Abstract

Analysis of drug administration by nurses in a health facility III

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Introduction and aims: The drug administration by nurses is one of the most important part of a nursing care performed on daily basis. The goal of this master's thesis was to analyze the drug administration by nurses to the patients hospitalized in the internal, surgical or aftercare wards in one of four health facilities in the South Bohemian region with an emphasis on medication errors and their prevention.

Methods: This is a part of an extensive observational and intervention study, which is conducted between years 2020-2023. The thesis demonstrates the data acquired by a direct observation of drug administration to the hospitalized patients from 19th to 25th July 2021. The data were collected by teams composed by a pharmacist and a nurse. The collected data were as follow: patients' personal data (e.g., age, gender, list of all drugs used by patient), data about the nurse who administered drugs (age, gender, length of working experience), data of the drug administration (the way of identification of the patient; the nurse's hygiene during the drug administration; checking of the drug's originality; whether the right medication was delivered to the right patient at the right time, of the right strength and dose; generic substitution; water intake and time interval from the food intake). All the data were anonymized and transferred into the web database and evaluated using descriptive statistics.

Results: Altogether, there were observed 2,369 drug administrations carried out by 13 different nurses in 105 patients (women 47.6%; mean age 75.3 ± 12.2 years). An average amount of drug doses administered per patient was 9.5 ± 6.9 per day, solid drug forms comprised 85.4%. Identified medication errors: omitted patient's identification (21.9%), omitted hand hygiene (32.5%), drugs exchange (0.5%), wrongly administered dose (2.0%), incorrectly administered drugs (3.7%), exchange of the drug form (0.3%), generic substitution (11.0%), inappropriate cutting the drugs (3.0%), inappropriate crushing of drugs (0.6%). In 25.7% of drug administration there incorrect time interval from the food intake was indicated.

Conclusions: Obtained results shown relevant cases of a medication errors. The cases were discussed with the hospital management, doctors, and nurses. There were interventions designed that should be leading to the correction of discovered errors.

Key words: nurse, medication error, drug administration.