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# The possibility of patient involvement in prevention of medication error

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ABSTRACT

Medication errors are the most frequent cause of patient harm. The new view of the role of the patient as a partner in his/her safe care can help reduce the risk of serious errors and omissions by health workers. In the context of sociological investigation, the level of patient involvement in the medication process in checking the accuracy of the medication administered and informing healthcare professionals about all the medication taken and possible allergies, has been researched. The selective file of patients admitted to the hospital, corresponded with the patient composition in the Czech Republic in terms of regions, gender and age. These features were intended to be representative. The research file consisted of 514 patients hospitalized at the hospital inpatient wards for at least 3 days. The research results show that patients carry out medication control very superficially. They trust the nursing staff and do not check medication accuracy. More than half of the respondents (56.2%) do not check the medication and do not ask the nurse about its name. It is puzzling and alarming that almost one-third of patients (26.3%) would not draw the attention of a doctor or nurse to the administration of wrong or unusual medication! In contrast, most patients do inform a doctor about medication already being taken (87.5%), and possible allergies (86.0%), and so the active involvement of patients in risk prevention is a possible solution. Patients should be encouraged to be vigilant and alert health professionals about errors that, in their opinion, have happened or could happen during the treatment process.



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## Introduction

The occurrence of errors in nursing and medical care is a global issue. The research studies ''Crossing the Quality Chasm: A New Health System for the 21st Century'' [1] and ''To Err Is Human: Building a Safer Health System'' [2] have shown that the misconduct of medical personnel affects approximately 5% of hospitalized patients. It is estimated that in the member states of the European Union (including the Czech Republic) the errors of members of the medical team affect between 8 and 12% of hospitalized patients [3]. Medication errors are the most common cause of patient harm; it is one of the most serious errors, which often ends with irreversible damage to the health status of the patients affected. Elderly patients who are suffering from a number of diseases are primarily at risk of medication errors, and furthermore, these patients use more drugs which may mutually interact. The economic and staffing situation of a number of hospitals that have a shortage of doctors and nurses, or who are at risk of budget loss, present another issue. According to AHRQ [4] 2–7% of all hospitalized patients are damaged during the medication process. Anderson and Townsend [5] reported that every year 1.5 million Americans are injured in some way due to medication errors by health professionals and that the costs of such errors amount to $3.5 trillion. An English study [6] showed that the health of every tenth hospitalized patient in the UK is damaged by the large number of errors occurring during the medication process. According to a German study [7], errors in medication affect the health of 40,000 Germans every year and 12,000 incidents are followed by legal action. From these reports, it is clear that the traditional management of safe health care is failing! A new look at the role of the patient as a partner in his/her safe health care can help reduce the risk of serious errors and omissions in medical and nursing care. Patients and their families should be encouraged and motivated by healthcare professionals to actively participate in the process of assuring the safety of the care provided.

We were interested in finding out whether patients are actively involved in the medication process, in checking the accuracy of the medication administered and in informing healthcare professionals about the medication being used and possible allergies.

## Materials and methods

The research was based on the technique of structured interviews between an interviewer and a respondent. The data were collected through the survey network INRES. 216 interviewers from the Czech Republic were involved in the survey. The interviewers were well instructed before commencement of the research. Statistical data processing was carried out using the statistical analysis programme SASD social data, version 1.4.10. 1st degree of sorting and 2nd degree classification table were processed. The degree of dependence of the selected features was based on the $\chi^2$ test and other criteria (depending on the nature of characters). The sample of patients admitted to hospital was designed so that its structure corresponded with the patient composition in the Czech Republic in terms of region, gender and age. These features were intended to be representative. The research file consisted of 514 patients admitted at the hospital inpatient wards for at least 3 days. In terms of gender, the file includes 242 (47.1%) male patients and 272 (52.9%) female patients, which corresponds to the analogous composition of patients admitted to the hospitals in the country. In terms of relative frequency, there was no file deviation from the population file. Age and gender are represented in the sample as percentages as given in Table 1.

Compared to the age breakdown of the basic file, the deviation does not exceed 1.0% (Table 1). It can be concluded that the results are representative of the various age groups of hospitalized patients in the Czech Republic. The regional classification of the respondents used for the breakdown by regions of the Czech Republic, has been in force since 2001.

When compared to the layout of the basic file, the maximal deviation is 0.4%. It can be concluded that the research results are representative of the various gender, age and region groups of hospitalized patients in the Czech Republic (Table 2). The preliminary analysis of the acquired data showed that out of the given aspects, which can describe and characterize the file, the basic demographic indicators best certify their desired differentiating function, namely the characteristics of gender, age and regional affiliation. Other characteristics of the selective file of hospitalized patients do not meet the requirements of representativeness, but they do enable its description through other features, which include education, marital status, occupation, type of hospital and characteristic features of hospitalization. In terms of education, the selective

**Table 1 – Composition of the research file by gender and age.**

| Age | Men | | | Women | | |
|---|---|---|---|---|---|---|
| | A | % | Deviation | A | % | Deviation |
| 18–29 years | 23 | 4.5 | 0.0 | 30 | 5.8 | 0.0 |
| 30–39 years | 31 | 6.0 | +0.2 | 34 | 7.0 | −0.4 |
| 40–49 years | 29 | 5.6 | −0.4 | 38 | 6.8 | +0.6 |
| 50–59 years | 34 | 6.6 | −0.8 | 38 | 6.6 | +0.8 |
| 60 and more | 125 | 24.3 | +0.9 | 132 | 26.7 | −1.0 |

*Source*: [8]

**Table 2 – Composition of the selective file by regions.**

| Region | A | % | Deviation |
|---|---|---|---|
| Capital city of Prague | 47 | 9.1 | −0.4 |
| Central Bohemia region | 65 | 12.6 | +0.4 |
| South Bohemia region | 33 | 6.4 | +0.2 |
| Plzeň region | 27 | 5.3 | +0.1 |
| Karlovy Vary region | 15 | 2.9 | −0.2 |
| Ústí region | 48 | 9.3 | +0.2 |
| Liberec region | 24 | 4.7 | −0.2 |
| Hradec Králové region | 24 | 4.7 | −0.2 |
| Pardubice region | 24 | 4.7 | −0.1 |
| Highlands region | 28 | 5.4 | +0.3 |
| Region of South Moravia | 58 | 11.3 | +0.2 |
| Olomouc region | 31 | 6.0 | −0.1 |
| Zlín region | 29 | 5.6 | −0.3 |
| Moravia–Silesia region | 61 | 11.9 | −0.2 |

*Source*: [8]