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Manual of Pediatric NURSING Procedures

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JAYPEE

Manual of Pediatric Nursing Procedures

As per Revised INC Syllabus

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1. Preparation for neonatal resuscitation.
2. Initial steps and bag and mask ventilation of neonatal resuscitation.
3. Discontinuation of bag and mask ventilation.
4. Weight recording of infant using digital weight machine.
5. Use of radiant warmer.
6. Phototherapy for the treatment of unconjugated hyperbilirubinemia.
7. Capillary blood glucose estimation of neonate.
8. Assessment of neonate's body temperature by human touch and capillary refill time (CRT).
9. IV cannulation.
10. Intramuscular injection to infant.
11. Gavage feeding of a baby.
12. Paladai feeding of a neonate.

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Contents

Unit-1: Caring for Neonates and Children with Special Considerations **1**

Family-Centered Care of the Children *1*
Promoting Coping of Children during Hospitalization *3*
Childhood Growth and Developmental Milestones *6*
Principles of Fluid and Nutritional Management of Children *12*
Principles of Pharmacologic Management in Children *18*
Prevention of Infections in Child Health Care *24*
Principles of Pain Management in Children *27*
Principles and General Guidelines for Pediatric Procedures *33*

Unit-2: Neonatal Nursing Procedures **36**

Procedure–1: Immediate Care of Stable Neonates at Birth in Delivery Room *37*
Procedure–2: Hand Hygiene in Health Care Settings *40*
Procedure–3: Neonatal Resuscitation *43*
Procedure–4: Assisting in Breastfeeding *48*
Procedure–5: Assessment of Vital Signs of Neonates *51*
Procedure–6: Weight Recording of Neonates *53*
Procedure–7: Physical Examination of Neonates *55*
Procedure–8: Care of Neonates at Postnatal Ward/Unit with Daily Monitoring *59*
Procedure–9: Bathing (Sponge Bath) and Diapering the Neonates *61*
Procedure–10: Care of Infected Umbilical Cord of the Neonates *64*
Procedure–11: Care of Neonates Under Radiant Warmer *66*
Procedure–12: Care of Neonates during Phototherapy *69*
Procedure–13: Oxygen Therapy for Neonates *73*
Procedure–14: Pulse Oximetry of Neonates *75*
Procedure–15: Blood Glucose Estimation of Neonates *76*
Procedure–16: Capillary Refill Time Estimation of Neonates *78*
Procedure–17: Intravenous Fluid Therapy in Neonates *79*
Procedure–18: Intravenous Medications in Neonates *82*
Procedure–19: Intramuscular Medications in Neonates *84*
Procedure–20: Insertion of Feeding Tube and Gavage Feeding in Neonates *86*
Procedure–21: Paladai Feeding or Cup/Katori-Spoon Feeding of Neonates *89*
Procedure–22: Expression of Breast Milk *91*
Procedure–23: Kangaroo Mother Care *93*
Procedure–24: Developmental Supportive Care of Neonates *96*
Procedure–25: Care of the Neonates during Respiratory Support with CPAP *100*

JAYPEE BROTHERS

Procedure–26: Care of the Neonates in Incubator/Isolette *102*
Procedure–27: Exchange Blood Transfusion in Neonates *104*
Procedure–28: Care of the Newborn Infants at Triage Area *108*
Procedure–29: ROP Screening of Newborn Infants *111*
Procedure–30: Discharge Planning and Care of Neonates at Home *113*

Unit-3: Child Health Nursing Procedures for Medical Conditions 117

Procedure–1: Admission of the Child in Hospitals/Health Care Institutions *117*
Procedure–2: Assessment of Vital Signs of Infants/Older Children *122*
Procedure–3: Anthropometry or Assessment of Growth Parameters of Children *127*
Procedure–4: Oxygen Therapy to Infant and Older Children *131*
Procedure–5: Nebulization Therapy or Aerosol Treatments to the Children *135*
Procedure–6: Intravenous Fluid Therapy Using Peripheral Catheters to the Sick Child *138*
Procedure–7: Placement of Gastric Feeding Tube and Gavage Feeding to Older Children *142*
Procedure–8: Oral Care of Infant and Young Child *147*
Procedure–9: Bathing Infant or Young Child *151*
Procedure–10: Care of Infected Eyes and Administration of Ophthalmic Medications *154*
Procedure–11: Medications to the Children—Oral, Sublingual and Buccal *157*
Procedure–12: Parenteral Medications to Children—Intramuscular and Subcutaneous *159*
Procedure–13: Administration of Intravenous Medications to Children *165*
Procedure–14: Administration of Nasal Medications to Children *168*
Procedure–15: Administration of Otic (Ear) Medications *171*
Procedure–16: Ear Irrigation of the Children *173*
Procedure–17: Administration of Rectal Medications to Children *176*
Procedure–18: Enemas to the Children *178*
Procedure–19: Insertion and Removal of Indwelling Urinary Catheter in Children *182*
Procedure–20: Care of Indwelling Urinary Catheter of Children *189*
Procedure–21: Urine Specimen Collections from Children *191*
Procedure–22: Blood Sampling by Venipuncture from Peripheral Sites of Children *194*
Procedure–23: Capillary Blood Glucose Monitoring of Children by Glucometer *197*
Procedure–24: Incentive Spirometry in the Children *200*
Procedure–25: Chest Physiotherapy of the Children *203*
Procedure–26: Pediatric Basic Life Support Measures *207*
Procedure–27: Care of Chest Tube and Chest Drainage in Children *214*

JAYPEE BROTHERS

Procedure–28: Blood and Blood Product Transfusion to the Children *219*
Procedure–29: Bone Marrow Aspiration in Children *223*
Procedure–30: Lumbar Puncture of the Children *227*
Procedure–31: Precautions during Seizures in Children *230*
Procedure–32: Cancer Chemotherapy of Children: Administration and Safe Handling *233*
Procedure–33: Transition Management: Discharging and Transferring the Child *239*
Procedure–34: Immunizations in Children *243*

Unit-4: Child Health Nursing Procedures for Surgical Conditions 248

Procedure–1: Preoperative Care of Children *248*
Procedure–2: Postanesthesia and Postoperative Care of Children *250*
Procedure–3: Removal of Sutures and Staples in Children *254*
Procedure–4: Wound Care of Children *257*
Procedure–5: Assessment and Care of Children with Cast *259*
Procedure–6: Care of Children with Traction *262*
Procedure–7: Skeletal Pin Site Care of Children *265*
Procedure–8: Ostomy Care of the Children *267*
Procedure–9: Care of Children with Gastrostomy/Jejunostomy (Skin Care, Tube Change) *271*
Procedure–10: Care of Children with Tracheostomy *274*

Appendices *283*
Suggested Reading *299*
Index *301*

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UNIT 3

Child Health Nursing Procedures for Medical Conditions

INTRODUCTION

Children are commonly hospitalized due to various medical conditions such as pneumonia and other respiratory problems, diarrheal diseases, urinary problems, blood disorders, malignant conditions, and accidental injury. Childhood diseases are not same as adult disease conditions. Pathophysiology may vary in some situations.

Nursing interventions related to medical conditions of childhood illness include basic nursing procedures, hygiene care, feeding, medications, diagnostic procedures, and therapeutic management such as oxygen therapy, fluid therapy, blood product transfusion, etc.

Care approach to the children should be different than that of adult. Young children are unable to express their problems and emotionally become more upset easily. Age-appropriate variations of level of understanding and unexpected strange situations of healthcare institutions may make the children more noncooperative and apprehensive. Individualized problem-oriented care approach should be followed for expected and optimal recovery of the sick children.

All children require comprehensive health care with prevention of health problems, health promotion, curative management of disease conditions, and rehabilitation in the family or community in case long-term sufferings with diseases or disabilities. Holistic care is essential for all children in health and illness for maintenance of physical, mental, and social well being.

PROCEDURE–1: ADMISSION OF THE CHILD IN HOSPITALS/HEALTH CARE INSTITUTIONS

Clinical Guidelines

- Hospitalization of sick children is necessary for prompt recovery from the disease conditions and for prevention of complications.
- Principles of family-centered care should be followed by all healthcare providers during the admission process and throughout the course of the child's hospitalization.
- Admission of the children in health care facilities/institutions is allowed for the purpose of observation, investigations, treatment, and for specialized skilled nursing care depending upon the sick child's clinical conditions.
- Hospital admission may be emergency or planned. Emergency hospitalization of children may require in case of any acute illness due to medical or surgical conditions, accidental injury, burns, poisoning, etc. Planned hospital admission is usually permitted in case of chronic medical and surgical illnesses of the child for therapeutic purposes or for diagnostic procedure.
- Planned admission procedure can be done systematically in sequence of required activities, but emergency admission procedure should be performed based on child's life-threatening emergency conditions or priority problems. Lengthy admission procedure may be

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inappropriate, if the child's health status appears to be deteriorating rapidly.
- Each child must wear an identification band throughout the length of hospitalization. If it is not possible to place the identification band on the child's extremity, then other arrangements must be made to identify the child at all times (e.g., identification band or tag fixed on the isolette or bassinet or crib or bed).
- Children should be assigned to rooms based on gender, developmental age, diagnosis, and seriousness of the condition, communicability of illness, and projected length of hospital stay. Children are assigned a bed, crib, isolette, warmer-bassinet appropriate for their chronological age, developmental age, and/or clinical condition.
- All personal history and assessment data collected during admission process become permanent part of child's medical record.
- Stress and anxiety of the child and his or her parents/family members should be managed carefully from the time of admission in healthcare facility and also during hospital stay. Everyone's concern should be taken care for better cooperation.
- Incidental or planned health teaching should be given for optimal health outcome of the child, whenever possible to the hospitalized child with age-appropriate discussion and also to the parents and family members according to their level of understanding.

Equipment Required

For the Assigned Room and Personal Care of the Child

- Bed, crib, isolette, warmer-bassinet to provide rest and sleep to the child
- Bed linens, blanket, pillow, bath towels, washcloths, dress materials, diapers as needed
- Toiletry items, e.g., soap, body lotion, comb, toothbrush, toothpaste
- Hand washing facilities and hand rub or sanitizers
- Water pitcher, drinking glass, spoon, feeding utensils (child may wish to use own items)
- Wash basin, waste disposal containers, bedpan, urinal and weighing scale to take weight of the diaper, as required.

For Admission Process of the Child

- Hand hygiene supplies for hand wash and hand rub
- Identification band for the child, as per hospital policy or as appropriate
- Thermometer, cotton swab in a container, and 70% alcohol to clean the thermometer before measuring baby's body temperature
- Sphygmomanometer and blood pressure (BP) cuff of appropriate size for the child
- Stethoscope for auscultation of heart and lung sounds
- Pulse oximeter to assess oxygen saturation and heart rate
- Weighing scale for child 2 years of age or younger in lying position
- Standing weighing scale for older children
- Measuring tape to assess head, chest, abdomen, and mid-upper arm circumference (MUAC) and to measure recumbent length of child younger than 2 years
- Stadiometer, if available, to measure standing height of the older children. Ordinary tape measure can be used to assess standing height of the older children
- Child and family orientation brochures and identity/visitor card, as per hospital policy
- Waste disposal containers as per Biomedical Waste Management (BMW) guidelines
- Child's admission documentation forms, child's case sheet and treatment sheet.

Assessment and Preparation

- Assess the child for indication of admission in hospital. Assess the ability of the child and family members to cope the situation to plan to provide necessary support

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- Self preparation should be done with practice of standard precautions to prevent transmission of microorganisms
- Environment should be clean, well-lighted, well-ventilated, and free of overcrowding
- Articles and necessary equipment should be collected and arranged for easy accessibility
- Preparation of parent and family members: Explain the need for admission and its procedure and plan of management. Allow parent to remain with the child and to take part in routine care. Answer to their questions as asked. Obtain informed written consent form for hospitalization signed from the parent or legal guardian. Explain the hospital routines, rules and regulations those need to be followed
- Preparation of child: Explain the importance and procedure of hospitalization in age-appropriate simple language. Make the child comfortable. Provide friendly and gentle approach to get cooperation. Encourage to ask questions to the older children and answer in simple age-appropriate language.

Performing the Steps of Procedure with Rationale/Point of Emphasis

Preparing the Environment for Admission of a Child in Healthcare Facility

1. Perform hand hygiene to reduce the incidence of healthcare-associated infections (HCAIs).
2. Obtain all necessary articles, special equipment, and furniture for the child. It promotes comfort for the child and family members by ensuring that required items for personal care of the child are readily available.
3. Check all equipment, lights, fan/AC, bed controls for good working order to prevent delay in admission and treatment process.
4. Inform and prepare other patients and family members about arrival of new patient/child.
5. Prepare admission bed for the child with sheets and blanket. Adjust the bed to lowest horizontal position and brakes locked. Ensure all side rails of the bed, crib, or bassinet latch in all positions to prevent accidental fall and injury. Lower height of bed makes it easier and safer for child to get in and out of bed. Brakes should be in locked position to prevent hazardous movement of the bed or crib or bassinet.
6. Ensure everything is ready to receive the child in admission bed and for prompt initiation of need-based problem-oriented treatment.

Assessing the Child on Admission

1. Greet the child by name and the family member. Introduce yourself to promote friendly welcome. Anticipate questions and anxiety level to provide support as required
2. Escort the child and parent/family member to the child's room and bed. Introduce them with other patients of that room
3. Assist the older child to sit or lie down in the bed or crib. Allow the family members to stay with the child. Allow the child to sit on parent's lap during assessment, if feasible, or in the bed or in the crib. Make sure side rails are up for safety. Note the child's condition on admission when receiving at bed
4. Apply identification band or tag to the child and to parents (if applicable)
5. Determine reliable person who will be able to provide necessary information related to child's past medical history or complete history of the events that led to child's admission. Person accompanying the child may not know details history of child's illness
6. Collect detailed history of illness and related information for hospitalization as per standard format of the health facility
7. Ascertain the history of previous hospitalization of the child. Determine child's perception and temperament in relation to

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previous experiences with hospitalization and healthcare personnel. This helps to consider appropriate and individualized approach to nursing care and treatment for the hospitalized child

8. Perform hand hygiene before physical assessment of the child
9. Assess vital signs including respiration, heart rate, temperature, BP, oxygen saturation by pulse oximetry, and pain level. This provide baseline parameters to compare with future monitoring findings
10. Assess the signs and symptoms of illness, present on admission in the hospital
11. Obtain the following information, as child's health condition permits:
    - Body weight measurement is essential for calculating medication dosage for the child
    - Length or height measurement is required for calculation of body surface area and body mass index (BMI)
    - Head circumference measurement helps to detect cranial problems and abnormalities
    - Mid upper arm circumference is important to identify level and grade of malnutrition
    - Abdominal girth measurement is needed to identify abdominal distention
12. Examine the child from head to toe for presence of abnormal clinical features
13. Record history of child's health and illness and all examination findings as baseline data
14. Discuss health care topics with the child and family members related to the participatory care that are relevant to the age and development of the child
15. Involve the parent/family member during routine care of the child and allow the child as per his or her own ability to perform self care
16. Ensure and validate the mechanism to contact family members when they are not present in the hospital with the child
17. Notify the attending physician or healthcare prescriber of the child about the admission and arrival of the child at the unit. Inform the presence of any emergency or unusual findings of the child immediately
18. Obtain treatment order on admission from the physician/healthcare prescriber.
19. Initiate prescribed treatment/management of the child promptly avoiding any delay
20. Discard the waste generated during the admission procedure as per BMW rules
21. Take care of reusable items by decontamination, cleaning, and disinfection or sterilization. Perform hand hygiene
22. Document the child's admission in hospital record system and register.

Orienting the Child and Family Members to the Hospital Unit/Ward

1. Orient the child (if condition permits), and family members to the physical setup of the unit (source of drinking water, wash basin, toilet, urinal).
2. Demonstrate the use of lights, bedside table, bed control, side rails and bathroom facility.
3. Explain unit/ward routine, meal schedule, hand washing guidelines, waste disposal and other hygienic practices, visiting rules, available services in the health facility, support systems, smoking policy, play facilities, and communication pattern.
4. Encourage parents/family members to notify the staff for their needs and problems.
5. Inform the parent and child about healthcare providers and attending physician who will meet and see the child during hospitalization. This will prevent family's confusion.
6. Determine whether or not family has brought any medications, supplies or devices from home for child's use. Discuss with physician, if any of these can be used. Otherwise send them back to home with the family. This prevents child's property from getting lost.
7. Label the child's personal devices with child's name and medical record number

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8. Answer to the questions asked by parents or family members to clarify their doubts.
9. Discuss about the financial aspects and expenditure for child's hospitalization, as per institutional policy especially in private sectors.

Securing the Valuable Items of the Child

1. Place child's clothes and toiletries in assigned locker or closet. This prevents child's clothing and other care items from getting mixed with others.
2. Encourage child's family to take all valuables, costly items, and money to their home, whenever possible. If family member is unavailable to take the valuable items to home, then list all items and preserve safely in presence of another employee and keep record.
3. Obtain parent's or family member's signature when handing over and returning the valuable items. Keep one copy of receipt as hospital document.
4. Allow personal dolls, toys, story books, musical tapes, and play materials to help the child to cope in the hospital environment.

Special Points to Remember for Newly Hospitalized Child

- Follow evidence-based scientific principles of therapeutic and nursing interventions for the disease process of the sick child
- Provide individualized need-based support to the child and family members to reduce stress and anxiety in friendly approach along with family involvement
- Make the child and family member comfortable. Ensure for best treatment and care
- Attempt to gain confidence of the child and parents during the period of hospital stay
- Hospitalization of the child is the break in the unity of the family. So, emotional support should be considered first for the child and family, then management of the physical problems should be provided to the sick child
- Special approach must be followed for terminally ill or dying children and their family.

Evaluation and Documentation

- Evaluate child's and family's understanding of admission process and orientation to the unit. Determine the area of concern of the family and the child to plan for necessary support accordingly
- Document the admission process in hospital record and assessment data in child case sheet including history of illness, examination findings and investigation reports, if any.

Communication and Teaching for Homecare

- Communicate with child and parents about the child's health status, plan of management, discharge planning, financial aspects, importance of family participation and about hospital rules and regulations
- Teach the child (as appropriate) and parents about the followings:
  - Rest, sleep, activity limitation, dietary restrictions, personal hygiene including hand wash
  - Environmental hygiene and cleanliness with appropriate waste disposal
  - Emergency conditions or danger signs requiring immediate medical attention
  - Use of medications, adverse effects of drugs and necessary precautions
  - Use of recreational and diversional measures for the child to cope with hospitalization
  - Care at home after discharge from hospital for continuation of treatment
  - Plan for follow-up visits, its date, time and place
  - Need for contact with community healthcare workers (ASHA, ANM, CHO), if needed
  - Importance of regular health check up and practice of health promotion activities.

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PROCEDURE–2: ASSESSMENT OF VITAL SIGNS OF INFANTS/OLDER CHILDREN

Clinical Guidelines

- Vital signs are physical signs concerning functions essentials to life and include respiratory rate, heart rate, body temperature, and BP. Alteration of these signs helps to detect abnormal physiological functioning of the body system. Vital signs are objectively measurable and verifiable
- Some healthcare professionals consider patient's level of pain to be a "fifth" vital sign, although this is not accepted by all. While all healthcare professionals agree that experience of pain by the individual is a critical feature of his or her adaptation to illness. Level of pain is considered as subjective
- Other important signs of illness, such as SpO_2, CRT, skin color, activity pattern and level of consciousness, should be assessed to identify the health status of the child and to diagnosis the disease process
- Various electronic automated devices are available to measure heart rate, SpO_2, respiration, temperature, and BP including ECG (e.g., pulse oximeter, BP monitor, multiparameter monitor, cardiorespiratory monitor, etc).
  Manufacturers' instructions must be followed to use all these devices. Comparison should always be done between electronic devices findings with routine examination findings by healthcare providers
- Purposes of vital signs measurement include to assess general health status of the child, to assist in diagnosis of illness and to observe the therapeutic effects of medications or medical interventions or surgical procedures
- Vital signs should be measured to assess the baseline health condition of the child on admission at triage bed or after receiving in the assigned bed inside the unit. In case of critically ill child, reassess vital signs at every 30 minutes interval till the child's condition is stabilized. Routine assessment of vital signs should be done at 4–6 hours intervals are as per unit policy. In emergency conditions, assess vital signs promptly
- BP is measured in neonates if clinical signs of hypotension are present or in case of renal disease or in congenital heart disease such as coarctation of aorta is suspected. Universal screening of neonates is not recommended
  BP should be measured in a child younger than 3 years of age with history of neonatal condition requiring intensive care, symptoms of hypertension or hypotension, elevated intracranial pressure, recurrent urinary tract infections, renal or cardiac disease, in case of malignancy or transplant (solid, bone marrow), and treatment with medications known side effects to affect BP. When child older than 3 years of age is seen in medical setting BP should be measured. A decrease in BP is a late sign of shock in children.
- Use of mercury thermometer and mercury BP instrument to assess body temperature and BP is not recommended at present to prevent mercury hazards.
- Standard precautions of infection control measures should be followed to prevent cross infections during the procedure.
- Recording and reporting of vital parameters should be done promptly and accurately as it is one of the most important legal documents regarding the improvement and deterioration of the health condition of the sick hospitalized child.

Equipment Required

- Hand hygiene supplies for hand wash and hand rub
- A clean tray containing digital thermometer, pediatric stethoscope, pediatric size sphygmomanometer (aneroid) with appropriate size BP cuff, a bowl with dry cotton swabs, a bottle of 70% alcohol or alcohol wipes (if available)
- Watch or clock with second hand or digital readout to count respiration and heart rate

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- Electronic automated devices (pulse oximeter, multiparameter monitor, BP monitor), if available and as per child's condition
- Chart having normal ranges of age-appropriate vital signs of the children
- Waste disposal containers as per BMW rules
- Vital signs documentation sheet/monitoring chart and child's case sheet.

Assessment and Preparation

- Assess the associated factors and signs of alteration of vital signs (e.g., tachypnea, bradypnea, tachycardia, bradycardia, hypothermia, hyperthermia/fever, hypotension, hypertension and other abnormalities). Review the child's record for medical diagnosis, history of illness, and current medications used. Assess the child and family members for anxiety, level of understanding, and ability to participate during the procedure
- Self-preparation: Review the age-appropriate range of vital signs of children, those should be readily available in hand during the procedure for quick reference
- Environment clean, calm, quiet, well lighted, free from noises and overcrowding
- All necessary articles and items should be collected and arranged near the child's bed
- Preparation of parents: Explain the steps of the procedure and equipment to be used for the procedure briefly. Discuss about importance of vital signs measurement of the child
- Preparation of child:
  - Explain the procedure to the child, if condition allows, in age-appropriate language
  - Allow the child to handle the equipment, if he or she is able to do that
  - Review child's medical record for previous vital signs, when available to get the baseline data for comparison. Check record for desired parameters
  - Note the child's medical diagnosis and history of respiratory problems, cardiac problems, infections or any other disease conditions or difficulties which may alter the vital signs
  - Make the child clean, comfortable, calm and quiet in supine position, whenever possible.

Performing the Steps of Procedure with Rationale/Point of Emphasis

Assessing Respiratory Rate

1. Perform hand hygiene and assemble all necessary items near the child bed.
2. Determine whether child is taking any medications that may affect respiratory rate and depth, e.g., salicylates can increase rate and depth of respiration.
3. Assess the child's respiratory rate first, before disturbing the child for other procedures that may affect the respiratory rate. Count respiration when the child is calm and quiet. Don't touch the infant and young child before counting respiration, if possible, because touch can stimulate the child and alter respiratory rate.
4. Count rate and rhythm of respirations of the child:
   i. Observe the abdomen for movement during respiration in infant and young child. As young children are primarily diaphragmatic breathers
   ii. Observe thoracic movements in older child. As older children depend more on their intercostal muscles for respiratory activity
   iii. Count respirations in infant for 1 minute. Infants are episodic breathers, it is normal for them to vary their respiratory rate and pattern. So count for full 1 minute to obtain more accurate measure of respiration
   iv. If respirations are irregular in older children, then count the number of respirations for one full minute
   v. If the older child is having regular respirations, then count respirations for 30 seconds and multiply by two (2) to get breathing rate per minute.
5. Note depth and pattern of respirations and presence of chest retractions, abnormal

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sounds in respirations, grunting, nasal flaring, cyanosis (central or peripheral), pallor, restlessness, anxiety, fussiness, irritability, level of activity and position of comfort (e.g., sitting up or leaning forward)
   - This helps to identify respiratory distress and signs of hypoxia. If respiratory distress is noted, then immediately auscultate breath sounds and report to appropriate healthcare professional/physician for prompt initiation medical management. Immediate medical attention is required to evaluate possible causes of respiratory distress and to prevent respiratory failure.

6. Make the child comfortable. Perform hand hygiene.
7. Communicate with team members about the abnormal respiration immediately.
8. Record respiratory rate in breaths per minute and all other observational findings.

Measuring Apical Heart Rate by Auscultation and Measuring Peripheral Pulse by Palpation

1. Determine the site for counting apical heart rate and peripheral pulse.
2. Ensure the child is not crying, not agitating and having no pain and anxiety. These conditions usually increase the heart rate. A quiet, cooperative or sleeping child will contribute to more success when auscultating the heart rate. Noisy respirations, crying infant and environmental noises detract from the ability to detect heart sounds and possible murmurs or presence of any other abnormalities.
3. Perform hand hygiene to prevent transmission of microorganisms.
4. Cleanse the stethoscope chest piece and ear pieces with alcohol wipes/swabs before and after examination to prevent cross infections. Discard the used alcohol swab/wipes in the waste disposal container
5. Insert ear pieces with tips bent forward toward face, considering normal anatomy of ear
6. Palpate the chest wall and identify the site of auscultation at point of maximal impulse:
   i. In children younger than 7 years age, auscult heart rate at just left of the midclavicular line and in fourth intercostal space
   ii. In children older than 7 years of age, auscult heart rate at left midclavicular line and in fifth intercostal space.
7. Warm the chest piece of the stethoscope by rubbing it in your palm. Cold stethoscope can cause discomfort or startle the child
8. Place diaphragm of stethoscope over the point of maximal impulse and count heart rate. Counting for full 1 minute gives more accurate heart rate, particularly when sinus arrhythmia or other irregularity is present. Always count heart rate for full 1 minute, if the heart rate is irregular. If the child is having regular heart rate, then count for 30 seconds and multiply by two (2) to get heart rate beats per minute.
9. Note rhythm and quality of heart sound of the child.
10. Report the presence of murmur or any other abnormality to the physician. Murmurs are not uncommon in infants, but must be evaluated for potential pathology.
11. Measure peripheral pulse by palpation as follows **(Fig. 3.1)**:
    i. Identify the site; radial and brachial pulses are most frequently used for easy accessibility in upper limbs. The dorsalis pedis pulse can be palpable on the dorsum of the foot or posterior tibial pulse can be felt in lower extremities
    ii. Locate the child's pulse and palpate with your first two or three fingers. Do not use excessive pressure, it may occlude the pulsation. Don't use thumb to check pulse because the thumb has

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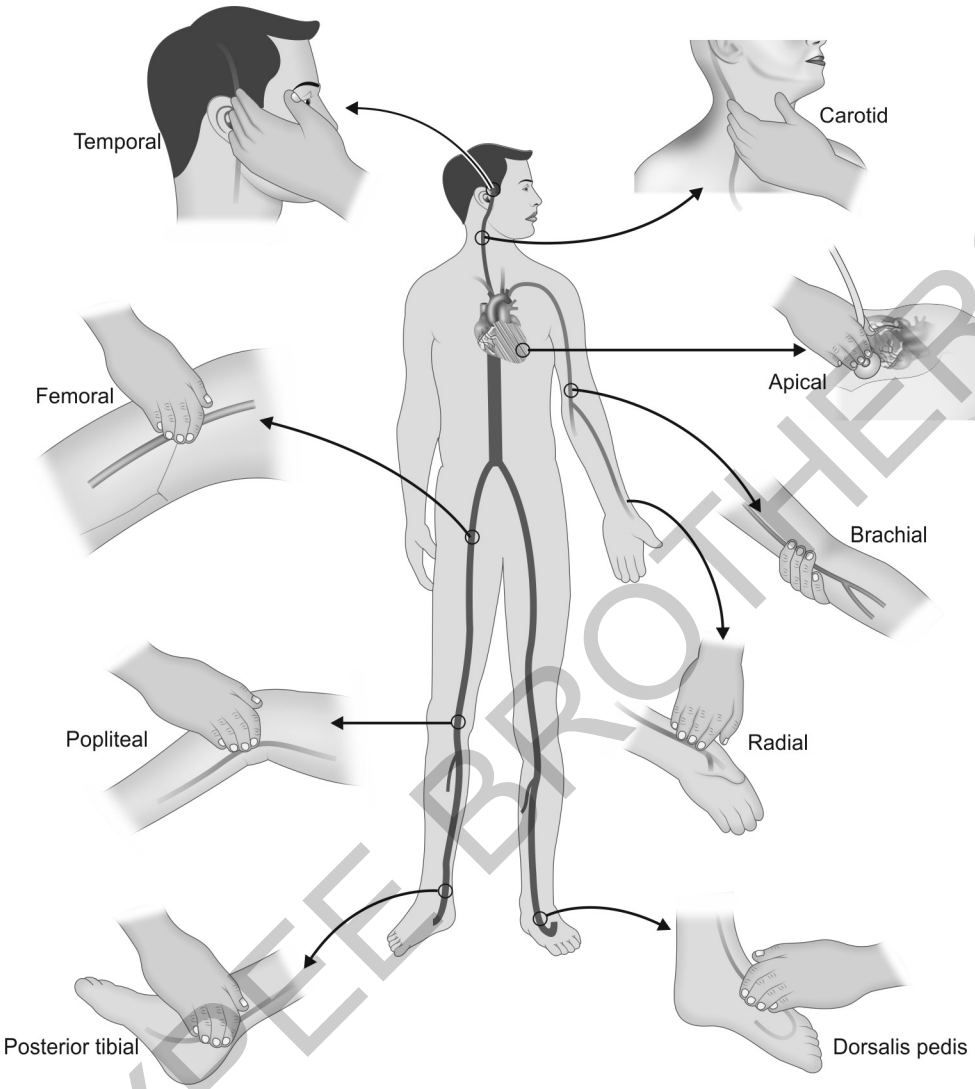

Fig. 3.1: Different sites of assessment of pulse of older children.

a pulse and may be confused with the child's pulse

iii. Note rhythm of pulse. If the pulse is irregular, then count for full 1 minute. If the child is having regular pulse, then count for 30 seconds and multiply by two (2) to get pulse beats per minute

iv. Check and count peripheral pulse in all four limbs, whenever indicated.

12. Compare heart rate and pulse rate. Find any difference in pulse rate in limbs.
13. Compare the heart rate with the display of it in the monitor or pulse oximeter.
14. Perform hand hygiene to reduce transmission of microorganisms.
15. Record heart rate, pulse rate, and other abnormal findings. Note the site used to obtain heart rate and pulse rate and child's present activity level (e.g., asleep, quiet, crying, fussing, restlessness).

Documentation of assessment findings in child's record provides basis for comparison and considers as part of legal record. Report the abnormal findings.

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Measuring Axillary Temperature using Digital Thermometer

1. Perform hand hygiene and make the child comfortable for temperature assessment.
2. Take out the digital thermometer from its container.
3. Wipe the thermometer with alcohol swab from bulb to stem in circular motion.
4. Dry the child's one axillae with dry cotton swab to remove moisture.
5. Place the tip of the thermometer at apex or roof of the axillae and support with arm. Keep the thermometer parallel to the child's arm and hold close to the child's body to keep the thermometer in place.
6. Wait for beep sound from the thermometer. Take out the thermometer from child's axillae gently to note the temperature and to interpret the temperature reading.
7. Read the child's body temperature to record it in the child's monitoring sheet.
8. Clean the thermometer with alcohol swab again after use from stem to bulb and preserve in the container gently. Each child should have personal digital thermometer for use to prevent cross infections.
9. Make the child comfortable. Discard all wastes. Perform hand hygiene.
10. Record the noted temperature in the chart or monitoring sheet.

Note: Temperature measurement can be done using disposable thermometer (e.g., chemical dot thermometer), as per availability. Electronic thermometer can be used to measure oral or rectal or tympanic temperature, whenever indicated in some special childhood conditions. Use of electronic devices should be done as per manufacturer's guidelines following basic anatomy of the body parts and contraindications for use of the devices.

Measuring Blood Pressure (BP) by Auscultation Method

1. Review child's previous BP readings, if available.
2. Analyze child's clinical diagnosis and current medications that can affect on BP.
3. Perform hand hygiene. Clean the diaphragm of stethoscope with alcohol wipes
4. Select the site of BP measurement. Use right arm whenever possible
   - Use same site and position of previous BP measurement, if already taken. If child refuses to use same site, then use another extremity
   - Do not use extremity that has injury, wound or foreign devices (e.g., IV cannula, arteriovenous fistula or renal dialysis shunt) or having altered circulation (e.g., Coarctation).
5. Select appropriate size BP cuff. The bladder width of BP cuff should be about 40% of the arm circumference midway between the olecranon (elbow) and the acromion (shoulder). Using too small cuff may falsely elevate the BP measurement and too large cuff may give falsely low reading. Use manufacturer's guidelines on the cuff for appropriate selection
6. Center the bladder of the BP cuff on the extremity proximal to the pulse (e.g., at the brachial site, position about 1–2 inches above the antecubital fossa) and snugly secure the cuff. Loose cuff may give false reading
7. Do not apply the cuff over clothing. It may interfere with correct placement of cuff
8. Measure BP after 3–5 minutes of rest, when possible, to prevent false elevation of BP
9. Position the child's arm (selected extremity) at heart level to get accurate reading
10. Locate the pulse at the site. Place the bell of the stethoscope where the pulse is felt, below the bottom edge of the cuff
11. Close the sphygmomanometer valve and inflate the BP cuff to a pressure above the point at which artery pulsation is obliterated. Stabilize the extremity during BP measurement. Movement may cause extra sounds and interfere with ability to hear pulsations
12. Deflate the BP cuff at a rate of 2–3 mm Hg per second to ensure accurate measurement

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13. Note Korotkoff sounds, beginning with onset of tapping sound. This correlates with phase I, which represents systolic pressure
14. Note muffling of the sound, if applicable. This represents phase IV and may occur more commonly in preadolescents
15. Note disappearance of sound. Silence correlates with phase V, which corresponds with diastolic pressure
16. Do not reinflate BP cuff during deflation. If it is necessary to repeat BP measurement, then allow few minutes in between another measurements
17. Fully deflate the BP cuff on completion of measurement and remove the cuff from arm
18. Make the child comfortable. Remove the instrument. Take care of all articles used
19. Perform hand hygiene. Record and inform the BP findings, extremity used and cuff size
20. Interpret the BP as high or low. Compare with previous BP findings, if taken already and with the BP value measured by the automated device method.

Evaluation and Documentation

- Evaluate the findings of child's vital signs (respiration, heart rate, body temperature, and BP) measurement for presence of any abnormalities and compare with previous findings, if already assessed
- Document the findings of vital signs assessment with date and time. Keep record of the presence of abnormal clinical features and child's response. Record about the sites of measurements and equipment used.

Communication and Teaching for Homecare

- Communicate with child and parents about the health status of the child, plan of management, tentative duration of hospital stay and anticipated prognosis of illness
- Teach the parents about use of thermometer, counting of respiration, recognition of abnormal vital signs (e.g., respiratory distress, fever) and need for contact of the healthcare provider for medical help. Instruct about participation in routine care of the child in hospital and continued care at home after discharge. Discuss about use of medications with necessary precautions and plan of follow-up care.

PROCEDURE–3: ANTHROPOMETRY OR ASSESSMENT OF GROWTH PARAMETERS OF CHILDREN

Clinical Guidelines

- Anthropometry is the science of measuring the human body. Usually body weight, length or height and head circumference are measured to assess the physical growth of the children and to detect any abnormal deviations as failure to thrive or growth retardation. Chest circumference and MUAC measurements also help in detection of abnormal growth and nutritional status of the children
- Growth parameters assessments are obtained at each visit to the healthcare facilities or at each home visit by the healthcare provider to detect growth failure. It is essential for all children on admission to healthcare institutions, as baseline data for planning of treatment
- Daily weight recording at same time, ideally in the morning before breakfast, using same weighing machine of hospitalized children is essential and important for calculation of IV fluid therapy and dose of medications. It should be measured in all hospitalized children, especially for children with abnormal cardiac and renal functions with evidence of accumulation of fluid as edema, fluid and electrolyte imbalances, excessive loss of body fluids in diseases conditions and to assess nutritional status
- Recumbent length is measured usually up to 2 years of age of the child in lying down position using infantometer or simple tape measure. After 2 years of age, standing height is measured using

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- Is based on clinical practice guidelines of pediatric and neonatal health care
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- Unit-1 contains eight basic topics for caring of children with special considerations in health care. Unit-2 contains 30 neonatal nursing procedures.Unit-3 contains 34 procedures for the young infants and children in medical illnesses. Unit-4 contains 10 procedures related to surgical problems of the children
- Each procedure is presented with a specific format of: (a) Clinical Guidelines, (b) Equipments Required, (c) Assessment and Preparation, (d) Performing the Steps of Procedure with Rationale and Point of Emphasis, (e) Evaluation and Documentation and (f) Communication and Teaching.

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