

ABSTRACT

Title: Risks and Problems Associated with Polypharmacy in Older Patients – A Self-Screening Tool for Identifying Risks of Pharmacotherapy by Patients Themselves

Author: Markéta Pitrová

Department of Social and Clinical Pharmacy, Faculty of Pharmacy in Hradec Králové

Supervisor:

Assoc. Prof. Daniela Fialová, PharmD, Ph.D.

Department of Social and Clinical Pharmacy, Faculty of Pharmacy in Hradec Králové and Department of Geriatrics and Gerontology, 1st Faculty of Medicine and General Teaching Hospital, Prague, Czech Republic

BACKGROUND

With the increasing number of older adults in the population nowadays, the importance of rational pharmacotherapy – the indication of the most effective, most safe and most cost-effective drug treatments – in older people grows. In order to early assess and resolve the risks of pharmacotherapy in this population, different pharmacotherapy risk assessment and risk management tools have been developed for use by physicians, pharmacists and other health care professionals.

As the active involvement of older adults in the process of pharmacotherapy risk assessment and risk management increases, it is crucial to create also patient self-assessment tools in this area. Thus, the aim of the diploma thesis was to develop and test in a pilot study a new patient self-administered pharmacotherapy risk assessment screening tool for use by older adults.

METHODS

A literature search for already available patient self-administered risk assessment tools was performed as a following literature search to the systematic literature review of Puumalainen et al., 2019. It was conducted in databases: Evidence Based Medicine, Medline Ovid, Scopus, Web of Science, PubMed and Google Scholar for studies

published between 8th of April 2016 to 10th of December 2018. Inclusion criteria for the literature search were: tools focused on patients aged 65 years and older, outpatient care setting, patient-administered tools focusing on medication in general, English language and content of the tool included in the article. The results of this literature search were discussed during meetings of research team members. Items for newly developed patient self-assessment tool were selected and adjusted using qualitative interviews with pharmacists assessing the applicability of selected and newly adjusted items. The completed and finalized tool was validated by Delphi expert panel consensus in Finland in 2019. Final version of the full questionnaire was tested in a pilot study on a sample of 172 non-hospitalized older adults aged 65 and older living in the community in the Czech Republic.

RESULTS

Literature search results showed that there is a lack of similar patient-administered pharmacotherapy risk screening tools focusing specifically on geriatric patients (6 tools have been identified). Final version of our tool was developed as a 15-item questionnaire, in the Czech version complemented with questions related to sociodemographic characteristics of respondents and table of medicines used by the patient. The Finnish version was reduced to 8 questions during the validation process. Out of 172 participants in the pilot testing, 118 patients (68.6 %) were women, mean age was 74.2 years (SD ± 6.3). Lists of medicines were provided by 153 patients (89.0 %) and 69 of them (45.1 %) were using polypharmacy (5 and more medicines). Out of all respondents, uncontrolled use of OTC (over the counter) medicines and dietary supplements was reported by 64 patients (37.2 %). More than half of patients (N = 95; 55.6 %) had 3 and more physicians involved in the management of their therapy.

CONCLUSIONS

Active involvement of seniors in pharmacotherapy risk assessment and risk management is crucial for identifying medicines-related risks. Due to the lack of previously developed patient self-administered pharmacotherapy risk-screening tools for older adults, our newly developed questionnaire is one of the rare instruments in this area. It can serve as an instrument to simplify the identification of patients who are in need of

a comprehensive medication review performed by an experienced clinical pharmacist or in need of simpler support from community pharmacists to resolve problems with medication adherence, inappropriate application of different drug forms etc.

KEYWORDS

patient self-assessment tools, geriatrics, pharmacotherapy risk assessment, pharmacotherapy risk management, polypharmacy, risk-screening tools, patient active involvement

DEDICATION

The tool was developed during my Erasmus+ programme study stay at the University of Helsinki in Finland in a close cooperation with the team of Finnish researchers, prof. M. Airaksinen, Dr. M. Dimitrow and T. Toivo, MSc. (Pharm). These experts collaborated with my supervisor of diploma thesis, Assoc. Prof. Daniela Fialová, PharmD, Ph.D.



The work of the Czech research team has been financed by the European EUROAGEISM H2020 project that received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 764632 and from the European project INOMED reg. No. CZ.02.1.01/0.0/0.0/18_069/0010046. The team was also supported by grant SVV 260417 and the scientific programme PROGRESS Q42 of the Scientific group KSKFII, Faculty of Pharmacy, Charles University in Hradec Králové, Czech Republic (Chair of the scientific group: Assoc. Prof. Daniela Fialová, PharmD, Ph.D.).