

# ABSTRACT

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**Title of the master thesis:** The analysis of drug-related problems potentially leading to hospitalization among geriatric patients

Hospital admissions due to drug-related problems (DRPs) represent a relevant clinical issue with significant economic consequences. Polypharmacy and age-related pharmacokinetic and pharmacodynamic changes make elderly patients particularly prone to develop DRPs.

The aim of the theoretical part of this thesis was to introduce the issue of drug-related problems and to outline the results of previous studies concerning drug-related hospitalizations among geriatric patients. The aim of the practical part was to determine the prevalence of DRPs potentially leading to hospitalization and to identify the most common medication classes involved in these DRPs.

Over the period of six months 200 admissions to geriatric ward of III. Internal Gerontometabolic Clinic of University Hospital Hradec Králové have been retrospectively evaluated in order to determine whether the hospitalization was potentially drug-related. The identified DRPs were consequently classified according to PCNE classification.

The overall prevalence of drug-related hospitalizations was 11.5 %. The majority of DRPs (83 %) were classified as adverse drug event. The associated outcomes were bleeding and electrolyte disturbances. Antithrombotics and diuretics were the most common medication classes associated with DRPs, followed by drugs acting on renin-angiotensin system. The results also indicate that age might not be as important as the number of drugs taken when predicting the risk of drug-related hospitalization to geriatric ward.

This thesis reveals high-risk medication classes potentially associated with hospital admissions among geriatric patients. The limitation is that certain aspects like medication adherence, self-medication, dietary and hydration habits were not assessed.

**Key words:** drug-related problem, hospitalizations, explicit criteria, implicit criteria