using a compounder or via other method (8% each). *Organisations not using AIO PN*: 43% of organisations were not planning to use AIO PN or didn't know and 15% planned to start in the future. 42% selected 'other' and gave comments, primarily relating to avoiding AIO PN for neonates, e.g. need to use neonatal network PN (split-phase) or prefer flexibility to stop lipid in case of adverse effects. Eleven organisations answered, 'Why are you thinking of using AIO PN?' – examples included releasing aseptic capacity, reducing administration errors/improving safety and the long shelf life of triple-chamber AIO bags.

Conclusion AIO PN appears to be an appropriate and safe for local use and should be taken into account in national standard paediatric PN formulation design where practicable.

P43 CONCENTRATED STANDARDISED PN TO OPTIMISE NUTRITION IN PRETERM INFANTS

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10.1136/archdischild-2020-NPPG.52

Background In 2010, the NCEPOD¹ report demonstrated a lack of good nutritional care for preterm infants. Since that time various approaches have evolved including standardisation of PN,² concentrated standardised PN³ and publication of a national framework from BAPM.⁴ The delivery of nutrition to preterm infants on our unit has been continuously monitored, evaluated and adapted.

Aims The aim of this audit was to evaluate whether reformulating our PN recipes would improve nutritional intake and thus growth parameters over the first 14 days after birth.

Methods Data was collected from our EPMA system and analysed retrospectively from all infants born at our unit <28 weeks gestation or <1Kg from 16/4/2016 to 15/4/2017 (audit 1) and from 1/6/2018 to 31/5/2019 (audit 2).

Results Data from a total of 33 patients was analysed using Excel™. The mean gestation and weight were similar for both audit cycles. Audit 1: gestation 26.5 weeks, weight 0.75 kg; audit 2: gestation 26.7 weeks, weight 0.74 kg. The average time from birth to PN was less in audit 2 (12 hrs 8 mins vs 13 hrs 12 mins), however the time from PN being prescribed to being administered took over 3 times longer (5 hrs 1 min vs 1 hr 30 mins). No patient received PN within 6 hours of birth in audit 2 compared to 20% in audit 1. The average nitrogen intake was higher in audit 2 than audit 1 (0.41 g/kg/day vs 0.36 g/kg/day) and the highest protein intake increased from 0.55 g/kg/day to 0.69 g/kg/day respectively; the average energy intake decreased from 73.5 kcal/kg/day in audit 1 to 68 kcal/kg/day in audit 2. The non-nitrogen energy to nitrogen ratio was lower in audit 2 versus audit 1 (165.3 kcal/g nitrogen vs 204.7 kcal/g nitrogen). There was no change in the percentage of patients requiring insulin: 40%. More patients had started receiving lipid infusion in the first 2 days after birth in audit 2 compared to audit 1 (94% compared to 33%). Both audits had 2 patients that had still not reached their birth weight by day 14, however the patients in audit 2 gained on average 9.12 g/kg/day compared to 4.96 g/kg/day in audit 1.

Conclusion Reformulating the PN resulted in higher nitrogen intakes and higher weight gain by day 14, although the full benefit may not have been achieved due to the lower kcal intake and non-nitrogen energy to nitrogen ratio. The time

from birth to PN and the time taken to administer PN once prescribed were longer so work needs to be done on addressing these issues and reducing barriers to nutrition. The total nitrogen intake with PN and EN also needs to be reviewed to prevent excessive nitrogen intake which may result if enteral feeds increase and the rate of PN is maintained.

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P44 VACCINE IN PEDIATRIC CHRONIC KIDNEY DISEASE (CKD) AND HEMODIALYSIS

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10.1136/archdischild-2020-NPPG.53

Aims Chronic kidney disease is a major risk factor of vaccine preventable infectious diseases due to the altered immune system and the natural evolution of the disease. There are differences in the prescription of some vaccines for this population. The aim of this study is to elaborate a vaccination protocol for chronic kidney disease and haemodialysis patients for a better immunization coverage, care and prevention against preventable infectious diseases.

Methods The study was conducted by a multidisciplinary team composed by pharmacists, infectious disease paediatrician and nephrology paediatricians. After a literature research (in Medline with MeSH terms: 'Kidney Failure, Chronic', 'Renal Dialysis' and 'Vaccines')^{1 2}, we compared the French immunization schedule³ for the general population with patient with chronic kidney disease or haemodialysis patients and confront it to the physician practice in our nephrology unit. For each vaccine, we collected the following data: indication, any difference concerning dose, schedule, re-administration, antibody titration and reason for these differences.

Results The literature analysis showed disparate practices among countries and even medical centres. The most concerned vaccines were: hepatitis A and B virus vaccine, pneumococcal vaccine, flu and measles vaccines. The difference between vaccine scheduled concerned the indication (meningococcus A, B, C, Y and W135, papillomavirus), dose (hepatitis B), the schedule (hepatitis B, hepatitis A, pneumococcal, measles), re-administration (hepatitis B, varicella), antibody titration (hepatitis B, varicella). Patients with chronic kidney disease are more susceptible to develop hepatitis B infection. As for adult population, the haemodialysis patients are vaccinated with double dose⁴ of hepatitis B vaccine. The antibodies