

ARTERIAL LINE MONITORING

1. Level: Air Med personnel only
2. Purpose: Defining proper operation of an invasive arterial pressure-monitoring device by an Air Med staff member.
3. Indications: transport of the patient with an in use arterial line, for conditions such as:
 - 3.1. Monitoring continuous blood pressure especially in patients with hemodynamic instability.
 - 3.2. When vasoactive medications are needed and the responses to such medications require continuous blood pressure monitoring.
4. Precautions: The provider should understand the operation and limitations of the arterial line before transporting a patient with the device placed as well as being familiar with the specific monitoring device used and its alarms/parameters.
5. Procedure: Arterial Pressure Monitoring
 - 5.1. Confirm placement and patency of arterial line and it's compatibility to the Air Med transducer equipment.
 - 5.2. Confirm presence of circulation distal to catheter.
 - 5.3. Ensure the device is secured and providing data.
 - 5.4. For radial and brachial arterial lines keep the arm in extended position for accuracy and patency of the line.
 - 5.5. Keep the arterial site clearly visible at all times. i.e: On top of sheets.
 - 5.6. Use a clear type dressing over the arterial line exit site for clear view of the site at all times and to prevent unnoticed adverse events such as hemorrhage or disconnection and signs of infection.
 - 5.7. Set appropriate scale and alarm parameters as appropriate.
 - 5.8. Re-zero the transducer after any adjustments to the patient position or arterial line.
 - 5.9. When measuring non-invasive blood pressure (NIBP) use alternate arm to invasive arterial cannulation.
 - 5.10. **Do not** inject any medication or other substances via the arterial line. The only purpose of an arterial line to be utilized is for close blood pressure monitoring.
6. Zeroing of transducer line: To ensure consistency and accuracy of the arterial blood pressure monitoring the transducer must be positioned and calibrated regularly to an anatomically consistent site. This site is called the phlebostatic axis.
 - 6.1. Position patient on their back
 - 6.2. Patient may be positioned with the head of the bed elevated between 0-60°
 - 6.3. Flush the system
 - 6.4. Position the transducer so that it is level with the heart or phlebostatic axis (4th intercostal space mid axillary line).
 - 6.5. Turn stop-cock on the transducer so that it is off to the patient.
 - 6.6. Remove cap
 - 6.7. Zero on transducer/monitor
 - 6.8. Turn stop-cock so that it is open to monitoring and patient.