

# GRP-130 PARENTS/CAREGIVERS' KNOWLEDGE TOWARDS MEDICINES ADMINISTRATION IN PAEDIATRIC PATIENTS

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**Background** The increasing complexity in paediatric patient care emphasises patient safety as a topic of high priority. Parents/caregivers' lack of knowledge on how to administer extemporaneous formulations to paediatric patients can be a potential source of medication errors.

**Purpose** To assess parents/caregivers' knowledge of medicines administration in paediatric patients

**Materials and Methods** A 2-month cross-sectional study was conducted with a convenient sample of paediatric outpatients' parents/caregivers from four hospitals in Lisbon. A questionnaire was developed to assess knowledge on how to administer the medicine (liquid or powder), how to measure the dose to be administered, the administration schedule, the storage conditions, the validity period of the extemporaneous formulation, and appropriate behaviour in case of missing a dose or vomiting immediately after taking the medicine. A univariate analysis was performed using SPSS v.19.

**Results** Eighty-four individuals participated in the study. The mean (SD) age was 34 (18.6) years, 26.0% were non-Caucasian, 75.3% were married, 46.8% had an average of nine years of education and 50.6% were professionally active. The mean level of knowledge as assessed by the questionnaire was 53.7%. The lowest levels of knowledge were found for appropriate behaviour in case of missing a dose or vomiting after taking the medicine, for which only 10.7% and 20.2% parents/caregivers, respectively, gave the correct answer. Non-Caucasian parents/caregivers and lower education level were significantly associated with a deficit of knowledge ( $p < 0.05$ ).

**Conclusions** Low levels of knowledge were found among parents/caregivers of paediatric patients. Strategies to increase knowledge, such as promoting short educational programmes at the hospital, should be considered to improve patient safety.

No conflict of interest.

# GRP-131 PATIENT SAFETY – ANALYSING MEDICATION-RELATED ADVERSE EVENTS

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**Background** Medication-related adverse events (AEs) lead to increased morbidity, mortality and costs. In Denmark, frontline personnel in hospitals and in the primary care sector are obligated to report adverse events to a national reporting system 'The Danish Patient Safety Database'. Since September 2011 it is also possible for patients and relatives to report AEs to the database.

An increased understanding of the causes of AEs may assist in preventing them.

**Purpose** The aim was to analyse medication-related AEs reported to the Danish Patient Safety Database in Zealand Region.

**Materials and Methods** Medication-related AEs are categorised by the person reporting the AE using the WHO classification system available in the Danish Patient Safety Database. The reported AE is subsequently analysed by a clinical pharmacist.

The analysis is performed using a modified version of the classification system, which was proposed by Ferner & Aronson. Errors are divided in two major categories:

- Mistakes (errors in planning actions), which are divided into knowledge-based errors and rule-based errors
- Skill-based errors (errors in executing correctly planned actions), which are divided into action-based errors (slips, including technical errors) and memory-based errors (lapses)

Data were received Oct. 2011–May 2012.

**Results** During the study period, 741 AE reports concerning events associated with medication in hospitals were filed in Zealand Region. They averaged 93 events every month.

The Danish Patient Safety Database showed that the medication-related AEs are mainly categorised as prescribing (31%) and administration (29%), and some as dispensing (19%).

For comparison, results from Ferner & Aronson showed that 60% are rule-based errors, 31% action-based errors, 8% knowledge-based errors and 1% memory-based errors.

**Results** Ferner & Aronson's classification tool by is useful in categorising medication-related AEs, and the resulting subgroups can add to our knowledge about how errors may be prevented.

No conflict of interest.

# GRP-132 PATIENTS DISCHARGED FROM HOSPITAL WITH OPTIMAL MEDICATION DUE TO PHARMACEUTICAL INTERVENTIONS

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**Background** Medication errors are common when transferring medication records between health care professionals in secondary and primary care. This can lead to suboptimal pharmacotherapy and decreased quality of health care. At our hospital pharmaceutical medication review has been successfully implemented at hospital admission on the acute ward to ensure rational pharmacotherapy.

**Purpose** To ensure rational pharmacotherapy and accurate medication status at hospital discharge, a clinical pharmacist supports the medical staff by conducting medication review and improves transfer of relevant discharge information to primary care.

**Materials and Methods** The study took place at a general medical ward at Lillebælt Hospital, Vejle. A clinical pharmacist conducted systematic medication review according to rational pharmacotherapy for discharge patients treated with at least six medicines. In addition the clinical pharmacist conducted medication reconciliation and verified the plan for further medical treatment in the discharge information to primary care emphasising the changes in medication made during hospital stay.

**Results** From February to September 2012, 326 medication records (with a total of 3973 medicines) were reviewed by the pharmacist. 730 clinical interventions were suggested to the medical staff with a top-3 of; 1. Duration of medical treatment, 2. Inappropriate dosing and 3. Supplemental medicine treatment. 85% of all interventions were accepted and led to medical changes, but nevertheless, for 32% of the patients, the pharmacist still had supplementary or altered information to the discharge plan.

**Conclusions** Our results indicate that pharmaceutical intervention contributes to appropriate medication use and more accurate discharge information. This on-going quality initiative can ensure the use of rational pharmacotherapy and thereby increase the quality of health care.

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