

## Procedure #2: Assessing Blood Pressure

### PURPOSES

- To obtain a baseline measurement of arterial blood pressure for subsequent evaluation
- To determine the client's hemodynamic status (e.g., cardiac output: stroke volume of the heart and blood vessel resistance)
- To identify and monitor changes in blood pressure resulting from a disease process or medical therapy (e.g., presence or history of cardiovascular disease, renal disease, circulatory shock, or acute pain; rapid infusion of fluids or blood products)

### Equipment

- Stethoscope
- Blood pressure cuff of the appropriate size
- Sphygmomanometer

### Preparation

1. Ensure that the equipment is intact and functioning properly. Check for leaks in the tubing between the cuff and the sphygmomanometer.
2. Make sure that the client has not smoked or ingested caffeine within 30 minutes prior to measurement.

### Performance

1. Prior to performing the procedure, introduce self and verify the client's identity using agency protocol. Explain to the client what you are going to do, why it is necessary, and how he or she can participate. Discuss how the results will be used in planning further care or treatments.
2. Perform hand hygiene and observe appropriate infection prevention procedures.
3. Provide for client privacy.
4. Position the client appropriately
  - The adult client should be sitting.
  - The elbow should be slightly flexed with the palm of the hand facing up and the arm supported at heart level. Readings in any other position should

be specified. The blood pressure is normally similar in sitting, standing, and lying positions

- Expose the upper arm.

**5.** Wrap the deflated cuff evenly around the upper arm. Locate the brachial artery.

- For an adult, place the lower border of the cuff approximately **2.5 cm (1 in.)** above the antecubital space.

**6.** If this is the client's initial examination, perform a preliminary palpatory determination of systolic pressure.

- Palpate the brachial artery with the fingertips.
- Close the valve on the bulb.
- Pump up the cuff until you no longer feel the brachial pulse. At that pressure the blood cannot flow through the artery. Note the pressure on the sphygmomanometer at which pulse is no longer felt.
- Release the pressure completely in the cuff, and wait 1 to 2 minutes before making further measurements.

**7.** Position the stethoscope appropriately.

- Cleanse the earpieces with antiseptic wipe.
- Insert the ear attachments of the stethoscope in your ears so that they tilt slightly forward.
- Ensure that the stethoscope hangs freely from the ears to the diaphragm.



- Place the bell side of the amplifier of the stethoscope over the brachial pulse site.
- Place the stethoscope directly on the skin, not on clothing over the site

**8.** Auscultate the client's blood pressure.

**9.** If this is the client's initial examination, repeat the procedure on the client's other arm. **There should be a difference of no more than 10 mmHg between the arms.**

The arm found to have the higher pressure should be used for subsequent examinations

**10.** Document and report assessment data according to agency policy. Record two pressures in the form

**"130/80" mmhg** where

**"130" is the systolic Blood pressure**

**" 80" is the diastolic Blood pressure.**

- **Blood Pressure Measured in millimeters of mercury (mm Hg)**
- **Recorded as systolic over diastolic**

Hypertension ----- increased blood pressure

Hypotension ----- decreased blood pressure