
CONFERENCE ABSTRACT

Drug therapy problems and factors associated with their occurrence among general ambulatory patients receiving medication management services at the Health Centre Zagreb - Centre

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Introduction

Identification, resolution and prevention of drug therapy problems (DTPs) is deemed crucial at ensuring patients' optimal medication use and improving their clinical outcomes. The aim of this study was to describe the DTPs and to determine the factors associated with their occurrence among general ambulatory patients receiving Comprehensive Medication Management (CMM) services provided by a pharmacist.

Methods

The CMM services outlined in the present study were piloted in an independent counselling unit, Pharmacotherapy counselling service, at the Health Centre Zagreb - Centre. The patient care service provided by two pharmacists followed the standardized patient care process proposed by Cipolle et al. (1). Independent variables (age, sex, employment status, number of diseases and drugs used, diagnosis of a cardiovascular disease, hypertension, dyslipidaemia and diabetes, hospitalization and emergency department, smoking status) were included in univariate analyses to identify factors associated with the dependant variable (sum of the DTPs). Independent variables with $p < 0.15$ in the univariate analyses were included in a multivariable logistic regression model. A p value of < 0.05 was considered statistically significant in all analyses.

Results

Overall 86 patients were included in the study, of which 54 (62.8%) were female. Patients' median age (overall range) was 70.5 (32 - 87) years, median number (overall range) of medications per patient was 8 (2 - 19) and polypharmacy (more than 4 medications used) was recorded in 68 (79.1%) patients. During the initial two visits, overall 241 DTPs were identified in 81 (96.2%) patients. The most prevalent DTP was "Needs additional therapy" (26.1%), followed by "Dosage too low" (24.5%). The drugs most frequently associated with DTPs were pantoprazole, statins and bisoprolol. Multivariate analysis showed that patients with polypharmacy were 8.86 times more likely to have three or more DTPs than the patients using 4 or less medications ($p = 0.011$). Additionally, patients with type 2 diabetes had 4.76 times higher chance to experience three or more DTPs than the non-diabetic patients ($p = 0.025$).

Discussions

This study is the first research that evaluated the incidence and type of DTPs in ambulatory patients, and established the factors associated with their occurrence, by using the theoretical framework proposed by Cipolle et al. (1).

Conclusions (comprising key findings)

Patients using 5 or more medications and type 2 diabetic patients should be prioritized for CMM services provision as they could potentially have a higher number of DTPs and therefore a greater benefit from the service.

Lessons learned

This study refers to the need for tailoring a targeted education for practitioners, so that encountered DTPs could be more efficiently identified, resolved and prevented.

Limitations

Since the practice has not yet been fully implemented in the health care system, a small number of patients has been gathered.

Suggestions for future research

Future research is needed as to establish the impact of CMM services on clinical outcomes in patients with chronic diseases.

References

1. Cipolle RJ, Strand L, Morley PC. Pharmaceutical care practice: The patient-centered approach to medication management. 3rd ed. New York: The McGraw-Hill Companies; 2012.