

# Abstract

## Drug Information Centre service analysis I.

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### Introduction and aim of the thesis

This study deals with the analysis of enquiries of the Drug Information Centre (DIC) of Faculty of Pharmacy in Hradec Králové, Charles University and University Hospital Hradec Králové. DIC have a unique role within provide clinical-pharmaceutical care in the provision of drug information. The aim of this study was the analysis of drug enquiries in 1994–2016 focusing on their urgency, type of enquiries and ATC groups.

### Methods

The data analysed were collected from all recorded enquiries in the Excel database within 1994–2016. Therefore, it was necessary to transform some of the paper-recorded enquiries from 1994 to 2002 into the Excel database in which the enquiries data from 2003 to 2016 were already included. Data analysis firstly focused on the characteristics of the enquiries (quantity, healthcare professionals' characteristics such as region, position, enquiry type and urgency of the enquiries). The character of enquiries included properties and active pharmaceutical ingredient of the medicines, compatibility data, stability, extemporaneous preparation, pharmacokinetics, mechanism of action, drug dosage, interactions, adverse effects, indication/contraindication, administration, alternative medication choice and medicines availability. ATC groups of drugs, as defined by the WHO, were also assessed. Analysed were the drugs represented by the most frequent ATC code to the third level, which indicates a pharmaceutical subgroup. Thereafter from this set the most frequently occurring medicines were selected as defined by ATC code to the fifth level, which indicates the drug molecule. Descriptive statistics was

employed in the analysis. Theoretical part of the thesis is based on the literature review of the DICs around the world, carried out using the bibliographic databases.

## **Results**

Altogether 2221 enquiries were gathered for this analysis between years 1994 and 2016. The highest number per year was recorded in 2003 (201). Majority of urgent enquiries appeared in 2001 (74). The most common overall type of enquiry answered were the adverse effects (442; 19.9%). Antithrombotic agents were the most common drugs dealt with in the enquiries according to the ATC occurrence (111; 5.0%). The most frequent molecule (the fifth level ATC analysis) was represented by warfarin (code B01AA03) (41; 1.84%).

The most frequent ATC groups in the enquiries related to pregnancy and lactation were assessed. The most common were of phytotherapeutics and animal products (code V11), the most common type of enquiries were indication/contraindication. Geriatric population enquiries were also analysed. Antithrombotic agents (ATC group B01A) were the most frequently included and the most common type of enquiries were the adverse effects.

The most common ATC group for the enquiries related to paediatric population were the nonsteroidal anti-inflammatory and antirheumatic drugs and the type of enquiries most frequent were related to indications/contraindications.

Phytotherapeutics and animal products were the most common subgroup from the ATC group Various.

## **Discussion and conclusion**

Throughout the years the number of enquiries answered by DIC decreased as well as the number of urgent enquiries resolved. The same trend was observed with the type of enquiries, yet the most common character of all enquiries remained the adverse effects. To improve the use of gathered data all enquiries in Excel database could be linked together using keywords so as to enable more user-friendly search within the past enquiries. Website-based interface could enable more user friendly management of enquiries and thus facilitate more efficient record keeping and information retrieval.