4CPS-218 ASSESSMENT OF CLINICAL PHARMACIST INTERVENTIONS IN AN INTENSIVE CARE UNIT

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Background Traditionally, the functions of the clinical pharmacist in the intensive care unit (ICU) of our hospital were based on pharmaceutical interventions (PIs) concerning parenteral nutrition (PN), the preparation of these formulas and checking that the composition was adapted to the nutritional requirements and the clinical situation of the patient. Nevertheless, the same pharmacist can also collaborate with the ICU staff (physicians or nurses) in the optimisation of the pharmacological treatment of critically ill patients.

Purpose To describe the number and type of PIs upon medical prescriptions of critical care patients and to assess the impact of these PIs according to the degree of acceptance by the ICU staff.

Material and methods We carried out a prospective study between 1 April and 31 May 2018 in an ICU of 18 beds of a tertiary teaching hospital. Inclusion criteria: ICU patients who received PN during the stay. Variables included: type of PI (made after daily review of the nutrition and drugs prescriptions that were communicated verbally to the ICU staff), demographics and acceptance by the ICU staff.

Results During the study period, 232 patients were admitted to the ICU, 30 (12.9%) of whom received PN (mean age 62, range 13–93; 32% females; mean length of stay 3 days: range 1–36). A total of 134 PIs were recorded: 56.7% were related to PN prescriptions (27.6% of this kind of PI were modifications of insulin, 14.5% were modifications of electrolytes); 16.4% enteral nutrition PIs; 7.5% administration of drugs via the nasogastric tube; 7.5% giving information about drugs administration; 4.5% stability of intravenous mixtures; 3% conciliation of medication; 3% suggestions for changing one drug for another (due to inefficiency); and 1.5% concerning maximum dose alerts. Eighty-three per cent of PIs were accepted by the ICU staff.

Conclusion More than four PIs were performed per patient and the percentage of rejected PIs was very low. Although the main task of our clinical pharmacist was focused on clinical nutrition, this study demonstrates the role and importance of this professional incorporated into the ICU multidisciplinary team, since PIs contribute to prevent medication errors and to improve the effectiveness and safety of the total pharmacological treatment in critically ill patients.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-219 ANALYSIS OF PHARMACEUTICAL INTERVENTIONS IN AN EMERGENCY DEPARTMENT

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Background Medication errors in the emergency department can persist throughout the episode of care and up to hospital

discharge, leading to inadequate management that can compromise patient care. The pharmacist in an emergency department can be a key person in reducing medication errors and improve the quality, safety and efficiency of patient care.

Purpose To analyse the pharmaceutical interventions made during the conciliation and validation process, the drugs classified according to the Anatomical Therapeutic Chemical (ATC) Classification System and the degree of acceptance of the intervention by the prescriber in a medium-sized hospital.

Material and methods Prospective observational study, conducted between August and September 2018. The pharmacist spent 3 hours from Monday to Friday in the emergency department to carry out the conciliation of the previous treatment and the validation of the treatment for the acute pathology that was prescribed in the emergency department. The pharmaceutical interventions were registered in the pharmacy software and were communicated to the responsible physicians. Data collected: drugs involved, type of pharmaceutical interventions and acceptance of the recommendation by the prescriber.

Results A total of 244 pharmaceutical interventions were recorded in 86 patients, 50% males, median age: 73, median age (17–95).

The most frequent pharmaceutical interventions performed were 186 conciliations of the previous 58 treatments for acute pathology that were prescribed in the emergency department.

The drugs involved according to the ATC were: 39 (16.0%) alimentary tract and metabolism; 28 (11.5%) blood and blood-forming organs; 55 (22.5%) cardiovascular system; three (1.2%) dermatologicals; nine (3.7%) genito-urinary system and sex hormones; 11 (4.5%) systemic hormonal preparations excluding sex hormones; 26 (10.7%) anti-infectives for systemic use; three (1.2%) antineoplastic and immunomodulating agents; six (2.5%) musculo-skeletal system; 45 (18.4%) nervous system; 13 (5.3%) respiratory system; and six (2.5%) various.

The degree of acceptance of pharmaceutical interventions were: 178 (73.0%) accepted, 54 (22.1%) rejected and 12 (4.9%) not valued.

Conclusion The most frequent pharmaceutical interventions performed were related to conciliation of the previous treatment. The most common drugs according to the ATC whose interventions were performed by pharmacists were for the cardiovascular system. The degree of acceptance of the pharmaceutical interventions by the prescribers was high.

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4CPS-220 THERAPEUTIC DRUG MONITORING: ARE WE GETTING IT RIGHT AND OPTIMISING THERAPY?

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Background Therapeutic drug monitoring (TDM) is currently planned and ordered by doctors at an outer metropolitan hospital. Previous audits looking at clozapine and low-molecular weight heparin (LMWH) TDM found that sample timing was

poor in relation to steady state and peak/trough concentrations (Clozapine (n=196) 41% samples were not troughs, and LMWH (n=193) 57% samples were not at peak levels).

A literature review has shown that there is small and sporadic research within this area. The research has shown some benefits of a pharmacist-led TDM service. Unfortunately, the studies within the literature are often limited by a small sample size and factors such as a specific population (i.e. oncology patients) or specific pharmacists (i.e. the infectious diseases pharmacist).

Purpose To review the TDM process within an outer metropolitan hospital.

Material and methods A retrospective audit was conducted on TDM undertaken between 1 January and 31 December 2016. Patients were identified using the electronic pathology database. Patients were excluded if under the age of 18, in an outpatient setting or the emergency department. Progress notes, medication charts and other relevant pathology were reviewed via the electronic pathology program and via the Electronic Clinical Record Management System. They were assessed for appropriateness of the timing of collection, compliance to recommended TDM guidelines, the appropriateness of action of the resulting pathology and the documented involvement of the pharmacist.

Results A total of 3095 tests were included in the study, covering 11 medications. Of these, 32.6% were collected at an inappropriate time, making interpretation difficult and at a pathology cost of \$23,084.86. On average, 50% of the doses administered to patients after TDM were appropriate based on results and the clinical scenario. There was documented pharmacist advice on the TDM result in only 8.6% of the time.

Conclusion TDM has a large impact on the therapy and outcome of patients. This audit showed that TDM is currently performed sub-optimally and with an unknown or ad hoc role of the pharmacist. These preliminary results show a review of the current TDM process is required and, with their drug and pharmacokinetic knowledge, a greater impact and role of the pharmacist is required.

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Nil.

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4CPS-221 IMPACT OF HOSPITAL-CITY COMMUNICATION BASED ON THE MULTIPROFESSIONAL AND COLLABORATIVE DEVELOPMENT OF THE DISCHARGE LETTER ON THE CONTINUITY OF PATIENTS' MEDICATION MANAGEMENT-CITY STUDY

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Background Hospitalisation leads to changes in the patient's medication management. Currently, hospital-city communication, based mainly on the hospitalisation report, does not allow an efficient transmission of information to ensure early and optimal post-hospital care of patients. A discharge letter was imposed at the regulatory level to improve the continuity of patients' medication management after discharge from hospital. However, explanations for drug changes remain limited.

Purpose The objective of this study was to evaluate the impact of the collaborative multiprofessional implementation, integrating the clinical pharmacist, of the discharge letter explaining all drug regimen changes, and its transmission to the general practitioner by secure messaging, would improve continuity of care medication of the patient.

Material and methods A prospective randomised controlled cluster study was performed in two care units of the internal medicine department of a university hospital centre between September 2017 and February 2018. The impact of the discharge letter was evaluated based on the average number of drug changes performed in hospital and continued by general practitioners, in each group, 3 months after discharge. A sensitivity analysis was conducted on the justification of the non-continuation of drug changes by the general practitioners, based on international STOPP and START criteria. The number of re-hospitalisations was compared between the two groups and the satisfaction of general practitioners concerning this approach was evaluated by questionnaire.

Results A total of 189 patients were included in the analyses: 92 in the interventional group and 97 in the control group. The mean number of discontinued drug changes after discharge did not differ significantly between the two groups (1.5 ± 1.5 vs. 1.7 ± 1.6 , $p=0.35$). Sensitivity analysis showed similar results. A downward trend in rehospitalisations 3 months after hospitalisation was highlighted in the interventional group (22% vs. 31%, $p=0.15$). General practitioners were satisfied by this approach (91%, $n=111$).

Conclusion Transmission to the general practitioner of the discharge letter, explanation of all drug regimen changes and elaborated collaboratively and multiprofessionally, seems to be a promising tool. A large multicentre prospective study should be conducted to confirm these findings.

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4CPS-222 IMPACT OF THE ESTABLISHMENT OF ASSISTED ELECTRONIC PRESCRIPTION ON THE IMPROVEMENT OF THE UNIT-DOSE DRUG DISPENSATION SYSTEM

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Background The aim of the unit-dose drug dispensation system (UDDDS) allows us to dispense the medication required for the patient for the following 24 hours once the prescribed treatment has been validated by the pharmacist.

Purpose Evaluation of the impact on the effectiveness of UDDDS after the change from the preprinted prescription chart (PPC) to the assisted electronic prescription (AEP).

Material and methods This study was performed in a general hospital (330 beds), in which 10 units of hospitalisation were counted on UDDDS. The schedule of the delivery of the medication carts was established at 3 pm, after the daily doctor's visit. We have compared the functioning of UDDDS during the third term of 2017 and 2018, analysing in this way the dispensation with PCC and AEP respectively. We have measured as efficacy parameters the number of validated prescriptions before 3 pm and the percentage of the returns of