

informed of these patients by the electronic records thus made by geriatricians. Pharmacists checked their medical records with the currently prescribed medicines and identified all discrepancies revealed in reconciliation, and if appropriate, notified attending physicians.

**Results** A total of 45 patients were included in the study with a median age of 87.8 (SD 4.6) years and a median of 8 (SD 3) current home medicines. The pharmacist was consulted in 86.7% of patients. Pharmacists reviewed all these patients and discrepancies were detected in 41% patients: a) prescription of a drug not included in the hospital formulary (23.1% of patients). The substitution of these drugs proposed by pharmacists was accepted by physicians in 44.4% patients. b) Other kinds of discrepancies were detected in 5 patients (12.8%). The degree of acceptance of these pharmaceutical interventions was positive in just one patient. The rest was either negative or not assessed by physicians. 100% of discharged patients included in their medical report a list of active drugs and also, specific recommendations were made about interrupting former medicines.

**Conclusions** Medicines reconciliation developed by a multidisciplinary team has been found to be useful in detecting and reducing discrepancies with home medicines when frail elderly patients are admitted to hospital. It will be interesting to implement the same process, involving a pharmacist, when patients are discharged.

No conflict of interest.

#### GRP-004 A NEW STRATEGY FOR MONITORING AND IDENTIFICATION OF ADVERSE DRUG REACTIONS IN ONCOLOGY PATIENTS

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**Background** Drug safety is an important issue in clinical practise because Adverse Drug Reactions (ADRs) are frequent and potentially life-threatening complications in patients undergoing cancer treatment.

**Purpose** This study had two main purposes: firstly, to monitor the safety of oncology patients in chemotherapy treatments and to identify and describe the toxicity of drugs; secondly, to compare the incidence and frequency of ADRs in approved experimental chemotherapy protocols compared to the ADRs in common clinical practise.

**Materials and Methods** From September to December 2012, all prescriptions reducing the normal dosage by at least 25% were examined to evaluate whether or not the reduction or withdrawal were related to ADRs. During these analyses pharmacists supported oncologists in completing ADR spontaneous report forms.

**Results** To date, eighty-two patients with dose reductions have been screened in the database. Seventeen patients (20.7%) experienced an ADR and the reports were recorded in the Italian Pharmacovigilance Database. Of the 17 patients, 12 were female and the median age was 62 years. All the observed ADRs are known and described in the summary of product characteristics. The drugs mainly responsible for the reactions were 5-fluorouracil, platinum-based agents, bevacizumab and cetuximab. Eight ADRs were graded as serious and required hospitalisation. Reducing the dose or withdrawing the drug after the onset of reactions led to a complete recovery in the majority of the patients. In 1 patient the ADRs caused treatment failure.

**Conclusions** Our exploratory survey demonstrates a clear and consistent underreporting in this patient setting. Management and understanding of ADRs in the course of drug treatment in cancer patients is important for improving the response to, and tolerability

of, the treatment. Collaboration between different professionals is needed to improve the clinical efficacy and safety of care for patients.

No conflict of interest.

#### GRP-005 A NOVEL MODELLING APPROACH ADAPTING FUZZY REGRESSION FOR CAPTURING VAGUE DEFINITION OF ADMISSION OF A PATIENT

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**Background** Unplanned admission of a patient which is a vague or fuzzy event has important financial implications for efficient use of hospital resources. Patients at high risk of admission are of major concern due to heavy use of hospital resources. Traditional approaches are not capable of accounting for the complex uncertainty and vague nature of hospital admissions. Methods adapting fuzzy regression methods could be an alternative method for decision-making experts to predict patient admission.

**Purpose** To deal with uncertainty in health system variables, identify the relationship between risk of admission and risk factors associated with the admission of a patient, and capture a vague definition of admission of a patient.

**Materials and Methods** A modelling approach adapting a fuzzy regression method was designed and developed using UK Hospital Episode Statistics (HES) data to capture the vague definition of admission of a patient. This model deals with uncertainty in health system variables which act as input variables in the model. The data collected is fuzzified, upper and lower bounds of the fuzzy membership function are evaluated using a JAVA programme that uses fuzzy regression methods.

#### Results

1. The fuzzy membership function was evaluated for about 10,000 patient records.
2. 404 input variables were scanned using HES data sets.
3. Significant risk factors were admission source, admission method, reference conditions, age, length of stay, disease diagnosis.
4. The uncertain relationship between predictors and outcome associated with it is shown with the help of upper and lower bound regression equations.

**Conclusions** The fuzzy regression model was found to be capable of quantifying and estimating the unknown relationships between input predictors and predicted outcomes. The findings suggest that the fuzzy regression approach provides a good way of dealing with uncertainty in health system variables and vagueness in the admission of a patient.

No conflict of interest.

#### GRP-006 A POLICY REVIEW OF THE APPLICATION OF THE INTEGRATED MEDICINES MANAGEMENT SERVICE MODEL IN NORTHERN IRELAND

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**Background** Since 2002, the Integrated Medicines Management Service (IMM) has strategically re-engineered clinical pharmacy services in the five acute Health and Social Care Trusts (HSCTs) in Northern Ireland. The Department of Health, Social Services and Public Safety (DHSSPS) supported the initial development of the IMM informed by evidence which demonstrated improvements in