

Pediatric Health Nursing Manual of Skills for Undergraduate Nursing Students

Nadeem Siyal

(BSN, MBA health) Manager Cardiac
Surgery ICU's NICVD, Karachi, Pakistan
Email: professionals603@gmail.com

Nazeer Ahmed

(BSN, MSN) Nursing Coordinator NICVD, Karachi
Email: nazeer_5527@yahoo.com

Gulshan khursheed

BSCN Post R/N, R/M & RN, Oncology Specialization,
DR Ziauddin University. Email: gulshan.imran@zu.edu.pk

Muhammad Asif:

Post RN BSN, DCHN, MSN scholar ZUFONAM, Lecturer at,
Iqra University Nursing College North Campus
Email: asif.shah@iqra.edu.pk

Marout Arif

BSN, MSN Scholar at ZUFONAM, Lecturer nursing at ZUFONAM
Email: marout.arif@zu.edu.pk

Author Details

Keywords: Pediatrics, Health, Nursing, Skill Manual, Undergraduate Nursing students

Received on 25 July 2025

Accepted on 20 Aug 2025

Published on 01 September 2025

Corresponding E-mail Author*:

Abstract

Aim of this scholarly paper is to conduction of Pediatrics clinical properly according to curriculum and new guidelines of PHN pediatric health nursing. It has been disseminated via scholarly paper for undergraduate nursing students and faculties who are engaged in PHN clinical. This paper outlines a competency-based, evidence-informed manual for Pediatric Health Nursing aimed at undergraduate nursing students. It synthesizes global child-health guidance (e.g., WHO Pocket Book; Integrated Management of Childhood Illness), quality and safety frameworks (QSEN), simulation standards (INACSL), and assessment models (Miller's Pyramid; Kirkpatrick) to define essential clinical skills, teaching-learning strategies, assessment methods, and implementation guidance—aligned where possible to current Pakistani BSN curriculum directions. The goal is to standardize skill

acquisition, promote safe family-centered care, and improve child health outcomes. This scholarly paper included an evidence based skill manual of Pediatric Health Nursing course

in BSN to understanding of knowledge skill and attitude of undergraduate nursing students regarding pediatric health nursing skills. There are three domains in this course, first on is that student have to attend the theory class of this course, second one is that student have to attend the skill lab class and then he has to sign off the procedure, third one is that student have to attend the clinical visit to pursuit of competency in this course. This manual is roadmap or guidelines for student and faculty to smoothly conduct the skills of PHN course.

Introduction

Children's health care presents unique challenges due to their distinct physiology, developmental variability, and dependence on parents or caregivers for both decision-making and daily care. Unlike adults, pediatric patients undergo rapid physical and cognitive changes that directly influence disease presentation, treatment response, and nursing care requirements (NCBI, 2013). For this reason, pediatric nursing demands specialized competencies that cannot simply be extrapolated from adult-focused practice. Nurses working with children must be adept not only at clinical assessment and interventions but also at fostering therapeutic communication with families, supporting growth and development, and addressing psychosocial needs across the lifespan from infancy to adolescence.

Global and national health authorities emphasize the importance of early recognition of illness, systematic pediatric assessment, and evidence-based interventions to reduce preventable morbidity and mortality among children (NCBI, 2017). The World Health Organization's child health strategies, along with locally adapted frameworks such as those guided by the Higher Education Commission (HEC) of Pakistan, highlight that undergraduate nursing curricula must prepare graduates to deliver competent, safe, and family-centered pediatric care (HEC, 2024). This includes mastery of skills in pediatric assessment, emergency stabilization, growth monitoring, immunization, and management of common childhood illnesses.

A structured Pediatric Health Nursing Skills Manual, therefore, is a crucial tool for undergraduate nursing students. Such a manual bridges the gap between theoretical knowledge and bedside practice by translating international guidelines into locally relevant, competency-based learning experiences. It also ensures alignment with national curriculum outcomes, accreditation standards, and professional expectations, thus contributing to the overall development of a competent nursing workforce prepared to meet the health needs of children and families (HEC, 2024; NCBI, 2017).

Children's unique physiology, developmental needs, and dependency on caregivers require pediatric-specific nursing competencies rather than simple extrapolations from adult care. International guidance emphasizes first-line, high-impact care for common childhood conditions, systematic assessment, and family engagement to reduce preventable morbidity and mortality. A structured skill manual helps prelicensure students translate guidelines into reliable bedside practice, while aligning with national curriculum outcomes in pediatric health nursing. NCBI Higher Education Commission.

Purpose. To present a scholarly framework and outline for a Pediatric Health Nursing Skills Manual that integrates authoritative clinical guidance, competency frameworks, and educational best practices suitable for undergraduate programs.

Guiding Frameworks and Standards

Clinical guidance.

WHO Pocket Book of Hospital Care for Children: practical, resource-appropriate protocols for assessment, stabilization (e.g., airway, breathing, circulation, oxygen, warmth), treatment, and monitoring in common pediatric conditions. NCBIWHO IRIS

Integrated Management of Childhood Illness (IMCI/IMNCI): an integrated syndromic approach to assessment, classification, and follow-up, with country-level adaptation. World Health Organization

AAP clinical practice guidelines/policies: condition-specific pediatric standards (e.g., immunization schedules, mental health competencies, pain management). Pediatrics+1

Professional scope/competence.

Pediatric Nursing Scope and Standards of Practice (ANA) anchor professional responsibilities and family-centered care expectations. ANA

QSEN Competencies (patient-centered care, teamwork, EBP, QI, safety, informatics) provide the quality and safety backbone for pre-licensure KSAs embedded across skills. QSEN+1

Simulation and pedagogy.

INACSL Healthcare Simulation Standards of Best Practice® (2021) guide design, facilitation, debriefing, evaluation, and operations for high-quality pediatric skills labs and scenarios.

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Assessment models.

Miller's Pyramid (knows → knows how → shows how → does) structures progressive assessment from knowledge to real-world performance. PubMedPMC

Kirkpatrick Model evaluates training at reaction, learning, behavior, and results—useful for program and manual evaluation. PubMedNursing Education Network

National alignment (example: Pakistan).

Recent **HEC BSN/BS Pediatric Nursing** curricula emphasize defined CLOs and skill/clinical credit hours for Pediatric Health Nursing—supporting a competency-based manual.

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Bachelors of Science in Nursing Year 3 Semester V

New Born Assessment

Objective:

To establish a standard procedure for BSN students to perform skills and to know:

Demonstrate the proper technique of New born assessment

Verbalize the purpose of health assessment

Purpose:

To perform an assessment of a newborn, using history, physical exam and routine screening procedures.

To identify normal parameters assessment of: RR, HR, BP, temperature.

To recognize the physical findings seen in a sick infant: poor perfusion, lethargy, hypotonic, cyanosis, plethora, poor feeding, and weak cry.

Important Requirements:

Tape Measure

Digital Scale

Examination Form

Stethoscope for auscultation of the heart and lungs

Small Mattress

S#	Steps	S	US
1.	Before starting the exam, always wash your Hands		

2.	Tell the mother that you will be examining the baby and take the baby to the examination area		
3.	General Appearance Briefly describe baby's appearance (hair, color, and posture)		
4.	Some of the measurements will be recorded onto the 'Newborn examination sheet', such as: Date and time of examination Weight Head Circumference (cm) Length (cm)		

5.	Assess the skin for discoloration , Texture, Turgor, Pigmentation, jaundice and normal variations example rashes, Mongolian spots, birth marks, bruises, and patechiaie.		
6.	Head to Toe Assessment Head Assessment (General appearance, Size, Common Variations (Caput Succedaneum and Cephalhematoma), Fontanel (Pulsation, Bulging, Sunken), Hairs (Texture, Distribution) Face (Symmetry, Spacing of features, movement) Eyes (General placement. color, any tears, pupils react to light, sub Conjunctival hemorrhage) Nose (General appearance, sneezing, one nostril Occluded, Coanal Atresia) Mouth (Symmetry, cleft palate, cleft lip, Tongue) Ears (Position, symmetry preauricular skin tag) Neck (appearance and mobility) Clavicles (appearance and size, expansion and retraction, breast tissues, auscultate breath sounds, breathing movement, Respiratory Rate) Heart (auscultate, any murmur, thrill, HR) Abdomen (appearance, palpate) Umbilicus (protrusions and herniation, number of vessels, auscultate bowel sounds, voiding)		
7.	Genitals Male: General appearance, Penis (placement of urinary meatus, scrotum, testis, Female : General appearance, vaginal tag, discharge)		
8.	Buttocks (symmetry , pattern of stool, pilonidal dimple,)		
9.	Extremity and trunk General appearance , symmetry, ROM, polydactyl, syndactyly , simian crease, spine, hip, legs and feet)		
10.	Reflexes (Moro, Rooting , Sucking, Palmer grasp, Planter grasp, Stepping, Babinski, Tonic neck, Trunk incurvation)		
11.	Activity cry (check for pitch)		
12.	Sensory (vision, auditory, tactile, olfactory, gustatory)	To observe the sensory responses	
13.	Remember to properly wrap the baby after the exam	To regulate the body temperature and prevent from hypothermia	
14.	Document all the findings according to the institution policy	To report any alteration and findings	

- **S: Satisfactory** **U: Unsatisfactory**

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Glossary:

HR (Heart rate)

RR (respiratory rate)

Moro reflex (response to sudden movement or loud noise)

Rooting reflex (turn in different direction of stimulus)

Sucking reflex (sucking is adequate on nutritional intake)

Palmer grasp (when palm is stimulated and held momentarily lessens baby grasps the finger)

Planter grasp (toe turned downward when stimulate the feet)

Stepping reflex (when held upright and one foot touching the flat surface will step alternately disappear)

Babinski reflex (fanning and extension of all toes)

Tonic neck (fencer position when head is turned to one side)

Trunk incurvation (in prone position stroking of spine causes pelvis to turn to stimulated side)

Reflexes in the Neonate

REFLEX	STIMULUS	RESPONSE	SEEN	NOT SEEN
Moro	Infant lying on back, slightly raised head suddenly released; infant lowered abruptly	Arms extended, head thrown back, fingers fat out; arms brought back to center with hands clenched; legs extended	Birth	4 months
Rooting	Lightly stroke cheek with finger	Head turns toward stimulus	Birth	4 months
Sucking	Insert finger into infant's mouth	Rhythmic sucking	Birth	7 months
Startle	Loud noise	Similar to Moro response	Birth	4 months
Palmar (grasp)	Touch palm with finger or object	Grasp object, holds tightly	Birth	6 months
Tonic neck (fencing)	Head turned to one side while infant lies on back	Arm and leg extend on the side infant faces. Opposite arm and leg extend.	2 months	6 months
Blinking	Light flash	Eyelids close	Birth	-----
Stepping	Infant supported in an upright position with feet touching flat surface.	Rhythmic stepping movements	Birth	6 weeks
Babinski	Stroke the sole of foot from heel to toe laterally	Toes fan out	Birth	12 mo.

GCS Monitoring of Infant and Children

Objective:

To establish a standard procedure for BSN students to perform skills and to know:
To Assess level of consciousness in pediatric patients.

Purpose:

It allows for calculation of the GCS in preverbal children, for whom some of the components in the standard GCS are not able to be measured.

	Child-Adult (Verbal)* (usually >2yrs)	Infant (Pre-Verbal)** (usually <2yrs)	Score
Eye opening	Spontaneous	Spontaneous	4
	To verbal stimuli	To sound	3
	To pain only	To pain only	2
	No response	No response	1
Verbal Response	Orientated, appropriate	Age-appropriate vocalization, smile, or orientation to sound, interacts (coos and babbles), follows objects	5
	Confused, disoriented	Cries, irritable	4
	Inappropriate words	Cries to pain	3
	Incomprehensible words Or non specific sounds	Moans to pain	2
	No response	No response	1
Motor Response	Obeys commands	Moves spontaneously & purposefully	6
	Localizes painful stimulus	Withdraws to touch	5
	Withdraws in response to pain	Withdraws in response to pain	4
	Abnormal flexion in response to pain	Abnormal flexion posture to pain (decorticate posture)	3
	Abnormal extension in response to pain	Abnormal extension posture in response to pain (decerebrate posture)	2
	No response	No response	1

The GCS is scored between 3 and 15, 3 being the worst, and 15 the best. It is composed of three parameters: best eye response (E), best verbal response (V), and best motor response (M). The components of the GCS are recorded individually; for example, E2V3M4 results in a GCS of 9.

REFERENCES

- * Data from: Teasdale, G. and Jennett, B. (1974). Assessment of coma and impaired consciousness. A practical scale. *Lancet*. 2:81.
- ** Data from: Holmes, J.F., Palchak, M.J., MacFarlane, T. and Kuppermann, N. (2005). Performance of the pediatric Glasgow coma scale in children with blunt head trauma. *Academy of Emergency Medicine*. 12:814.

The standard GCS is a component of several prognostic and clinical decision making tools.

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Head to Toe Assessment of Child

Objectives:

To establish a standard procedure for BSN students to perform skills and to know:

Demonstrate the proper technique of Child assessment

Verbalize the purpose of health assessment

Purpose:

To understand how the general approach to the physical examination of the child will be different compared to that of an adult patient, and will vary according to the age of the patient.

To observe and demonstrate physical findings unique to the pediatric population, and to understand how these findings may change depending upon the age of the child.

To complete a thorough physical examination on a pediatric patient in different age group

Equipment's:

Tape Measure

Digital Scale

Examination Form

Stethoscope for auscultation of the heart and lungs

Small Mattress

Differences in Performing a Pediatric Physical Examination Compared to an Adult:

General Approach

Gather as much data as possible by observation first

Position of child: parent's lap vs. exam table

Stay at the child's level as much as possible.

Order of exam: least distressing to most distressing

Rapport with child

Include child - explain to the child's level

Distraction is a valuable tool

Examine painful area last-get general impression of overall attitude

Be honest. If something is going to hurt, tell them that in a calm fashion. Don't lie or you lose credibility

Understand developmental stages' impact on child's response. For example, stranger anxiety is a normal stage of development, which tends to make examining a previously cooperative child more difficult.

Procedure:

S#	Steps	S	US
1.	Vital signs Normal differ from adults, and vary according to age Temperature (Tympanic vs. oral vs. axillary vs. rectal) Heart rate Auscultate or palpate apical pulse or palpate femoral pulse in infant Palpate antecubital or radial pulse in older child Respiratory rate -Observe for a minute. Child normally have periodic breathing so that observing for only 15 seconds will result in a skewed number. Blood pressure Appropriate size cuff - 2/3 width of upper arm Site Growth parameters - must plot on appropriate growth curve Weight Height/length OFC: (Occipital Frontal Circumference) Unique findings in pediatric patients (See outline below)		
2.	General Statement about striking and/or important features. Nutritional status, level of consciousness, toxic or distressed, cyanosis, cooperation, hydration, congenital abnormalities, mental state Obtain accurate weight, height and OFC		
3.	Skin and Lymphatics Birthmarks: hemangiomas, Mongolian spots. Rashes, petechiae, pigmentation, jaundice, texture, turgor Lymph node enlargement, location, mobility, consistency Scars or injuries, especially in patterns suggestive of abuse		
4.	Head Size and shape Fontanelle(s) Size Tension - calm and in the sitting up position Sutures - overriding Scalp and hair		
5.	Eyes: General Strabismus Slant of palpebral fissures Hypertelorism or tele canthus EOM Pupils Conjunctiva, sclera, cornea Plugging of nasolacrimal ducts Red reflex Visual fields - gross exam		
6.	Ears Position of ears Observe from front and draw line from inner canthi to occipital Tympanic membranes		

	Hearing - Gross assessment only usually		
7.	Nose Nasal septum Mucosa (color, polyps) Sinus tenderness Discharge		
8.	Mouth and Throat Lips (colors, fissures) Buccal mucosa (color, vesicles, moist or dry) Tongue (color, papillae, position, tremors) Teeth and gums (number, condition) Palate (intact, arch) Tonsils (size, color, exudates) Posterior pharyngeal wall (color, lymph hyperplasia, bulging) Gag reflex		
9.	Neck Thyroid Trachea position Masses (cysts, nodes) Presence or absence of nuchal rigidity		
10.	Lungs/Thorax Inspection Pattern of breathing Abdominal breathing is normal in infants Period breathing is normal in infants (pause < 15 seconds) Respiratory rate Use of accessory muscles: retraction location, degree/flaring Chest wall configuration Auscultation Equality of breath sounds Rales, wheezes, rhonchi Upper airway noise Percussion and palpation often not possible and rarely helpful		
10.	Cardiovascular A. Auscultation Rhythm Murmurs Quality of heart sounds B. Pulses Quality in upper and lower extremities		

11.	Abdomen Inspection Shape Infants usually have protuberant abdomens Becomes more scaphoid as child matures Umbilicus (infection, hernias) Muscular integrity Auscultation Palpation Tenderness - avoid tender area until end of exam Liver, spleen, kidneys (May be palpable in normal newborn) Rebound, guarding (Have child blow up belly to touch your hand)		
12.	Musculoskeletal Sacral dimple Kyphosis, lordosis or scoliosis Joints (motion, stability, swelling, tenderness) Muscles Extremities Deformity Symmetry Edema Clubbing Gait In-toeing, out-toeing Bow legs, knock knee ("Physiologic" bowing is frequently seen under 2 years of age and will spontaneously resolve) Limp Hips Ortolani's and Barlow's signs		
13.	Neurologic - most accomplished through observation alone Cranial nerves Sensation Cerebellum Muscle tone and strength Reflexes DTR Superficial (abdominal and cremasteric) Neonatal primitive		
14.	Genitourinary External genitalia Hernias and Hydroceles Almost all hernias are indirect Can gently palpate; do not poke finger into the inguinal canal Cryptorchidism Distinguish from hyper-retractile testis Most will spontaneously descend by several months of life Rectal and pelvic exam not done in routine.		

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Giving a tub bath to an Infant/ Neonate.

Objective:

To establish a standard procedure for nursing students to be competent and confident in the baby bath/tub bath of an infant.

List equipment necessary for baby bath.

Demonstrate setting up of equipment for baby bath.

Discuss the purposes of giving tub bath.

Understand and demonstrate care of equipment and an infant after the procedure.

Purposes

Perform neonate / infant bath

Important Requirements:

One tray (medium size),

Baby soap

2 gallipots

1 kidney tray

Cotton balls

Baby lotion

1 clinical thermometer

1 bath thermometer

1 big towel ,1 small towel

Baby wrappers, clothes

Distilled water

Baby bath tub

Baby weighing scale

1 paed's stethoscope

Alcohol swab

S.No	Steps	S	US
1.	Assess the baby's general condition.		
2.	Explain the procedure to mother.		
3.	Check baby's temperature. If below 97.6 F (Ax) don't give bath to infant.		
4.	Assemble the clothes, towels and other bathing supplies.		
5.	Wash hands. Make sure everything you need is within arm's reach.		
6.	Close all the windows because the baby is extremely delicate and a draft could cause her/him to catch a chill. Make sure the room is warm.		

7.	Undress the infant except the diaper and place the baby (Preferably on a flat surface).		
8.	Wrap the infant in baby sheet / wrapper (mummy restrain).		
9.	Clean eyes with boil water (room temp). Clean eyes from inner to outer canthus, using one stroke only and discard it. Use a separate cotton ball for the other eye, clean nares and ears with wet cotton balls.		

10.	Check water temperature with elbow or wrist or bath thermometer (use a water temperature of 100.4 degrees Fahrenheit)		
11.	Wash the face with clean water without using any soap. Wash and dry face with clean towel/cotton.		
12.	Hold the infant in a football hold, plug ears with thumb and fingers for safety.		
13.	Wash hair and dry it properly.		
14.	Unwrap and remove the diaper of the infant. Talk to your infant in a soothing voice and tell her/him what's going to happening while you're removing the clothes. Soap him/ her using both hands from top to bottom and back and do not forget behind the ears, neck and under the arms all places where stuff can accumulate.		
15.	Clean the genitalia last and always wipe from front to back to prevent the bacteria of bowel from spreading to the genital area. Dry your hands with corner of the towel (for Safety.)		
16.	Immerse the infant in the tub and support the head and neck with your arm. Put your hand in baby's axilla which is further away from you and rinse the soap off.		
17.	Remove infant from the tub and place on clean side of towel, dry the infant immediately and gently pat dry.		
18.	Give cord care (if applicable). Apply lotion (if skin is dry) and dress up the infant, keep diaper folded away from area and wash hands prior to handling infant's umbilical cord area.		
19.	Store reusable items. Empty, rinse and dry wash basin. Dispose soiled linen in the hamper bag.		
20.	Wash hand		
21.	Document response of baby		

Ball J, Bindler R, Cowen K & Shaw M. (2017). Pediatric Nursing Caring for Children. Julie Lavin Alexander.USA.

Wong, D.L. (2015). Whaley and Wong's nursing care of infants and children, St. Louis: Mosby.

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Placement and Care of a Neonate kept in an incubator

Objective:

To establish a standard procedure for BSN students to perform skills and to know:
Discuss the purposes and indications of keeping a neonate / infant in an incubator.
Demonstrate proper utilization of an incubator.

Scope:

This procedure applies to nursing students for the Utilization of nursing knowledge through the application of critical thinking, judgment and skill. It is stranded in the principles of nursing education.

Purposes:

- To provide nursing care to a neonate / infant, placed in an incubator.
- To provide save and warm environment to neonate.

Important Requirements:

- Incubator
- Incubator Sleeves
- Linen

S.No	Procedure	S	US
1.	Ensure incubator has been disinfected and labeled with date and time. (Incubator must have been disinfected within the last 7 days). For detailed incubator cleaning		
2.	Wash hands before doing anything.		
3.	The incubator should always be pre-warmed before placing an infant in it. The use of double-walled incubators significantly improves the infant's ability to maintain a desirable temperature and		
4.	Set the incubator temperature as follows according to weight of the neonate: Under 1000g 35 – 36 ⁰ C 1000 – 1500g 34 – 35 ⁰ C 1500 – 2000g 33 – 34 ⁰ C 2000 – 3000g 32 – 34 ⁰ C Over 3000g 31 – 33 ⁰ C Note: Modification in the ranges can be made according to Infant's Requirement.		

5.	Lock dial at appropriate level.		
6.	Label incubator with date and time initiated.		
7.	Explain to the family.		

8.	Place infant in pre heated incubator.		
9.	Cover port holes completely.		
10.	Put mittens on infant according to infants' condition.		
11.	Ensure that IV tubing's, cardiac monitor wires and other wiring is passed through appropriate holes located in hood of incubator.		
12.	Monitor infant's temperature q 2-3 hrs. / Or according to the policy and record incubator temperature simultaneously.		
13.	Notify physician if infant's skin temperature is below or above 36 – 37°C / 96.7 °F.		
14.	Dress and wrap infant warmly when taking out of incubator e.g. for feed, I/V samples.		
15.	Plan all care at one time i.e. vital signs ,changing, weighing ,feeding and position changing etc.		
16.	Place the infant with head side of incubator elevated.		
17.	Position q2 hourly with appropriate support.		
18.	Encourage parents to participate in care i.e. to touch, hold and feed infant (as per hospital policy)		
19.	Clean incubator q 24hours with 70% alcohol solution. Wipe inside & outside mattress and tray after removing the infant. Change incubator sleeves at the same time		
20.	When incubator is to be discontinued ensure the following: Switch temperatures dial to off. infant temperature remains stable Wrap infant in blanket and shift to cot. Monitor infants temperature q2 hourly for 6 hrs and then according to neonate's condition		
21.	When incubator is changed / discontinued transfer the incubator to designated place as soon as possible		
22.	Document the nursing care been provided.		

Reference:

Ball J, Bindler R, Cowen K & Shaw M. (2017). Pediatric Nursing Caring for Children. Julie Lavin Alexander.USA.

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Care of a Neonate under Phototherapy

Objective:

To establish a standard procedure for BSN students to perform skills and to know:

Review the path physiology of Hyper bilirubinemia

Understand the phototherapy unit.

Discuss the purpose of phototherapy.

Demonstrate care of a neonate under phototherapy

Scope:

This procedure applies to nursing students for the Utilization of nursing knowledge through the application of critical thinking, judgment and skill. It is stranded in the principles of nursing education:

Purposes:

To assess the need of the baby

To cover the baby eye for further irritation

To prevent from burn

Important Requirements:

Phototherapy lamp (single or double)

Eye pads / Green eye protectors

Tape

Baby cot/ warmer/ incubator

Procedure:

S.No	Procedure	S	US
1.	Check doctor's order for starting of phototherapy single or double Assemble equipment		
2.	Make sure all tube lights are working.		
3.	Wash hands before handling infant.(medical asepsis)		
4.	Explain procedure to the family.		
5.	Undress infant completely, in order to have maximum exposure to light, which will help in decreasing the bilirubin level.		
6.	Cover infant's eyes with eye pads and secure firmly, make sure that eyes are closed properly because the cornea may become excoriated if the dressing comes in contact with the dressing. Assess eyes for the evidence of discharge, excessive pressure on the eyelids or any corneal irritation.		

	Prevent any occlusion of the nares because infants are obligatory nose breathers; blockage due to eye pads will produce apnea.		
7.	Set up the phototherapy light distance between the surface of lamps and the infant. It should not be less than 18 inches (46 cm) If the neonate is in an incubator, place the phototherapy light at least 3 inches (7.6 cm) above the incubator. Lights closure to infant will cause the burn; light on far distant will not give any effect or benefit. Infant should be placed in incubator, if kept in cot or bed then place the sheet over the light; To prevent hypothermia.		
8.	Change position of infant every 2 hours during therapy from supine to prone and side lying.		
9.	Do not apply petroleum jelly, lotion or oil to skin, Oily skin is burnt easily with phototherapy light. Oily products can absorb heat and cause burn, as well as serves as barrier to effective phototherapy.		
10.	Monitor body temperature every 2-4 hours. Heat from light will produce dehydration, which will be manifested by increase in temperature.		
11.	During therapy observe skin condition for: Dryness Eruption of skin rashes Alteration in color Dehydration		
12.	Monitor stool for frequency and consistency and give good skin care after each stool and voiding. Loose stools may indicate accelerated bilirubin removal.		
13.	Maintain intake and output record during therapy in order to monitor the hydration status.		
14.	Observe following signs of kernicterus : it is produced from the injury to the brain cells due to excessive bilirubin in blood reaching to brain cells. Poor feeding Apneic spells Lethargy Irritability High pitched cry Jitteriness or Seizures		
15.	Turn off the phototherapy unit before drawing blood sample, direct exposure of blood to light will increase the isomerization of blood sample and will give the false result.		
16.	Ensure bilirubin results are obtained as prescribed or as per routine. Inform results to physician.		
17.	Encourage mother to handle and feed infant during phototherapy to prevent dehydration and maintain the mother infant bond, but discourage too much handling outside phototherapy.		
18.	Remove eye pads if the infant is being fed outside the incubator/cot.		
19.	Check eyes and then clean with normal saline, before replacing eye pads in every shift to prevent eye infection		
20.	Document the Following:		

	Feeding Condition of Skin Body Temperature Bilirubin Levels Urinary Output Intensity of Phototherapy Time that phototherapy is started or Stopped Number and consistency of Stool Occurrence of Side effects		
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Reference:

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Care of a child receiving Oxygen therapy

Objective:

At the end of the session, students will be able to:
Discuss briefly the physiology of respiration.
Describe clinical signs of respiratory distress.
Discuss purposes and indications of oxygen therapy.
Demonstrate correct documentation and client's response.

Scope:

This procedure applies to nursing students for the Utilization of nursing knowledge through the application of critical thinking, judgment and skill. It is strangled in the principles of nursing education

Purposes:

To assesses the client before and after therapy
To prevent from respiratory distress
To perform the procedure of giving oxygen therapy using different devices.

Important Requirements:

Oxygen (cylinder or wall fixed) with flow meter.
Humidifier with water.
Oxygen device and tubing (Infant/child mask or nasal prongs)
Gauze pieces, Torch, and Applicator.

Procedure:

S.No	STEPS	S	US
1.	Identify the client.		
2.	Determine the need for oxygenation		
3.	Check Physician's order.		
4.	Wash hands.		
5.	Collect equipment		
6.	Explain the procedure to the client/attendant and allow them to feel the equipment.		
7.	Explain the safety measures to family members and follow them.		
8.	Assist the client to assume semi Fowler's position or left lateral if possible.		
9.	Assess nares for nasal discharge. Clean if required.		
10.	Apply the appropriate oxygen delivery device as per physician's order. Documentation as per policy.		
	Oxygen Tent / Mistent:		
11.	Select the appropriate tent that will achieve the desired concentration of oxygen and maintain patient comfort.		
12.	Pad the metal frame that supports the tent.		
13.	Check the functioning of the device.		
14.	Place the client in the tent.		
15.	Analyze and record the tent atmosphere every 1-2 hours. Concentrations of 30%-50% can be achieved in well-maintained tents.		
16.	Maintain a tight-fitting tent. Regularly provide organized nursing care through the sleeves or pockets of the tent.		
17.	Documentation as per policy		
	Oxygen by Nasal Cannula or Nasal Prongs		
18.	Attach the connecting tube from the nasal cannula to the humidifier outlet and check the tubing for kinks and leakage.		
19.	Place the tip of the cannula in client's nose and adjust straps around ears.		
20.	Periodically inspect nares and skin behind ears.		
21.	Documentation as per policy		
	Oxygen by Mask:		
22.	Choose an appropriate mask that covers the mouth and nose but not the eyes		
23.	Place the mask over the client's mouth and nose. Secure the mask with an elastic head grip. Do not allow the oxygen to blow in client eyes		
24.	Remove the oxygen mask at hourly intervals; wash the face and dry. (According to client's condition)		
25.	For comatose infants or children, use the masks with caution.		

26.	Documentation as per policy		
	OXY Hood		
27.	Warmed, humidified oxygen is supplied through a plastic box that fits over the child's head		
28.	Oxygen should not be allowed to blow directly into the infant's face		
29.	Continuously monitor the oxygen concentration, Temperature and humidity inside the hood		
30.	Open the hood or remove the baby from it as infrequently as possible		
31.	Document the following findings Record in nurses notes Child's respiratory status. Child's response to oxygen therapy		

References:

Ball J, Bindler R, Cowen K & Shaw M. (2017). Pediatric Nursing Caring for Children. Julie Lavin Alexander.USA.

Wong, D.L. (2015). Whaley and Wong's nursing care of infants and children, St. Louis: Mosby.

S: Satisfactory

U: Unsatisfactory

Faculty Comments:

Faculty Signature: _____

Administration of medication/Oral medication/Parental /Intravenous medication

Objective:

Demonstrate safety precautions in administering medications and follow rights of medication.

Demonstrate skin preparation technique

Scope:

This procedure applies to nursing students for the Utilization of nursing knowledge through the application of critical thinking, judgment and skill. It is stranded in the principles of nursing education.

Purposes

Prepare medication using aseptic technique.

Explain the side effects of each drug.

Determine site of injection properly.

Important Requirements:

Medication (Tablet, Capsule, Syrup, Ointment)

Medication Administration record (MAR) sheet

Physician order / Active Profile sheet

Ampule of sterile medication.

Filer (if ampoule is not scored).

Small size gauze piece

Sprit swabs.

Needle and syringe of appropriate size
 Danger box.
 Kidney dish.
 Medication ticket.

1. Procedure:

S.No	Steps	S	US
1.	Check medication order and compare it with active profile sheet.		
2.	Prepare medication ticket follow the ten rights		
3.	Wash hands		
4.	Collect equipment		
5.	Select proper ampoule from bin (read label first time) and compare with MAR sheet.		
6.	Check for expiry date and any changes in color, consistency etc.		
7.	Calculate the dosage.		
8.	Tap top of ampoule lightly with finger until fluid leaves neck.		
9.	Partially file the neck of an ampoule (if necessary).		
10.	Wrap small gauze piece/ tissue paper around the neck of ampoule.		
11.	Snap neck of ampoule bending it towards you.		

12.	Clean tip of the ampule with alcohol swab, waiting for dry then Insert syringe needle tip or shaft to touch rim of ampoule).		
13.	Draw medication into syringe by gently pulling back on plunger. (Read label second time).		
14.	To expel excess air bubbles, remove needle from ampoule. Hold Syringe with needle pointing up. Tap side of syringe to cause bubbles to rise toward needle. Draw back slightly on plunger and then push the plunger upward to eject air. Do not eject fluid.		
15.	If syringe contains excess fluid, use kidney dish. Hold syringe vertically with needle tip up and slanted slightly towards kidney dish. Slowly eject excess fluid into the kidney. Recheck fluid level in syringe by holding it vertically.		
16.	Cover needle with cap.		
17.	Change needle on syringe (if required)		
18.	Discard the ampoule and its top into sharp container. (Read label third time before discarding).		
19.	Replace equipment and wash hands.		
20.	Document properly		

Medication through IV chamber

1.	Check Doctor's Orders. Check both MAR sheet & Patient's		
2.	Active profile.		
3.	Identify the patient. Wash hands.		

4.	Prepare medication and normal saline using the ten rights of medication administration and aseptic technique.		
5.	Determine the patency of heparin lock. Assess for signs of phlebitis. Clean heparin lock with spirit swab. Cannula must be flushed with normal saline before and after the medication administration Neonates – 0.5 – 1ml of normal saline Children – 1 – 2 ml of normal saline		
6.	Fill burette with 10-50 cc of IV solution (as per child's age and weight) and prime the tubing. Also, check compatibility of IV fluid with the drug being administered. NOTE: Administer medication within 60 minutes of preparation. Also, ensure that IV solution used is compatible with the medication, and flow rate is maintained according to the physician order.		
7.	Clean port of burette and add medication.		
8.	Clean the heparin lock with spirit swab and insert needle through heparin lock / or open the heparin lock by applying pressure above the cannula to prevent blood drop, remove the needle from the drip set and directly attached to the cannula. Start I.V, secure tubing and monitor flow rate.		
9.	Label the bag/ Burette with date, time, name and dose of drug, and your initials. Ensure that the medication finishes in the given time. Flush tubing with 10 CC of IV fluid after completion of each I/V medication. Flush cannula with 3-5 ml of normal saline after the medication.		

	(Patients identification, concept of asepsis and protocols of drug administration to be followed throughout whenever necessary Note: All I/V medication administration set and burette should be change in 72 hours		
10.	Document in the medication file.		
Oral Medications			
11.	Check Doctor's Orders. Check both MAR sheet & Patient's active profile.		
12.	Identify hands		
13.	Wash hands		
14.	Prepare medication and normal saline using the ten rights of Medication administration and aseptic technique.		
15.	Read the label to make certain you have the right drug and to check the right amount of medicine to give the child. Shake the bottle well to mix the medicine if the label says to do this.		
16.	Pour out the exact amount of the drug into the measuring spoon Or fill the syringe or dropper with the drug to the right amount. Read the amount at the bottom of the semicircular line around the top of the liquid.		
17.	Give the medicine to the child in a quiet place so that you will not be disturbed.		
18.	Tell the child what you are going to do.		
19.	If needed, hold the infant or young child in your lap. Place her arm closest to you behind your back. Firmly hug her other arm and hand with your arm and hand; snuggle her head between your body and your arm. Sometimes you may also want to grasp her legs between yours. Your other hand remains free to give the child the drug.		

	Allow the child to sip the drug from the spoon. If it is a large amount of medicine, and the child can drink from a cup, you can measure the drug into a small cup. Make sure that the child takes the entire drug. You may have to add a small amount of water to rinse the drug from the sides of the cup. Or		
20.	Gently place the dropper or syringe in the child's mouth along the inside of the cheek. Allow the child to suck the liquid from dropper or syringe. If the child does not suck, squeeze a small amount of the drug at a time. This takes longer but the child will swallow the medicine and be less likely to spit it out or choke on it. Place an empty bottle nipple in the child's mouth, add the drug to the nipple, and allow the child to suck the nipple.		
21.	Rinse the child's mouth with plain water to remove any of the sweetened drugs from the gums and teeth. This can be done by wrapping a paper towel around your finger, soaking it in plain water, and then swabbing the gums, cheeks, plate, and tongue.		
22.	Return the drug to a safe place out of the child's reach. Place it in the refrigerator if the label says to do this.		
23.	Write down the time you gave the child the medicine and check for the time you need to give the next dose.		
24.	Praise the child for helping. Documentation as per policy		

Administration of Intradermal Medication			
25.	Explain to the patient / parent the reason oedication Administration. Explain clearly that the drug absorbs very slowly because it is injected just under the epidermis. This procedure leaves a small weal under the skin. Use 1.0 ml syringe with a 25 gauge needle		
26.	Choose appropriate site for injection. Inspect skin surface for bruises, inflammation and lessons. NOTE: The inner surface of the forearm and the outer aspect of the upper arm are the most common sites of injection		
27.	Assist client to comfortable position.		
28.	Clean site with an antiseptic swab in a firm circular motion.		
29.	Remove needle caps or sheath from needle by pulling it straight off.		
30.	Hold syringe between thumb and forefinger of dominant hand with bevel of needle pointing up		
31.	With non-dominant hand, stretch skin over site with forefinger and thumb.		
32.	With needle almost against client's skin, insert it slowly at 5 to 15 degree angle until resistance is felt. Then advance needle though epidermis to approximately 3 mm (1/8) inch below skin surface. Needle tip can be seen through skin.		
33.	Inject medication slowly. Normally, resistance is felt. If not, needle is too deep; remove and begin again.		
34.	While injecting medication, notice that small bleb resembling mosquito bite appears on skin's surface Withdraw needle while applying spirit swab very superficially over the site. Do not massage site.		
35.	Encircle injection site 2.5 cm. In case of a test dose observe the area after 15 minutes if redness develops around the area of injection, reaction should be recorded and reported to the doctor. Write date, time, and medication name and nurse initial. Read within 48 to 72 hours of injection.		
36.	Assist client to comfortable position.		
37.	Discard uncapped needle in danger box.		
38.	Wash hands and replace equipment.		
39.	Observe for any allergic reactions. If allergic reaction to a specific drug is identified then put allergies label on the red folder. Inform patient regarding the allergies.		
40.	Record in MAR sheet / medication		
Subcutaneous Injection			
41.	Explain procedure to client		
42.	Choose injection site by assessing size and integrity of muscle. (One that has not been used frequently).		
43.	Position the client appropriately for the site selected. Rectus femoris /Vastus lateralis: Client lying, on back, or sitting. The preferred site for infant is the Vastus Lateralis Ventrogluteal: patient lying on the back or side with the hip and knee flexed. is relatively free of major nerves and blood vessels, large muscles ,well defined land marks for safe site location makes it preferred over the dorsal gluteal muscle and recommendation is that it should not be used until the child is walking.		

	Dorsogluteal: patient lying prone or lateral with upper leg flexed at knee and thigh. It is strongly recommended that children under 6 years of age do not receive injection in this site as the muscles are very small, poorly developed and located close to sciatic nerve and major blood supply Deltoid: - Client sitting or lying flat with upper arm flexed. Muscles are very small and not well developed, so it is not used until the child is 6 years of age. Abdomen S/C only). Patient may be side lying or assume. A sitting position		
44.	Clean the site with spirit swab in a firm circular motion.		
45.	Remove needles cap or sheath from needle by pulling it straight off.		
46.	Use non-dominant hand to stretch/pinch the skin (according to patient's body mass)		
47.	Hold syringe between thumb and forefingers of dominant hand and insert needle at a 90angle		
48.	Slowly pull back on plunger to aspirate medication. If blood appears in syringe, remove needle; dispose of medication and procedure. If no blood appears, inject medication slowly. Note:- some institution policies recommend not to aspirate subcutaneous Heparin injection		
49.	Withdraw needle quickly while placing antiseptic swab gently above or over injection.		
50.	Massage the site gently, using the spirit swab. Note: Avoid massaging when contraindicated i.e. iron injection, anti-coagulant, Insulin.		
51.	Check injection site for bleeding or bruising		
52.	Do not recap needle. Dispose the syringe and needle into the sharps container		
53.	Assist patient to comfortable position		
54.	Record in MAR / Medication sheet		
55.	Assess client's response to medication in 30 minutes		
The Administration of Bronchodilator's Via Nebulizer			
56.	Check the medication order and prepare medication as prescribed. Explain the procedure to the patient.		
57.	Prepare the dose in the syringe and then instill it into the nebulizer cup. (For infants and children dosage should be as follows): 0-1 yr.: 1.25 mg = 0.25 ml + 1.75 ml N/S = 2.0 ml 1-5 yr.: 2.50 mg = 0.50 ml + 1.50 ml N/S = 2.0 ml 5-12 yr.: 3.75 mg = 0.75 ml + 1.25 ml N/S = 2.0 ml 12 yr.: 5 mg = 1 ml + 1.5 ml N/S = 2.5 ml).		
58.	With medication in place, carefully tighten the cup and put it on the patient's face in an upright position of the cup.		
59.	Attach the O2 tubing to the O2 flow and adjust the accordingly. Children O2 = 4-6 L/min DON'T USE HUMIDIFIER with nebulizer. Observe for the mist from the nebulizer.		
60.	When finished, discontinue oxygen immediately and remove the face mask. (if applicable) Encourage the patient to expectorate. Observe and record the amount and color of sputum if any.		

61.	Leave the patient in a comfortable position and continue to observe his breathing.		
62.	Wipe the nebulizer and face mask with a tissue and dry it. Keep the mask in a disposable glove for further use.		
63.	Document: Pre-finding: R/R, breath sounds. Therapy: Medication dosage, route, duration of therapy. Post finding: R/R, breath sound and child's Response to therapy.		

References:

Ball J, Bindler R, Cowen K & Shaw M. (2017). Pediatric Nursing Caring for Children. Julie Lavin Alexander. USA.

Wong, D.L. (2015). Whaley and Wong's nursing care of infants and children, St. Louis: Mosby.

S: Satisfactory

U: Unsatisfactory

Faculty Comments:

Faculty Signature: _____

Insertion of nasogastric (NG) tube & Naso/Oro Gastric

Objectives:

By the end of this skills students will be able to

Apply knowledge of A&P in identifying G.I organs and their functions related to N.G tube insertion / feeding.

Discuss briefly the factors influencing diet.

Identify clinical signs of inadequate nutritional status.

Perform the procedures.

Discuss purposes of nasogastric tube insertion, feeding and removal and gastrostomy

Identify different types of formula/supplemental available for feeding.

Discuss purposes of feeding by gastrostomy tube.

List few nursing diagnoses related to nutritional problems.

Demonstrate correct documentation.

Scope:

This procedure applies to BSN students for the Utilization of nursing knowledge through the application of critical thinking, judgment and skill. It is stranded in the principles of nursing education.

Purposes:

Perform assessment of nutritional status before performing feeding.

Perform the procedures confidently.

Important Requirements:

Tray, (NG tube size 5-12 in children Syringe 5-30cc)

Hypo allergic tape

Scissors

Stethoscope

Bath towel
 Wrapper for restraining child
 Torch
 Spigot
 Clean gloves
 Lubricant (K-Y jelly or distilled water).
 Prescribed feed / formula
 Nurse's notes form.
 Fluid balance sheet.

Procedure:

S.No	Insertion of nasogastric (NG) tube & Naso/Oro Gastric	S	US
1.	Check doctor's order for N.G tube insertion.		
2.	Explain procedure to the client/family		
3.	Assess: Nostrils for patency /obstruction / bleeding etc. (Note especially history of nasal surgery or deviated septum). Abdomen for distension, cramps, and bowel sounds. Level of consciousness. Presence of gag reflex. Ability to cope with the procedure		
4.	Collect equipment.		
5.	Cut one strip of tape or as required.		
6.	Wash hands and put on clean gloves.		
7.	Place the client in appropriate position: Child: supine with rolled towel under head and neck.		
8.	Place the towel across the chest.		
9.	Measure the tube for approximate length of insertion and mark the point with a small tape. Measure from the tip of the nose to the earlobe and to the point midway between the xiphoid process and umbilicus. (Same as for the oro-gastric insertion)		
10.	Lubricate 1—2 inches of the tube with distilled water / KY jelly.		
11.	Insert the tube into either of nostril with its natural curve towards the child Ask the client to hyperextend the neck, and gently advance the tube towards the nasopharynx.		
12.	If the tube meets resistance, withdraw it, re-lubricate it and insert it in another nostril.		
13.	If the client gags, stop passing the tube for a moment, have the client rest, and take few breaths (if applicable) to calm the gag reflex. While passing the tube check mouth for coiling of tube.		
14.	Confirm the placement of the tube by: * Deliver a bolus of air. (0.5-1ml in premature or small infants, 5ml in older children) through a syringe while listening over stomach for gurgle and burp. Aspirate air after confirming position. Aspirating stomach contents.		
15.	Secure tube to the upper lip and cheek.		
16.	Document:		

17.	Date and time of insertion / change of the tube, in nurse's notes and on the tube as well. Size of the tube. Client's response to procedure. Type and amount of aspirated content. HUB measurement of the outer side of the tube from nostril to the end of tube.(Indelible mark)		
18.	Provide Nasogastric tube care daily. Inspect the nostril for discharge and Irritation. Clean the nostril and the tube with moistened cotton. Apply water-soluble lubricant to the nostril, if it is dry or encrusted.		

	Change the adhesive tape as required. Give frequent mouth care.		
N.G TUBE FEEDING			
19.	Check the doctor orders		
20.	Explain procedure to the client / family.		
21.	Assess the client for: abdominal distension, feeling of fullness, belching, loose stools, flatus, pain, bowel Sounds and allergy to food.		
22.	Gather equipment.		
23.	Wash hands.		
24.	Place the client in fowler's position for the feeding		
25.	Confirm the placement of the tube by: * Inject the air into the tube and listen for a " pop " sound. This Sound will tell you the tube is in the right place. Withdraw the air you injected to check for placement. If you do not hear this sound. Remove the tube and repeat the step. (0.5-1ml in premature or small infants, 5ml in older children) through a syringe while Listening over stomach for gurgle and burp. Aspirating stomach contents.		
26.	Aspirate all the residual stomach content, measure the amount, and Check about reinstalling.		
27.	Test the temperature of the formula by dropping a few drops on the inside of your wrist. It should feel warm, not hot. Or let the formula warm to room temperature, check the expiry date and administer the feed.		
28.	Hold your child in fowler's position while feeding. You may give Your child a pacifier to suck on during feedings. (This way your baby will continue to learn feeding skills and will connect the Sucking with the feeling of being full.)		
29.	You may need to push gently with the plunger to start the formula Flowing. Release the tube and let the formula enter the stomach Slowly. Keep adding more formula as the syringe empties (Picture 3, page 3). Feed your child slowly over 15 to 20 minutes.		
30.	Flush the tube after feeding with (1-2ml of air / H ₂ O in infant). Adult (40- 60ml) of water in adults. Pinch the tube before the syringe gets emptied to prevent introduction of excessive air into the stomach.		
31.	Clamp the feeding tube before all the water is instilled		
32.	Instruct the client to remain in fowlers' or slightly elevated or right Lateral position for at least 30 minutes.		
33.	Document: date and time of feeding. Type and amount of feeding, Amount of water used for flushing tube. - Child's response to feeding (regurgitation, feeling fullness		

N.G REMOVAL CHECKLIST

S.No	Steps	S	US
1.	Check doctor's order.		
2.	Explain procedure to client / family.		
3.	Collect equipment.		
4.	Wash hands.		
5.	Put on clean / disposable gloves.		
6.	Loosen the tape that is holding the tube. Disconnect the tube from the suction if it is applied		
7.	Clamp the tube before removal.		
8.	Asks the client to take a deep breath and hold it for a second (in older children).		
9.	Pull the tube out quickly and smoothly.		
10.	Dispose the tube and equipment appropriately.		
11.	Hold, cuddle and burp the child or provide reassurance in older child and adult patient.		
12.	Document the removal of the tube, with date and time, amount and appearance of drainage in nursing notes.		

Reference:

Ball J, Bindler R, Cowen K & Shaw M. (2017). Pediatric Nursing Caring for Children. Julie Lavin Alexander.USA.

Wong, D.L. (2015). Whaley and Wong's nursing care of infants and children, St. Louis: Mosby.

S: Satisfactory

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Faculty Comments:

Faculty Signature: _____

Urine Specimen Collection

Definition:

It is the collection of a small quantity of urine sample in a clean container for physical examination of the urine, testing of urine, and examination of the urine in laboratory under a microscope.

Objectives:

Apply knowledge of A&P in identifying urinary system's organs and their functions related to urination.

Demonstrate correct documentation.

Purposes:

To detect and for the measurement of the presence of abnormalities in urine such a red blood cells (RBC) White blood Cells(WBC's) casts, pus, pH, sugar, albumin and specific gravity.

To diagnose and monitor various conditions including kidney disorders; urinary tract infections.

To monitor the disease process, e.g. diabetes.

To evaluate the efficacy of treatment

Perform the procedures confidently.

Important Requirements:

Non-sterile gloves

Paper towels

Specimen container

Collection device/ kidney tray

Toilet tissue

Biohazard transport bag

Urinal/ bedpan

Sterile gloves

Clean urine specimen collection kit

Laboratory requisite / form

Procedure:

S. No.	Steps	Rationale	S	US
1.	Identify the patient (double Check) and check the physician's order.	Confirm the client's identity to make sure the procedure is performed on the right person.		
2.	Explain the procedure to the patient.	Providing information fosters his/her cooperation		
3.	Assemble equipment and check the specimen form with client's name, date and content of urinalysis.	Organization facilitates accurate skill performance. Make sure that the specimen container is labeled with client's name and MR number, date and time of collection.		
4.	At all times, respect the client's privacy and modesty by remembering to close the doors and window covers, and ensuring the client is properly covered.	To maintain their dignity.		
5.	Label the bottle or container with the date, client's name, department identification, and Doctor's name.	Ensure correct identification and avoid mistakes.		
6.	For a midstream urine specimen, open the clean urine specimen collection kit. Provide the client with special	For proper sampling.		

	cleansing wipes/cotton balls from the kit if they're able to clean the perineum by themselves. Otherwise, assist as necessary. Put on gloves. If the client has phenotypically female genitalia, use your other hand to separate the labia. Then, use the wipe to wipe downwards from the top of the vulva and towards the anus. If the client has a circumcised penis, start by placing the wipe on the tip of the penis, while if the client has an uncircumcised penis, first retract the foreskin by gently pushing the skin downwards towards the base of the penis. Wash downwards towards the base of the penis in a circular motion.			
7.	Give the client time to urinate and assist as necessary. Remind them not to throw toilet tissue into the collection device, kidney basin, the bedpan, or the urinal because this can alter the results. If a midstream urine specimen is required, remind them to start the flow of urine, then stop it, and then restart it. The sample should be collected from the restarted	To provide comfortable environment.		

	flow. When collecting a midstream specimen, clients with phenotypically female genitalia should keep the labia separated and clients with uncircumcised penises should keep the foreskin retracted. For most clients, you can leave the room until they finish. Be sure that the call light is close to the client. Remember to remove your gloves when you leave, dispose of them safely, and put on a new pair when you come back. Knock before entering.			
8.	Provide tissue paper, a moist cloth, or pre-moistened wipes if they are able to clean themselves; otherwise, you should assist in perineal care. Also, assist the client with hand washing as necessary.	To prevent from contamination.		
9.	If the client used the toilet, help them return to bed. Take the collection device from the bedside to the bathroom. If the client used a bedpan or a urinal, place the cover on and take it to the bathroom.	To prevent from fall. To prevent from cross infection.		
10.	Note the general quality, the amount, the color, and the odor of the urine.	For clarity for others health care worker.		

11.	To collect the urine specimen, Raise the toilet seat and, while holding the specimen container over the toilet, pour about 90–120 mL of urine from the collection device/ kidney tray, into the container. The container should be about three-quarters full with urine. Empty the rest of the urine into the toilet. Close the specimen container tightly and place it back on the paper towel on the bathroom counter. Be careful not to touch the inside of the lid or the container, especially if when collecting a midstream urine specimen.	To prevent further infection and cross infection.		
12.	Dispose of one glove and use the ungloved hand to hold the biohazard transport bag. Then, with your gloved hand, put the specimen container into the bag. Make sure not to touch the outside of the transport bag with the glove. Dispose of the other glove safely and wash your hands.	To prevent cross infection.		
13.	The urine specimen has to be taken to the laboratory within 20 minutes. Otherwise, it must be refrigerated until the scheduled pick up time.	To accurate results.		
14.	Clean and return the equipment to the			

	right place.			
15.	Wash your hands thoroughly.	To prevent cross infection		
16.	Document, in nursing notes and on Kardex.	For updates and avoidance of repetition.		

Note: on the specimen label if the female client is menstruating at that time. (Rationale: One of the tests routinely performed is a test for blood in the urine. If the female client is menstruating at the time a urine specimen is taken, a false-positive reading for blood will be obtained.)



Reference:

https://www.osmosis.org/learn/Collecting_a_urine_specimen:_Clinical_skills_notes
PGIMER-NINE: Clinical Nursing Procedures by Sandhya Ghai (CBS)

S: Satisfactory

U: Unsatisfactory

Faculty Comments:

Faculty Signature: _____

Sterile Specimen from a Catheter /Urine Culture

Definition:

Catheter specimens of urine (CSU) are usually collected for microscopy, culture and sensitivity (MC&S) testing when an infection has been suspected.

Purpose:

To collect uncontaminated urine specimen for culture and sensitivity test
To detect the microorganisms causes urinary tract infection (UTI)
To diagnose and treat with specific antibiotic

Equipment's required:

Clean tray to hold equipment;

Sterile gloves;
 Sterile 10ml syringe (not required if taking a specimen from a catheter valve);
 Non-traumatic clamp (not required if taking a specimen from a catheter valve);
 Specimen container;
 Alcohol-impregnated swabs (2% chlorhexidine in 70% isopropyl alcohol);
 Sterile jug or sterile kidney tray (if taking a CSU from a catheter valve);
 Documentation and forms.
 Sterile culture bottle with label as required
 Paper tissues if needed
 Ball Pint

Procedure:

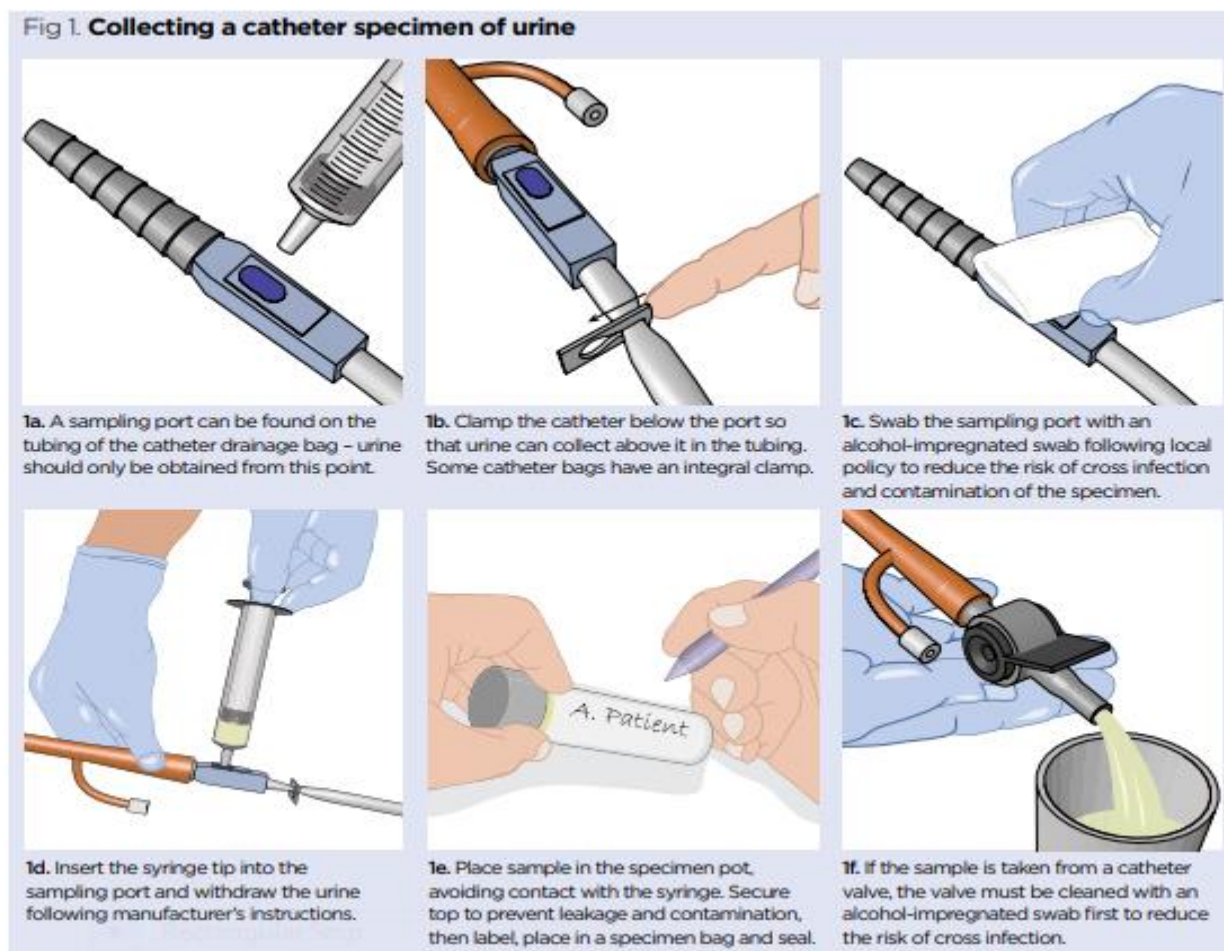
S. No	Steps	Rationale	S	US
1.	Identify the patient (double Check) and check the physician's Order.	Confirm the client's identity to make sure the procedure is performed on the right person.		
2.	Explain the procedure to the Patient.	Providing information fosters his/her cooperation		
3.	Decontaminate hands and prepare the equipment and check the specimen form with client's name, Medical record number, Doctor's name date and content of Urinalysis.	Organization facilitates accurate skill performance. Make sure that the specimen container is labeled with the client's name and as well as the date and time the specimen was collected.		
4.	At all times, respect the client's privacy and modesty by remembering to close the doors and window covers, and ensuring the client is properly covered.	To maintain self- esteem.		
5.	If taking a specimen from a sampling port (Fig 1a), check first whether there is urine in the catheter tubing. If the tubing is empty apply a clamp below the level of the sampling port (Fig 1b). This allows urine to collect above the clamp so that a sample can be obtained.			
6.	Decontaminate your hands and apply non-sterile gloves. Clean the sampling port with an alcohol-impregnated swab according to local policy and allow to dry	This reduces the risk of cross infection or contamination of the specimen (Rowley, 2011).		
7.	Stabilize the tubing by holding it below the level of the sampling	For earth gravity utilization.		

	port.			
8.	Insert the syringe tip into the sampling port (following manufacturer's instructions)	Be careful to protect the sterile syringe tip and disinfected sample port from contamination		
9.	Aspirate at least 10ml of urine and withdraw the syringe.	To have enough sample for onward testing.		
10.	Put the urine into a sterile labeled container, avoiding contact between the syringe and the pot	Ensure the top of the specimen container is secured to prevent leakage and contamination of the specimen		
11.	Wipe the sampling port with an alcohol impregnated swab and allow to dry	This reduces the risk of cross infection and contamination		
12.	If a clamp was used, release it to allow urine drainage freely.	Failure to do this will cause the bladder to fill and can result in discomfort and bypassing of urine around the catheter, which can be distressing for the patient.		
13.	Remove and dispose of gloves, and wash hands with soap and water.	To prevent cross infection.		
14.	Complete the request form and recheck the details	For accuracy.		
15.	Send the sample to the laboratory immediately or refrigerate until it can be transported.	To ensure accurate results are obtained		
16.	Document the date and time the sample was collected in the patient's note	To avoid repetition of procedure.		

Collecting from a catheter valve First, follow steps 1-4 above.

S. No	Steps	Rationale	S	US
1.	Ensure the patient has a full bladder.			
2.	Apply non-sterile gloves and clean the catheter valve port with an alcohol-impregnated swab.	Allow to dry. This reduces the risk of cross infection.		
3.	Open the valve and release a small amount of urine to flush the valve.			
4.	Open the valve again and empty the remaining urine into a sterile jug, ensuring the valve does not come into direct contact with the jug.	To secure the specimen kept in sterilized container surely		
5.	Put a sample of urine in a sterile container. Ensure the top of the specimen container is secured.	To prevent leakage and any contamination of the specimen		
6.	Close off the valve and wipe the port	To prevent the spread of		

	with an alcohol-impregnated swab.	infection		
7.	Dispose of any remaining urine according to local policy	To prevent the spread of infection		
8.	Follow steps 13-16 above to complete the procedure. NT			



Note: Clean the catheter collection port with a 70% alcohol swab • Using sterile technique, puncture the collection port with a needle attached to a syringe • Aspirate the urine and place it into a sterile container. Do not use urine from collection bag.

Reference:

https://cdn.ps.emap.com/wp-content/uploads/sites/3/2017/07/170712-Specimen-collection-2-obtaining-a-catheter-specimen-of-urine_V2.pdf

https://www.osmosis.org/learn/Collecting_a_urine_specimen:_Clinical_skills_notes

PGIMER-NINE: Clinical Nursing Procedures By Sandhya Ghai (CBS)

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Collection of a Stool Specimen

Definition:

Collection of stool specimen deters a process which is aimed at doing chemical bacteriological or parasitological analysis of fecal specimen

Purpose:

To identify specific bacteria like Salmonella and Shigella

To determine presence of ova and parasites

To determine presence of blood and fat.

To examine for stool characteristics such as color, consistency and odor.

Equipment's required:

Laboratory form

Disposable gloves if available

Clean bedpan with cover

Closed specimen container as ordered

Label as required

Wooden tongue depressor(1-2)

Kidney tray or plastic bag for dirt

Procedure:

S. No	Steps	Rationale	S	US
1.	Identify the patient (double Check) and check the physician's Order.	Confirm the client's identity to make sure the procedure is performed on the right person.		
2.	Explain the procedure to the Patient.	Providing information fosters his/her cooperation		
3.	Decontaminate hands and prepare the equipment and check the specimen form with client's name, Medical record number, Doctor's name date and content of urinalysis.	Organization facilitates accurate skill performance. Make sure that the specimen container is labeled with the client's name and as well as the date and time the specimen was collected.		
4.	At all times, respect the client's privacy and modesty by remembering to close the doors and window covers, and ensuring the client is properly covered.	To maintain self-esteem.		
5.	Assemble equipment. Label the container.	Organization facilitates accurate skill performance Careful labeling ensures accuracy of the report and alerts the laboratory personnel to the presence of a contaminated specimen		
6.	Explanation: Explain the procedure to	Most of clients cannot pass on command		

	the client Ask the client to tell you when he/she feels the urge to have a bowel movement			
7.	Ask the client to tell you when he/she feels the urge to have a bowel movement	Most of clients cannot pass on command		
8.	Perform hand hygiene and put on gloves if available			
9.	Placing bedpan Close door and put curtains/ a screen. Give the bedpan when the client is ready. Allow the client to pass feces Instruct not to contaminate specimen with urine	To provide privacy You are most likely to obtain a usable specimen at this time. To gain accurate results		
10.	Collecting a stool specimen: Remove the bedpan and assist the client to clean if needed Use the tongue depressor to transfer a portion of the feces to the container without any touching Take a portion of feces from three different areas of the stool specimen Cover the container	It is grossly contaminated To gain accurate results It prevents the spread of odor		
11.	Remove and discard gloves. Perform hand hygiene	To prevent the spread of infection		
12.	Document the procedure in the designated place and mark it off on the Kardex.	To avoid duplication Documentation provides coordination of care		

Note:

The procedure is exact same in routine test of stool and culture. **BUT!**
When you collect stool specimen you should caution on the next point;
Collect stool specimen with clean wooden tongue depressor or spatula for routine stool test

Stool specimen for culture can be obtained directly from the rectum using a sterile wooden tongue depressor or spatula for culture

Inform bleeding hemorrhoids or hematuria is present.

If woman has menstrual periods, postpone the test until 3 days after it has ceased.

Reference:

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Vomit Collection

Definition:

Vomit specimen is a sample of material expelled from the stomach through the mouth or, less often, the nose.

Purpose:

To identify bacteria, may or may not be pathogen.

To determine presence of blood.

To examine for vomit's characteristics such as color (the presence of bile).

Equipment's required:

Laboratory form

Disposable gloves

Kidney basin / Emesis basin

with cover

Closed specimen container as ordered

Label as required

Sterile container with tight-fitting lid

Box of tissues

Wooden tongue depressor (1-2)

Plastic bag for dirt

Procedure:

S. No	Steps	Rationale	S	US
1.	Identify the patient (double Check) and check the physician's Order.	Confirm the client's identity to make sure the procedure is performed on the right person.		
2.	Explain the procedure to the Patient.	Providing information fosters his/her cooperation		
3.	Decontaminate hands and prepare the equipment and check the specimen form with client's name, Medical record number, Doctor's name date and content of urinalysis.	Organization facilitates accurate skill performance. Make sure that the specimen container is labeled with the client's name and as well as the date and time the specimen was collected.		

4.	At all times, respect the client's privacy and modesty by remembering to close the doors and window covers, and ensuring the client is properly covered.	To maintain self- esteem.		
5.	Assemble equipment. Label the container.	Organization facilitates accurate skill performance. Careful labeling ensures accuracy of the report and alerts the laboratory personnel to the presence of a contaminated specimen		
6.	Explain the procedure to the client Ask the client to tell you when he/she feels the urge to have a vomit	Most of clients cannot pass on command		
7.	Position your patient in a chair or on the side of bed. If he is not capable of sitting alone, place him in a high-Fowler's position. Remove dentures, if he has them	To prevent choking.		
8.	Place the tissues nearby and have the patient rinse his mouth with clean water to remove any food particles	For hygiene purpose and for dignity maintenance.		
9.	Don't allow him to brush his teeth or use mouth wash.	Doing so could kill bacteria in the sputum, rendering it useless.		
10.	Uncap the container but avoid touching the inside to ensure that it's sterile.	Prevent cross contamination		
11.	Using the sterile collection container provided,	To prevent contamination.		
12.	Record the amount, consistency, and color of the vomitus collected, as well as the time and date in the nursing notes.	For update other health care team members.		
13.	Send the sample to the lab immediately, stored frozen at -4°F (-20°C) or at -94°F (-70°C).	For better results.		
14.	Remove and discard gloves. Perform hand hygiene	To prevent the spread of infection		
15.	Document the procedure in the designated place and mark it off on the Kardex.	To avoid duplication Documentation provides coordination of care		

Note. Vomitus samples should always be stored frozen at -4°F (-20°C) or at -94°F (-70°C).

Reference:

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<https://www.cdc.gov/norovirus/lab/specimen-collection.html>
<https://nursing-skills.blogspot.com/2014/02/collection-of-specimen-of-vomit.html>
<https://nurseslabs.com/nurses-guide-specimen-collection-preparation-handling-procedures>

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Suctioning Naso/ Oro-pharyngeal and Tracheal

Objective:

At the end of the session, students will be able to:

Discuss briefly the physiology of respiration.

Describe clinical signs of hypoxia.

Explain oropharyngeal and nasopharyngeal and tracheal suctioning.

Discuss purposes and indications of suctioning.

Demonstrate correct documentation: amount, color, consistency, and odor of secretions and client's response.

Scope:

This procedure applies to BSN students for the Utilization of nursing knowledge through the application of critical thinking, judgment and skill. It is stranded in the

S.No	Steps	S	US
1.	Assess clients : R/R, depth, rhythm, breath sounds. Ability to swallow and cough (if applicable). Oxygen saturation. Mouth and nostrils for crusting, ulcers and/debris. (Use torch and tongue depressor, if necessary). Treatment. Saline nebulizer Bronchodilators Chest Physiotherapy Postural drainage. Asses the need for suctioning since it can be hazardous and cause is comfort, it is not recommended in the absence of apparent need i.e. Coughing, increased respiration, excessive secretions through mouth and Nose.		
2.	Explain procedure to the client/family		
3.	Attach suction apparatus to appropriate unit and check function of suction machine		
4.	Gather equipment.		
5.	Check that suction pressure is not above 10-15 KPA for infants and children		

6.	Make appropriate position: In conscious client semi fowlers for unconscious client side lying. Nasal/tracheotomy hyper extended neck Position.		
7	Place towel/tissue on client's chest.		
8.	Set up the galipot and pour distilled water/boil water at room temperature, aseptically.		
9.	Wash hands.		
10.	Put on gloves aseptically on dominant hand		
11.	Hyper oxygenate client by increasing/giving up to 100% before suctioning, if not contraindicated.		
12.	Open the wrapper of catheter from distal end and attach it with suction unit.		
13.	Un wrap catheter without touching it to any non-sterile surfaces. Use dominant/gloved hand to hold the catheter.		
14.	Measure the tube for distance of insertion. (From tip of the nose to the ear lobe).		

principles of nursing education

Purposes

Assess client's respiratory status before and after suctioning.

Maintain asepsis throughout the procedure.

15.	Lubricate with distilled water/boil water at room temperature and check for the patency of the catheter and also check for the pressure of suction machine		
16.	Insert the catheter in one nostril without applying suction up to the measured mark distance		
17.	If one nostril is obstructed, try the other one. *Never force the catheter against an obstruction Never apply suction during insertion of catheter		
18.	Apply intermittent suction for not more than 5 seconds. Rotate and twist the catheter as you remove it. The total time for suctioning should not exceed more than 15 seconds. Application of suction pressure upon insertion increase hypoxia and results in damage to the nasal mucosa.		
19.	Look at the mucus for COCA (color, odor, characteristic and amount). Rinse the catheter in boil water by applying suction and then repeat for the other nostril.		
20.	Monitor child's cardiopulmonary status during and between suction passes, observe for signs of hypoxemia; dysrhythmias, cyanosis, anxiety and changes in mental status		
21.	Use the same catheter for oral suctioning. Insert the catheter the client's mouth along one side, until it reaches the back of the throat, without applying suction.		
22.	Apply suction for 5 seconds. Rotate and twist the catheter when removing it.		
23.	Discard the catheter and save it according to hospital policy		
24.	Make sure the patient receives O2 during and after procedure too. Readjust the O2 after few minutes/when client's conditions stabilize according to doctor's order.		

Perform the procedure of suctioning

25.	Document in nursing notes, date, time, client's response, (breath sounds, RR, O2 saturation and skin color) secretion obtained (COCA) and condition of nose and mouth.		
TRACHEOSTOMY SUCTIONING			
26.	Follow the step 1-10		
27.	Hyper ventilate/oxygenate client before suctioning, if not contraindicated -Increase O2 flow rate to 10 liter/min -Attach ambo bag on the tracheal opening and give 5 breaths. -If copious amount of secretions are present, First do the suctioning and then hyperventilate (can be best done by other Nurse).		

Important Requirements:

Oxygen & Suction apparatus,

Ambo bag,

Tray,

Suction catheter: Fringe, 5, 6, 8, 10 for infant/children.

28.	Open the wrapper of catheter from distal end and attach it with suction unit.		
29.	Lubricate and check for the patency of the catheter in sterile water and also check for the pressure of suction machine.		
30.	If secretions are thick, instill normal saline 0.9%. 0.5 ml for infants. (1- 2ml for toddler, 2-3rd for older children.) Be sure to remove needle from the syringe.		
31.	Gently insert catheter after lubricating the tip of catheter into Tracheal stoma, about 2-3 inches for infant and child. -Pull back 1 cm when resistance is met without applying suction. Catheter is now in the tracheobronchial tree. Application of suction pressure upon insertion increases hypoxia and results in damage to the tracheal mucosa.		
32.	Apply suction for not more than 5 seconds. Rotate and twist the catheter as you remove it.		
33.	Look at the mucus for color, consistency or any other changes (COCA).		
34.	Rinse the catheter in sterile water by applying suction.		
35.	Observe the client's respiration and skin color between each suctioning and allow him to rest for 2-3 minutes, Reduce incidence of hypoxia and atelectasis.		
36.	Ensure that entire procedure does not exceed 5 minutes duration, as prolonged suctioning can decrease the clients' oxygen level and cause distress.		
37.	Re-apply supplementary oxygen as required during and after suctioning. -Increase O2 flow rate to 10 liters/min. -Attach ambo bag on the tracheal opening, and give 5 breaths.		
38.	Discard catheter after suctioning (check hospital policy). -Use same catheter if required, to do Naso-oral suctioning and discard after use.		

T. Connector,

39.	Reposition the child. support ventilator effort; promote comfort; communicates caring attitude		
40.	Document in nursing notes: Condition of the tracheotomy site, date, time, client's response, and secretions obtained (COCA). Watch for the potential complications: Hypoxia ,Atelectasis, Dysrhythmias, mucosal trauma with increased secretions, cardiac arrest		

Sterile water,
Normal saline 0.9%,
Syringe (5cc or 10cc),
Sterile gallipot/sterile container,
Clean gloves for Oro-nasopharyngeal suctioning, and sterile gloves for tracheotomy suctioning,
Towel/tissue,
Mucous extractor – for specimen collection

Reference:

Ball J, Bindler R, Cowen K & Shaw M. (2017). Pediatric Nursing Caring for Children. Julie Lavin Alexander. USA.

Wong, D.L. (2015). Whaley and Wong's nursing care of infants and children, St.Louis: Mosby.

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Lumbar Puncture

Definition:

Lumbar puncture is the insertion of a needle into the subarachnoid space of the spinal column.

Purpose:

To collect specimen of cerebrospinal fluid for diagnostic purpose
To measure and reduce CSF pressure
To determine the presence or absence of blood in CSF
To detect the spinal subarachnoid block
To administer antibiotics intrathecal in certain cases of infection.

Indications

Infection of CNS such as suspected meningitis, encephalitis
Brain or spinal cord tumors
Subarachnoid hemorrhage, hydrocephalus, benign intracranial hypertension
To inject medications into the cerebrospinal fluid ("intrathecal"),

Precaution

Patient anxiety during the procedure can lead to increased CSF pressure.

Equipment's:**Sterile:**

Gallipots

Sterile towel with hole

Hand towel

Sterile gloves

Dissecting forceps and artery forceps

Two lumbar puncture needle with different size (Barker's needle) (5 to 12.5 cm long)

A measure for fluid to be collected

A short length of rubber tubing to be attached to the needle.

Needle (5/8 to 1 1/2 inches, 21 to 25 gauge) and syringe for local anesthesia (3 to 5 ml).

Four test tubes for specimen

Ten gauze sponges (4 x 4) (dressing and tape)

Gown, cap

Clean:

Tray

Monometer with three-way stopcock

Local anesthetic (lidocaine)

Skin cleansing lotion (ether,

Povidone-iodine, saline, etc.)

Straight chair

Rubber sheet and towel.

Receiver for used instruments

Pillow for placing between client's knee

Masks and goggles

Alcohol swabs

Plaster and scissors.

Procedure:

S No	Steps	Rationale	S	US
	Explain the procedure to the client's parents	To gain cooperation and reduce fear.		
	Assemble the necessary Equipment's, including sterile set of Lumber puncture.	To have an easy access and to minimize disturbance.		
	Maintain privacy of the client.	To ensure privacy.		
	Wash Hands	To reduce cross contamination.		
	Check Vital sign's before and after procedure	Tells at very fundamental physiological level how the patients is doing.		

	Recumbent position (lateral recumbent) Infant or young child Restrain by placing one arm under child's flexed knees and grasping child's wrists restrains both upper and lower extremities. Place other arm posteriorly around child's neck and shoulders, Restrains upper extremities. Nurse helps hold arms	It helps maintain the position. expose the spine		
	Older Child. Children may grasp knee with hands, Restrain lower extremities. May place a pillow between the knees, prevent upper leg from rolling forward. Nurse helps hold arms and legs in flexed position. Restrain both upper and lower extremities. Note: It may require someone with strength to safely restrain the child during the procedure.	It helps maintain the position. Expose the spine.		
	Sitting position. Older child Sit on table with elbows resting on knees. Place pillow in front of child and instruct child to grab it.	Helps prevent child from moving		
	Small Infant: Hold in sitting position Helps restrain child Flex thighs on abdomen and grab elbows spine at appropriate angle.	This position is possible only with a small infant who is unable to straddle or with an older child who will cooperate without restraint.		
	Once child is positioned, the physician drapes the back, identifies and cleanses the puncture area infiltrates the area around the puncture site with local anesthetic, and carries out the procedure. Strict aseptic technique is maintained throughout.	Prevent pain during procedure.		
	Open the sterile set and pour antiseptic solution into the gallipots.	Prevent risk of infection.		
	Sterile gloves (physician) Gloves Non Sterile gloves (Nurse)	To reduce risk for transmission of microorganisms.		
	Monitor for complications throughout the procedure: changes in the level of consciousness (LOC), pupil size and reactivity; respiratory status; vital signs (VS); numbness, tingling, or pain radiating down the legs.	Prevent from complications		

	VS, LOC, and motor activity every 15 minutes for 1 hour, then every 30 minutes for 1 hour accord	May place a pillow between the knees, prevent upper leg from rolling forward.		
	The procedure is ended by withdrawing the needle while placing pressure on the puncture site and applying sterile dressing.	To determine bleeding or CSF leakage at puncture site every 4 hours for 24 hours		
	After the procedure place the patient comfortably flat (can be raised if needed) and watched for headache.	Keep the child flat after procedure for 1-24 hours Reduce the risk of spinal headache.		
	Encourage child to take fluid by mouth unless contraindicated.	Replace fluid loss during the procedure and reduces chance of spinal injury		
	Label the specimen and send to the laboratory.	To roll out the diseases		
	Record time of procedure, amount, color and consistency of the fluid withdrawn Change in level of consciousness, pupil size or reaction Vital signs, respiratory status	To maintain accurate patient records.		

- **S: Satisfactory** **U: Unsatisfactory**
Faculty Comments:

Faculty Signature: _____

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