

adherence to the guidelines: it is fundamental continuing the training of the staff to achieve the required standard. Among the objectives for 2013, another audit with a modified cheque list will be performed, involving a greater number of health care professionals.

No conflict of interest.

GRP-026 APPLICATION OF FAILURE MODE AND EFFECT ANALYSIS ON THE PRESCRIBING AND TRANSCRIBING PROCESSES IN THE DISTRIBUTION UNIT DOSE SYSTEM

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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-027 ASSESSMENT OF BLOOD PRESSURE CONTROL AND ANTIHYPERTENSIVE MEDICATION ADHERENCE IN A PORTUGUESE HYPERTENSIVE POPULATION

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Background Hypertension is one of the major causes of worldwide morbidity and mortality. Despite the wide variety and availability of powerful antihypertensive agents, the blood pressure (BP) of fewer than a third of adult hypertensive patients is under control. Non-adherence to medicines is one of the major causes of treatment failure.

Purpose To evaluate BP control and antihypertensive medicines adherence in a Portuguese hypertensive population.

Materials and Methods A cross-sectional observational study was conducted in adult (aged 18 or over) hypertensive patients attending the hypertension/dyslipidaemia clinic for at least 6 months at the university teaching hospital of Cova da Beira Hospital Centre, Covilhã, Portugal, from March to August 2012. Patients were asked to participate in a structured interview which included socio-demographic characteristics, antihypertensive medicines adherence and target BP values. Medicines adherence was measured using a validated five-item adherence scale, [1] derived from the four-item scale developed by Morisky *et al*, [2] Detailed clinical information was obtained from medical records.

Results A total of 94 patients met the inclusion criteria and completed the structured interview. Of these, the BP of 47% was under control according to the European Society of Hypertension. Antihypertensive medicines adherence was 40%. Patients with controlled BP had a significantly higher rate of medicines adherence than patients with uncontrolled BP (52% vs. 30%, $P = 0.028$). Likewise, it was observed that patients whose BP was controlled were significantly more aware of their target BP figures (75% vs. 46%, $P = 0.034$).

Conclusions Many hypertensive patients prescribed antihypertensive treatment fail to achieve BP control in clinical practise. Poor medicines adherence and poor patient knowledge of target BP values should be considered as possible underlying causes of inadequately controlled BP and must be addressed in any intervention aimed to improve BP control.

References

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No conflict of interest.

GRP-028 ASSESSMENT OF COMPLIANCE AND AVOIDED COSTS AFTER IMPLEMENTATION OF GUIDELINES FOR CANDIDA INFECTION TREATMENT AND INVASIVE FUNGAL INFECTIONS IN NON-HAEMATOLOGY PATIENTS

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Background The recent marketing of new high-cost antifungal agents (echinocandins and azoles) requires the design of cost-effective treatment protocols.

Purpose A new treatment guide for candidaemia and other invasive fungal infections for non-haematology adult patients was approved in June 2011. The main objective was to evaluate the cost reduction by introducing this protocol in a 737-bed University Hospital serving a population of more than 400,000 inhabitants.

Materials and Methods Retrospective observational study between June and December 2011. We reviewed the medical records of patients whom were prescribed antifungal treatment during that time and we assessed the adjustment to the approved treatment guidelines. To quantify the avoided costs we extracted consumption data and costs of antifungals from the pharmacy service