

ABSTRACT

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Title of the master thesis: Analysis of drug-drug interactions in patients admitted to hospital (II.)

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Drug-drug interactions (DDIs) are part of drug-related problems. Drug-related problems can be either potential (possibly leading to real problems for the patient) or manifest (the problem already impacts the patient). This study aims to identify potential DDIs in the medication history of patients acutely admitted to University Hospital Hradec Králové via the department of emergency medicine. The objectives are to determine the prevalence of hospital admissions with at least one potential DDI in the medication history and characterize the identified potential DDIs with respect to their mechanism, severity rating, level of documentation, and potential consequences. Another objective was to identify medication classes involved in potential DDI. The design of this study is an observational cross-sectional study. The data were obtained from the previous study examining the drug-relatedness of 1252 hospital admissions. For the purpose of my master's thesis, a sample of 378 hospital admissions was analyzed. The screening for potential DDIs was performed in 300 hospital admissions (298 patients) with at least two medications in the medication history. Potential DDIs were identified using IBM Micromedex, Lexicomp® Drug Interactions, and Stockley's Interactions Checker.

A total of 2010 potential DDIs were identified in the medication history of 260 patients admitted to the hospital. The prevalence of hospital admissions with at least one potential DDI was either 69% (whole sample) or 87% (sample with at least two medications). Most potential DDIs were pharmacodynamic. The most common severity category was moderate. The most common level of documentation of potential DDIs was fair. The most common consequence of potential DDIs was an increased risk of hypotension. Diuretics and Drugs used for diabetes were the most common medication classes involved in potential DDIs.

The preliminary results indicate that more than two-thirds of patients acutely admitted to the hospital have at least one potential DDI in the medication history, but only a few of them are contraindicated or have a good level of documentation.

Key words: drug-drug interaction, hospitalization, drug-related problem, cross-sectional study

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