)
        - Client education – teach the child and parents about medications; to avoid home remedies, as it can worsen infection; about correct laundering of potentially infected clothing, bedding; teach the parent to bag items that cannot be laundered into tightly sealed bag for 14 days; teach the parents to boil combs, brushes and hair accessories for 10 min or soak in lice-killing products for 1 hr; discourage sharing of personal items

❖ Physiological Adaptations – (5)

- Alterations in Body Systems – (1)
    - Pituitary Disorders: Client Comfort (RM AMS RN 10.0 Chp 77)
        - Postoperative – monitor neurological status; drainage to mustache dressing (drip pad). Notify provider of the presence of glucose I the drainage (indication of leakage of cerebrospinal fluid). Maintain the client in a high-Fowler’s position.

Monitor fluid balance, especially greater output than intake (DI). Encourage deep breathing exercises, but limit coughing as this increases intracranial pressure and can cause a leak of cerebrospinal fluid (CSF). Assess for manifestations of meningitis. Administer replacement hormones.

- Hemodynamics – (1)
  - Electrocardiography and Dysrhythmia Monitoring: Identifying the Need for Anticoagulation Therapy (RM AMS RN 10.0 Chp 28)
    - Clients who have atrial fibrillation of unknown duration must receive adequate anticoagulation for 4-6 weeks prior to cardioversion therapy to prevent dislodgement of thrombi into the bloodstream
- Medical Emergencies – (1)
  - Emergency Nursing Principles and Management: Priority Assessment (RM AMS RN 10.0 Chp 2)
    - ABCDE Principle
      - A = airway/cervical spine
      - B = breathing
      - C = circulation
      - D = disability
      - E = exposure
  - Head Injury: Identifying Indications of a Skull Fracture (RM AMS RN 10.0 Chp 14)
    - Skull fractures can occur following forceful head injury. The brain might be damaged as a result. The client can have localized pain at the site of the fracture, and swelling can occur. The nurse should be alert for drainage from the ears or eyes (cerebral spinal fluid [CSF])
- Unexpected Response to Therapies – (2)
  - Assessment and Management of Newborn Complications: Neonatal Abstinence Syndrome (RM MN RN 10.0 Chp 27)
    - Long-term complications – feeding problems; central nervous system dysfunction (cognitive impairment, cerebral palsy); attention deficit disorder; language abnormalities; microcephaly; delayed growth and development; poor maternal-newborn bonding
    - Expected findings – monitor the neonate for abstinence syndrome (withdrawal) and increased wakefulness using the neonatal abstinence scoring system that assesses for and score the following:
      - CNS: High-pitched, shrill cry; incessant crying; irritability; tremors; hyperactivity with an increased Moro reflex; increased deep-tendon reflexes; increased muscle tone; disturbed sleep pattern; hypertonicity; convulsions
      - Metabolic, vasomotor, and respiratory findings: Nasal congestion with flaring, frequent yawning, skin mottling, retractions, apnea, tachypnea greater than 60/min, sweating, temperature greater than 37.2° C (99°F)
      - Gastrointestinal: Poor feeding; regurgitation (projectile vomiting); diarrhea; excessive, uncoordinated, constant sucking
      - OPIATE WITHDRAWAL: Manifestations of neonatal abstinence syndrome

- HEROIN WITHDRAWAL: Low birth weight; Small for gestational age (SGA); Manifestations of neonatal abstinence syndrome; Increased risk of sudden infant death syndrome (SIDS)
- METHADONE WITHDRAWAL: Manifestations of neonatal abstinence syndrome: Increased incidence of seizures, sleep pattern disturbances, higher birth weights (compared to with heroin exposure)
- MARIJUANA WITHDRAWAL: Preterm birth, meconium staining; Long-term effects, such as deficits in attention, cognition, memory, and motor skills
- AMPHETAMINE WITHDRAWAL: Preterm or SGA, drowsiness, jitteriness, sleep pattern disturbances, respiratory distress, frequent infections, poor weight gain, emotional disturbances, and delayed growth and development
- ALCOHOL WITHDRAWAL: Jitteriness, irritability, increased tone and reflex responses, and seizures
- FETAL ALCOHOL SYNDROME: Facial anomalies: small eyes, flat midface, smooth philtrum, thin upper lip, eyes with a wide spaced appearance, epicanthal folds, strabismus, ptosis, poor suck, small teeth, and cleft lip or palate; Deafness; Abnormal palmar creases and irregular hair; Many vital organ anomalies, such as heart defects, including atrial and ventricular septal defects, tetralogy of Fallot, and patent ductus arteriosus; Developmental delays and neurologic abnormalities; Prenatal and postnatal growth delays; Sleep disturbances
- TOBACCO: Prematurity, low birth weight, increased risk for SIDS, increased risk for bronchitis, pneumonia, and developmental delays