the WHO) in multifactorial anaemic patients older than 75 years, using high doses of darbepoetin with initial monthly dosage, eliminating weekly/fortnightly induction, facilitating treatment.

Material and methods A retrospective, multicentre, observational study was conducted in patients who started treatment with monthly doses of darbepoetin in the last 3 years (1 April 2017 to 1 April 2020), without previous induction doses. The first follow-up visit was made 1 month after the first dose was administered or just after the second dose, testing that Hb was maintained >12–13 g/dL. If the tests showed higher results, doses were lowered (20–25%); if the tests showed lower results, the dose was increased. The procedure was repeated the following month only in patients not in the range. In these cases, after two checks of stability, the test became quarterly. Variables measured were dosage, and initial, monthly and quarterly Hb values. Patients with insufficient information, or younger than 75 years, were excluded (because of different optimal values). Data were obtained from the hospital's clinical information systems. Patients were informed if they required a different dosage than usual, giving their consent.

Results 36 patients initiated darbepoetin monthly during the study (7 men, 29 women). Median age was 86 years. Six patients were excluded, one for age, and five for not having sufficient data. Dosage by prescribers was 1.5 µg/kg/month. Average Hb starting treatment was 9.76 g/dL (range 7.6–10.5) and in the first control (4–8 weeks) it was 11.11 g/dL (range 8.8–13.6). In 70% (21/30) of patients, it was not necessary to change the initial dose because therapeutic objectives were progressively achieved. This dose was maintained until the successive quarterly controls. In the other 30% (9/30), 4 had their dose increased and 5 had their dose decreased to keep within range. In successive quarterly controls, the average value was 12.62 g/dL (10.5–15.3), achieving the therapeutic goals in all but two patients. Two patients were transfused due to acute processes that could alter the results.

Conclusion and relevance The monthly starting dosage in elderly patients appeared an effective and safe way to achieve therapeutic goals in multifactorial anaemia. The advantage over weekly/biweekly induction lies in better therapeutic adherence, reducing the number of doses needed in patients who also have many other medications.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

5PSQ-130 INTRAVENOUS POTASSIUM CHLORIDE: IS THE MEDICATION USE PROCESS SECURE?

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Background and importance Potassium chloride (KCl) for injection is identified as a high risk medicine and a 'never events'. The development of quality assurance strategies for the KCl use process is essential to minimise risk.

Aim and objectives To assess compliance with guidelines for KCl prescription, pharmaceutical evaluation and administration for KCl use to identify priorities for improvement.

Material and methods A prospective observational study was conducted including patients treated with intravenous KCl (outside the intensive care unit) over 4 non-consecutive days from February to March 2020. The KCl use guidelines of the French National Agency for Medicines and Products Safety was considered as a reference. Data collected were: for the prescribing stage: indication, information that must appear on the prescription, concentration and flow rate; for the pharmaceutical evaluation stage: entry of pharmaceutical intervention (PI) for a non-compliant prescription; and for the administration stage: labelling, administered concentration and flow rate. Data were collected from the electronic medical records and the observation of KCl administration.

Results During the study period, 34 patients (53% men) were included, with a median age of 76 years (range 26–94). The KCl use process was compliant for 6% (2/34). The prescribing stage was non-compliant (NC) for 88% (30/34): 76% (26/34) with NC indication, 53% (18/34) with incomplete prescription and 12% (4/34) too concentrated. The pharmaceutical evaluation stage was NC for 83% (25/30): it was missing in 58% (15/26) of non-indication PI, 89% (16/18) of missed information PI and 75% (3/4) of NC concentration PI. The administration stage was NC for 68% (23/34): 53% (18/34) with incomplete labelling and 15% (5/34) too concentrated. The flow rate was 100% compliant.

Conclusion and relevance This study highlights a lack of compliance with recommendations. Because of this audit, we have identified an action plan for improvement: raising awareness of KCl good practices among physicians, pharmacists and nurses; identification of high risk medicines by a specific logo on software; and setting up intravenous KCl prescription protocols and an automatic reassessment request after 2 days. For pharmacists, it will be necessary to set up a simulation for pharmaceutical evaluation on fictional cases. For nurses, the labelling rules should be recalled.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

5PSQ-131 ADHERENCE OF THE HOSPITAL CLINICAL MANAGEMENT UNITS TO THE CENTRE'S PROTOCOL FOR THE SAFE USE OF INTRAVENOUS POTASSIUM

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Background and importance Following the recommendations of the Spanish Delegation from the Institute for Safe Medication Practices (ISMP), the safety commission of our hospital developed a programme to promote the safe use of intravenous potassium between 2012 and 2015. An audit carried out found that consumption from concentrated solutions (CS) was 10 times higher than from prediluted solutions (PS). A protocol was circulated to the service areas (SA) through institutional messages and training sessions. As a consequence, the amount of potassium consumed from PS was 3.7 times higher than from CS.

Aim and objectives In 2019, the International Medication Safety Network (IMSN) included the use of intravenous potassium as one of the main measures to avoid serious medication errors. The objective was to determine the degree of

adherence to the intravenous potassium programme after its completion 5 years ago.

Material and methods A retrospective observational study was conducted between June and December 2019. Potassium CS and PS used in our hospital were identified and the potassium mEq consumed with both methods were calculated. The intensive care unit was excluded because its use of CS is accepted by the ISMP.

Results Two types of CS were found: potassium chloride 2 mEq/mL and monopotassium phosphate 1 mEq/mL. Regarding PS, eight types were available: glucose 5%+10 mEq K, glucose 5%+15 mEq K, glucose 5%+20 mEq K, glucosaline+10 mEq K, glucosaline+15 mEq K, physiological+10 mEq K, physiological+15 mEq K and physiological+20 mEq K. Potassium consumption was 501 650 mEq in CS and 125 620 mEq in PS. Therefore, the ratio of potassium consumed using CS was four times higher than that consumed in PS.

Conclusion and relevance After 5 years from the end of the programme implemented to reduce the consumption of potassium CS in our hospital, there has been a loss of adherence to the protocol that has led to a considerable increase in CS consumption, multiplying its use by four versus the recommended SP. Therefore, it is necessary to circulate the protocol for the use of intravenous potassium chloride, which must be maintained over time through annual audits and continuous dissemination sessions.

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5PSQ-132 FAILURE MODE AND EFFECT ANALYSIS APPLIED TO THE PARENTERAL NUTRITION PREPARATION PROCESS IN A MATERNITY AND NEONATAL HOSPITAL

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Background and importance Parenteral nutrition (PN) is an intravenous nutrition technique commonly used in intensive healthcare units. Considering the lack of marketed mixtures for the neonatal population, the preparation of PN is an essential, but complex and high risk hospital activity.

Aim and objectives To analyse the risks related to the process of preparing parenteral nutrition bags in the pharmacy department of a university maternity and neonatology hospital.

Material and methods This FMEA was performed in the sterile preparation unit from January to April 2020. A multidisciplinary team was recruited to firstly perform a process mapping followed by related failure mode mapping through brainstorming sessions. Then, the criticality score for each failure mode was determined by collectively voting on a scale from 1 to 10 for each index (severity, occurrence and no detection). The failure modes were prioritised according to the risk priority number (RPN), which is the product of the three indices. Finally, an action plan to control the highest RPN failure modes was developed.

Results We identified a total of 90 failure modes. The RPN ranged from 3 to 630. The rounded mean±SD was 108±60. The failure modes were considered 'critical' (n=31) for RPN ≥108, 'to control' (n=11) for 60<RPN<108 or 'acceptable'

for RPN ≤60. The absence of pharmaceutical validation and the absence of agitation after the addition of each component had an RPN of 630. The steps with the highest cumulative criticality and the number of failure modes were production and quality control. The most critical substep was the aseptic filling in a closed system. A list of possible and achievable actions (n=46) was developed for the 'critical' and 'to control' failure modes with an appointed pilot for each action.

Conclusion and relevance Pharmaceutical validation was one of the most critical steps in our study. The optimal solution would be to invest in integrated commercial software. Production requires most of the improvements. The acquisition of an automated compounding device would minimise the risk. A second FMEA is needed to assess the impact of the changes undertaken. It will allow us to detect residual risks.

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5PSQ-133 EVALUATION OF A QUALITY MONITORING PROGRAMME FOR INTRAVENOUS FLUID MANAGEMENT

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Background and importance Intravenous fluid stewardship can support caregivers to optimise the patient's outcome, avoid fluid overload or electrolyte disorders, and control costs. Implementing a stewardship initiative requires monitoring to guarantee guideline adherence.

Aim and objectives To evaluate the impact of an internal audit on intravenous fluid use and identify opportunities to improve quality monitoring.

Material and methods To evaluate fluid guideline adherence in a Belgian university hospital, an internal audit was organised comprising five QIs, developed by the fluid stewardship programme. The QIs were calculated every 2 weeks over a 6 month period (August 2019 to January 2020), focusing on prescription and labelling, documentation of indication and monitoring of body weight and electrolytes. Every ward steward (22 physicians, 16 nurses) received the results of the first 3 months (T1) in an electronic report. The report's impact on the QIs between T1 and the following 3 months (T2) was assessed using a χ^2 test and interrupted time series (ITS) analysis. Afterwards, stewards were surveyed on how to further optimise fluid management monitoring.

Results In total, 729 patients (T1: 361; T2: 368) receiving 758 intravenous fluid bags (T1: 381; T2: 377) were screened. QIs on prescription and labelling were close to the target value. The QI 'documented indication' was low (21%). 'Availability of electrolyte values' increased significantly between T1 and T2 (90.3% vs 96.2%, $p<0.05$). ITS analysis could not definitely attribute this effect to our intervention. Internal medicine wards had significantly better results for the 'availability of electrolyte values' QI compared with surgical wards