
Understanding Medication Errors in the ICU



Medication use is a fundamental aspect of healthcare. The process of administering medication involves numerous steps. Within a single medication administration sequence, there can be a range of 80 to 200 individual steps. Each of these steps represents a potential opportunity for a medication error, thus highlighting the importance of thorough and vigilant medication management practices.

Medication errors remain a prevalent issue in the ICU, occurring at significant rates. These errors are often linked to adverse events and can potentially have life-threatening consequences.

The objective of this study was to determine the frequency and severity of medication errors reported in the incident management reporting system, to analyse the antecedent events, their nature, circumstances, risk factors, and contributing factors that lead to medication errors, and to identify strategies that can enhance medication safety in the ICU. The study aimed to provide insights into the prevalence, causes, and potential solutions for medication errors in the ICU setting.

Study researchers collected data from the incident report management system and electronic medical records over a 13-month period. A total of 162 medication errors were reported in the ICU during this period, of which 150 were eligible for inclusion. The majority of medication errors occurred during the administration phase (89.4%) and the dispensing phase (23.3%). The most commonly reported errors included incorrect doses (25.3%), incorrect medications (12.7%), omissions (10.7%), and documentation errors (9.3%). Among the medication classes, narcotic analgesics (20%), anaesthetics (13.3%), and immunomodifiers (10.7%) were most frequently associated with medication errors.

Prevention strategies were found to primarily focus on addressing active errors rather than latent errors. Active antecedent events included action- and rule-based errors, while latent antecedent events were most commonly associated with system safety breakdowns and education.

Findings from this study thus provide an epidemiological perspective on medication errors within an ICU. The majority of medication errors observed were preventable. Improving administration-checking procedures is identified as a crucial step in reducing medication errors. Study authors recommend implementing interventions at both individual and organisational levels to address administration errors and inconsistent medication-checking procedures. There is a need for more research to determine the most effective system developments for improving administration-checking procedures and to assess the risk and prevalence of immunomodifier administration errors in the ICU. Additionally, investigating the impact of single- versus two-person checking procedures on medication errors in the ICU is deemed important to address current gaps in evidence.

Source: [Australian Critical Care](#)

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