taxonomies listed in ISMP Spain. The errors observed and reported by the staff involved with the process were recorded by the pharmacist. The differences between frequencies were checked with the Chi-Square statistical test.

Results The total error frequency (EF) was 1.27%. The drugs most frequently involved were natalizumab (2.43%), infliximab (1.23%) and intravenous immunoglobulin (1.23%). No statistically significant differences between EF of each drug and the mean frequency were detected (P = 0.94, 0.76 and 0.94). The services involved were: Gastrointestinal (2.98%), Neurology (1.57%), Rheumatology (1%), Haematology (0.15%) and Oncology (0.035%). Only in the Haematology and Oncology services were differences from the average found (P = 0.038, p = 0.001). Most failed orders were manual (67%). All incidents occurred in the prescribing process and were detected by the pharmacist during validation. No errors reached the patient (category B). In the classification by error type: 67% were incorrect date (periodicity in the cycle), 22% dosage (50% excess) and 11% in the rate of administration.

Conclusions After reviewing the results we can assume that the main checkpoints where our activities should focus on are the following: incorrect date, dosage and rate of administration.

A possible methodological bias can be considered because the data were collected in the pharmacy unit and all errors were prescription errors – no pharmacy or process errors.

No conflict of interest.

GRP-136 PHARMACEUTICAL INTERVENTIONS AND E-PRESCRIBING TOOLS IN A TERTIARY-CARE INSTITUTION

doi:10.1136/ejhpharm-2013-000276.136

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Background Failure Mode and Effect Analysis (FMEA) is a tool to identify, assess and prevent possible failures that could occur in a process.

Purpose

1. To describe FMEA as a method to identify weaknesses in the process of prescription and transcription of medical orders.
2. To isolate the key steps according to their risk priority number (RPN).
3. To report the steps taken.

Materials and Methods A multidisciplinary study group was assembled. Possible errors in the prescription/transcription workflow were identified and classified according to their RPN score (calculated by multiplying the severity, occurrence, and detection). Strategies for improvement were established.

Results Errors in the prescription were classified as follows: (1) Patient-and-history identification, (2) Clinical and laboratory data checkout, (3) Treatment conciliation, (4) Allergies, (5) Verbal prescription, (6) Handwritten prescription. Errors in transcription: (7) Patient identification (nurse), (8) Internally mailed prescriptions, (9) Paper transcription, (10) Check in pharmacy, (11) Patient identification (pharmacist), (12) Prescription validation, (13) Prescription printing, and (14) Acknowledgement of errors by the pharmacist. Top-ranked item (number), suggested solution, and indicator, respectively were: (5) Verbal prescription (288), storage of verbal prescriptions in pharmacy, % of verbal prescriptions; (9) Failure in paper transcription (288), computerised physician order entry (CPOE), % of electronic prescriptions; (14) Error report to the pharmacist (288), implementation of a two-way communication protocol, number of reports; (8) Paper-based prescriptions sent to pharmacy (243), CPOE, % of electronic prescriptions; (10) Check in pharmacy (216), CPOE, % of electronic prescriptions. The pharmacy, medical director, and Quality Unit were responsible for the changes undertaken in all cases.

Conclusions Verbal prescription, failure in paper transcription, error report and mailed prescriptions to pharmacy were the steps with the highest risk of error. For most cases, CPOE was implemented, whereas the percentage of electronic prescriptions was the key indicator to measure the overall improvement in these processes. In conclusion, further efforts and pharmacy policies should focus on the implementation of CPOE in all inpatient areas, thus preventing failure of prescription/transcription and validation loops.

No conflict of interest.

GRP-137 PHARMACEUTICAL INTERVENTIONS AT BEATRIZ ANGELO HOSPITAL

doi:10.1136/ejhpharm-2013-000276.137

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Background Beatriz Ângelo Hospital (HBA) is 424-bed district hospital (210-bed Medical Specialties, 90-bed Surgical Specialties, and 22-bed Intensive/Intermediate care unit, among others).

All prescriptions are validated by a pharmacist at the Department of Pharmacy (DP), and it is always possible to access the electronic medical record of each patient to consult clinical data and record any suggestions or interventions. For the purposes of this study, pharmaceutical interventions (PIs) are defined as contact with other healthcare providers in order to prevent any medicines-related problems (MRPs).

Purpose To quantify and characterise PIs at HBA following the identification of any risks of MRPs during prescription validation.

Materials and Methods Prospective data collection from 1 July to 30 September and subsequent entering of the data into a PIs database created by the HBA's DP according to a protocol developed by the DP of Hospital da Luz and Faculdade de Farmácia da Universidade de Lisboa.

Results During the period of analysis, 914 PIs were recorded for a total of 280 patients (an average of 3.3 PIs per patient), with the following distribution: 242 PIs in Intensive Care units, 400 in the Medical Specialties, 214 in the Surgical Specialties and 58 in other units. The most frequent causes of PIs were: unsuitable use of medicine due to the renal function (n = 420 [46.0%]); potential adverse effect/toxicity (n = 139 [15.2%]); and lack of therapeutic efficacy (n = 112 [12.3%]). The most frequent PIs were therapeutic drug monitoring (n = 343 [37.5%]); suggestions regarding parameters found in blood tests (n = 241 [26.4%]); adjustments to dose and frequency of administration (n = 106 [11.6%]); adjustments to route of administration and medicine formulation (n = 07 [11.7%]).

As for the expected effects of PI, the most frequent were: increased effectiveness (n = 548 [60.0%]); reduced drug toxicity (n = 205 [22.4%]); reduced risk associated with route of administration (n = 104 [11.4%]).

Concerning the results of PI, the most frequent were: no clinical improvement/no clinical aggravation (n = 289 [31.6%]); problem prevented (n = 248 [27.1%]); clinical improvement (n = 238 [26.0%]). Of all PIs, 813 (88.9%) were accepted, and 328 (35.9%) of all PIs were recorded in the patient's electronic medical record.

Conclusions The high acceptance of PIs confirms the interdisciplinary cooperation of all the healthcare providers within the institution. The results show that PI is fundamental in promoting the good use of medicines and preventing MRPs. The development of a software application integrated in the electronic medical record will allow us to be more agile in documentation and to quantify the pharmacist's contribution within the clinical team.

No conflict of interest.