FUNDAMENTALS

Nursing Process

Activities associated with Nursing Process

- Assessment: Gather objective and subjective data.
  Verify data.
- Diagnosis: interpret data.
  Collect additional data when necessary.
  Determine health team's ability to meet client's needs.
- Planning: Determine and prioritize outcomes of care
  Develop and modify plan for delivery of client's care.

  Interventions: Organize and manage the client's care, including assignment and delegation of tasks.
  Perform or assist in performance of client's care.
  Counsel and teach client, significant others, and health team.
  Provide care specifically directed toward achieving outcomes.
- Evaluation: Compare actual outcomes with expected outcomes.
  Evaluate compliance with established plan.
  Record and describe client's response to plan.
  Modify plan as indicated and set priorities.

(Sandra Upchurch, Traci Henry, Hesi Comprehensive review for Nclex-RN)

Classic leadership styles: Behavior associated with leadership styles

- Democratic: (Participative) Assertive
- Authoritarian: (Autocratic) Aggressive
- Laissez- faire: (Permissive) Passive

Advance Directives

- **Instructional directives:** Lists of medical treatment that a client chooses to omit or refuse if the client becomes unable to make decisions and is terminally ill.
- **Durable power of attorney:** Appoints a person chosen by the client to make health care decisions on the client's behalf when the client can no longer make decisions.

Good Samaritan Act: Protects health practitioners against malpractice claims for care provided in emergency situations.

- Protecting a nurse when he or she is performing emergency care.

Triage color code system

	Red	Yellow	Green	Black
Urgency	Most urgent, first priority	Urgent, second priority	Third priority	Dying or dead
Injury type	Life threatening injuries	Injuries with systemic effects and complications	Minimal injuries with no systemic complications.	Catastrophic injuries
May delay treatment	No	30-60 minutes	Several hours	No hope for survival, no treatment.
Examples	Severe respiratory distress or cardiac arrest, limb amputation.	Open fracture, large wounds	Minor lacerations, sprains, strains, contusions.	

(Sandra Upchurch, Traci Henry, Hesi Comprehensive review for Nclex-RN

- **Vital Signs:**

✓ An important part of assessment, prioritization of interventions can be determined by change in vital signs; must be carefully monitored and reported to start.

✓ Unregulated care providers may measure VS for stable patients and then nurse may interpret and intervene.

Temperature: 36-38 degree Celsius or 96.8-99.8 Fahrenheit

- Older adults may have lower temperature (36 is acceptable)
- Dehydration, stress, ovulation, and strenuous exercises can raise temperature.
- Axillary is lower than oral temperature while, rectal and tympanic is higher than oral.

- **Hyperthermia:**

Body temperature that is elevated because of the body' inability to loss promote heat loss or reduce heat production.

Eg. Heat stoke, Organ Failure.

- **Malignant Hyperthermia** :

Malignant Hyperthermia is a type of severe reaction that occurs in response to particular medications used during general anesthesia, among those who are susceptible.

Clinical manifestations: Muscle rigidity, fever and fast heart rate. Complications can include muscle breakdown and high blood potassium.

Treatments for malignant hyperthermia include the medication **Dantrolene**, ice packs and other measures to cool body temperature as well as supportive care.

Rhabdomyolysis: Is the breakdown of muscle tissue that leads to the release of muscle fiber contents into the blood. These substances are harmful to the kidney and cause kidney damage. Rhabdomyolysis is also the side effects of **statin drugs**. Eg. Atrovastatin, Lovastatin etc.

- **Hypothermia:**
  Hypothermia is caused due to heat loss during prolonged exposure to cold overwhelming the body's ability to produce heat.
  Mild (34-36): Uncontrolled shivering, loss of memory, depression, poor judgment.
  Moderate hypothermia: (28C-32C) Slow down in breathing and heart rate.
  Severe (<30): Cardiac dysrhythmias, LOC, unresponsiveness to painful stimuli and clinical signs of death.

Pulse: 60-100 (Average adult)

- Bounding flow of arterial blood flow that palpable at various points on the body.

DO YOU KNOW THE 9 PULSE SITES IN HUMAN BODY?

- Important indicator of the circulatory system.
- **Stroke volume: (60-70ml)** The volume of blood pumped out of the left ventricle of the heart during each systolic cardiac contraction.
- Cardiac output: Normal 4-8L blood (CO= SV multiply HR).
- Use the radial artery to get a standard pulse and check for irregularity, bounding or threading pulse.
- Pulse abnormalities: Tachycardia, Bradycardia, Pulse deficit, Dysrhythmias.

Respiration: 12-20 per minute (Average adult)

- Respiration involves ventilation, diffusion, and perfusion.
- Ventilation is assessed by determining Respiratory rate, depth, and rhythm.
- Diffusion and perfusion are assessed by determining oxygen saturation.
- **SpO2: 95-100%** (Less than 90% must be notified immediately)

DO YOU KNOW THE CONDITION IN WHICH RESPIRATION BELOW 90% IS CONSIDERED NORMAL?

- **Breathing pattern abnormalities**: Bradypnea, tachypnea, hyperpnea, apnea, hyperventilation, hypoventilation, Cheyne-stokes respiration, Kussmaul's respiration, Biot's respiration.

Blood Pressure: 120/80 mm Hg (Average Adult)

- Force exerted on the walls of an artery by the pulsing blood under pressure from the heart
- Systolic: Peak maximum pressure when the ejection of blood occurs.

- Diastolic: Minimal pressure exerted by the blood in the arteries when the ventricles relax and get filled.
- **Pulse pressure**: Difference between systolic and diastolic blood pressure (120-80=40).

Complications of PP: Associated with an increased risk of developing atrial fibrillation.

Wide PP and systolic hypertension had a significantly positive association with coronary heart disease.

Increased risk for stroke. Worse outcomes in CKD.

- Hypertension: BP above 140/90 mm Hg.
- Hypotension: Systolic BP lower than 90 mm Hg,

Avoid applying cuff to:

✓ IV infusing arm
✓ AV fistula/ shunt
✓ Breast or axillary surgeries
✓ Traumatized or diseased extremities
✓ Cast or Bulky bandage

Ethical Principles

Ethical principles help you determine whether an action is right or wrong.
Autonomy: The right of individuals to make decisions for themselves.
Beneficence: A nurse's duty to do what is in the best interests of the client.
Justice: A fair, equitable and appropriate treatment.
Nonmaleficence: A nurse's duty to do no harm
Fidelity: Keeping faithful to ethical principles and the ANA code of ethics for nurses.
Confidentiality: Maintaining the client's privacy by not disclosing personal information about the client.
Accountability: Responsibility for one's actions.

Pain:

- "An unpleasant, subjective sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage."

Type of pain is based on pathology and location:

✓ **Nociceptive:** Normal processing of stimuli that damages normal tissues or has the potential to do so if prolonged.

a) **Somatic pain:** Arises from bone, joint, muscle, skin, or connective tissue.
b) **Visceral pain:** Arises from visceral organs, such as GI tract and pancreas.

✓ **Neuropathic pain:** Generated from nerves: Eg, diabetic neuropathy, trigeminal neuralgia.
✓ **Acute pain:** Less than 6 months of course.
✓ **Chronic pain:** Pain that persists past the normal time of healing.

- ✓ **Cancer pain:** May be acute, chronic or both.
- ✓ **Referred pain:** Pain sensed at a site distant to the area of tissue damage.
- ✓ **Breakthrough pain:** Occasional transitory exacerbations of their baseline pain.

a) Incident pain (Flare up with particular activity).
b) Idiopathic pain (Unknown cause).

- **Pain Management:**

✓ Non-pharmacological measures (Relaxation exercises , Distraction, altering positions, music therapy etc.
✓ WHO pain relief ladder:

a) NSAIDs (Aspirin, Ibuprofen and Naproxen) and **non- opioids** (Codeine, hydromorphone, Morphine sulfate, Fentanyl).

b) Opioids: Oxycodone, Hydrocodone
c) Co-analgesics (Are the medications whose primary indication is the management of a medical condition with secondary effects of analgesia (Eg. Corticosteroids).

➢ **Opioid side effects: "MORPHINE"**

✓ MO**:** Miosis (Pupil constriction), Mood changes.
✓ R: Respiratory depression, reduced salivation.
✓ P: Pruritus, Pneumonia (aspiration).
✓ H: Hypotension, Headache.
✓ I: Infrequent elimination.
✓ N: Nausea, Nervousness.
✓ E: Emesis.

➢ **Tylenol (Acetaminophen)**
✓ No-anti-inflammatory effects, action unknown
✓ Major adverse effect: Hepatotoxicity
✓ Max. dose: 4g in 24 hours (same as aspirin) for adults, for infants and children: weight dependent.
✓ Antidote: Acetylcysteine (Mucomyst)

➢ **Aspirin and ibuprofen (NSAIDS)**
✓ Mild to moderate pain relief for acute pain resulting from injury or trauma
✓ Salicylates or aspirin: Avoided in pediatric patients, can cause REYE's syndrome.
✓ Chronic use in older patients: GI bleeding and Renal insufficiency.

➢ **Codeine**
✓ Moderate to severe pain
✓ Prodrug

- ✓ Risk of oversedation and respiratory depression.

- ➢ **Opioid Analgesics**
- ✓ Moderate to severe pain
- ✓ Fatal adverse effects: Oversedation and Respiratory depression
- ✓ Antidote: Naloxone
- ✓ Common adverse effects: N/V, constipation, sedation, pruritis, confusion.
- ✓ Less common adverse effects: Urinary retention, dry mouth, sweating, orthostatic hypotension, seizures.
- ➢ **Adjuvants (Co-analgesics)**
- ✓ Anticonvulsants (Gabapentin)
- ✓ Antidepressants (Amitriptyline)
- ✓ Corticosteroids

Antibiotics:

- ✓ Always complete full course even when feeling well.
- ✓ Always assess for antibiotics allergies before administration.
- ✓ If cultures are ordered, obtain them before administration of first dose.

Intravenous Lines:

- ✓ **All medicated infusion lines:** Change 24 hours.
- ✓ **Non-medicated IV tubing:** Change 96 hours.
- ✓ Torniquet:
- ✓ Tie for 1 minute minimum.
- ✓ 3-5 inches above the targeted area.
- ✓ Release pressure for 3min and re-apply if unsuccessful in 1st attempt.

No venipunctures on:

- ✓ Weak, paralytic arms
- ✓ Infection
- ✓ A/V fistula/graft (Dialysis)
- ✓ Impaired lymph drainage
- ✓ Mastectomy side-arm

Phlebotomy: Drawing blood from a vein.
Phlebitis: Inflammation of vein
- ✓ Pain, increase skin temperature
- ✓ Further complication: Thrombophlebitis/ PE
- ✓ **Management**: Apply a warm, moist compress to the affected area as order.

Infiltration: Leakage of intravenous solutions or medication (non-vesicant) into extravascular tissue.

- ✓ Edema, pallor, decrease skin temperature around the site and pain.

- ✓ **Management**: Discontinue IV fluid, remove the IV, Mark the outline affected area with a marker, apply a hot or cold compress based on the type of IV fluid infiltrated and Elevate the extremity.

  Extravasation: IV catheter becomes dislodged and medication infuses into the tissue (Vesicant).

- ✓ Pain, burning, swelling and redness at the site.
- ✓ **Management**: Same as infiltration
- ✓ Aspirate any residual drug from the cannula
- ✓ Administer a drug specific antidote
- ✓ Notify the physician.

  Vesicants: Drugs that can result in tissue necrosis or formation of blisters when accidentlally infused into tissue surrounding a vein. Eg. Doxorubicin, Vincristine.

  Non-vesicants: inert or neutral compounds that do not cause inflammation or damaga.Do not cause ulceration, however they do tend to cause pain at and around the injection site, and along the vein. Eg. NS, RL, Furosemide (Lasix).

Total Parenteral Nutrition

Total Parenteral nutrition (TPN) is nutrition provided intravenously for clients who are unable to tolerate oral or enteral feedings. It may be used in both home and hospital environments.

Since it's very thick, only give TPN through a central line.

Indications: Pancreatitis/ Crohn's disease (NPO).
Severe burns, Trauma.

Nurse should check the weight on a daily basis.
Hyperglycemia is the major complication of TPN.
Increased urination (Polyuria), Polydipsia, Nausea, headache and abdominal pain.
Always taper down, do not stop abruptly.
Change bag and tubing every 24 hours.

What would be the nurse's priority action when a client's TPN bag is empty and a new one is not readily available?

Administer dextrose 10% in water until the new bag arrives.

PICC: Peripherally inserted central catheter

Indication:

- ✓ Long term IV medication administration.
- ✓ Continuous administration of vesicants or drugs that irritate peripheral veins eg. Chemotherapeutic agents, vasoactive drugs (Milrinone, vasopressin, epinephrine).
- ✓ No BP or no venipuncture.
- ✓ If gauze dressing change 48 hours/ if transparent dressing change 72 hours.

- ✓ Teach client to avoid excessive physical activity in that arm to prevent catheter dislodgement and lumen occlusion.
- ✓ Flush with NS before and after use.

Keypoints:
PICC dressing change: wear mask, gloves, client face away, sterile procedure.
PICC removal: Client holds breath after exhalation to prevent air embolism.

Medication administration
Eyes: Ophthalmic use:

- ✓ Instill one or two drops into the middle of the lower conjunctival sac.
- ✓ Do not allow tip of the applicator to come in contact with the eye.
- ✓ Do not drop medication directly in to the cornea (nerve fibers cause pain)
- ✓ Direct client to close his or her eyes gently to distribute the medication.
- ✓ Make sure you administer the correct medication in the correct eye.

Ears:

- ✓ Child under 3 years pull pinna down.
- ✓ People over 3 years pull pinna up.
- ✓ Hold dropper 1 cm above ear canal.
- ✓ Do not put drop on ear wax/ do not use q-tip to remove ear wax.
- ✓ **Epinephrine (Epipan)**: For anaphyplactic shock/ severe allergic rxn/ sudden asthma attack.
- ✓ SC is also an option for ACLS (Advanced cardiovascular life support).
- ✓ Always keep in pocket
- ✓ Site: IM/ vastus lateralis.

Positioning:

- ✓ **Fowler's position:** Includes semi-fowler's position which is between 30-40 degrees and high fowler's which is 90 degree.

Indications: Cardiac issues, SOB, or NG tube.

- ✓ **Lateral position**: Can be right or left side.

Indications: GI issues and rectal surgery.

Lithotomy : Gynecological procedures and childbirth.

Sim's position: A prone/ lateral

Indications: Administering enemas, perineal examinations and for comfort in pregnancy.

Supine: Used in surgery for abdominal, facial and extremity procedures.

Prone: Drainage of the mouth after oral or neck surgery. It also allows for full flexion of knee and hip joints.

Thoracentesis: Sitting upright

Lie on unaffected side (if unable to sit): during the procedure.

Paracentesis: Sitting upright (Peritoneum: bladder has to be protected). Ascites, Peritoneal dialysis.

Lumber puncture: **During procedure**: Fetal position/ c shaped/ hunched seated.

Post procedure: Prone (0-4 hours), supine (0-12 hours).

Liver biopsy: During: Supine, right arm overhead.

Post procedure: right side for 2-4 hours / pressure to prevent bleeding.

Cardiac catheterization: Leg straight 2-6 hours after procedure.

During or after tube feeding: HOB at 30 degrees/ to prevent aspirations.

Neuro problems: HOB elevated and midline (15-30 degrees)/ to prevent increased ICP.

Most respiratory and cardiac diseases: HOB elevated/ high fowler 45 degree.

Lumber puncture: complication: Headache and brain herniation.

Epidural anesthesia: Hypotension.

Nasogastric tube feeding:

- ✓ Measure from nose tip to ear lobe and then xiphoid process.
- ✓ During insertion: High fowler or left lateral.
- ✓ Flush with 15ml water before and after med administration, flush with 30 ml water after intermittent or continuous infusion of feeding and repeat every 4-6 hours.
- ✓ Do not use SR, ER enteric coated.
- ✓ Infection control: rinse bag and tubing with water every 8 hours whenever feedings are interrupted.
- ✓ Change bag and tubing every 24 hours.

Validating placement of tube: Chest x-ray: Standard protocol

Urinary catheterization

Do not force against resistance (BPH).

Tap the catheter: **Female**: Inner thigh or lower abdomen.

Male: Top of the thigh or lower abdomen.

Prokinetic medications: Increase gastric emptying

Eg. Cisapride, Metoclopramide and Erythromycin.

Blood transfusion:

- ✓ LPN cannot do blood transfusion.
- ✓ Informed consent: nurse check it, doctor obtains it.
- ✓ Obtain type and cross-match records and the unit of blood to administer.
- ✓ ABO and RH type.
- ✓ Two licensed individuals: 2RNs or 1RNs AND 1 LPN will do the checks.
- ✓ Client's name and hospital number on the unit of blood and on the cross match records.
- ✓ If any of these do not match, do not give the blood.
- ✓ Check the expiration date on the unit of blood.
- ✓ Administer the blood immediately after receiving it from the blood bank; blood should never be stored in the unit refrigerator or allowed to sit out at room temperature. The maximum amount of time blood can be out of monitored storage is 30 minutes.
- ✓ Do not add any medications to blood products.
- ✓ Do not warm before blood transfusion, if blood must be warmed, use special type of equipment.
- ✓ Do not use the microwave to warm the blood.
- ✓ Inspect the blood bag for leaks, abnormal color, excessive air or bubbles.
- ✓ The average rate of blood transfusion in an adult is 1 unit of blood over about 3-4 hours, depending upon the condition of the patient.
- ✓ The blood administration set should be changed after 2 units.
- ✓ It is not recommended to use an infusion pump : the pump increases RBC hemolysis.
- ✓ Multiple transfusions can cause **hypocalcemia.**
- ✓ Administer blood with **y-set and with NS only.**
- ✓ Administer within 4 hours.
- ✓ Stay with patient for first 15 minutes and observe the patient for transfusion hemolytic reactions.
- ✓ Check the baseline vital signs before transfusion.
- ✓ During the transfusion, continue to monitor for circulatory overload.
- ✓ If patient is stable, before transfusion, UAP can check the vitals.

Blood transfusion reactions

1. Hemolytic transfusion reaction: Low back pain, hypotension, tachycardia, tachypnea, fever, chills, flushing, chest pain, dyspnea.
2. Stop BT Immediately.
3. Obtain first voided urine specimen to test for blood in the urine.
4. Anticipate blood samples for testing.

Allergic reactions

Urticaria, Pruritis, facial flushing, sever SOB, bronchospasm.

Stop transfusion.

Febrile reaction:

Chills, fever, headache, flushing, muscle stiffness/ pain, increased anxiety.

Stop the transfusion.

Sputum collection:

- ✓ Done in the morning if possible.
- ✓ Rinse mouth with water.
- ✓ Sit on side of bed, high fowler.
- ✓ Inhale deeply.
- ✓ Cough deeply.
- ✓ 4-10 ml mucous is required.
- ✓ Sterile container.
- ✓ Label and send to the lab ASAP.

Fire safety:
R: rescue patients.
A: activate fire alarm.
C: close the door to confine fire.
E: Extinguish fire.

How to fire extinguisher:
P**:** Pull pin.
A: Aim at the base of fire
S: Squeeze the handle.
S: Sweep from side to side.

Radiation safety:

- ✓ Label the hazardous substance.
- ✓ Reduce the exposure to radiation
- ✓ Use shielding device: lead apron
- ✓ Private room
- ✓ Never touch dislodged radiation implants.

Restraints:

- ✓ Prescription is needed.
- ✓ Assess.
- ✓ Skin integrity every 30 minutes.
- ✓ Neurovascular signs every 30 minutes (Check color, warmth, movement and sensation).
- ✓ Remove every 2 hours for exercise and circulation.

- ✓ Offer fluid and bedpan or toileting every 2 hours.
- ✓ Order is always time specific/ no standing order required.

Consent:

- ✓ Informed consent: written/ verbal/ implied (Understood if client is unconscious).
- ✓ For minors: consent must be obtained from parents or guardian.
- ✓ Nurse signs as a witness.

LAMA:

- ✓ Leave against medical advice.
- ✓ HCP explain risks to the patient.
- ✓ Client should be cognitive or able to understand the risks.

NO LAMA FOR:

- ✓ Danger to self or others.
- ✓ LOC, altered consciousness.
- ✓ Under the influence of drugs.
- ✓ Court decisions.
- ✓ Mental illness.
- ✓ Disoriented to time, place and person.
- ✓ Parents of minor (For life, limb or organ saving treatment).

Roles of Health Care Team Members

Nurse roles are as follows:

1. Promote health and prevent disease
2. Provide comfort and care to clients
3. Make **decisions**
4. Act as client advocate
5. Lead and manage the nursing team
6. Serve as case manager
7. Function as a rehabilitator
8. Communicate effectively
9. Educate clients, families, and communities and health care team members

A. Primary health care provider (PHCP): A PHCP or specialist diagnoses and treat diseases.

A. Physical therapist: A physical therapist assists in examining, testing and treating clients recuperating from injuries, illness, or surgery physically disabled clients.

B. Occupational therapist: An occupational therapist develops adaptive devices that help chronically ill clients with a disability perform activities of daily living.

C. Respiratory therapist: A respiratory therapist delivers treatments designed to improve the client's ventilation and oxygenation status.

D. Speech therapist: A speech therapist evaluates a client's ability to swallow safely and evaluates speech and communication ability. The speech therapist develops a plan to treat communication and swallowing disorders. These therapists also work to prevent, assess, diagnose, and treat speech, language, social communication, and cognitive communication in children and adults.

E. Nutritionist: A nutritionist or dietitian assists in planning dietary measures to improve or maintain a client's nutritional status.

The nurse delegates only tasks for which he or she is responsible. The nurse who delegate is accountable for the task; the person who assumes responsibility for the task is also accountable.

A. Principles and guidelines of delegating
B. Assignments
1. Assignment is the transfer of performance of client care activities to specific staff members.
2. Guidelines for client care assignments
a. Always ensure client safety
b. Be aware of individual variations in work abilities.
c. Determine which tasks can be delegated and to whom.

Principles and Guidelines and Delegating

- Delegate the right task to the right delegate. Be familiar with the experience of the delegates, their scopes of practice, their job descriptions, agency policy and procedures, and the state nurse practice act.
- Provide clear directions about the task and ensure that the delegate understands the expectations.

Prioritizing Care

A. Prioritizing is deciding which needs or problems require immediate action and which ones could tolerate a delay in response until a later time because they are not urgent.
B. Guidelines for prioritizing
C. Settling prioritizing for client teaching
1. Determine the client's immediate learning needs.
2. Identify the typing of learning needs for the individual; for example consider the client's age, cognitive age, language needs, and generational concerns.

Guidelines for prioritizing

- The nurse and the client mutually rank the client's needs in order of importance based on the client's preference and expectations, safely and physical and physiological needs ; what the client sees as his or her priority needs may be different from what the nurse sees as the priority needs.
- Priorities are classified as **high, intermediate , or low**
- Client needs that are life-threatening or that could result in harm to the client if they are left untreated are high priorities.
- Nonemergency and non-life-threatening client needs are intermediate priorities.
- Client needs that are not related directly to the client's illness or prognosis are low priorities.

- The nurse can use **the ABCs**—airway, breathing, and circulation—as a guide when determining priorities; client needs related to maintaining a patent airway are always the priority.
- If cardiopulmonary resuscitation (CPR) is necessary, the order of priority is **CAB—**compressions, airway and breathing—this is the exception to using the ABCs when determining priorities.
- When providing care, the nurse needs to decide which needs or problems require immediate action and which ones could be delayed until a later time because they are not urgent.
- The nurse considers clients problems that involve actual or life threatening concerns before potential health-threatening concerns.
- The nurse can use Maslow's Hierarchy of Needs theory as a guide to determine priorities and to identify the levels of physiological needs, safety, love and belongings, self esteem, and self-actualization (basic needs are met before moving to other needs in the hierarchy).
- When prioritizing care, the nurse must consider time constrains and available resources.
- Problems identified as **important by the client** must be given high priority.
- Prioritization may be different in a disaster or emergency situation, where an action should be taken before gathering further information.

In the event of a disaster, activate the emergency response plan immediately.

A. Triage

1. In a disaster or war, triage consists of a brief assessment of victim that allows the nurse to classify the victims according to the severity of the injury, (urgency of treatment, and a place for treatment (see Priority Nursing Actions).
2. Simple Triage and Rapid Treatment (START) is a strategy used to evaluate the severity of injury of each victim as quickly as possible and tag the victims in about 30 to 60 seconds.
3. In an emergency department, triage consists of a brief assessment of clients that allows the nurse to classify clients according to their need for care and establish priorities of care; the type of illness or injury, the severity of the problem, and the resources available govern the process.

B. Emergency department triage system

1. A commonly used rating system in an emergency department is a 3-tier system that uses the categories of emergent may be identified by color coding or numbers.
2. The nurse needs to be familiar with the triage system of the health care agency.
3. When caring for a client who has died, the nurse needs to recognize the importance of family and cultural and religious rituals and provide support to loved ones.
4. Organ donation procedures of the health care agency need to be addressed if appropriate.

Think survivability. If you are the first responder to a scene of a disaster such as a train crash, a priority victim is one whose life can be saved.

VITAL SIGNS AND LABORTORY REFERENCE INTERVALS

- The nurse ensures that vital sign measurements are documented correctly and always reports abnormal finding to the PHCP

- The temperature is not taken rectally in cardiac clients; the Client who has undergone rectal surgery; or the Client with diarrhea, fecal impaction, or rectal bleeding or who is at risk of bleeding.
- The apical pulse is counted for 1 full minute and is assessed in clients with an irregular radial pulse or a heart condition, before the administration of cardiac medications such as Digoxin and beta blockers, and in children younger than 2 years.
- The respiratory rate may be counted for 30 seconds multiplied by 2, except in a client who is known to be ill or is exhibiting irregular reparations, in which case respirations are counted for 1 full minute.
- A usual pulse oximetry reading is between 95% and 100%. A pulse oximetry reading lower than 90% necessitates PHCP notification; values below 90% are acceptable only certain chronic conditions. Agency procedures and PHCP prescriptions are followed regarding actions to take for specific readings.
- Consider the client's culture and spiritual and religious beliefs in assessing pain; some cultures frown on the outward expression of pain.
- Ice or heat should be applied with a towel or other barrier between the pack and the skin but should not be left in place for more than 15 to 30 minutes.
- The major concern with acetaminophen is hepatotoxicity.
- An electronic infusion device is always used for continuous or dose-demand IV infusion of opioids analgesics.
- Drawing blood specimens from an extremity in which an IV solution is infusing can produce an inaccurate result, depending on the test being performed and the type of solution infusing.
- Fist pumping and increased tourniquet time cause pseudo hyperkalemia through multiple mechanisms such as hemolysis, release of potassium from muscle, ph changes in the sample, hemoconcentration and water shift into cells.
- If the aPTT value is prolonged (longer than 100 seconds or per agency policy) in a client receiving IV heparin therapy or in any client at risk for thrombocytopenia, initiate bleeding precautions.
- If the PT value is longer than 25 seconds and the INR is greater than 3.0 in a client receiving standard warfarin therapy (or per agency policy), initiate bleeding precautions.
- Monitor the platelet count closely in clients receiving chemotherapy because of the risk for thrombocytopenia. In addition, any client who will be having an invasive procedure (such as a liver biopsy or thoracentesis) should have coagulation studies and platelet counts done before the procedure.
- Monitor the WBC count and differential closely in clients receiving chemotherapy because of the risk for neutropenia ; neutropenia places the client at risk for infection.

NUTRITION

- Major stages of the lifespan with specific nutritional needs are pregnancy, lactation, infancy, childhood, and adolescence. Adults and older adults may experience physiological aging changes, which influence individual nutritional needs.
- Always assess the client's ability to eat and swallow and promote independence in eating as much as possible.
- Always consider the client’s culture, spiritual and personal choices when planning nutritional intake.

- Provide nutritional supplements such as those high in protein as prescribed, for the client on a liquid diet.
- Consider the client's disease or illness and how it may affect nutritional status.
- Calorie counts assist in determining the client's total nutritional intake and can identify a deficit or excess intake.
- Fluid restrictions may be prescribed for clients with hyponatremia, severe extracellular volume excess, and renal disorders. Ask specifically about client preferences regarding types of oral fluids and temperature preference of fluids.
- An initial assessment includes identifying allergies and food and medication interactions.
- **Body mass index (BMI)** can be calculated by dividing the client's weight in kilograms by height in meters squared. For example, a client who weighs 75 kg (165 pounds) and is 1.8m (5 feet, 9 inches) tall has a BMI of 23.15 (75 divided by 1.8^2 = 23.15). From: Potter et al.(2013), p. 1008.

HEALTH AND PHYSICAL ASSESSMENT OF THE ADULT CLIENT

- To test skin turgor, pinch a large fold of skin and assess the ability of the skin to return to its place when released. Poor turgor occurs in severe dehydration or extreme weight loss.
- Neck movements are never performed if the client has sustained a neck injury or if a neck injury is suspected.
- The first slide on the Ishihara chart is one that everyone can discriminate; failure to identify numbers on this slide suggests a problem with performing the test, not a problem with color vision.
- Before performing an otoscopic exam, and inserting the speculum, check the auditory canal for foreign bodies. Instruct the client not to move the head during the examination to avoid damage to the canal and tympanic membrane.
- The otoscope is never introduced blindly into the external canal because of the risk of perforating the tympanic membrane.
- When auscultating breath sounds, instruct the client to breathe through the mouth and monitor the client for dizziness.
- When performing an abdominal assessment, the specific order for assessment techniques is **inspection, auscultation, percussion, and palpation.**
- Dorsiflexion of the great toe and fanning of the other toes (Babinski's sign) after firmly stroking the sole of the foot, is abnormal in anyone older than 2 years and indicates the presence of central nervous system disease.

PROVISION OF A SAFE ENVIRONMENT

- Remember the **mnemonic RACE** (Rescue clients, Activate the fire alarm, Confine the fire, Extinguish the fire)to set priorities in the event of a fire and **the mnemonic PASS** (Pull the pin, Aim at the base of the fire, Squeeze the handle, Sweep from side to side) to use a fire extinguisher.

- Any electrical equipment that the client brings into the health care facility must be inspected for safety before use.
- Needles (sharps) should not be recapped, bent, or broken because of the risk of accidental injury (needle stick).
- A PHCP's prescription for use of a safety device (restraint) is needed. Alternative measures for safety devices should always be used first.
- The Poison Control Center should be called first before attempting an intervention.

- Handle all blood and body fluids from all clients as if they were contaminated. In the event of a disaster, the emergency response plan is activated immediately.
- Anthrax is transmitted by direct contact with bacteria and spores and can be contracted through the digestive system, abrasions in the skin, or inhalation through the lungs.

Bibliography:

- All material is used for educational purpose.
- Silvestri, Linda. Silvestri, Angela. Saunders Comprehensive review Nclex-RN, Edition:8, Pg. 89, 167,618.654.
- Upchurch, Sandra. Hesi "Comprehensive review Nclex-RN". Editin: 4. Pg. 220-350.
- Billings, Diane. Lippincott Q-A Review. Edition: 13th. Pg. 150-400.
- Lacharity, Linda A. Priority delegation and assignment. Edition: 4th. Pg no. 400-650.
- Rinehart, Wilda. Exam Crack Nclex-RN. Edition: 5th. Pg. no: 40-65.
- HURST, Marlene. Hurst Reviews nclex-RN. Edition: ist. Pg. no: 50-100.
- Konar, Hiralal. DC Dutta's textbook of Obstetrics. Edition 10th. Pg. no: 200-300.