## ABSTRACT

Determination of risk factors for drug-related problems: A multidisciplinary triangulation process

### Introduction

Drug-related problems (DRPs) constitute a frequent safety issue among hospitalised patients leading to patient harm and increased healthcare costs. Because many of them would be preventable, the specific risk factors that facilitate the occurrence of DRPs are of considerable interest. Detecting patients at risk for DRPs will enable clinical pharmacists to guide and target preventive measures in patients where it is needed most.

#### Aim

To determine individual risk factors for DRPs by combining current evidence from the literature with the professional experience of healthcare providers as a basis for the development of a risk assessment tool.

#### Methods

We realised a triangulation process: An expert panel was conducted, using the nominal group technique and qualitative analysis, to gather risk factors of drug-related problems. The expert panel consisted of two senior hospital physicians (internal medicine and geriatrics), one emergency physician, one general practitioner, one clinical pharmacologist, one clinical pharmacist, one registered nurse, one home care nurse and two community pharmacists. The literature was searched for supplementing risk factors. Gathered factors from the literature search and the NGT where assembled and validated in a Delphi questionnaire. The Delphi panel was composed of the same participants as the NGT.

# Results

The nominal group resulted in 33 items with additional 13 risk factors from the qualitative analysis of the discussions. The qualitative analysis highlighted seamless care issues, communication issues between healthcare providers, patient education and questions about responsibilities as major concerns of every healthcare provider. The literature search delivered another 39 unique risk factors. The 85 risk factors were refined to produce 42 statements for the Delphi online questionnaire. Of these, 28 risk factors were judged to be "important" or "rather important".

#### **Discussion/Conclusions**

Our study resulted in a final list of 28 risk factors judged by the expert panel as "important" or "rather important" with respect to their contribution to the occurrence of DRPs. The approach to gather risk factors not only by literature search but with an expert panel discussion enabled us to stay as close to daily practice as possible. Gathered risk factors will help to characterize and identify patients at risk for DRPs and will enable clinical pharmacists to guide and target preventive measures in order to limit the occurrence of DRPs. In a further step, these risk factors will serve as the basis for a screening tool to identify patients at risk of DRPs.