

## Medication Errors in Neonatal Intensive Care Unit

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**Abstract :** Background: Neonatal intensive care units are high-risk settings where medication errors can occur and cause harm to this fragile segment of patients. This multicenter qualitative study was conducted to describe medication errors that occurred in neonatal intensive care units in Palestine from the perspectives of healthcare providers. Methods: This exploratory multicenter qualitative study was conducted and reported in adherence to the consolidated criteria for reporting qualitative research checklist. Semi-structured in-depth interviews were conducted with healthcare professionals (4 pediatricians/neonatologists and 11 intensive care unit nurses) who provided care services for patients admitted to neonatal intensive care units in Palestine. An interview schedule guided the semi-structured in-depth interviews. The qualitative interpretive description approach was used to thematically analyze the data. Results: The total duration of the interviews was 282 min. The healthcare providers described their experiences with 41 different medication errors. These medication errors were categorized under 3 categories and 10 subcategories. Errors that occurred while preparing/diluting/storing medications were related to calculations, using a wrong solvent/diluent, dilution errors, failure to adhere to guidelines while preparing the medication, failure to adhere to storage/packaging guidelines, and failure to adhere to labeling guidelines. Errors that occurred while prescribing/administering medications were related to inappropriate medication for the neonate, using a different administration technique from the one that was intended and administering a different dose from the one that was intended. Errors that occurred after administering the medications were related to failure to adhere to monitoring guidelines. Conclusion: In this multicenter study, pediatricians/neonatologists and neonatal intensive care unit nurses described medication errors occurring in intensive care units in Palestine. Medication errors occur in different stages of the medication process: preparation/dilution/storage, prescription/administration, and monitoring. Further studies are still needed to quantify medication errors occurring in neonatal intensive care units and investigate if the designed strategies could be effective in minimizing medication errors.

**Keywords :** medication errors, pharmacist, pharmacology, neonates

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