Drug, What Drug? Intensive Care Unit Nurses' Reported Perceived Pharmacologic Knowledge and Confidence

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Purpose: The purpose of this study was to survey Registered Nurses working in an intensive care unit (ICU) on their perceived pharmacologic knowledge and confidence. The study aimed to answer the following research question: What perceptions exist among ICU Registered Nurses on their pharmacologic knowledge and confidence of specific medication classes commonly encountered in the critical care setting in conjunction with their reported experiences regarding educational and experiential backgrounds, medication errors, and pharmacologic resources?

Methods: A descriptive study design in which the author developed a survey questionnaire consisting of quantitative and open-ended questions. Responses to open-ended questions were categorized based upon identified similarities and frequency in class of drugs or specific drugs or medication administration processes mentioned by respondents. Quantitative responses were analyzed using descriptive statistics.

Results: Registered Nurses (n = 62) in various ICU settings in a regional hospital in the southern United States responded to the survey. Significant implications were discovered in responses regarding perceived knowledge of antianxiolytics, perceived knowledge of neuromuscular blockers, confidence in assessing drug-drug and drug-food interactions, confidence in assessing applicable labs, and reliance upon an intravenous (IV) pump to calculate dose and/or rate of prescribed IV medications. 4.8% of Registered Nurses surveyed reported having no knowledge at all with antianxiolytics, while 1.6% reported having no knowledge of neuromuscular blockers. Antianxiolytics, antiarrhythmics, and neuromuscular blockers were also all specific classes in which Registered Nurses highly reported being only slightly knowledgeable in at 21%, 60.5%, and 22.6% respectively. Perceived confidence in assessing drug-drug and drug-food interactions or applicable labs associated with medications were among the lowest self-perceived as 8.1% and 1.6% of respondents reported having no confidence respectively. 75.8% of Registered Nurses surveyed reported relying upon an IV pump to calculate dose and/or rate of prescribed IV medications.

Conclusion: Registered Nurses in the critical care setting report similar perceptions about their pharmacologic knowledge and confidence as other Registered Nurses in previous studies. Further studies are needed within the critical care population of Registered Nurses to identify actual pharmacologic knowledge in order to better educate and equip nursing staff with the knowledge and confidence to provide safe, quality patient care. Registered Nurses are on the forefront of medication administration. Clinical knowledge and confidence associated with medications and their applications to practice are important for Registered Nurses to self-asses and, in-turn, for nurse leaders and educators to also be aware of in order to support both nursing students and Registered Nurses in safe practice.
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Keywords:
Critical Care, Knowledge and Confidence and Pharmacology

Abstract Summary:
Medication errors are a serious issue the healthcare field faces, leading to approximately 1.5 million adverse drug events in the United States alone each year. Knowledge has been an identified factor of contribution to medication errors in clinical practice. How do ICU nurses perceive their pharmacologic knowledge and confidence?

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**Author Summary:** Preston is a recent graduate from the University of Alabama in Huntsville's College of Nursing BSN program with previous experience as a Certified Pharmacy Technician in multiple pharmacy environments.