

indicated the IV access through which IV medications, parenteral nutrition, and infusion solutions should be administered to avoid incompatibilities and whether flushing of the infusion line was required.

**Results** In both periods, 66 patients each were included in the evaluation. Flushing volume was reduced from a median of 0.68ml/kg/day (Q25/Q75 0.35/1.33) to 0.31ml/kg/day (Q25/Q75 0.05/0.74;  $p < 0.001$ ). In the control period, the median fluid overload per patient was 2.3%, while 1.5% fluid overload occurred in the intervention period ( $p < 0.001$ ). Also, fewer patient days with fluid overload of  $\geq 10\%$  occurred during the intervention period. Fluid overload of  $\geq 20\%$  were only observed in the control period.

**Conclusion** The use of pharmaceutical infusion schedules with recommendations for flushing infusion lines according to compatibility has reduced the flushing volume. This can avoid the administration of unnecessary IV fluids. Reducing fluid intake helps to reduce the occurrence of fluid overload in PICU patients.

NP-004

#### RETROSPECTIVE STUDY ON INDIVIDUALISED MEDICATION OF DEMENTIA PATIENTS RECEIVING CHRONIC HOSPITAL CARES

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10.1136/ejhp-pharm-2023-eahp.4

**Background and Importance** Those elderly, dementia patients who receive treatments for their various chronic diseases belong to a high risk cohort. Their individualised medication should avoid treatment with multiple drugs and with active substances which pose a health risk for them. This may eliminate the adverse effects to which these patients are particularly susceptible.

**Aim and Objectives** The study evaluates the medical treatment of dementia patients receiving chronic and palliative cares simultaneously. We collected data of individualised medications from historic patient records in 2020–2021. The study was approved by the research ethics committees of the university and the hospital (IG/02176-000/2022)

**Materials and Methods** We examined the real-world data of drug treatment in dementia patients aged 65 or older who spent at least 5 days in the hospital. We analysed the anonymised, aggregate data. We used international databases compiled from meta-analyses and systematic reviews (Beers Criteria, START/STOPP, WHO, EMA and UCSF).

**Results** We analysed the drug treatment history of 108 patients (74 women and 34 men with the average age of  $80.5 \pm 9$  year), who met the preliminary selection criteria. We classified the patients into the following cohorts: 1.9% direction diagnosis, 20.4% basis of the main diagnosis, 35.2% main diagnosis, 38.9% comorbidity and 3.7% disease underlying death. The distribution of dementia types were: 53.7% vascular, 1.9% related to other diseases and 44.4% unspecified. The average number of medicines taken per day per patient was 10.8 pieces. Multiple drug treatment occurred in 86.1% of patients. 10% of the patients received medicine to treat dementia (donepezil in 60% of the cases, memantine 40% of the cases). At least one required medication was not administered for 38.9% of dementia patients because of its adverse effect.

**Conclusion and Relevance** From this investigation we concluded that the active involvement of a clinical pharmacist and the internationally validated clinical database systems are essential. They enhance the clinical effectiveness of the medication by reducing multiple drug uses and by eliminating adverse drug reactions. Our real-world study is highly beneficial for the individualised medication of dementia patients receiving chronic hospital cares.

NP-005

#### SELF-ASSESSMENT ON THE IMPLEMENTATION OF RECOMMENDATIONS OF THE PERIOPERATIVE PROCESS: INFECTIOUS RISK MANAGEMENT IN SURGERY SETTING

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10.1136/ejhp-pharm-2023-eahp.5

**Background and Importance** Surgical site infections (SSIs) are among the most common complication in surgery. They are associated with longer postoperative hospital stays, may necessitate additional surgical procedures, require long antimicrobial treatment leading to an increased antimicrobial resistance contributing to a costly healthcare. It's necessary to adopt a healthcare policy aimed at a more rational use of antimicrobials to limit antimicrobial resistance.

Our aim was to develop a self-assessment on the implementation of the recommendations, in order to identify key gaps and provide guidance and recommendations for improving IPC (infection prevention and control) practices.

**Materials and Methods** A multidisciplinary collaboration has involved infectious disease specialists, hospital pharmacists, microbiologists, intensivists, emergency surgeons, nurses. It was conducted a thorough self-assessment on the four following surgery areas: general surgery, emergency surgery, Orthopedic Surgery, Cardiosurgery Unit during July 2021 – March 2022.

A summary results of the recommendations core components self-assessment was provided by a scored checklist attributed to a specific level of recommendations implementation (score 0: not applicable; 1: no implementation; 2:  $\leq 50\%$ ; 3:  $> 50\%$ ; 4: 100% implementation).

The checklist report 13 macro-requisites to which a score is assigned; for each requirement was reported the number of improvement actions.

**Results** Following the assessment, 31 improvement actions were identified. The comparison versus total average of values shows 4 macro requirements under threshold: Screening per *S. Aureus*; Preoperative bathing; mechanical bowel preparation and the use of oral antibiotics and the maintenance of adequate circulating volume control/normovolemia.

This self-assessment reported 8 improvement actions in Emergency Surgeon: 10 in Orthopedic Surgery, 6 actions in General Surgery and 7 improvement actions in Cardio Surgery.

Furthermore, were highlighted important shortcomings such as antimicrobial prophylaxis for the prevention of SSI in colorectal surgery: scored 1,3 (NA); screening per *S. Aureus* in orthopedic surgery: score 1.

**Conclusion** The assessment allowed the identification of the priority areas intervention, in order to set innovative strategic actions to improve safety in the perioperative process.

In the future it will be possible to implement strategies with proven effectiveness and a global approach. The aim is

to overcome and refining guidelines by providing a comprehensive range of evidence-based recommendations for the prevention of SSIs.

### NP-006 IMMUNOTHERAPY IN SECOND-LINE TREATMENT OF NON-SMALL CELL LUNG CANCER

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10.1136/ejhpharm-2023-eahp.6

**Background and Importance** The introduction of immunotherapy in the treatment of patients with non-small cell lung cancer (NSCLC), whose disease progressed after first-line treatment, was considered an important advance. Real-life use data for these drugs are essential to measure their real added value in the treatment of these patients.

**Aim and Objectives** Our aim was to study the effectiveness of Atezolizumab (ATZ), Nivolumab (NVL) and Pembrolizumab (PMB), in the second-line treatment of NSCLC, in real clinical practice and analyze it considering the efficacy described in published clinical trials.

**Materials and Methods** This is an observational retrospective study of patients diagnosed with locally advanced or metastatic NSCLC, treated in second-line or later until the end of August 2021, with one of the following drugs: ATZ; NVL or PMB. Effectiveness was evaluated in terms of Progression-Free Survival and Global Survival.

**Results** Thirty-two patients treated with ATZ, 46 with NVL and 17 with PMB were included. Of the treated patients, 59.4% for ATZ, 39.1% for NVL and 100% for PMB had positive expression of PDL1 (>1%). The median progression-free survival calculated was 5.6 months for ATZ; 8.4 months for NVL and 5.0 months for PMB. The median overall survival calculated was 16.3 months for ATZ, 15.7 months for NVL and 32.6 months for PMB.

**Conclusions and Relevance** The progression-free survival and overall survival obtained demonstrate that, when used in clinical practice, the drugs studied are effective, with results not lower than those demonstrated in clinical trials. Immunotherapy proves to be a relevant therapy in the second-line treatment of NSCLC.

#### REFERENCE

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### NP-007 RECOMMENDATIONS FOR ADMINISTRATION OF IMMUNOSUPPRESSANTS VIA ENTERAL FEEDING TUBE ACCORDING TO THEIR *IN-VITRO* ADMINISTRATION

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10.1136/ejhpharm-2023-eahp.7

**Background and Importance** Immunosuppressants (IS) are used in the treatment and prevention of graft rejection after solid organ or tissue transplantation.<sup>1</sup> Their administration via an enteral feeding tube (EFT) is problematic regarding their narrow therapeutic index, cytotoxic, teratogenic potential, and occupational hazard. Incomplete absorption due to incorrect

administration via EFT may lead to graft rejection.<sup>2</sup> Appropriate drug forms of IS for administration via EFT are missing in our country.

**Aim and Objectives** Despite multiple published guidelines for the administration of medicines via EFT, available drug forms differ between countries. Our aim was to create local recommendations for the safe administration of IS via EFT reflecting the available medicines in our country, while preventing EFT occlusion and preserving optimal effect.

**Materials and Methods** A literature search was aimed to determine the site of absorption, incompatibilities, and measures to decrease the occupational hazard. The practical part consisted of dissolving tablets, capsules' content, and their administration via EFTs of diameters 10, 8, and 6 Fr. The administration of IS was realized by the adapted protocol by White et al., 2015.<sup>3</sup> We evaluated the rate of disintegration of tablets and tube occlusion.

**Results** Only one brand of mycophenolate mofetil tablets and two brands of azathioprine tablets disintegrated in a syringe. All the other tablets need to be crushed. Two of the studied IS caused the occlusion of a 6 Fr EFT, no EFT of wider diameter was occluded. We summarize our recommendations in a table.

**Conclusion and Relevance** Crushing tablets or opening capsules is often the only possibility for IS administration via EFT. In these cases, using personal protective equipment is always needed. Ciclosporin, mycophenolate mofetil, and azathioprine can be administered relatively safely. Special attention is needed when an EFT of 6 Fr is used due to its easy occlusion.

#### REFERENCES AND/OR ACKNOWLEDGEMENTS

Our project was supported by the National Institute of Cardiovascular Diseases, EduPharm pri NÚSCH, Bausch Health, Novartis, Nutricia, Roche.

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### NP-008 EMERGENCY DEPARTMENT REVISIT SCORE BASED ON PHARMACOTHERPAY

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10.1136/ejhpharm-2023-eahp.8

**Background and Importance** Drug-related problems (DRPs) are a common reason for visiting the emergency departments (ED). However, the information available on risk factors associated with new ED visits based on the patient's pharmacotherapy is limited.

**Objective** To develop a predictive model of the risk of revisiting the ED at 30 days based on patients' treatment at discharge.

**Methods** Retrospective cohort study involving adult patients who attended the ED in Catalonia (Period: 2019) with a triage level of 1–3. A 30-day return visit prediction model was created in a referral cohort (60%) using a logistic regression model, being validated in a validation sample (40%). Variables included in the multivariate analysis were assigned a score proportional to the regression coefficient. The sociodemographic variables considered in this study were age, sex and income level, multimorbidity burden based on the Adjusted