

Adult – Basics of Hemodynamic Monitoring

Course Description: This module offers a comprehensive guide to understanding the fundamental principles and indications for invasive hemodynamic monitoring. It discusses the indications and possible complications involved with the insertion of central venous lines, arterial lines, pulmonary artery (PA) catheters, and with ICP monitoring. Expected CVP, RV, PAP, PCWP, CO, and CI readings; waveforms; and troubleshooting tips are offered. This module is a great orientation tool for nurses who want to pursue careers in critical care or emergency nursing.

Course Objectives:

- Explain the fundamental principles and indications for invasive hemodynamic monitoring
- Discuss the relevance of "zeroing" the lines to the phlebostatic axis prior to waveform readings
- Describe the indications for central venous lines and explain the normal parameters expected
- List the indications and contraindications for pulmonary artery (PA) catheters
- Describe the floating of a pulmonary artery catheter through the heart during insertion
- Compare and differentiate CVP, RV, PAP, and PCWP readings and waveforms
- Compare and differentiate cardiac output and cardiac index
- Briefly discuss the indications for arterial lines and describe the expected waveforms
- Describe the indications for ICP, including the expected parameters and nursing considerations
- Review troubleshooting tips for dampened waveforms and/or abnormal readings with hemodynamic monitoring
- List the possible complications associated with hemodynamic monitoring