

Conclusion and relevance During the first wave of the SARS-CoV-2 pandemic, activity related to the validation of inpatients treatments increased significantly in our centre. The acceptance rate of interventions was not collected but it should be considered for future studies. The therapeutic groups involved in the pharmaceutical interventions differed between the P and pre-P periods. In the P period, those related to antiparasitic drugs (which includes hydroxychloroquine) increased significantly. Types of interventions were also different between both periods. In the P period, the interventions related to drug interactions and excessive durations of treatments were the most frequent. Both types were interventions related to the safety of treatments during the pandemic.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

4CPS-373 PHARMACEUTICAL CARE IN HOSPITALISATION UNITS: ANALYSIS OF INTERVENTIONS

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Background and importance The roles of hospital pharmacists have been expanded from dispensing to patient care. Establishing interprofessional collaboration between pharmacists and other specialists significantly improves the quality of patient care.

Aim and objectives To analyse pharmaceutical interventions (PIs) carried out in a preliminary phase of a pharmaceutical care programme targeting hospitalised patients.

Material and methods A retrospective descriptive study of PIs was carried out in a tertiary referral hospital (529 beds) over a 1 year period, from January to December 2019. The pharmaceutical care programme was conducted by five pharmacists involving 14 hospitalisation units. Data were obtained from the electronic medical record. Variables included were: number of patients susceptible of monitoring, number of PIs, PIs per patient, type of PI, PIs per hospitalisation unit and acceptance rate. PIs included resolution of issues raised by specialists and proactive recommendations and were performed in the electronic prescription programme (Farma-tools). The PIs were registered and classified into eight groups: pharmacokinetic monitoring, dose adjustment in renal failures, clinically relevant interaction, medical reconciliation error, prescribing error, information to prescriber, adverse drug reaction and other.

Results 1102 PIs were performed in 868 patients during the study period (1.3 PI per patient): 19.7% (216) were related to pharmacokinetic monitoring, 19.1% (210) to dose adjustment in renal failure, 14.1% (155) to clinically relevant interactions (categories D and X of Lexicomp), 11.2% (123) to medical reconciliation errors, 10.4% (115) to prescribing errors, 10.3% (114) to information to prescribers, 7.6% (84) to adverse drug reactions and 7.7% (85) other. Regarding PIs per hospitalisation unit: 12.4% were related to pneumology, 11.9% to internal medicine, 9.2% to neurology, 9.1% to general surgery, 8.4% to urology, 8% to traumatology, 7.7% to digestive, 7.3% to vascular surgery, 7% to cardiology, 5.4% to

neurosurgery, 5.1% to oncology, 4% to heart surgery, 3% to psychiatry and 1.5% to intensive care unit. The acceptance rate was 78.6% (866).

Conclusion and relevance The acceptance rate was high, which indicated considerable concern by the majority of hospitalisation units. The clinical pharmacist's integration into hospitalisation units improved the quality of patient care, especially through pharmacokinetic monitoring and dose adjustment in renal failure.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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4CPS-374 A SCREENING MODEL TO IDENTIFY ELDERLY POLYPHARMACY PATIENTS THAT MAY BENEFIT FROM PHARMACIST LED MEDICATION REVIEW DURING HOSPITAL ADMISSION

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Background and importance The National Health Authority calls for initiatives ensuring that relevant elderly polypharmacy patients receive medication reviews during hospital admission to reduce the risk of adverse events. Potentially inappropriate medications (PIMs) are one of the most frequent causes of adverse events in older people. Pharmacist led systematic medication reviews are time consuming, and while hospital length of stay has progressively reduced to an average of a few days, the effort has to be aimed at PIM interventions that are best suited to being carried out by a hospital physician.

Aim and objectives The purpose of the study was to develop a screening model to identify patients who may benefit from a pharmacist led medication review in hospital.

Material and methods A screening model was developed using PIMs described in the international literature and the workflow of pharmaconomists and clinical pharmacists in local hospitals. The screening model was applied to all elderly polypharmacy patients admitted to bed wards having pharmaconomist medicine management in five hospitals. Patients fitting the model were identified by pharmaconomists and referred to a pharmacist led medication review. The pharmacist led medication review was performed centrally with the aim of reducing the number of drugs, number of PIMs and complexity of the medication regimen. The primary outcome was the number of PIMs at discharge compared with the number of PIMs at admission to hospital.

Results The screening tool in the model comprised 10 medication focus points and demonstrated a specificity of 78% and sensitivity of 80% in detecting the relevant patients when applied to a cohort of elderly polypharmacy patients. From April to June 2018, 17 631 patients were screened using the tool. The pharmaconomists referred 396 patients to the pharmacists (average age 78 years, 52% women). Of these, 229 received a pharmacist led medication review (average of 2.78 interventions/patient). For the 115 patients with a possible follow-up, the average number of PIMs/patient was significantly reduced ($p < 0.001$) from 2.02 PIMs at admission to 1.57 PIMs at the end of hospital admission.

Conclusion and relevance The screening model developed detected relevant elderly polypharmacy patients for a

pharmacist led medication review during hospital admission. The model was easily implemented, low resource and resulted in a significantly reduced number of potentially inappropriate medications.

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4CPS-375 EXCESSIVE POLYPHARMACY AND OTHER DETERMINANTS FOR UNPLANNED HOSPITAL ADMISSIONS

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Background and importance Unwanted polypharmacy has been associated with avoidable harm (eg, unplanned hospital admissions (UHAs)), especially in older adults. Clinical pharmacy interventions have been developed to reduce UHAs. Yet it remains unclear which population derives the largest benefit of such interventions.

Aim and objectives The aim of this study was to identify determinants for UHAs in community dwelling adults.

Material and methods A retrospective study was performed, using data from a linked database consisting of the Integrated Computerised Network and the InterMutualistic Agency database. Patients aged 40 years or older with data available for the years 2013–2015 were included. Patients who died or were admitted to a nursing home were excluded. An index date was defined as the last general practitioner (GP) contact in 2014. The preceding 12 months were used to collect the determinants. For the occurrence of a UHA, a period of 12 months after the index date was used. To select determinants for inclusion in the multivariable model (table 1), a univariate logistic regression model was fitted on each predictor with the outcome UHA as the response. Systolic blood pressure, alanine

aminotransferase and potassium were non-significant at the level of 0.2 and hence were excluded from the multivariable model.

Results 40 411 patients were included in the project and 2126 (5.26%) patients had at least one UHA. Mean age was 58.3 (\pm 12.3) years. Results of the multivariable logistic regression model are summarised in table 1.

Conclusion and relevance The model identified seven determinants as associated with UHA: excessive polypharmacy, male gender, number of comorbidities, older age, low haemoglobin level and prior hospital and GP visits.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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4CPS-376 ANTIRETROVIRAL THERAPY OPTIMISATION STRATEGIES IN PATIENTS INFECTED WITH HUMAN IMMUNODEFICIENCY VIRUS: A DECISIVE TASK FOR HOSPITAL PHARMACISTS

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Background and importance Antiretroviral therapy (ART) for human immunodeficiency virus (HIV) cause a significant economic impact on health systems worldwide. Guidelines and treatments are constantly renewing, and for this reason it is crucial to optimise these therapies.

Aim and objectives To identify and propose patients who could benefit from ART simplification, from dolutegravir/abacavir/lamivudine (DTG/ABC/3TC) to dual therapy dolutegravir/lamivudine (DTG/3TC), and to analyse the economic impact of simplifying the regimen.

Material and methods A prospective study was conducted in a second level hospital in March 2020. All HIV patients with active ART (>6 months) with DTG/ABC/3TC were included. Patients who were candidates for simplification had to meet the following criteria: treatment with DTG/ABC/3TC for at least 6 months, absence of failure prior to another ART, undetectable plasma viral load (VL) for at least 6 months (undetectable being <50 copies/mL) and optimal adherence. Adherence was indirectly calculated by scoring the days that treatment was collected on time; 95% score or more was considered optimal. Adverse effects (AE) related to ART therapy were also recorded and taken into account, but they were not an indispensable requirement for simplification. Candidates were proposed to their doctor. The annual economic impact was evaluated by analysing laboratory sales prices in Spain and the number of patients who had a simplified ART.

Results 64 patients were included, 52(83%) were men, with a mean age of 48 (27–77) years. 38 (59%) patients had at least one prior ART and 10 (26%) of these patients failed on previous ART and consequently were excluded for simplification. Of the total number of patients receiving DTG/ABC/3TC, 50 (78%) presented undetectable VL, 44 (69%) had optimal adherence and 27 (42%) had some type of mild AE: 10 (37%) patients presented with neurological symptoms, 10 (37%) with dyslipidaemia and 7 (26%) with gastrointestinal upset. 31 (48%) patients met the criteria for simplification to DTG/3TC and 27 (87%) treatments were changed. This gave a saving of 49 288€ per year.

Abstract 4CPS-375 Table 1 Multivariable logistic regression model

Variable	Adjusted odds ratio	p value
Male	1.151	0.0273
Age	1.031	<0.0001
Body mass index	1.001	0.8989
Haemoglobin (women <12 g/dl, men <13 g/dl)	1.331	0.0192
Creatinine	1.040	0.6839
Aspartate aminotransferase (women >93 U/l, men >111 U/l)	2.243	0.0965
No of previous emergency department visits	1.547	<0.0001
No of previous hospital admissions	1.298	<0.0001
No of previous unplanned hospital admissions	2.452	<0.0001
No of previous general practitioners contacts	1.017	0.0098
Polypharmacy (5–9 drugs)	0.999	0.9887
Excessive polypharmacy (>9)	1.365	0.0062
No of chronic comorbidities	1.045	0.0003