ABSTRACT

Analysis of drug administration by nurses in health facility XIV.

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Introduction: Medication errors are one of the causes of adverse events in healthcare facilities, leading to patient endangerment or harm. A study looking at this issue reports that the most common errors occur when a nurse administers medicines in a healthcare facility.

Aim: The aim of the thesis is to monitor medication errors of nurses during the preparation and administration of medication to patients and to analyse the prevalence of medication errors, determine their type, their relationship to other influencing factors, and their severity with respect to the patient's condition.

Methods: Prospective observational study with direct observation method, conducted in a specialized medical rehabilitation facility. The study included two pre- and post-intervention phases in which nurses' medication and procedural errors were monitored, analysed and evaluated. Observations were conducted in each phase over three days each time during morning, midday and evening administration. The results were analysed in programs Microsoft Excel and Wolfram Mathematica.

Results: The study included before and after the intervention 210 and 221 patients, 27 and 31 nurses. A total of 4661 and 4391 drugs were administered in each phase. Of these, a total of 2703 pre- and 390 post-intervention errors were identified. In terms of dosage form, oral (92.79% and 95.53%), subcutaneous (5.11% and 2.87%) drugs were the most common in both phases. In less than 1.6% then topical, inhaled, transdermal, intramuscular, intravenous and sublingual administration. According to ATC classification, the most commonly administered drugs were from category A (24.76% and 23.21%), C (27.01% and 25.98%) and category N (22.25% and 22.34%). The most

common errors were labelling of risky drugs (100% and 72.22%), improper hand hygiene (79.32% and 0.48%), improper disposal of drugs (62.50% and 16.24%), failure to mark the date of 1st use for reusable LPs (58.72% and 16.67%) or failure to maintain proper food spacing (53.48% and 2.73%).

Conclusion: The thesis analysed data from research in a rehabilitation facility, dealing with the issue of errors in the preparation and administration of medication by a nurse. Based on the results, interventions were proposed to minimize them, such as modification of internal guidelines, educational materials and seminars for nurses, or implementation of an electronic medication system. After consultation with the management of the rehabilitation facility, interventions and modifications to internal guidelines were implemented and medication and procedural errors by nurses were eliminated.

Keywords: medication errors, medication administration, nurse, procedural errors, healthcare facility