GRP-082 HOSPITAL PHARMACIST INTERVENTIONS IN PATIENTS WITH ENTERAL NUTRITION FEEDING TUBES

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Background Patients receiving enteral nutrition (EN) suffer several kinds of complications such as gastrointestinal disorders, lung aspiration, tube dislodgement, tube clogging, hyperglycaemia and electrolytic alterations. The pharmacist's key role is to ensure the best nutrition and to solve and prevent problems related to drug administration by this route.
Purpose To analyse hospital pharmacist interventions (HPIs) in patients fed with EN through feeding tubes.
Materials and Methods Prospective study from 1 July 2011 to 30 June 2012 in a 350-bed hospital. Twice a week a hospital pharmacist monitored patients fed through feeding tubes. HPIs were classified in four types: Type 1: EN formula recommendation (to increase nutritional support, to recommend another kind of formula, to modify the regimen); Type 2: to recommend flushing feeding tubes with water; Type 3: to suggest replacing PVC nasogastric tubes (NTs) with silicone NTs; Type 4: to adjust pharmacotherapy (EN-drug interactions and drug incompatibilities). The pharmacist reported all HPIs to physicians.
Results A total of 132 patients were monitored, with 94 HPIs: Type 1: 45 (47.9%) (37 (82.3%) to increase nutritional input, 2 (4.4%) regimen modification and 6 (13.3%) new formula recommendations), Type 2: 11 (11.7%); Type 3: 3 (3.2%); Type 4: 35 (37.2%) (12 (34.3%) substitutions of omeprazole capsules for omeprazole oral solution, 10 (28.6%) lactulose for lactitol, 9 (25.7%) delayed-release tablets for immediate-release tablets, 4 (11.4%) others).
Conclusions HPIs contributed to improved pharmacotherapy and suitability of the EN formula in most of the patients with feeding tubes. Designing an EN multidisciplinary care plan improves patients' treatment and health outcomes.

No conflict of interest.

GRP-083 HOSPITAL PHARMACISTS CAN IMPROVE PHARMACOVIGILANCE IN THE EMERGENCY ROOM

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Background Hospital pharmacists can play an important role in reporting adverse drug reaction (ADRs). Several publications underscore the fact that adverse drug events account for a substantial percentage of all hospital admissions. In the literature, several ways are mentioned in which the pharmacist can contribute to the safe use of drugs.
Purpose To establish ADRs in the Emergency Room (ER).
Materials and Methods This study was conducted from April 2010 to December 2011 in Salerno University Hospital. ADR report forms completed in the first 20 months of the project were analysed. Some of their key principles were collected: sex; suspected drug that caused the reaction and other drugs taken in association; description of ADRs and their classification as non-severe, severe or life-threatening. They were compared with ADR data for 2009.
Results 158 forms were analysed, each related to one different patient: 98 patients were women (68%). 50% of the events were connected with antibiotics, e.g. amoxicillin/clavulanic acid (28 cases), penicillin (19 cases), cephalosporins (17 cases); 35% concerned anti-inflammatories such as nimesulide (21%), propionic acid derivatives (21%), acetylsalicylic acid (14%), ketorolac (11%), steroidal anti-inflammatories (7%). 103 patients didn't take other drugs, but 55 had taken another one. Skin reactions were 52% of events, while 14% were cardiovascular events, 13% gastrointestinal problems, and 8% were respiratory reactions. Non-severe ADRs were 75%; 25% were severe and 1 case life-threatening. Before the project, in 2009 only one ADR had been reported; zero reports in the period January–March 2010.
Conclusions It is evident that the presence of a hospital pharmacist in ER increases the number of ADR reports: data confirms that a pharmacist who supports medical staff in reporting ADRs should be operative in all hospital departments.

No conflict of interest.

GRP-084 HOW HAS THE INTRODUCTION OF NEW DRUG CHARTS AFFECTED PRESCRIBING DOCUMENTATION?

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Background University Hospitals Bristol (UHBristol) have standards for safe and professional prescribing [1]. The standards include prescriber accountability and informed clinical decision making by awareness of drug chart(s) in use and any medicine(s) not given. In 2011 the Medical, Pharmaceutical and Nursing Colleges produced standards for hospital in-patient prescription charts aimed to help eliminate prescribing errors and improve patient outcomes [2]. The standards correlate with the UHBristol standards.
Timeline Initial audit *February 2010*. New prescription chart was released in July 2010 and re-audited in *September 2010*. Revised chart was released July 2011 and re-audited in *January 2012*.
Directing Change The audit results and the NHS Institute for Innovation and Improvement Plan, Do, Study, Act (PDSA) [3] tool informed each chart change. The strategy was co-ordinated by pharmacy, with input from the healthcare team.
Purpose To establish achievement of the prescribing standards below within in-patient medical wards at UHBristol.

> **Prescriber identity:** 100% of prescribers should print their name
> **Prescriber contact:** 100% of prescribers should print their bleep number
> **Additional chart(s):** 100% of additional prescription charts(s) will be documented on main prescription chart
> **Missed doses:** 100% of medicines that are not given will have a documented reason

Materials and Methods Data collection proforma was designed, piloted and used for each audit cycle. Ten in-patient prescription charts from each ward were reviewed.
Results The table states the achievement of the standards with each cycle. The last column indicates the change between the first and last audit.
Conclusions Each revision of the prescription chart produced improvements in achievement of the standards. The audit cycle, PDSA and multidisciplinary approach informed changes and enhanced the charts' fitness for purpose.
References

1. UHBristol Medicines Governance Group.Medicines code.2009.
2. http://www.rpharms.com/what-s-happening-/news_show.asp?id=275
3. http://www.ihi.org/knowledge/Pages/Tools/PlanDoStudyActWorksheet.aspx

Abstract GRP-084 Table 1

		Initial audit February 2010	Re-audit September 2010	Re-audit January 2012	
Prescriptions reviewed		**384**	**387**	**387**	***Change***
Standard	**Target**				
Prescriber identity	100%	18.4%	95.2%	98%	***+76.6%***
Prescriber contact	100%	7.8%	77.9%	84%	***+76.2%***
Additional chart(s)	100%	38.3%	81.3%	90%	***+51.7%***
Missed doses	100%	5.9%	80.2%	100%	***+94.1%***

No conflict of interest.

GRP-085 IDENTIFICATION OF RELEVANT DRUG INTERACTIONS IN NEONATAL INTENSIVE CARE UNITS

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Background Among the different types of medication errors, drug interactions may have serious consequences in Neonatal Intensive Care Units (NICU). However, they can be easily detected with appropriate tools, particularly in the context of a computerised prescribing system with pharmaceutical analysis.
Purpose The objective of this study was to calculate a theoretical criticality index, using a method inspired by the Failure Modes, Effects and Criticality Analysis (FMECA) method for each drug interactions identified in NICU in order to prioritise them to pharmacists and physicians.
Materials and Methods The study was a retrospective review of prescriptions in a French NICU. The study included prescriptions for preterm infants with gestational age below 33 weeks and hospitalised between January 2006 and December 2009. For each prescription, drug interactions were evaluated with the French Theriaque® medication database. The criticality index of each drug interaction was calculated by multiplying occurrence, severity and detection scores. The scales of each score had been built by a multidisciplinary group. Severity and detection scores were assessed by pharmacists and physicians. Intraclass Correlation Coefficients (ICCs) were used to compare pharmacists' and physicians' scores, and a synthesis was realised.
Results Among the 907 prescriptions with at least 2 prescribed drugs (4605 prescriptions written, with 109 different drugs), 47 different drug interactions were identified with Theriaque®. The 10 most critical drug interactions for pharmacists and physicians were detailed, and then a common medical and pharmaceutical synthesis was established. The ICC of detection was 0.75 (95% CI: 0.63–0.88), and the severity was 0.32 (95% CI: 0.08–0.56).
Conclusions This work highlights the importance of multidisciplinary collaboration in safe medication practise. This method can be used as a basis for future cooperation between medical teams and the pharmaceutical teams that make interventions. It is easily transferable to other medical specialties with the same objectives.

No conflict of interest.

GRP-086 IDENTIFYING NEW TUBERCULOSIS CASES THROUGH PHARMACY DISPENSING RECORDS IN PROF DR FERNANDO FONSECA HOSPITAL, PORTUGAL

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Background Controlling and preventing tuberculosis (TB) continues to be a major public healthcare challenge. Pharmacy and clinical records can thus contribute with important information concerning newly-diagnosed inpatients, treatment regimens and resistant strains.
Purpose To identify new tuberculosis (TB) cases through prescription records in a Portuguese General Hospital.
Materials and Methods This study took place in 2012, in Hospital Prof Dr Fernando Fonseca EPE (HFF), an 800-bed hospital. Patients were identified from Pharmacy dispensing records (Hosix v7.1; SIVSA) and clinical information was collected from the electronic medical records (Soarian Clinicals 3.1; Siemens). This data covered: age, sex, signs and symptoms, risk factors, outcomes of chest X-ray, diagnosis, respiratory isolates, therapeutic and microbiology results.
Results To the end of September 2012 75 new cases of TB were identified. 38 diagnoses were made up to 24 h after hospital admission. The most frequent symptoms were non-productive cough 65.8%, weight loss 55.3% and fever 50%. There were 26 cases of pulmonary TB and 12 of extrapulmonary TB. 23 patients tested positive to the Ziehl Neelsen stain. 2 of the patients had resistant TB. 37 patients were diagnosed up to a maximum period of 10 weeks after hospital admission. The most frequent symptoms were non-productive cough 40.5%, weight loss 40.5% and fever 37.8%. There were 16 cases of pulmonary TB, 13 extrapulmonary and 8 strictly clinical and imaging diagnoses. 3 patients tested positive to Ziehl Neelsen. 2 of the patients had resistant TB. By the time of the congress data will be updated for the year 2012.
Conclusions The high rate of delayed-diagnosis TB contributes to an increase risk for the health care workers and other patients exposed to it. The hospital OHD used this study to demonstrate the importance of early diagnosis in the Emergency Department and faster microbiology results and of putting suitable isolation measures in place.

No conflict of interest.

GRP-087 IMPACT OF AN ELECTRONIC MEDICINES RECONCILIATION PROGRAMME USED IN A GENERAL SURGERY UNIT

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Background Medicines reconciliation is a key tool in the prevention of adverse drug events.
Purpose To assess the impact of a medicines reconciliation programme for hospital admission into a general surgery unit, including an electronic tool, in the number and type of unintended discrepancies between chronic medicines and medicines prescribed upon admission.