an Excel© spreadsheet which logs a range of criteria, such as the patient's sociodemographic background, the drug(s) involved, the type of error, the associated pharmaceutical intervention and many others.

Results 60 errors for 1000 patient days, that is 0.5 error per stay and 90 errors per 1000 prescriptions were detected for short stays. 1393 errors of all types were detected over 5 months, which is 0.9 error per month and per bed. The errors were spread over 3 categories: errors defined by the French Clinical Pharmacy Society criteria (67.3%), errors linked to the computerised tool (14.3%) and other types of error (18.4%). 5 drug classes were heavily involved. 59% of patients were affected by an error despite a prior pharmaceutical intervention. Errors rarely have drastic consequences on the patient: 4‰ prescriptions. Weaknesses in knowledge and malpractice represent nearly 85% of the total of errors. Errors due to computer parameters represent an increasing risk (14%).

Conclusions Most prescribing errors are avoidable. Although computerised physician order entry is a way of making the medication process safer, it also generates comments and has limitations. The prescription tool determines the type and frequency of errors. All these errors justify the analysis of all the prescriptions by a pharmacist, as s/he has a rounded knowledge of the patient beyond the medical prescription. The booming certification of various software packages dedicated to helping hospital prescription writing in a way acceptable to the High Authority for Health contributes to this step of making care safer and will hopefully lead to a decrease in errors.

No conflict of interest.

GRP-043 CONCURRENT USE OF DIFFERENT BENZODIAZEPINES IN DIFFERENT HEALTHCARE LEVELS

doi:10.1136/ejhpharm-2013-000276.043

J Sotoca, M Rovira, C Codina, J Ribas. *Hospital Clínic, Pharmacy Service, Barcelona, Spain*

Background Benzodiazepines are the most commonly-used anxiolytics and hypnotics. Concern has been expressed regarding their potential over-prescription. Different benzodiazepines have fundamentally the same mechanism of action and differ from each other mainly by differences in pharmacokinetics. There is no pharmacological basis for using more than one benzodiazepine in the same patient.

Purpose The purpose of this study was to study the prevalence of concurrent use of different benzodiazepines in different healthcare levels in the same area: primary care, tertiary level hospital discharge and ambulatory mental health centre.

Materials and Methods Data were obtained from the pharmacy claims database between 1st and 31st January 2012.

Patients who had been dispensed at least one benzodiazepine during January 2012 were included (n = 1707 in primary care, n = 273 at tertiary level hospital discharge and n = 128 in an ambulatory mental health centre). The proportion of benzodiazepine users was calculated and broken down by gender and age.

Results The number of patients who were dispensed two or more different benzodiazepines simultaneously was 124 (7.3%) in primary care, 11 (4.0%) in hospital discharge and 1 (0.8%) in the ambulatory mental health centre. Most patients who were prescribed benzodiazepines were women (between 60% and 70% depending on the health care setting). Women benzodiazepines users were younger in the ambulatory mental health centre (mean age 51 years) than at hospital discharge (mean age 64 years) or in primary care (mean age 68 years).

Conclusions There was more detrimental prescribing of different benzodiazepines simultaneously in primary care than at hospital discharge or in an ambulatory mental health centre. In patients who used benzodiazepines simultaneously, they were mainly prescribed by the same physician.

No conflict of interest.

GRP-044 CONFORMITY OF THE BATCH FILE IN PREPARATION: AN INTERNAL AUDIT

doi:10.1136/ejhpharm-2013-000276.044

N Gastaut, T Pepin, L Lohan, A Jalabert, S Hansel-Esteller, G de Barry. *CHU DE MONTPELLIER – HOPITAL LAPEYRONIE, Pharmacie Lapeyronie – A. de Villeneuve, Montpellier Cedex 5, France*

Background Around 3000 batches of medicinal products are prepared each year in Lapeyronie Hospital.

For each batch, a batch file (BF) is created. This contains the prescription, a manufacturing and labelling sheet (MLS) and a control and batch release sheet (CBRS).

Purpose Since the publication of the French Good Manufacturing Practice in 2007, a process of quality improvement has been implemented. An internal audit of all 2011 BFs has been conducted to evaluate the non-conformity (NC) rate.

Materials and Methods An internal control questionnaire (ICQ) evaluating various criteria was written by the pharmacist and completed by students and residents for each BF. The results were compared with a previous 2010 study.

Results 42% of 2,858 BFs were not acceptable. There were 1691 non-conformities (a BF can be unacceptable on several criteria): 32% of the unacceptable BFs had a problem with the prescription, 59% had inaccuracies with the MLS and 9% with the CBRS.

Of those with prescription problems, pharmaceutical validation traceability was lacking for 49% and 31% had not been signed by the MD.

The absence of checking the sheet before preparation was the major NC factor (79%) regarding the MLS. The volume of raw materials was not checked during preparation in 8.6% of MLS.

NC regarding CBRS was due to incomplete checking of the preparation before it was released (36%).

Results in these 2 studies showed that the MLS was not checked before preparation in 28% of BFs in 2011 against 71% in 2010. The volume cheque before preparation was not performed in 41% of BF in 2011 against 85% in 2010.

Conclusions Following this audit, corrective actions were instituted: pharmacists were trained on the importance of the pharmaceutical validation of prescriptions, and the assistants were reminded of the importance of getting their work checked before and during preparation.

Nevertheless, there has been progress in the conformity rate between these two audits, pointing out the impact of corrective actions.

No conflict of interest.

GRP-045 CONTRADICTIONS IN THE INTERPRETATION OF DRUG/SUPPLEMENT INTERACTIONS AND DIFFICULTIES OF THEIR MANAGEMENT IN EVERYDAY CLINICAL PRACTISE

doi:10.1136/ejhpharm-2013-000276.045

A Végh, RG Vida, B Nyaka, L Botz. *University of Pécs, Department of Pharmaceutics Central Clinical Pharmacy, Pécs, Hungary*

Background The growing use of supplementary products (herbal remedies, food supplements, etc.) poses an unignorable and poorly explored risk to hospital patients. The results of our previous study [1] show that 85.5% of hospital patients took at least one supplementary product; and with one patient out of four we have identified potential interactions. However, several questions arise about their clinical relevance: (1) Might the interaction harm the patient?

(2) Is treatment modification or close monitoring necessary? (3) Is it reasonable to prohibit the use of any supplement?

Purpose To explore and study those determinants that need to be taken into account when managing drug/supplement interactions.

Materials and Methods Taking the results of our previous study as a basis we have systematically evaluated the literature and the available authentic databases.

Results There are significant differences between the databases we have looked at, as to which interactions are present in the system, and how broad a spectrum of active ingredients is included when a known case of interaction occurs.

We identified the following factors, which have to be taken into account when evaluating a potential interaction:

- type of underlying evidence (in vitro studies, case reports, clinical trials, etc.)
- which form of a given interacting substance has been reported on (species, plant-part, type of extract, etc.) and whether this component is present in the product
- mechanism and dose dependence of the interaction
- which patient groups are more likely to develop symptoms due to the interaction

We evaluated 155 components found in supplementary products by the listed criteria, then assessed the relevance and classification of interactions.

Conclusions Special software, that contains all the recommended criteria we have set up, could become an effective tool for preventive screening of interactions on hospital admission.

Reference

1. A. Végh, E. Lankó, A. Fittler, L. Botz (2012): Identification and prevention of deleterious effects of supplementary health products on medical therapy – A challenge for clinical pharmacists; abstract in *EJHP* 19 (2), p. 95.

No conflict of interest.

GRP-046 CORONARY PATIENTS: WHICH THERAPEUTIC APPROACH ON DISCHARGE FROM HOSPITAL?

doi:10.1136/ejhpharm-2013-000276.046

G Foucras, L Denis, B Sallerin, E Divol. *CHU TOULOUSE – Rangueil, Pharmacy, Toulouse, France*

Background Coronary artery disease is one of the main causes of death in industrialised countries. The recommended treatment is 'BASI' (B for beta-blockers, A for antiplatelet agent, S for statin and I for ACE inhibitors or sartans) together with appropriate treatment of major cardiovascular risk factors (CVRFs).

Purpose To study compliance with the standard care of coronary patients, choosing to focus on hospital discharge in the context of improving professional practise.

Materials and Methods This study was conducted in two cardiology units, over 2 years. It focused on all inpatients with a positive coronary angiography. An evaluation of professional practise was conducted in 2010. Improvement actions were then taken: the results were presented to cardiologists and a booklet was written summarising good professional practise recommendations. In 2012, practise was re-evaluated through a second study. We collected and analysed information on treatment after hospitalisation, CVRFs and information in the discharge letter.

Results The study included 179 patients in 2010 and 111 in 2012.

Concerning drug treatment, the recommended 'BASI' treatment was prescribed in 72% of cases in 2010 versus 70% in 2012. For non-compliant treatments (i.e. other than BASI), 17% were justified in the discharge letter (BASI not indicated or contraindicated), against 16% previously.

Concerning the management of CVRF, lipid analysis was performed for 94% of patients in both groups, and recorded in the discharge letter in 82% (2010) versus 77% (2012). 30% of patients with diabetes and/or obesity consulted a dietician or diabetologist in 2010 versus 44% in 2012. Last, 68% of smokers received a nicotine substitute in 2010 and 35% in 2012.

Conclusions Our work shows that the recommendations are generally well respected. This may explain why, despite successive changes of junior doctors, practise has changed little during this study. However, further action will be required concerning management of CVRFs, which is still less satisfactory.

No conflict of interest.

GRP-047 CREx AND ORIONÆ ANALYSIS IN AN HOSPITAL PHARMACY: A SIX-MONTH REVIEW

doi:10.1136/ejhpharm-2013-000276.047

C Pichard, F Roussel, I Debrix, F Baud-Camus. *HOPITAL TENON (AP-HP), Pharmacie, Paris, France*

Background Prevention of medication errors has led to improved safety of the drug use system. Experience feedback committees (Comités de Retour d'Expérience, CREx), in particular, can help health professionals to improve the quality and safety of drugs management.

Purpose To set up a CREx in our pharmacy, in order to record, analyse and correct precursor events.

Materials and Methods Medication errors are collected on a report form. Once a month, these errors are reported to CREx and the staff select the event that will be discussed in the next CREx meeting. The ORION method, based on experience acquired in aeronautics, was selected to analyse how the CREx should operate. The systemic analysis is divided into 5 steps, performed by a pilot trained in the method and presented during CREx. The five steps are: collect the data, rebuild a chronology of facts, identify any gaps, contributing and influential factors, propose corrective measures and write the analysis report.

Results From April to September 2012, 61 dysfunctions were reported. 19 were actual and 42 were potential errors. Among these errors, 47.5% related to prescription, 21% to dispensing, 21% to inventory management, 7% to administration, 1.7% to validation and 1.7% to preparation. Five of these errors were analysed in CREx (ORION method). Ten corrective measures were proposed, 6 of which were actually implemented. We noted an increase in the number of dysfunctions reported, from 4 dysfunctions reported in April to 22 in September.

Conclusions CREx is well established in our pharmacy, taking place once a month, with representatives of all pharmacy staff. After six months, CREx has enabled 6 corrective measures to be implemented (creation or modification of procedures, modification of medicines management, etc.). It has also enabled pharmacy staff to understand the importance of reporting and analysing medication errors.

CREx is thus an approach to sustain in order to improve the safety of the drugs use system.

No conflict of interest.

GRP-048 CYTOTOXIC DRUGS WITH THE POTENTIAL TO PROLONG THE QT INTERVAL

doi:10.1136/ejhpharm-2013-000276.048

[1]M Morgado, [2]L Lemos, [2]R Oliveira, [1]S Morgado. *[1]Hospital Centre of Cova da Beira, Pharmaceutical Services, Covilhã, Portugal; [2]University of Beira Interior, Health Sciences Faculty, Covilhã, Portugal*

Background Regulation No. 173/CD/8.1.7. from the Portuguese Authority of Medicines and Health Products (INFARMED), issued on 2 August 2012 and titled 'Ondansetron – dose constraint for