levels. However, they are also associated with deleterious outcomes.

**Purpose** We aimed to characterise the impact of blood transfusions in length of stay (LOS) and in-patient mortality, in a population of hospitalised anaemic patients treated with IV iron.

**Material and methods** This was a retrospective cohort study. Patient records from a Portuguese General Hospital, with at least one inpatient administration of iron sucrose (IS) in 2014–2015 or ferric carboxymaltose (FC) in 2016 (when FC became available), were reviewed. Adult anaemic patients with at least one Hb evaluation before and after the administration of IV iron were included. Endpoints assessed comprised the association of blood transfusions with LOS and in-patient mortality, adjusted for sex, age and baseline Hb level. Statistical analysis included a generalised linear mixed-effects model and logistic regressions, using a 5% significance level.

**Results** Data was collected for 1178 patients, of which 878 were treated with IS and 300 with FC. Mean age was 63.9 and 71.1 for patients treated with IS and FC, respectively. The majority of patients were female: 61.4% and 51.3% for the groups treated with IS and FC, respectively. Average baseline Hb level was 8.4 g/dl for both groups. The majority of patients required blood transfusions in both groups: 58.0% in the IS and 62.9% in the FC.

Receiving at least one blood transfusion increased the LOS by 21% (95% CI: 8 to 35) in the IS group and 28% in the FC group (95% CI: 3 to 60).

The in-hospital mortality risk increased 2.5-fold (95% CI: 1.4 to 4.3) in patients treated with IS and who received a blood transfusion. As for patients treated with FC, in-hospital mortality was 4.3 times (95% CI: 1.6 to 12.1) higher in patients who received a blood transfusion.

**Conclusion** Blood transfusions impacted adversely on patients’ outcomes across different groups. Therefore, blood transfusions should be carefully considered, in accordance with the most recent patient blood management guidelines.

**REFERENCES AND/OR ACKNOWLEDGEMENTS**

**Conflict of interest** Corporate-sponsored research or other substantive relationships: this study was developed with financial support from Vifor Pharma. The authors had no restrictions or limitations during the study.

**5PSQ-018 IMPLEMENTATION OF PARENTERAL NUTRITION PRESCRIBING SOFTWARE IN A NEONATAL INTENSIVE CARE UNIT**

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**Background** Parenteral nutrition in neonatal intensive care units is a daily activity with extreme risks. These risks are mainly related to the immaturity of neonates, a sensitive population. The computerisation of the process of prescription is a promotional tool to reduce the risks.

**Purpose** This study aimed to assess the interest in implementing software to help prescribers of parenteral nutrition in neonatology.

**Material and methods** This prospective comparative study was conducted in a neonatal unit, during a period of 3 months. It looked to evaluate the process of preparation of parenteral nutrition mixture before and after the implementation of the prescribing software. This software was developed and validated by a team of doctors and pharmacists. The evaluation was performed by making a comparison between the errors that occurred during the manual
Results This study included 2,285 PN prescritions concerning 263 newborns. There was 1241 individualised PN concerning 130 newborns, including 89% preterm. Medium gestational age was 30 (24-41) weeks and medium weight was 1462 g (580-3770). Medium prescription duration was 13 (1-54) days. One-thousand and eleven (81%) individualised nutrition could not be substituted in standardised or commercialised PN because of the inappropriate concentration of glucose or low concentration of electrolytes. None of the individualised nutrition can be substituted without addition. Two-hundred and thirty (19%) individualised nutrition could potentially be replaced: 187 by standardised nutrition and 43 by commercialised nutrition. These standardised or commercialised nutrition bags need, on average, 3.4 adjuncts of electrolytes to maintain the needs of the newborns. Three additions were authorised according to guidelines, so only 108 (9%) individualised nutrition could be substituted.

Conclusion The individualised PN rate of our maternity hospital is in line with the national PN rate. All substitutable individualised PN need some addition but there is no protocol to do that in our hospital. They were then always justified. There are two ways of improvement: use software that suggest the most adapted PN product; or define with the neonatologist which type of addition should be prioritised.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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No conflict of interest.

5PSQ-020 SAFETY EVALUATION OF INJECTABLE POTASSIUM CHLORIDE PRESCRIPTIONS IN HOSPITAL

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Background Errors in the administration of injectable potassium chloride (KCl) is part of a list of 12 events described by ANSM (French drug safety agency). These events are called ‘Never-Events’, which should never occur in hospital if preventive measures are applied.

Purpose We wanted to know the level of safety of our injectable KCl prescriptions using ANSM safety criteria.

Material and methods We carried out a 2 week transversal-retrospective study. Between 1 July and 15 2018 each nominal prescription of injectable KCl was included using our pharmacy validation software (DXCare). All services were included except the ICU and emergencies. Then an intern in the pharmacy processed analyses of the following safety criteria. A double-check was made by a senior pharmacist. The reference guideline used for the safety criteria was the 2017 ANSM recommendations for injectable potassium chloride. For each prescription, recommended ANSM safety criteria related to intravenous KCl were assessed:

• Indication of severe hypokalaemia (<3 mmol/L) or inability to swallow.
• Prescription of KCl using specific units (g or mmol).
• Use of a slow infusion rate (≤1 g/h).
• Use of the available ready-to-use solution.
• Mention of the nature of the dilution solution to be used.