

PIPs are a real problem in the elderly. Pharmacists' contribution to their systematic detection can improve safety and promote the rational use of medicines.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

5PSQ-154 INCIDENT REPORTS VERSUS DIRECT OBSERVATION TO IDENTIFY MEDICATION ERRORS AND RISK FACTORS IN HOSPITALISED NEWBORNS

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Background Medication errors (MEs) are frequent in hospitals, and newborns are particularly exposed. Identification and understanding the causes and risk factors associated with MEs will help to improve the effectiveness of medication.

Purpose First, we aimed to compare the rate of MEs highlighted through voluntary incident report and direct observation. Second, we aimed to identify risk factors that contributed to the occurrence of MEs, in order to implement interventions to reduce their occurrence and improve effectiveness of medication.

Material and methods This study was carried out in the 12-bed neonatal intensive care unit (NICU) of our University Hospital. All MEs occurring during drug prescription, preparation or administration in the NICU and voluntarily reported by carers in our incident reporting system from June to September 2010 and from August to November 2012 were analysed and compared with MEs detected prospectively through direct observation by a clinical pharmacist. Direct observation and voluntary incident reporting were compared in terms of the number of MEs identified, error type, severity and other variables related to MEs. Poisson regressions were performed to identify risk factors for MEs. Different outcomes were considered: number of prescription errors, number of preparation errors, number of administration errors and total number of MEs. For each outcome, the following explanatory variables were included in the analysis: year, birthweight, gestational age, severity of the disease, mode of ventilation and number of drugs prescribed per patient.

Results A total of 164 patients were included in the study. Ultimately, 383 MEs were identified by the clinical pharmacist, and two MEs were declared by carers. Prescription errors accounted for 38.4%, preparation errors for 16.2% and administration errors for 45.4%. Incorrect rate of administration (21.9%), incorrect timing of administration (18.3%), dose omission (10.4%) and improper dose (8.1%) were the most frequent errors observed. The two variables significantly related to the occurrence of MEs were gestational age <32.0 wk (p=0.04) and number of drugs prescribed (p<0.01).

Conclusion Carers underreported the true rate of MEs in our NICU. The risk of MEs is increased in newborns<32.0 weeks and increases with the number of drugs prescribed to each patient.

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5PSQ-155 THE EFFECT OF GERIATRIC STEWARDSHIP ON DRUG-RELATED PROBLEMS AFTER DISCHARGE

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Background A main obstacle of inpatient medication review is the lack of insight into patient needs and the outpatient's medical history.

Purpose To establish whether drug-related problems (DRPs) after discharge can be reduced via geriatric stewardship, which entails inpatient medication reviews based on patient interviews and consultations with primary care providers.

Material and methods This implementation study with a pre-post design included hospitalised elderly patients with poly-pharmacy and a risk factor for frailty who were admitted to orthopaedic or surgical wards. The pre-cohort received the usual care; and the after-cohort received an extended medication review based on: 1) a review of the clinical records; 2) a consultation with the general practitioner and community pharmacist; 3) a patient interview; and 4) a multidisciplinary evaluation of all the recommendations of steps 1 to 3.

Two weeks after discharge, patient-reported DRPs were assessed by telephone using a validated questionnaire. DRPs (i. e. an event or circumstance involving drug therapy that actually or potentially interferes with desired health outcomes) were classified into drug-related complaints, practical problems and questions about medication. The primary outcome was the number of DRPs per patient in each group. A Poisson regression was performed to compare the groups, adjusted for potential confounders. Second, we assessed the number of altered recommendations by patient interviews and consultations of primary care providers.

Results Of 127 included patients (control: 74, intervention: 53), intervention patients reported fewer DRPs after discharge than patients in usual care, 2.8 vs. 3.3 per patient (RR_{adjusted} 0.83, 95% CI: 0.66 to 1.05). The difference was mainly due to a 50% reduction in drug-related complaints. In the intervention group, nearly 30% of the medication review recommendations based on the clinical records changed after consulting the patient and primary care providers.

Conclusion The implementation of geriatric stewardship reduced DRPs after discharge in this cohort. Significance was not reached but further research with larger patient numbers may confirm this effect and determine the effect on clinical outcomes. The importance of patient interviews is consistent with the findings of Viktil et al¹ on the value of patient interviews in an inpatient setting. No previous study considered consultations of primary care providers.

REFERENCES AND/OR ACKNOWLEDGEMENTS

1. Viktil, et al. *Pharmacoepidemiol Drug Saf* 2006;**15**:667–74.

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5PSQ-156 RISK ASSESSMENT AND MANAGEMENT TO IMPROVE THERMO-SENSITIVE DRUGS SAFETY

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