

PROCEDURE FOR: Arterial Blood Pressure Monitoring

- POLICY:
1. Arterial lines can only be monitored in the following units (ICU, MFICU, Cardiac Step-Down Unit, PACU).
  2. Monitoring alarms must be on at all times.
  3. Prior to insertion, MD/APRN will perform Allen's test.
  4. Fluid bag and tubing will be changed every 3 days.

EQUIPMENT: Pressure monitor/module/transducer cable  
Arterial pressure monitoring system/transducer  
IV flush system consisting of:  
-500cc NS, unless otherwise ordered  
-Pressure infuser bags  
Radial artery or femoral artery catheter kit  
Sterile gloves  
Sterile towels  
Chlorhexidine prep  
Silk sutures (3-0 and 4-0)  
Straight needle and/or needle holder  
Central line dressing kit  
Level  
Optional:  
-1% Lidocaine solution  
-Cutdown tray  
-Arm board

PROCEDURE:

ACTION

POINTS OF EMPHASIS

1. Explain procedure to patient.
2. Assemble normal saline solution, tubing and flush system. A pressure infusion bag may be applied at a low pressure to assist with priming. Once primed, set the pressure bag at 300 mmHg.
3. Level and zero transducer.
4. To level the transducer, place patient supine (HOB may be at a level of comfort for the patient, up to 45 degrees.) Next, using level, align transducer's "zero stopcock" to patient's right atrium (4<sup>th</sup> intercostal space, midchest).
2. Be sure to remove all air from the bag & flush system; change stopcock caps to closed caps to avoid air entering the system.
4. This aligns with transducer for accurate blood pressure readings.

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ACTION

POINTS OF EMPHASIS

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| <p>5. To zero the transducer, turn the zero stopcock off to the patient and open the system to air by removing the dead-ended cap. Press zero on the bedside monitor. Once zero displays, replace dead-ended cap. Reposition the stopcock to the monitoring position and be prepared to attach the system to the arterial catheter.</p> <p>6. MD/ARPN will insert arterial catheter and secure it with sutures. RN will apply sterile dressing and leave loop of tubing visible.</p> <p>7. Use arm board to immobilize area if necessary.</p> <p>8. Refer to hemodynamic monitoring protocol for arterial blood pressure monitoring care.</p> | <p>6. The loop ensures visibility for blood return and system integrity.</p> |
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APPROVAL: ICU Standards Committee  
Nursing Standards Committee  
Cardiac Step-Down Standards Committee

EFFECTIVE DATE: 1/86

REVISION DATES: 2/87, 1/88, 2/90, 1/93, 11/93, 1/95, 3/96, 8/97, 8/99, 10/03, 10/09