than 2 mg. Nobody was given more than 9 mg. In total, 350 mg of atropine was immediately necessary on the site of the attack, equivalent to 350 phials of 1 mg. In our simulation, the time for access and preparation of the antidote was about 10 minutes from the moment of the alert. The transfer and distribution time to the site was less than 15 minutes due to favourable road access, geographical factors and the short distance from the station to the storage facility.

Conclusions The pharmacist is responsible for immediate availability, accessibility and distribution of the antidotes to the site of emergency, and awareness of appropriate treatment.

No conflict of interest.

GRP-186 THE QUALITY OF ORAL CHEMOTHERAPY PRESCRIBING IN ONCOHAEMATOLOGIAL OUTPATIENTS

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Background Nowadays, in our health area, most of the oral antineoplastic drugs prescribed to outpatients are dispensed in hospital pharmacy services. Patients receiving these kinds of drugs are susceptible to suffering adverse events (AE) due to medicines errors (MEs).

Purpose To evaluate the quality of oral chemotherapy drug prescriptions (OCDPs) in oncohaematological outpatients.

Materials and Methods Descriptive prospective study. OCDPs for adult patients received in a pharmaceutical outpatient care unit were analysed for two months. The information necessary for OCDPs was established based on legal rules and international recommendations. We established that omitted or confused information in patient identification (identification number), weight, height and/or corporal surface (in drugs dosed depending on these parameters), diagnosis, treatment duration, dose and frequency of administration, presented serious risk based on possible consequences.

Results 291 prescriptions were analysed from 183 patients. 100% of prescriptions had almost one omission, 78.7% of which showed serious errors of omitted or confused information related to the following items: patient identification (0.7%), weight, height or corporal surface (56.7%), diagnosis (28.9%), treatment duration (14.1%), dose (5.8%) or frequency (12.1%). Information omitted or confused about patient and treatment information included: age or birth date (1.4%), allergies (omitted 56%, unknown 38.8%), morbidities (59.5%), cycle number (67%) and periodicity (46.7%). Drug information omitted or confused included: drug name (generic 35.7%, originator 61.5% or both 2.7%), dose units (10.7%), pharmaceutical form (83.1%) or route of administration (58.4%). Physician information omitted or confused included: name (7.6%), signature (1%) and collegiate number (1%).

Conclusions Our results show a high rate of omitted and confused information in prescriptions in OCDP. Extreme attention during the validation process was required in order to prevent MEs and AEs. New tools, such as electronic prescription, pre-printed medical orders or educational programmes for prescribers, must be implemented in order to improve the quality of OCDP.

No conflict of interest.

GRP-187 THE RATES AND TYPES OF PRESCRIBING ERRORS IN ELECTRONIC CHEMOTHERAPY PRESCRIPTIONS FOR AMBULATORY PATIENTS

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Background Electronic prescribing (EP) systems have been recognised as successful in reducing chemotherapy prescribing errors. However, electronic prescriptions are unlikely to prevent all errors, and new types of errors may emerge.

Purpose To assess prescribing error rates and identify new error types and their causes with the implementation of a electronic prescribing system for ambulatory cancer patients at a London Cancer Centre.

Materials and Methods A service evaluation was conducted in two parts, covering two different strategies for interception of prescribing errors – prospectively by pharmacists during a 2-week period, and retrospectively using data from the pharmacy EP telephone helpline service, over 41 weeks.

Results The overall rate of error-containing prescriptions was estimated to be 6%.

In the prospective part, 32 errors were identified from 571 electronic chemotherapy prescriptions. Most commonly committed errors were chemotherapy drug dose adjustments (13; 41%) and weight omissions (11; 34%).

In the retrospective analysis, 95 of 141 errors (67%) were 'e-selection errors', classified mainly as 'work-arounds' (26; 18%), 'wrong commands' (35; 25%), or 'wrong fields' (27; 19%). 63 errors (45%) were related to scheduling a chemotherapy or supportive drug or regimen.

Electronic system-related causes of prescribing errors were recognised in 4 of 32 cases (13%) in the prospective part, and in 89 of 141 cases (63%) in the retrospective part. It was estimated that with implementation of technical solutions and additional prescriber training, 85% of these errors could be prevented in the future.

Conclusions The estimated rate of chemotherapy prescribing errors was 6%. A number of different errors, specific for electronic prescribing, were identified, with a thorough explanation of how various errors may have occurred. Future larger scale studies are needed to confirm prescribing error rates, and to possibly identify other, previously unrecognised, types of chemotherapy prescribing errors.

No conflict of interest.

GRP-188 UNDER-REPORTING OF ADVERSE DRUG REACTIONS IN THE HOSPITAL SETTING: AN ESTIMATE BASED ON THE ANALYSIS OF HOSPITAL DISCHARGE RECORDS

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Background In the post-marketing setting, spontaneous reporting is an important tool for the surveillance of Adverse Drug Reactions (ADRs). However, underreporting is a major limitation of a pharmacovigilance system. Several studies showed that ADRs may cause hospitalisation resulting in an increase in hospital stays and costs.

Purpose To gather information on the extent and frequency of ADRs at Careggi University Hospital, and to identify unreported ADRs to the Pharmacovigilance Office, using the hospital discharge records.

Materials and Methods We analysed the hospital discharge records from January 2011 to June 2012. In particular, we considered those records with a Drug Related Group (DRG) classification related to allergic reactions, poisoning and toxic effects of drugs (DRGs from 447 to 451). We included in our analysis records referring to poisoning, according to the new pharmacovigilance legislation in force from July 2012. Our research gave us information about the number of suspected reactions, but it didn't provide specific information on the patients and the seriousness of the reaction.

Results We obtained 346 records related to the DRGs selected: 101 (29%) ADRs and Testing Oral Exposure to Drugs, 91 (27%) poisoning, 20 (6%) drug abuse, 7 (2%) reactions to foods and 97 (28%) unspecified events. It was possible to identify the drug involved in only 51 records: antibiotics, NSAIDs, chemotherapy agents, local anaesthetics, opioids and immunoglobulin were the agents mainly reported. Only 2 cases had been reported to the Pharmacovigilance Office and entered in the Italian National Pharmacovigilance Database.
Conclusions Our survey shows a mismatch between the ADRs documented in the hospital discharge records and those actually reported to the hospital's Pharmacovigilance Office, highlighting the problem of under-reporting. The data could be useful for implementing measures to raise awareness among health care professionals and to spread the culture of drug safety.

No conflict of interest.

GRP-189 UPGRADING A VITAMIN K ANTAGONIST CONSULTATION PROGRAMME: IDENTIFICATION OF NEW ORAL ANTICOAGULANT (NOAC) PRESCRIPTION PARTICULARITIES

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Background Our pharmacy department performs 150 Vitamin K antagonist (VKA) patient consultations annually. New oral anticoagulants (NOACs) are expected to replace VKAs in most of their indications. The variety of drugs and the different therapeutic schemes depending on the indications can be extremely hazardous. The NOAC marketing authorization (MA) came along with a European risk management plan.
Purpose To assess the prescription particularities of NOACs, further to the extension of their indication in cardiology in the management of atrial fibrillation (European Society Of Cardiology Guidelines in 2012).
Materials and Methods A retrospective study of NOAC prescriptions was performed from January 2011 till July 2012 to identify the main departments prescribing them and to evaluate the indications. Secondly, we questioned 2 cardiologists to determine the needs of patients and other healthcare practitioners for information about these treatments.
Results An increase in NOAC prescriptions was observed: 25 in 2011 and 41 in 2012 (7 months). The main prescribing departments were cardiology and orthopaedic surgery with respectively 48 and 12 patients. 18 prescriptions (2011) vs. 8 in 2012 did not match the recommendations. This was mainly due to prescription anticipating the MA in cardiology. Information needs identified by the cardiologists concerned prescription (switching from VKA-NOAC, effects of medicines altering the haemostasis and changing the dose required, perioperative management for optimal safety if the patient needs surgery or invasive procedures). The patient also needs to be informed (knowledge of the treatment, awareness of the risk of haemorrhage, self-medication and clinical surveillance of any bleeding).
Conclusions This preliminary research shows that it is necessary to supervise NOAC prescriptions and inform patients, to ensure these new treatments will be used properly. It allowed us to design a standard protocol for prescribing and monitoring NOAC. Our anticoagulant consultation programme will include these needs and NOAC patient consultation will be offered from January 2013.

No conflict of interest.

GRP-190 USE OF TRANQUILLISERS AND RESTRAINT IN A FRENCH TEACHING ACUTE CARE HOSPITAL

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Background Major and minor tranquillisers can be used to chemically restrain a patient. Use of chemical restraint (CR) has been described mainly in long care settings but there is very limited information when considering acute care hospitals.
Purpose To study the prescriptions for major and minor tranquillisers in 3 clinical wards of a French teaching hospital and to determine if they can be considered CR.
Materials and Methods This prospective study took place over 2 weeks in 3 different wards: geriatrics, pneumology and vascular surgery. Tranquilizers were defined as anxiolytics (minor) and neuroleptics (major). Prescriptions were checked daily and for each patient with a tranquilliser, medical records were screened to determine whether it was newly prescribed. For every newly-prescribed tranquilliser the practitioner was asked the indication, if he considered his prescription was a CR and if the patient was being physically restrained.
Results 45.2% of the 137 patients included had been prescribed at least 1 tranquilliser. 54.5% of the 77 tranquillisers prescribed were introduced during the hospitalisation. Among those 42 newly-introduced tranquillisers, 9 (21.4%) were considered as CR by the prescribers. 6.6% of the patients included were chemically restrained, which is comparable with previous retrospective studies of restraint in acute care wards. The most frequently prescribed CR was alprazolam (55.6%) and the most frequent indication for CR was anxiety. In addition 88.9% of the CR drugs were prescribed 'when required' leaving responsibility for administration to nurses alone. None of the patients with tranquillisers had physical restraint.
Conclusions This is the first prospective study on restraint in an acute care hospital. CR is used for a minority of patients; however it is mostly prescribed 'when required'. Hence it should be used with the utmost care and prescribed with the most precise instructions in order to avoid misuse and risk of abuse.

No conflict of interest.

GRP-191 WOULD 50ML PREFILLED SYRINGES IMPROVE PATIENT SAFETY? OBSERVATION OF 960 INFUSIONS WITH A SYRINGE PUMP IN A MULTI-CENTRIC STUDY

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Background Before infusion with a syringe pump, drug preparation requires often dilution and more steps compared to most other injection practises, thus involves risks for patients and Health Care Workers (HCWs). The literature indicates that prefilled syringes (PFSs) address these issues successfully but most data do not apply to intravenous infusions.
Purpose BD ran a multicentre study to evaluate the expected impacts of a new BD Sterifill 50 ml PFS on patient and HCW safety, comparing an infusion with a syringe pump using either the PFS or a conventional system (drug in ampoule, diluent, 50 ml syringe filled at time of use).
Materials and Methods 120 HCWs performed infusions in a randomised order, 4 with the new PFS, 4 with the conventional system, mimicking regular dobutamine preparation and infusion (250 mg/50 ml, 10 ml/h). For all 960 cases, an observer recorded any handling