SKILL 2 Pulse

EQUIPMENT

Stethoscope (for apical pulse)
Watch with a second hand

GENERAL GUIDELINES FOR VITAL SIGNS

1. Check record for baseline and factors (age, illness, medications, etc.) influencing vital signs. *Provides parameters and helps in device and site selection.*
2. Gather equipment, including paper and pen, for recording vital signs. *Promotes organization and efficiency.*
3. Wash hands. *Reduces transmission of microorganisms.*
4. Prepare child and family in a quiet and nonthreatening manner. *Enhances cooperation and participation; reduces anxiety and fear, which can affect readings.*

NOTE: Infants and young children may be quiet and more cooperative if vitals signs are obtained while child is sitting on caregiver's lap.

APICAL PULSE

PROCEDURE

Apical pulse should be the first vital sign assessed. *Other assessment procedures may be upsetting, leading to increased heart rate and crying, which makes hearing apical pulse difficult.*

An apical pulse should be taken on neonates, infants, and young children (under 2 years of age) and on all children with cardiac problems or receiving digitalis preparations. *Radial pulse is unreliable in neonates and infants due to their small size and normally rapid heart rate. Radial pulse is unreliable in children with cardiac problems or receiving digitalis preparations due to possibly irregular heart rhythm.*

1. Steps 1–4 of General Guidelines.
2. Cleanse earpieces and diaphragm of stethoscope with an alcohol wipe. *Reduces transmission of microorganisms from practitioner to practitioner and from client to client.*
3. Warm stethoscope in hand for 5–10 seconds. *Prevents client from being startled by cold bell; promotes client comfort.*
4. Raise client's gown to expose sternum and left chest. *Allows for proper placement of stethoscope.*
5. Place stethoscope over point of maximal impulse (PMI). *Enhances ability to clearly hear heart sounds.*
   a. For infant, PMI is at 3rd to 4th intercostal space near the sternum. (Figure 6)

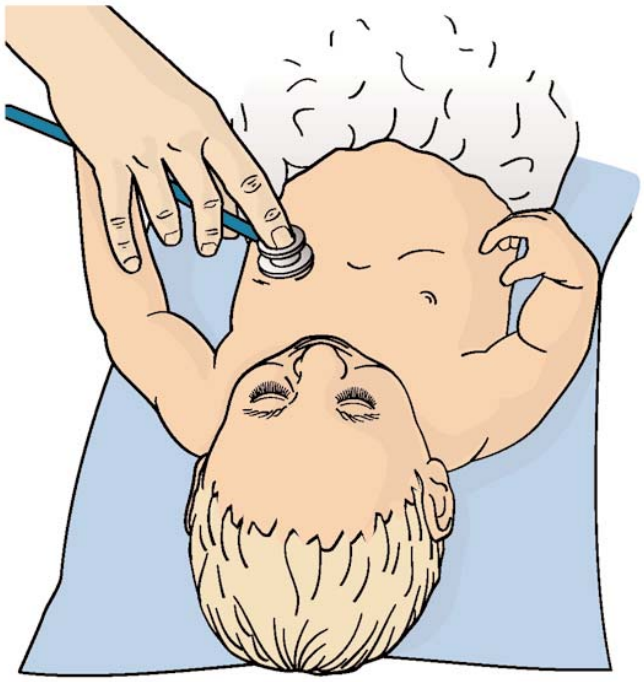

FIGURE 6 Place stethoscope over point of maximum impulse to count heart rate.

   b. For older child, PMI is at 5th left intercostal space in the midclavicular line.
6. Count pulse for one full minute. Each "lub-dub" sound is one beat. Assess apical pulse for rate, rhythm, and any abnormal heart sounds. If an irregular rhythm, determine if there is a regular pattern to the irregularity. *Counting for less than one minute may lead to inaccurate heart rate, especially in neonates, infants, and young children where arrhythmia is normal or in children with cardiac problems or receiving digitalis preparations.*
7. If appropriate, evaluate for pulse deficit between the apical pulse and peripheral pulse by simultaneously taking the apical and radial pulse. For the inexperienced nurse this may be more accurately accomplished by using two nurses, one to count the apical pulse and one to count the radial pulse. Both nurses should use the same watch when performing this procedure.
8. Wash hands. *Reduces transmission of microorganisms.*

continued

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SKILL 2 Pulse *continued*

RADIAL PULSE

PROCEDURE

A radial pulse is reliable in children over 2 years of age except as specified under apical pulse above. Some agency policies require apical pulses on all children regardless of age or condition. Be familiar with the policy of your agency.

1. Steps 1–4 of General Guidelines.
2. Place index and middle finger along child's radial artery. *Fingertips are sensitive to touch. Use of thumb might lead to nurse feeling own pulse.*
3. Apply gentle pressure, enough to feel the pulsating artery. *Too firm a pressure obliterates the pulse. Too gentle a pressure does not allow one to feel the pulse.*
4. Count pulse rate for 30 seconds and multiply by two to get the rate per minute. If there are any abnormalities in the pulse, count the rate for one full minute. *Ensures sufficient time to count irregular beats.*
5. Assess the pulse for rate, rhythm, amplitude (strength), and elasticity of vessel (distention of vessel).
6. Wash hands. *Reduces transmission of microorganisms.*

ASSESSMENT OF PERIPHERAL PULSES

PROCEDURE

1. Steps 1–4 of General Guidelines.
2. Assess peripheral pulses by placing index and middle finger against pulse site and applying gentle pressure. Pulse sites to be assessed generally include brachial, radial, femoral, popliteal, posterior tibial, and dorsalis pedis (pedal). See steps 2 and 3 of radial pulse procedure.
3. Assess equality of pulses (amplitude and elasticity of vessel) bilaterally, i.e., right side compared to left side. Assess for any pulse deficit between upper and lower extremities.
4. Wash hands. *Reduces transmission of microorganisms.*

DOCUMENTATION

1. Pulse rate and site.
2. Rhythm, and, if applicable, number and character of irregular beats.
3. Sites, character, and quality of peripheral pulses. Note if bilateral equality and if deficits exist between upper and lower extremities.
4. Who notified if concerned about findings.

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