

Abstract

Analysis of drug administration by nurses in health facility XI

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Introduction and aim: Medication errors are intrinsically linked to the practice of the medical profession. They can occur at several levels – prescription, drug preparation, dispensation, administration, and subsequent use of the drug by the patient. Nurses play an important role in the process of the drug administration in a hospital setting. Because of the occurrence of medication errors and the consequent inability to achieve desired health outcomes, efforts are nowadays made to detect and minimize them. The aim of this study was to detect and analyze medication errors occurring during drug administration by nurses in a healthcare facility in South Bohemia.

Methodology: The study is a part of a multi-year project involving the Faculty of Pharmacy of Charles University. The methodology is based on an observational study. The data collection took place in April 2022. Three hospital wards were assigned for the observation, where morning, midday and evening drug administration was monitored for three consecutive days. Data were recorded on a pre-generated form based on the patient's medical records. The recorded data included patient's identification, the administration of the correct drug at the right time, strength and dose. Other data recorded included correct drug manipulation, time distance from food, generic substitution and following hygiene principles. After the data collection, the recorded data were discussed within the multidisciplinary team and then transcribed into an electronic database. All data were finally analysed using the descriptive statistics. Statistical relationships were evaluated using parametric and non-parametric tests. In the course of the overall evaluation, the data were compared with the results from the previous collecting carried out in 2021.

Results: 80 patients were observed during the study. The drugs were administered by a total of 14 nurses at the average age of 42.7. A total of 1,439 drug administrations were observed, with solid oral dosage forms representing for the largest proportion, accounting for 1,106 administrations. The most frequently recorded medication errors included administration of the drug without the patient identification (74.5 %; an increase of 64.4 % from 2021) and the lack of the hygiene during the administration (31.8 %; a decrease of 48.4 %). Regarding the medication errors for all dosage forms, the most common were the administration of the drug by another nurse (43.4 %) and the administration of the drug without checking its use (23.1 %). Among the more serious medication errors were observed the administration of the wrong drug dose (2.0 %), wrong dosage form (1.0 %),

administration of the wrong drug (0.4 %), administration of the wrong strength (4.7 %), and incorrect time of administration (2.2 %).

Conclusion: Frequent medication errors were noted in this study. With the time lapse a post-study intervention was conducted. Its aim was to describe specific cases of medication errors and highlight their management and prevention.

Keywords: drug administration, nurse, medication error