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GRADUATION PROJECT

**What defines medication errors in neonatal intensive care unit:
scenarios and minimization approaches**

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Abstract:

Objectives: Medication errors are believed to be one of the main issues in the NICU, thus this qualitative study was conducted to define medication errors in the NICU and the possible scenarios and to develop a recommendation or new guidelines, which will help minimize the incidence of medication errors.

Methods: Purposive and snowball sampling techniques were used to recruit doctors and nurses who work in the NICU. Semi-structured interviews (n = 15) were conducted with study participants. The interpretative description method was used to qualitatively analyze the data collected during the interviews.

Result: Following the thematic analysis adopted for this study, six major themes were identified. These themes were as follows: phases in which medication errors occur, factors that precipitate to medication errors in the NICU, documentation system related errors, errors related to communication, relation between the environment and medication errors. Phases in which medication errors occur were classified into minor subthemes: packaging, preparation, dosing, administration, timing, and monitoring. The documentation system related errors were also classified into minor subtheme: documentation processes, paper system, electronic system, and medication reconciliation.

Conclusion: This qualitative study reflected the knowledge and experience of doctors and nurses who work in the NICU about medication errors that occur there. Our study emphasizes the presence of medication errors in the NICU and the risk of these errors and the potential effect on neonates, our study identified the scenario in which medication errors occur in the NICU and classified the result into multiple categories which are: phases of medication error, factors precipitate medication error, the environmental causes of medication and how communication can result in such error, and finally the presence of reporting form and causes of under reporting.

Keywords: Medication errors; Newborn; Neonatal intensive care unit; Qualitative analysis