

Nursing Care Procedures



Key steps, tasks & decisions crucial to patient care—including vital signs, documentation & communication, specimens, wound care & more!

introduction

- ⊙ A **procedure** is a series of activities, tasks, steps, decisions, calculations and other processes, which, when undertaken in the appropriate sequence, produces the described result, product or outcome
- ⊙ These procedures include the objects and tools used by the nurse, such as stethoscopes, pharmaceuticals, monitors, catheters and other tubes, and computers; these tools must be used with knowledge, reflective practice and professional judgment to result in an outcome that benefits patients and society

- ⊙ This guide provides **procedure-specific knowledge** on the methods of performing certain tasks
- ⊙ But nursing is more than just the competent completion of a series of tasks; it is equally important that the nurse uses **critical thinking** to integrate knowledge of the individual patient and his/her nursing care needs in the application of these procedures to each nursing situation
- ⊙ **Critical thinking** for nursing procedures is the ability to think in a systematic and logical manner, with openness to questions and reflection on the reasoning process used to ensure safe nursing practice and quality care

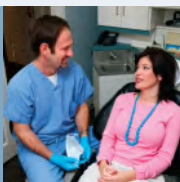
THE NURSE KNOWS: to assess each patient to determine his/her specific individual needs

therapeutic communications

- ⊙ **Therapeutic nurse/patient relationships** can occur only when each person views the other as a unique human being; characteristics of the therapeutic relationship include clear definitions of goals and boundaries
 - **goal-directed and purposeful interaction involves:**
 - establishing a contract for the time, place and focus of the nurse/patient meetings
 - planning conditions for termination at the onset and throughout the relationship
 - roles and responsibilities should be clearly defined
 - the nurse is the professional caregiver and facilitator
 - the patient's needs and problems are the focus of the relationship
 - **confidentiality** is maintained by:
 - sharing information only with professional staff who have a need to know
 - informing the patient of all information to be shared beforehand
 - advising the patient that information that deals with harming him/herself or others will be communicated to the staff as needed
- ⊙ **Therapeutic behaviors** by the nurse include:
 - self-awareness of thoughts, feelings and behaviors
 - clarification of personal values
 - empathic understanding
 - effective communication
 - realistic goal setting
 - collaborative work with patients
 - responsible and ethical practice
- ⊙ Therapeutic use of self is the ability to use one's personality consciously and with full awareness in an attempt to establish relatedness and to structure nursing interventions; the nurse must possess: **self-awareness, self-understanding, self-reflection**

THE NURSE KNOWS:

- the difference between a caring relationship and an over-involved relationship is narrow: you must learn to distinguish between professional and personal interactions
- always begin with the question: was the intervention designed for the benefit of the patient or the nurse?



Rapport	Implies special feelings on the part of both the patient and the nurse based on acceptance, warmth, friendliness, common interest, a sense of trust and a nonjudgmental attitude
Trust	Implies a feeling of confidence in another person's presence, reliability, integrity, veracity and sincere desire to provide assistance when requested; trust is the basis of a therapeutic relationship
Respect	Implies the dignity and worth of an individual regardless of his/her unacceptable behavior
Genuineness	Refers to the nurse's ability to be open, honest and "real" in interactions with the patient; genuineness implies congruence between what is being felt and what is being expressed
Empathy	A process wherein an individual is able to see beyond outward behavior and sense accurately another's inner experience at a given time; with empathy, the nurse's feelings remain on an objective level—it differs from sympathy in that, with sympathy, the nurse subjectively shares what the other person is feeling and experiences a personal need to alleviate distress

⊙ Nonverbal Communication

- research suggests that nonverbal communication is more important to understanding human behavior than words alone—the nonverbal "channels" seem to be more powerful than what people say:
 - **eye contact**
 - **facial expressions**
 - **gestures**
 - **posture & body orientation**
 - **proximity**
 - **paralinguistics**
- ⊙ **5 principles** regarding the establishment of **professional boundaries**:
 - **rule of abstinence:** the professional must abstain from personal gratification at the patient's expense
 - **duty to neutrality:** the professional should not interfere in the patient's personal relationships
 - promotion of **patient's autonomy** and self-determination
 - **fiduciary relationship:** the professional should act in the best interests of the patient
 - **respect** for human dignity

clean conditions

asepsis: the absence of microorganisms

- ⊙ Microorganisms are found everywhere in the world
 - **pathogens** (pathogenic microorganisms) **cause disease**
 - nonpathogenic organisms do not cause disease
 - some microorganisms are nonpathogenic in their normal environment (e.g., *escherichia coli* [*E. coli*] in the intestines) but are pathogens in other environments (e.g., *E. coli* in the urinary tract results in a urinary tract infection [UTI])
- ⊙ Providing a safe environment to prevent the transmission of **nosocomial infections**
 - an infection acquired in the hospital/health-care setting that was not present or incubating at the time of admission is called a nosocomial infection

- **aseptic technique** is an infection control procedure that decreases the transmission of pathogens and, thereby, reduces the incidence of infection
 - **medical asepsis:** practices that reduce the number, growth and spread of microorganisms or the absence of pathogens
 - AKA: "clean technique"
 - **clean objects** have the presence of some microorganisms that are usually not pathogenic
 - **soiled/dirty objects** have the presence of a high number of microorganisms that are potentially pathogenic
 - medical asepsis procedures include:
 - > hand washing
 - > gloves
 - > daily linen changes
 - > clean floor and furniture
 - > designation of clean and dirty areas

- ▲ **clean areas:** linen room, medication room
- ▲ **dirty areas:** specimen/lab area, central service pick-up area, used-linen receptacles
- ▲ cross-contamination must be avoided
- ▲ articles that touch the floor are contaminated and must be disposed of properly
- cleaning is conducted from the cleanest to the least-clean area; for example, clean an incision from the central portion outward to the periphery of the skin
- **surgical asepsis:** practices that eliminate all microorganisms from an object or area
 - AKA: “sterile technique”
 - removes all microorganisms and spores from an object or area
 - **spores:** single-celled organisms in a resting or inactive state
- Reducing or eliminating **infectious agents**
 - contact with inanimate objects can be the source of transmission of microorganisms
 - this chain of infection can be broken by reducing or destroying the microorganisms on an object
 - **cleansing:** removal of soil and organic material from instruments or equipment
 - reusable objects need to be cleansed after use with each patient
 - objects are cleansed *before* disinfection or sterilization
 - objects are cleansed with water, mechanical action and, sometimes, a detergent
 - rinse under cold water (warm water causes protein in organic material to coagulate and stick)
 - create friction to the object while under the running water
 - rinse under warm water
 - dry the object
 - nurses need to use personal protective equipment—such as gloves, masks, goggles—during cleansing to prevent potential hazard to the nurse from splashing of contaminated materials
 - **disinfection:** the elimination of pathogens, except for spores
 - chemical solutions are used to clean inanimate objects, such as stethoscopes, blood pressure cuffs, linens, electronic fetal monitor attachments and some types of endoscopes
 - some common disinfectants are alcohol, sodium hypochlorite, quaternary ammonia bleach
 - a **germicide** is a chemical that can be applied to both animate and inanimate objects to eliminate pathogens
 - germicides used on human skin include antiseptic preparations, such as alcohol and silver sulfadiazine
 - **sterilization:** the total elimination of all microorganisms, including spores

- methods of sterilization include:
 - moist heat/steam
 - radiation
 - chemicals
 - ethylene gas
- choice of method depends upon type of contamination, amount of contamination and object to be sterilized
- boiling water is **not** an effective sterilization method, as some viruses and spores can survive temperatures above 121° Fahrenheit (F)

Hand Washing

- The Centers for Disease Control and Prevention found that:
 - there is only a 48% compliance rate for hand washing
 - on average, hands were washed for 8.5 to 9.5 seconds, but a minimum of 10 to 15 seconds is needed to prevent the spread of infection
 - compliance with effective hand washing technique is higher among nurses than other health-care personnel, including physicians
- The most basic and effective infection control measure (when done properly)
- The rubbing together of all surfaces and crevices of the hands
- Essential elements of effective hand washing
 - **soap or chemical**
 - prevents the spread of microorganisms
 - **water**
 - adequate flow of water, but without splashing that will contaminate uniform
 - **warm water**—cold water inhibits sudsing and cleansing, and hot water damages the skin
 - wetness facilitates distribution of soap over entire surface
 - **friction:** physical removal of soil and transient flora—**most important!!**
 - rub vigorously with a circular motion while keeping fingers lower than wrists
 - rub all sides of each finger, then between the fingers, then the palms, and finally, the backs of the hands
 - hand washing must take a **minimum of 10 to 15 seconds** in order to produce the mechanical action necessary to allow antimicrobial products to achieve the intended effect
 - hands soiled with organic matter require soap or detergents with antiseptics and water to be effectively cleaned
 - waterless antiseptics agents are useful only when hands look clean



THE NURSE KNOWS:

- always wash your hands—**
- after arriving at work
 - before leaving work
 - between patient contacts
 - after removing gloves
 - before and after performing invasive procedures
 - after handling contaminated equipment

vital signs (VS)

- **Vital signs (VS)** are physical indications that an individual is alive:
 - temperature
 - heartbeat or pulse
 - breathing rate
 - blood pressure (BP)
- These signs can be observed, measured and monitored to assess an individual's level of physical functioning
 - normal vital signs vary, depending upon age, sex, weight, exercise tolerance, and condition
 - Preparing to check vital signs:
 - examination/hospital room should be quiet, warm and well-lit
 - prior to measuring vital signs, the patient should have had the opportunity to sit or rest in bed for approximately 5 minutes, so that the values are not affected by the exertion required to walk to the exam room or other activities
 - all measurements are made while the patient is seated/reclining
 - **observation:** before diving in, take a minute or so to look at the patient in his/her entirety, making your observations
 - does the patient seem anxious, in pain, upset?
 - what about dress and hygiene?
 - remember, the data collection process begins as soon as you lay eyes on the patient
- **Normal ranges** for the average healthy adult
 - **temperature: 97.8–99.1° Fahrenheit (F); 36.5–37.2°C**
 - normal = 98.6° F; 37°C
 - generally obtained using an oral thermometer that provides a digital reading when the sensor is placed under the patient's tongue
 - temperature is measured in degrees, either Celsius (C) or Fahrenheit (F), with a fever defined as greater than 38–38.5° C or 100.4–101.5° F
 - rectal temperature, which most closely reflects the body's core temperature, is approximately one degree Fahrenheit (1° F) higher than oral temperature

- **breathing: 12 to 18 respirations (breaths) per minute**
 - respirations should be counted for at least 30 seconds; the total number of breaths in a 15-second period is relatively small, and any miscounting can result in rather large errors when multiplied by 4
 - try to count respirations as inconspicuously as possible so that the patient does not consciously alter his/her rate of breathing; this can be done by observing the rise and fall of the patient's hospital gown while you appear to be taking his/her pulse
 - respiratory rate, particularly in the presence of cardiopulmonary illness, can be a very reliable marker of disease activity
- **pulse: 60 to 80 beats per minute (at rest)**
 - can be measured at any place where there is a large artery (e.g., carotid or femoral) or simply by listening over the heart
 - for the sake of convenience, it is generally done by palpating the radial impulse
 - place the tips of your index and middle fingers just proximal to the patient's wrist on the thumb side, orienting them so that they both are over the length of the vessel
- **blood pressure (BP)**
 - systolic: less than 120 mm of mercury (mm Hg)**
 - diastolic: less than 80 mm Hg**
 - readings are reported in millimeters of mercury (mm Hg)
 - the size of the BP cuff will affect the accuracy of these readings
 - the inflatable bladder, which can be felt through the vinyl covering of the cuff, should reach approximately 80% around the circumference of the arm
 - the width of the inflatable bladder should cover approximately 40% of the upper arm
 - if the cuff is too small, the readings will be artificially elevated
 - if the cuff is too large, the readings will be artificially low

THE NURSE KNOWS: these numbers provide critical information about a patient's state of health—that's why they're called **“vital signs”**

wounds & wound care

- ◎ **Skin:** the body's largest organ and its primary defense against infection
- ◎ **Wound:** a disruption in the integrity of body tissue
 - any wound sets in motion a complex set of responses
 - wound healing occurs in a 3-phase process:
 - **defensive (inflammatory) phase:** occurs immediately after injury and lasts 3 to 4 days; **hemostasis** and **inflammation** are the major events
 - **hemostasis:** the cessation of bleeding
 - > occurs with **vasoconstriction** of large blood vessels
 - > platelets, activated by the injury, aggregate to form a platelet plug and stop the bleeding
 - > activation of the clotting cascade leads to the formation of **fibrin** and a fibrinous meshwork, which traps platelets and other cells
 - > fibrin clot formation provides initial wound closure, and prevents excessive loss of blood and body fluids
 - **inflammation:** the body's defensive adaptation to tissue injury; involves both vascular and cellular responses
 - > tissue injury stimulates the release of chemical mediators, such as **histamine** (from mast cells), **serotonin** (from platelets), **complement** and **kinins**; all these are vasoactive substances that cause the blood vessels to dilate and become more permeable, resulting in increased blood flow, which carries the nutrients and oxygen that are essential to wound healing
 - ▲ increased blood flow transports **leukocytes** (white blood cells [WBC]) to the area to participate in **phagocytosis** (the envelopment and disposal of microorganisms)
 - ▲ increased blood supply also removes the dead cells, **bacteria** and **exudates** (material and cells discharged from the blood vessels)
 - > inflammation results in the area's appearing red, edematous (swollen) and warm to the touch, with varying amounts of exudates present
 - **reconstructive (proliferative) phase:** begins on day 3 or 4 following the injury and lasts for 2 to 3 weeks
 - begins with **collagen** depositions; collagen is the most abundant protein in the body and is the material of tissue repair
 - > connective tissue contains **fibroblasts**, which migrate into the wound as a result of cellular mediators
 - > fibroblasts secrete collagen
 - > initially, collagen is gel-like; however, over months of healing time, it forms collagen fibrils and adds tensile strength to the wound
 - > as the wound become stronger, the risk of wound separation or rupture decreases
 - > a properly healing wound can resist normal stress, such as tension or twisting, after 15 to 20 days
 - **angiogenesis:** the formation of new blood vessels
 - > with injury, the endothelial cells in the existing vessels produce enzymes that break down the basement membrane; as a result, new vessels form and grow across the wound to increase blood flow, and the supply of nutrients and oxygen necessary for wound healing

- **granulation:** tissue development
 - > granulation tissue (new tissue) grows inward from the surrounding healthy connective tissue
 - > granulation tissue is filled with new capillaries that are fragile and bleed easily; granulation tissue is red and translucent, with a granular appearance
- **wound contraction:** the process of wound closure; contraction is noticeable 6 to 12 days after injury
 - > the edges of the wound are drawn together by the action of **myofibroblasts**, which are specialized cells that contain bundles of parallel fibers in the cytoplasm; these myofibroblasts bridge across a wound and then contract to pull the wound closed
- **maturation phase:** the final stage of healing; begins on day 21 (approx.) and can continue for up to 2 years, depending on the depth of the wound; scar tissue is remodeled by **collagen deposition**, **lysis** (disintegration) and **debridement** (removal, usually surgical) of wound edges

◎ Wound Drainage

- there are 3 types of wound drainage:
 - **serous exudate**, which is primarily **serum** (the clear portion of blood); appearance is watery and has a low protein count; seen with mild inflammation, such as blister formation after a burn
 - **purulent exudate**, which is **pus**; generally occurs with severe inflammation and infection; exudate is thick because of the presence of **leukocytes**, liquefied dead tissue debris, and **bacteria**; purulent drainage may vary in color (yellow, brown, green), depending on the causative organism
 - **hemorrhagic exudate**, which is primarily **red blood cells** (RBC) and is caused by capillary damage; this type of exudate is associated with severe **inflammation**; the color of the exudate reflects whether the bleeding is fresh (bright red) or old (dark red)

◎ Wound Healing

- there are 3 types of wound healing:
 - **primary intention:** wounds with **minimal tissue loss** and edges that are well-approximated (closed); healing occurs with minimal granulation tissue and minimal scarring
 - **secondary intention:** wounds with **extensive tissue loss** or in which the wound edges cannot be approximated; repair time is longer as granulation tissue gradually fills in the deficit; tissue replacement and scarring is greater, and the susceptibility to **infection** is increased
 - **tertiary intention:** delayed closure; conditions in which healing by tertiary intention may occur include **poor circulation** or **infection**; suturing of the wound is delayed until the problem resolves and more favorable conditions exist for wound healing

◎ Hyperbaric Oxygen Treatment (HBO₂ or HBOT)

- **oxygen** used under pressure can assist wound healing by increasing the amount of oxygen delivered to body tissues by the bloodstream
- **HBO₂** provides the oxygen needed to stimulate and support wound healing, and to kill germs
- **HBOT** is a supplemental therapy to be used in addition to the current medical and surgical therapy

urine collection

- ◎ The type of testing determines the method of collection
- ◎ All urine collection requires the use of universal precautions to prevent the transmission of microorganisms
 - **random collection**
 - order is written for a UA (routine urine analysis)
 - collected at any time using a clean container, not a sterile container
 - after the patient urinates into the specimen collection container, it is sealed, labeled and placed in a biohazard bag for transport to the laboratory
 - specimens need to be submitted to the laboratory immediately to prevent the growth of bacteria or changes in the urine's composition
 - **timed collections**
 - urine is collected over a 24-hour period and stored in a plastic gallon container
 - container contains a preservative
 - if the analyte to be studied is light-sensitive, a dark plastic container is needed
 - container is refrigerated or kept on ice throughout the 24-hour time period
 - at the beginning of the collection period, the patient voids and discards the first specimen; all subsequent urine is saved until the end of the 24-hour period—a complete, forced voiding at the exact end of the 24-hour period is the last specimen added to the container

• collection from a closed drainage system

- a **sterile specimen** can be obtained to culture the urine
- to obtain a "fresh" specimen:
 - manipulate the tubing so that urine drains from the tubing into the collection bag
 - clamp the tubing below the aspiration port for 10 to 15 minutes
 - wash hands and wear gloves
 - cleanse the aspiration port and insert needle/syringe to aspirate urine (this is a sterile procedure)
 - transfer the specimen to a sterile container; seal, label and transport to lab **immediately**
- **clean/voided specimens**
 - a **clean-catch** or **midstream-voided specimen** is done to collect a specimen of urine uncontaminated by skin flora
 - the first voiding in the morning is the best time to obtain this specimen
 - different aseptic techniques are used for women and men:
 - women are instructed to cleanse from the front to the back
 - men are instructed to cleanse from the tip of the penis downward
 - > for infants and young children, a sterile collection bag is placed over the perineum or penis/scrotum

THE NURSE KNOWS:

- privacy and respect for the person is critical in obtaining a urine specimen
- proper collection technique and timely transport of the specimen to the lab will influence the validity of the results

blood specimens

◉ Venous Samples

- **venipuncture:** puncturing of a vein with a needle to aspirate blood
 - equipment needed:
 - sterile needle and syringe
 - vacuum tube holder with a sterile two-sided needle
 - collecting tubes (universally color-coded):
 - > red = no additive
 - > lavender = EDTA (ethylenediaminetetraacetic acid)
 - > light blue = sodium citrate
 - > green = sodium heparin
 - > gray = potassium oxalate
 - > black = sodium oxalate
 - sources of variability that can lead to inaccuracy
 - **hemoconcentration:** reduced plasma volume and increased concentration of blood cells, plasma proteins and protein-bound constituents
 - **hemolysis:** breakdown of red blood cells (RBC) and the release of hemoglobin
 - **contamination with IV fluids:** when blood is drawn from a site above an intravenous infusion

THE NURSE KNOWS:

- to keep the length of time a patient stands before venipuncture to a minimum, which increases accuracy of results
- to minimize the length of time of tourniquet application during venipuncture, which decreases the incidence of hemoconcentration
- to use a needle gauge appropriate to the size of the vessel, which prevents hemolysis

◉ Arterial Samples

- **arterial puncture:** puncturing a peripheral artery, such as the radial or femoral artery, to aspirate blood
- **central line puncture:** arterial blood samples can also be obtained from an arterial line

- the first sample of blood drawn from a central line **cannot be used** for diagnostic testing
- the amount removed, prior to obtaining a sample for testing, is directly related to the dead space of the catheter
 - equipment needed:
 - > 5-ml heparinized syringe
 - > ice
 - **contraindications** to arterial punctures:
 - > patient is hyperthermic
 - > immediately after suctioning or respiratory treatments
 - > following changes in ventilator settings
 - > patient is on anticoagulant therapy or has a clotting disorder
 - > patient has peripheral vascular disease

THE NURSE KNOWS:

- to perform an Allen test to measure for collateral circulation before the arterial puncture
- to wait a minimum of 20 minutes after any respiratory treatments

◉ Capillary Punctures

- skin punctures to obtain small quantities of blood or when the patient has poor peripheral veins
- common sites for capillary puncture:
 - for neonatals & infants
 - **heel:** the *plantar surface* of the heel, beyond the lateral and medial limits of the calcaneus (heel bone); the puncture should **NEVER** be performed on the central area of the infant's foot (area of the arch)
 - for children & adults
 - **fingertip:** the inner aspect of *palmar fingertip*
 - **earlobe:** when the patient is in shock or the extremities are edematous

THE NURSE KNOWS:

- application of heat prior to capillary puncture leads to vasodilation
- after the puncture, the first drop of blood is discarded to avoid hemolyzed cells

nutrition



◉ Physiologic Basis

- the consumption of nutrients is necessary to support the physiologic activities of **digestion**, **absorption** and **metabolism**, as well as to maintain **homeostasis**
- **nutrition** is the process by which the body metabolizes and uses nutrients
- the **metabolism** of nutrients plays a critical role in supplying the body with the substances needed to maintain internal **homeostasis**
- **nutrients** are classified into 3 groups:
 - **energy nutrients**, which release energy for maintenance of homeostasis
 - **organic nutrients**, which build and maintain body tissues, and regulate body processes
 - **inorganic nutrients**, which provide a medium for chemical reactions, transport materials, maintain body temperature, promote bone formation and conduct nerve impulses

◉ Diet Therapy

- **therapeutic nutrition** requires consideration of the patient's total needs: cultural, socioeconomic, psychological and physiological
- nurses need a solid comprehension of diet therapy in order to assist the patient in making lifestyle adaptations and informed choices
 - **nothing by mouth (non per os – NPO):** a type of diet modification, as well as a fluid restriction; this intervention is ordered to rest the gastrointestinal (GI) tract, either prior to surgery and certain diagnostic procedures, or when the source of the patient's nutritional problem is unidentified
 - **clear liquid diet:** consists of liquids that have NO residue, such as water, apple juice and gelatin; dairy products are not allowed
 - **liquid or full-liquid diet:** consists of substances that are liquid at room temperature (e.g., ice cream, pudding)
 - **soft diet:** promotes mechanical digestion of foods; used for patients with difficulty in chewing or swallowing, or with impaired digestion and/or absorption; foods to be avoided include nuts, seeds (including tomatoes or berries with seeds), raw fruits and vegetables, fried foods, whole grains
 - **low-residue diet:** consists of reduced fiber and cellulose,

prescribed to decrease GI mucosal irritation; foods to be avoided are raw fruits (except bananas), vegetables, seeds, plant fiber, whole grains; dairy products are limited to 2 servings per day

- **high-fiber diet:** consists of foods high in fiber and/or cellulose; used to increase the forward motion of indigestible wastes through the colon
- **sodium-restricted diet:** used with patients who have excess fluid volume, hypertension, heart failure, myocardial infarction and/or renal failure; sodium intake may be restricted as follows:
 - mild: 2,000 to 3,000 mg (2 to 3 grams)
 - moderate: 1,000 mg (1 gram)
 - strict: 500 mg (1/2 gram)

◉ Enteral Nutrition

- used for patients with a functional GI tract who will not or cannot eat, and therefore, are at risk for malnutrition
- tube feedings are **contraindicated** in patients with:
 - diffuse peritonitis
 - intestinal obstruction
 - intractable vomiting
 - severe diarrhea
- **enteral feeding tubes**
 - **large-bore nasogastric tube:** a tube is inserted through nostril and passed into gastric cavity
 - **advantages**
 - > easy to place
 - > large volume can be delivered intermittently
 - > acid environment may reduce infection
 - > less risk of dumping syndrome
 - > uses normal GI-emptying mechanisms and prevents intestinal overload
 - **disadvantages**
 - > limited use (1 week maximum)
 - > gastric retention, reflux and aspiration are possible
 - > large tube is uncomfortable and visible to others
 - > allows regurgitation by interfering with normal upper and lower esophageal sphincter function
 - > gastric ulceration may occur
 - **gastrostomy or PEG tube:** tube is inserted directly into gastric cavity
 - **advantages**

- > long-term use possible
- > allows intermittent feeding
- > normal gastric emptying time occurs
- > tube is not visible to others
- > medication administration is easier
- > less risk of infection
- > esophageal irritation is avoided
- **disadvantages**
 - > requires surgical placement with sedation or local anesthesia
 - > necessitates local skin care
 - > may ulcerate gastric mucosa
- **nasointestinal tube:** tube is inserted through nose and passed into intestines—either duodenum or jejunum
 - **advantages**
 - > smaller tube, more comfortable
 - > less risk of aspiration and reflux
 - **disadvantages**
 - > requires X-ray confirmation of placement
 - > tube is more difficult to place
 - > elevated position needs to be maintained
 - > constant infusion is needed because of osmotic response of the small intestine
 - > cramping, diarrhea, vomiting and distension are more common
 - > tube may migrate back into stomach, increasing the risk of aspiration
 - > greater risk of infection due to alkaline environment
 - > limited use (4 weeks maximum)
- **jejunostomy (tube surgically inserted into jejunum)**
 - **advantages**
 - > tube position is guaranteed
 - > tube is not visible
 - > less risk of reflux and aspiration
 - **disadvantages**
 - > requires general anesthesia for placement
 - > continuous infusion is required
 - > cramping, diarrhea, vomiting and distension are more common
 - > tube can migrate back into stomach, increasing the risk of aspiration
 - > greater risk of infection due to alkaline environment
- **types of enteral formulas**
 - **osotonic:** contains proteins, fats and carbohydrates with a high molecular weight and osmolarity equal to that of the body
 - **elemental:** contains monosaccharides and amino acids with minimal triglycerides content in hypertonic concentrations
 - **fluid restriction formula:** contains highly concentrated source of kilocalories
- **parenteral feedings:** provide nutrition via a route outside the alimentary tract
 - infusion of solution directly into the vein to meet daily nutritional needs
 - total parenteral nutrition (TPN): consists of an intravenous solution containing dextrose, amino acids, fats, essential fatty acids, vitamins and minerals

documentation

- **Documentation** is **written evidence** of:
 - the **interaction** between and among health professionals, patients, families and health-care organizations
 - the **administration** of tests, procedures, treatments and patient education
 - the **patient's response** to diagnostic tests, procedures, treatments and interventions
- Systematic documentation is critical because it presents the care administered by nurses in a logical manner, as follows:
 - **assessment data** identifies the patient's **specific condition** or alterations, and provides the foundation of the nursing care plan
 - **risk factors** and/or the identified alteration in **health patterns** direct the formation of the nursing **diagnosis** and the nursing care **priorities**
 - identifying the nursing diagnosis promotes the development of the patient's goals (short-term and long-term) and expected outcomes, as well as triggering the creation of **nursing actions** or **interventions**
 - the **plan of care** identifies the actions necessary to **resolve the nursing diagnosis**
 - implementation or the **act of "nursing"** is evidenced by actions the nurse performs to assist the person being nursed in **achieving the expected outcomes**
- Documentation requirements differ, depending on the health-care facility
 - all nursing documentation **must reflect the nursing process** and the individualized context of the patient, and the nursing situation
 - nursing documentation must be **logical, focused and relevant to care**, and also must represent **each phase of the nursing process**
- **General Documentation Guidelines**
 - be certain you have the **correct patient record** or chart, and that the patient's name and identifying information is on EVERY page of the record
 - document as soon as the patient encounter is concluded to ensure **accurate recall of data**
 - date and time each entry—**accurately**
 - sign each entry with your full legal name **and** professional credentials
 - do not leave space between entries
 - if an error is made, use a single line to cross out the error, then date, time and sign the correction—**never erase, cross out or use correction fluid**
 - **never change** another person's entry, even if it is incorrect
 - use quotation marks to indicate direct patient responses
 - document in chronological order
 - write legibly
 - use pens with permanent black ink, which photocopies well
 - document in a complete but concise manner by using phrases and abbreviations (as appropriate)
 - document all telephone calls made or received by you that are related to a patient's care
 - avoid using judgmental language: "good," "poor," "bad," "normal," "abnormal," "appears to be," etc.
- avoid evaluative statements: "patient is uncooperative," "patient is lazy"; instead, cite specific behaviors or actions that you observed, i.e., "patient said, 'I hate this place,' and kicked the trash can"
- state time intervals precisely; e.g., "every 3 hours," not "occasionally"
- do not make relative statements: "a mass the size of an egg"; rather, state: "mass 3 cm x 5 cm"—**always be specific**
- draw pictures when appropriate; i.e., location of scars, bruises, skin lesions
- refer to findings by using anatomic landmarks, such as LUQ (left upper quadrant)
- Accurate charting/documentation reflects the nurse's decision-making ability and the patient's plan of care
- **Methods of Documentation**
 - **narrative charting:** a story format that describes the patient's status, interventions and treatment, as well as the patient's response to treatment
 - **advantage**
 - easy to use in an emergency situation in which a simple chronologic order of events needs to be recorded
 - **disadvantages**
 - lacks analysis and critical decision-making on the part of the nurse
 - difficult to avoid subjectivity
 - **SOAP:** a structured logical format applied to narrative charting; the acronym SOAP stands for:
 - **S: subjective data**—what the patient says
 - **O: objective data**—what is observed/inspected
 - **A: assessment/analysis**—the conclusion reached on the basis of the data in "S" and "O" formulated as the patient's problem or nursing diagnosis
 - **P: plan**—actions to be taken to change the status of the patient's problem
 - **advantage**
 - > requires analysis of collected data to identify the problem
 - **disadvantage**
 - > no opportunity to evaluate and revise the plan of care within the same note
 - **PIE:** acronym for **problem, intervention, evaluation**
 - **AIR:** acronym for **assessment, implementation, revision** (a variation of PIE)
 - **focused charting:** a method of identifying and organizing the narrative documentation of patient concerns to include data, actions and responses
 - **CBE (charting by exception):** a method that requires the nurse to document only deviations from pre-established norms

THE NURSE KNOWS:

documentation based on the nursing process facilitates effective care, as the story of the patient's care can be traced from assessment, to identification of the problems and calls for nursing, to the planning, implementation and evaluation of nursing care



hygiene

- **Hygiene:** the science of health; it provides **cleanliness, comfort, relaxation**, positive **self-image** and **skin integrity**
 - hygiene is influenced by **social** and **cultural** practices, **personal** preferences, **socioeconomic** status and **knowledge**
 - nurses need to be aware of the meaning of self-care activities in the area of hygiene
- **Cleansing baths:** purpose is personal hygiene and part of routine care
 - an excellent time to perform a complete **skin assessment**
 - provides time for the nurse to meet the patient's **psychosocial needs**
 - provides a time to educate the patient on basic and special **hygiene needs**
 - **types of baths**
 - **shower:** for ambulatory patients, with minimal assistance from the nurse
 - **tub bath:** permits washing and rinsing in the tub
 - **self-help bath:** for patients confined to bed; the nurse prepares bath equipment but provides minimal assistance—usually limited to washing difficult-to-reach places
 - **complete bed bath:** for dependent patients confined to bed—the nurse washes the patient's entire body
 - **partial bath:** cleaning only body areas that would cause discomfort or odor if not washed
 - **therapeutic bath:** usually done in a tub and typically lasting from 20 to 30 minutes
 - requires a physician's order stating the:
 - > type of bath
 - > temperature of the water
 - > surface to be treated
 - > type of medicated solution to be used

○ Skin Care

- **skin**, the body's largest organ, provides a **protective barrier** between internal and external environments:
 - **regulates** body temperature
 - **secretes** sebum
 - **excretes** sweat
 - **transmits** sensations
 - **facilitates** absorption of vitamin D
- skin care promotes **optimal functioning** of the skin; excessive or abrasive skin care can **damage** the skin and result in a **loss of protective functions**
- **optimal skin care** includes:
 - **perineal care:** to prevent or eliminate infection and odor, to promote healing, remove secretions and provide comfort
 - **back rubs:** to stimulate circulation, relax muscles and relieve muscle tension
 - **foot and nail care:** to prevent problems that may interfere with ambulation and standing
 - **oral care:** to maintain the integrity of the mucous membranes, teeth, gums and lips
 - **hair care:** to promote hair growth, prevent hair loss, prevent infections and infestations, promote circulation of the scalp, evenly distribute oils along hair shafts and maintain physical appearance
 - brushing and combing
 - shampooing
 - shaving

THE NURSE KNOWS:

- all hygiene practices are influenced by the patient's background and cultural values
- to ask the patient before performing care and to show sensitivity to the practices that are different from your own



movement, body alignment & body mechanics

- **Mobility** is the ability to move and engage in activity; it promotes health and well-being
- **Immobility** is the inability to move and engage in activity; it presents a threat to physical, mental and social well-being
 - mobility activities include:
 - walking
 - sitting
 - standing
 - pushing/pulling
 - performing **activities of daily living (ADLs)**
 - **mobility influences** the function of many body systems, such as the **respiratory, gastrointestinal** and **urinary systems**, and enhances **muscle tone** and **energy level**
- **Body alignment** refers to the position of body parts in relation to each other
 - muscle tone and bone strength allow a person to maintain an **erect posture**
 - **proper body alignment** is characterized by:
 - head upright
 - face forward
 - shoulders square
 - back straight
 - abdominal muscles tucked in
 - arms straight at side
 - hands palm forward
 - legs straight
 - feet forward
- **Physiologic effects** of mobility and immobility
 - immobility affects a variety of body systems and functions

Physiologic Effects of Immobility

Neurologic

- sensory deprivation

Gastrointestinal (GI)

- decreased appetite
- stress ulcers
- constipation
- fecal impaction

Cardiovascular

- increased cardiac workload
- orthostatic hypotension
- formation of thrombus

Urinary

- urinary stasis
- urinary tract infection (UTI)
- calculi

Respiratory

- increased respiratory effort
- hypostatic pneumonia
- altered gas exchange

Integumentary

- pressure ulcers
- skin shearing

Musculoskeletal

- decreased bone density
- contractures
- muscle atrophy
- increased pain

Psychological

- anxiety
- depression
- helplessness, hopelessness
- increased dependency

- Nursing procedures that prevent the complications of immobility

• bedrest

- a therapeutic intervention that:
 - provides rest for patients who are exhausted
 - decreases the body's oxygen consumption
 - reduces pain and discomfort
- bedrest can also be **counterproductive**; inactivity caused by bedrest causes structural changes in joints and shortens muscles; changes such as decreased range of motion (ROM) and contractures can occur within 48 hours
- it is an important nursing responsibility to **prevent immobility**—approximately 7 days are needed for the patient to regain the function lost during 1 day of bedrest

• body alignment

- when patients are unable to move independently, nurses are entrusted to use proper turning and positioning techniques
- if the patient is unable to move independently, he/she **must be repositioned every 2 hours**
 - when positioning a patient in bed, the hips should be even with the middle of the bed (between the knee gatch and the head elevation portion)
- **3 essential principles** to be considered with positioning patients:
 - **pressure:** compromises circulation and leads to skin breakdown and ulceration
 - **friction:** caused when the skin is dragged across a rough surface, such as bed sheets, stretchers or other surfaces
 - **skin shear:** tearing of the deep layers of skin as a result of being dragged across a hard surface

○ Range-of-motion (ROM) exercises

- **ROM exercises** are used to **preserve full flexibility, maintain muscle tone and strength, prevent contractures and improve circulation**
- during ROM exercises, each joint is taken through its full functional motion

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