European Medicines Agency. PS were reported on a visual analogue scale for each drug. The quantity tested by each pharmacist was two drops. The time between two medications was at least 5 min. The possibility of administration of a fraction of the dose was also determined. Modified release formulations and cytotoxic drugs were excluded. Liquid forms were tested with the same method.

Results One-hundred and fifty drugs were tested including 43 liquid forms and 107 solid forms. The average PS was smaller for diluted solid forms than for liquid forms (2.3 vs 2.9, $p < 0.001$). This can be explained by the more frequent bitterness of diluted solid forms (87% vs 14%, $p < 0.001$). PS was less than 3/5 for each tester in 72% of solid forms vs 60% of liquid forms ($p < 0.001$). A dose fraction can be used for 76 diluted solid forms. Flavoured suspending excipient can mask the taste of 80/107 solid medication but only when the bitterness was low. Some medications cause other sensations: tricyclic antidepressants are anaesthetics for mucosa, naftidrofuryl and febuxostat are irritants for esophagus and glycerin in the formulation causes a warm sensation in the mouth.

Conclusion This database provides part of the answer regarding the acceptability of a treatment. PS is an important factor in compliance, particularly in the paediatric population. This method requires to be validated because taste varies with age, ethnic ... This study must be completed by other elements such as pH of the solution, stability of the active substance or solubility parameters.

REFERENCES AND/OR ACKNOWLEDGEMENTS

https://www.ema.europa.eu/documents/presentation/presentation-acceptability-palatability-methods-available-assessment_en.pdf

No conflict of interest.

4CPS-247 LOCAL ASSESSMENT OF THE IMPACT OF PHARMACIST-LED MEDICATION RECONCILIATION ON HOSPITALISED ELDERLY PATIENTS

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Background Medication reconciliation (MR) through pharmacists' interventions (PIs) is a standardised practice in many countries to reduce drug-related problems (DRPs), such as drug-drug interactions, no therapeutic indication and inappropriate duplications. DRPs, which are relatively common in poly-treated elderly hospitalised patients, can increase morbidity and healthcare costs. In Italy, MR has still not been systematically introduced, therefore, local assessments are crucial to evaluate feasibility.

Purpose To evaluate the impact of pharmacist-led MR.

Material and methods A pre-post intervention study was performed including hospitalised poly-medicated patients >65 years: in the pre-intervention group (PRE-group) MR was not conducted (May to September 2017); and in the post-intervention (POST-group) pharmacist-led MR was performed (November 2017 to March 2018). Data, collected with a specifically designed MR form from medical records and the

hospital database, were registered in an Excel database including: patient demographics, number of prescriptions and DRPs at admission and at discharge, number of PIs and clinician acceptance rate in the POST-group and rehospitalisation rate 3 months after discharge in both groups. Statistical analysis was performed using STATA 15. Students *t*-test for independent data was used to compare quantitative variables between the two groups, while the Chi-square test was used for qualitative variables.

Results A total of 84 patients were included: 34 in the PRE-group (35.3% male, mean age 84.5 ± 6.7 , mean number of prescriptions per patient on admission 7.4 ± 2.7 , at discharge 8.0 ± 2.6) and 50 in the POST-group (45.1% male, mean age 83.2 ± 17.5 , mean number of prescriptions per patient on admission 8.4 ± 3.2 , at discharge 7.7 ± 3.0). DRPs at discharge were substantially reduced after the implementation of MR conducted by a pharmacist ($p < 0.001$): in the PRE-group, mean 2.90 ± 2.83 DRPs per patient were identified on admission and 3.79 ± 2.99 at discharge, while in the POST-group 4.80 ± 2.97 DRPs per patient on admission and 2.64 ± 1.75 at discharge leading to a significant difference in terms of reduction of DRPs at discharge between the two groups ($p < 0.05$). In total, 288 PIs were performed with a 74% clinician acceptance rate. The rehospitalisation rate reduced significantly in the POST-group (35% vs 10%, $p < 0.05$).

Conclusion Results showed pharmacist-led MR to be an effective procedure in the local setting, reducing DRPs and rehospitalisations in elderly patients. Therefore, MR programmes should be introduced into Italian standard practice to reduce healthcare costs.

REFERENCES AND/OR ACKNOWLEDGEMENTS

None.

No conflict of interest.

4CPS-248 ANTIMICROBIAL POINT PREVALENCE SURVEY

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Background Antimicrobial resistance has become a global challenge in healthcare and is usually associated with poor antibiotic-prescribing patterns.

Purpose We sought to determine the rate and characteristics of antibiotic prescription in order to design future targeted antimicrobial stewardship interventions.

Material and methods A point prevalence survey was carried out in the framework of the multi-centre study of international prevalence Global PPS 2017 (www.globalpps.com) in November 2017. The study was conducted from the analysis of all prescriptions of active antibiotics at 8 am at the hospital in a single day. A descriptive study (frequency and percentage) of the variables explored was carried out.

Results Of 174 patients eligible for the study, quality indicators for antimicrobial prescriptions were: compliance with institutional guidelines: 100%, 62.3% and 57.8% ($p < 0.01$); reason given for prescribing in patient case notes: 50%, 83% and 85.3% ($p < 0.01$); antibiotic duration documented in medical chart: 14.3%, 7.5% and 13.8% ($p = 0.498$); and targeted treatment: 28.6%, 34% and 32.1% ($p = 0.922$) for ICU, medical and surgical departments respectively.

There were therapeutic indications in 129 of the prescriptions, of which 22.5% were for skin and soft-tissue infections, followed by 15.5% complicated urinary tract infections and 9.3% pneumonia. Amoxicillin-clavulanate was the most prescribed antibiotic for treatment and prophylaxis purposes (48.1% and 29.8% respectively). According to syndrome, worst guideline compliance was observed in complicated urinary tract infections 57.9% and skin and soft-tissue infections (65.5%).

Conclusion In our setting, adequate acquisition definition, compliance with local guidelines, obtaining of microbiological samples and certain clinical syndromes (skin and soft tissue and urinary) were the main variables identified to prioritise ASP-targeted intervention.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-249 IMPLEMENTATION OF AN INTEGRATED SOFTWARE FOR CLINICAL TRIALS MANAGEMENT AND AUTOMATED PREPARATION OF INVESTIGATIONAL DRUGS IN A HOSPITAL PHARMACY

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Background In conducting clinical trials (CT), the hospital pharmacy is responsible for receiving, handling and dispensing investigational drugs while ensuring a high level of quality. All CT-related data are to be documented and reported in compliance with the CT protocol and good clinical practice, thereby encouraging the implementation of an information technology system to support and improve standard operating procedures management.

Purpose The aim of this pilot study was to evaluate a software, specifically designed for managing investigational and non-investigational medicinal products (IMPs/NIMPs), fully integrated into the robotic compounding platform of injectable drugs.

Material and methods The software was installed in the pharmacy-based Clinical Trials Unit in July 2018. IMPs/NIMPs, individual patient data, sponsor and investigator data were entered into the software database according to the ongoing CT protocols. Detailed reports were recorded, including the delivery to the CT site, the inventory at the CT site, the use by each patient, the accountability, and the return to the sponsor or alternative disposition of unused investigational drugs. Any changes to the CT protocols were traced. In addition, through the integration with the robotic compounding platform, individually prescribed doses for parenteral administration were prepared by using the supporting device for manual preparation which verifies dosing accuracy by gravimetric control and ensures identity by photographic recognition.

Results Two months after the installation, about 20% of the 60 ongoing cancer CT were managed through the software, involving, overall, 25 patients. In total, 10 investigational medicinal products were entered, of which four for oral administration and six injectable drugs. Overall, 39 individually prescribed doses were manually prepared by using a workflow system for compounding. Before implementation,

the dose errors were not recorded. After implementation, the mean absolute dose error amounted to $\pm 1.56\%$ ranging from $\pm 0.13\%$ to $\pm 4.29\%$. The automated data handling and record-keeping were ensured, thus improving quality in the preparation process and reports' traceability. The centralised management of all documents reduced time for data entry by the pharmacy staff and minimised human errors.

Conclusion The software for managing cancer CT in the hospital pharmacy, currently under validation, was successfully implemented, thereby encouraging the insertion of further CT protocols.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-250 INFLUENCE OF TIME AND STORAGE CONDITIONS IN THE STABILITY OF NEONATAL TOTAL PARENTERAL NUTRITION ADMIXTURES

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Background Ternary mixtures in parenteral nutrition have a complex composition. Thus, interactions between those components can occur and lead to instability of the mixture, compromising its safety. It is possible that a process of destabilisation of the lipid emulsion starts due to aggregation of fat globules.

Purpose To analyse the stability and safety of neonatal total parenteral nutrition admixtures (TPN) as a function of globule size, time and storage conditions.

Material and methods We studied eight TPN compositions (100 ml) designed following the premature infants' protocol in our hospital for TPN prescription and elaboration. All the samples were macronutrients (glucose, lipids and proteins) and micronutrients ternary mixtures, calculated according to the nutritional requirements of a 1 kg neonate during the first 8 days of life. The globule size was measured by laser diffraction (Beckman Coulter LS I3 320) on the preparation day (day 0) and after 7 days. The samples were stored at refrigerated and room temperature. They were prepared in duplicate. We used the SPSS v20 program to perform the statistical analysis.

Abstract 4CPS-250 Table 1

Sample	lipids (g)	Globule size (microns)	Globule size (microns)	Globule size (microns)
		DAY 0	DAY 7 (ambient)	DÍA 7 (refrigeration)
TPN1	0.714	0.373	0.390	0.396
TPN2	1.138	0.401	0.395	0.397
TPN3	1.478	0.257	0.249	0.203
TPN4	1.750	0.250	0.263	0.244
TPN5	2.160	0.270	0.273	0.256
TPN6	2.580	0.266	0.267	0.269
TPN7	2.990	0.269	0.247	0.257
TPN8	4.000	0.256	0.247	0.256