

POSTER PRESENTATION

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# Systematic medication review and health-related outcome in elderly patients acutely admitted to an orthopaedic ward: a randomised controlled study

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## Background

Acute admission to hospitals, age and number of drugs are associated with an increased risk of adverse drug events due to morbidity, poly-pharmacy and inappropriate interactions. Thus, the objective of the present study was to investigate if systematic medication review and drug counseling on admission to hospitals would have a significant impact at clinically health-related outcomes in elderly patients admitted acutely to an orthopaedic ward.

## Methods

A randomised controlled study comprising 108 patients aged 65 years or older admitted acutely to an orthopaedic ward in Denmark was conducted. Intervention: a clinical pharmacist collected information regarding the patient's medication and medical history in the medical record, the electronic drug order system, the registry of drug purchase and interview with the patient's. Subsequently, this was discussed with a clinical pharmacologist and an advisory note with drug recommendations were handed directly to the ward physicians. Control: the usual medication routine in the ward. The primary outcome measure was time to first unscheduled contact to a physician post-discharge limited to emergency department visit, re-admission and general practitioner. Secondary outcomes were admission time, time to first re-admission, number of re-admissions, emergency department visits, ambulatory care visits, contact to general practitioner, physicians outside working hours, medical specialist and finally, quality of life at three-month follow up.

## Results

In the intervention group time to first unscheduled contact to a physician post-discharge was 16.3 days(95%CI: 10.5-22.2) and in the control group 25.6 days (95%CI:17.8-33.4), which was not a statistically significant difference. No overall differences between study groups were seen in the secondary outcome measures. The physicians complied with 41 of 222 drug recommendations. Subgroup analysis indicated that physicians were more prone to accept recommendations in the very old treated with numerous of drugs.

## Conclusion

The findings do not lead to the recommendation of an extra medication review in a general population of elderly admitted acutely to an orthopaedic ward. Considering the physicians marked hesitation to comply with drug recommendations future studies should explore the impact of a differentiated medication review in acute admitted patients based on the individual patient's risk of adverse drug events.

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