Arterial Line Nursing Care and Arterial Blood Gas Drawing Abstract

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Critically ill patients require arterial lines to monitor blood pressure trends, titrate drug therapies, and obtain blood samples for arterial blood gases and laboratory studies. Overall, the nurses in the critical care step-down unit do not frequently care for patients with these invasive devices. As a result of this decreased prevalence, there was an observed and verbalized interest to strengthen arterial line care and skills. Evidence-based literature reveals that blood gas samples obtained from an arterial line provide the most exact measurement of the partial pressure of oxygen and carbon dioxide in the body, as well as gives deeper insight into effective ventilation. The literature also determines that the majority of arterial catheter blood pressure monitoring systems were either overdamped or underdamped, resulting in inaccurate systolic and diastolic pressure readings. Given these findings, it is essential for nurses to maintain protocol-driven arterial line care and accurate arterial blood gas practices. The unit presentation included a simulation session in which nurses were able to practice the arterial blood gas drawing skills through an assigned competency and video recording. Likewise, an educational handout was developed and shared so that the nurses can refer to the specific policy statements, direct patient care takeaways, and steps to retrieve online resources via the hospital's website. In order to fully ensure that patients receive optimal treatment, it is crucial that nurses are aware of the factors and care that affect the safety and accuracy of arterial monitoring.

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