

ad-hoc basis with several specialist pharmacists reviewing queries on a daily basis. Average call durations were between 5 to 8 minutes with more complex queries requiring in depth data search taking up to 30 minutes. All queries are logged on paper and then reviewed on a monthly basis as they are entered onto a database. Since the introduction of the service, the volume of calls received has increased by more than 50% with average of 35 per month in 2015 and 54 in 2017. Originally, the service was designed primarily for patients, parents and carers. Due to the increased recognition, the service has now been expanded to a variety of internal and external healthcare professionals, community practitioners and pharmacies, drug companies, commissioning staff, researchers and students. The types of queries range from supply issues, procurement of unlicensed medicines, to adverse effects, administration advice and complex pharmaceutical queries.

Conclusion The service has grown and developed with focus based around improving patient care, medication adherence and minimising medicines related risks. Through providing accurate, up-to-date and evidence based information its appeal has reached a wider audience including healthcare professionals. Combined with an increase in the number of calls and technological advances, a new email service has been rolled out in 2017, as an alternate means to contact the service. Direct comments from users of the service has shown positive feedback and trust.

P044

CAN AN ELECTRONIC PRESCRIBING SYSTEM ENSURE CLEAR ANTICOAGULATION DISCHARGE COMMUNICATION?

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Aim The National Patient Safety Agency (NPSA)¹ identified heparin as a major cause of adverse events associated with adverse incidents, including some fatalities. By ensuring good communication, this should be associated with risk reduction.¹ The aim of this study was to ensure there is clear anticoagulation communication on discharge, from the paediatric intensive care unit (PICU) electronic prescribing system (Philips), to the paediatric cardiac high dependency unit and paediatric cardiac ward. To investigate whether the heparin regimen complies with the hospital's anticoagulant guidelines and if there is any deviation; that this is clearly documented. To find out if there is an indication documented for the heparin regimen chosen and if there is a clear long term plan documented for the patient, after heparin cessation.

Methods A report was generated for all patients who were prescribed a heparin infusion on PICU, between 1st January 2018 and 30th June 2018, from the Philips system. All discharge summaries from the PICU Philips system were reviewed. Only paediatric cardiac patients were included that had a heparin infusion prescribed on discharge, all other discharge summaries were excluded from the study. Each discharge summary was reviewed in the anticoagulant section; for the heparin regimen chosen, whether it complies with the hospital's anticoagulant guidelines and if there was any deviation whether this was documented. The indication documented of which heparin regimen was chosen and whether a clear long term plan was documented after heparin cessation;

for example if the patient is to be transferred onto aspirin, clopidogrel, warfarin or enoxaparin.

Results 82 discharge summaries were reviewed over the 6 month period between 1st January 2018 and 30th June 2018; 16 were excluded as were not paediatric cardiac, leaving 66 paediatric cardiac discharge summaries that were reviewed. 45 out of 66 (68%) complied with the hospital's heparin anticoagulation guidelines. Of the 32% that deviated from the protocol; only 33% (7 out of 21) had a reason documented. Only 50% (33) of the summaries reviewed had an indication for anticoagulation noted on the discharge summary and 91% of discharge summaries had a long term anticoagulant plan documented.

Conclusion The electronic prescribing system can help to ensure a clear anticoagulation communication as shown by 91% of the anticoagulation long term plan being clearly documented; making it a more seamless patient transfer. On the Philips PICU electronic prescribing system there is an anticoagulant section on the discharge summary that has 3 boxes that need to be completed; heparin regimen, indication and anticoagulation long term plan. However, despite these boxes; deviations from the anticoagulant protocol were poorly documented as highlighted by only 33% having the reason highlighted in the discharge summary, only 50% of the indications were documented. Despite having prompts for this information on the discharge summary, the medical staffs needs to be aware to complete this information, in order to reduce potential medication errors and risk.

REFERENCE

1. The National Patient Safety Agency (NPSA). *Actions that make anticoagulant therapy safer*. NPSA; March 2007.

P045

VALUE FROM YOUR VITAMINS – OPTIMISING VITAMIN SUPPLEMENTATION IN CHILDREN WITH CYSTIC FIBROSIS

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Aim To optimise fat soluble vitamin supplementation in children with CF in a tertiary children's hospital and primary care. To compare supplementation of individual vitamins and supplementation with a new multivitamin preparation against national guidelines, cost and patient acceptability.¹

Methods Comparison of current practice (supplementation of individual vitamins) with a new multi-vitamin preparation, Paravit-CF. Form and dose of each of the fat soluble vitamins was compared against national CF Trust guidelines for nutrition.¹ Cost of treatment per day was compared. Patient acceptability was explored by comparing medication burden and with a focus group made up of representatives from the CF multi-disciplinary team (MDT) including, consultants, specialist nurses, dieticians and a pharmacist.

Results Current approach to vitamin supplementation is not in line with the CF Trust guidelines for nutrition. Supplementation with Paravit-CF preparations meets recommendations made in the CF Trust guidelines for nutrition for patients of all ages except for infants. Infants will receive vitamin A at higher doses than recommended. Cost of vitamin supplementation is reduced by approximately 50% when using Paravit-CF compared with current practice. Medication burden is reduced by more than 50% when using Paravit-CF compared with

current practice. Main themes from the MDT focus group were that Paravit-CF liquid is colourless, taste free, odour free and can be mixed into food, all of which may aid compliance. Paravit-CF preparations also vegetarian friendly and comply with halal and kosher regulations. Unlike current practice, Paravit-CF does not offer flexibility in dosing of individual vitamins.

Conclusion Fat soluble vitamin supplementation using Paravit-CF offers several advantages over supplementation of individual vitamins. Paravit-CF offers vitamin supplementation at doses in line with the recommendations made by the CF Trust, is cheaper and reduces the medication burden for patients. Locally, the decision has been made to switch to Paravit-CF as first line vitamin supplementation in children with CF. Future work is planned to assess clinical efficacy and financial impact of the switch.

REFERENCE

1. Cystic Fibrosis Trust. Nutritional Management of Cystic Fibrosis. Second Edition. September 2016. Available from: <https://www.cysticfibrosis.org.uk/the-work-we-do/clinical-care/consensus-documents> (Accessed 10 July 2018)

P046

EVALUATING THE SAFETY OF DOSE BANDING PREMEDICATION (ATROPINE, SUXAMETHONIUM AND FENTANYL) FOR NEONATAL INTUBATION (PROJECT NIK)

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Background The process of prescribing and preparing premedication for intubation needs to be completed carefully to ensure the correct dose is prescribed and administered. Doses of atropine, suxamethonium and fentanyl were banded according to weight. The dose banding was implemented alongside pharmacy prepared neonatal intubation drug kits and a prescribing bundle on the neonatal electronic prescribing system, which automatically populates the doses according to the patient's weight.

Aim To evaluate the safety of dose banding neonatal premedication for intubation.

Methods A tool was developed to collect data including the patient's weight, gestation, if dose banding had been used and whether any adverse effects were experienced with emphasis on hypotension, bradycardia, chest wall rigidity and prolonged paralysis. Data was collected from January 2018 to July 2018.

Results Outcomes from 89 intubations using dose banding were reviewed. The corrected gestation of patients ($n = 63$) were 24+3 to 42+1 and the weight from 500 g to 4 kg. In 97.75% all three pre-medication drugs were given, the 2 cases that did not were due to rapid desaturations and the decision was made to intubate before all the medicines had been administered. All cases used the correct dose-banding for the medication. In all cases the fentanyl was administered over at least 1 minute with 7.87% receiving the fentanyl over more than 2 minutes. 95.5% of patients were normotensive within 30 minutes of intubation. Hypotension was observed in 2 cases >90 minutes post intubation. In two patients, a low mean blood pressure (BP) was observed prior to the decision to intubate and the premedication did not cause a further decrease in BP. No patients experienced bradycardia, chest wall rigidity or prolonged paralysis.

Conclusion This work has illustrated that dose-banding of intubation premedication is safe in this cohort of neonates and allows for successful intubation, whether the patient is 24 weeks or 42 weeks corrected gestational age. Chest wall rigidity may occur if fentanyl is administered too quickly. All patients received fentanyl over at least 1 minute, with the majority receiving over 1–2 minutes. The fentanyl dose is a very small volume, to ensure the dose was administered slowly, a flush was used to ensure that any remaining in the cannula was not bolused to the patient. Hypotension was seen in 2 patients >90 minutes after intubation which is unlikely to have been related to the use of neonatal intubation drugs. However this highlighted that not all patients are having BP monitoring 30 minutes post-intubation. An outcome has been to emphasise the need for this monitoring. Bradycardia and prolonged paralysis, two potentially prominent adverse effects, were not seen indicating that the atropine and suxamethonium doses were appropriate. A limitation of this study was that patients concurrent medication was not recorded. Data will continue to be collected to assess safety as this data set did not include babies in the <500 g banding. The next step will be to compare outcomes with patients that were intubated prior to the implementation of dose banding.

P047

EVALUATING THE IMPACT OF PRE-PREPARED NEONATAL INTUBATION PREMEDICATION KITS ON A LEVEL 3 NEONATAL UNIT (PROJECT NIK)

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Background In January 2018, neonatal intubation premedication kits containing atropine, suxamethonium and fentanyl were introduced alongside the implementation of dose-banding for these medicines according to patient's weight and regardless of the patient's gestation. A prescribing bundle on the electronic prescribing system was also created to automatically populate the doses based on the patient's weight. Seven kits are produced each week by the Pharmacy Technical Services Unit.

Aim To assess the staff perceived impact of pre-prepared intubation drug kits with associated dose-banding of the medication.

Methods Three months after the kits were implemented, a survey was sent to all nursing and medical staff to establish their thoughts on the intubation process before and after the introduction of pre-made intubation drug kits.

Results 78 staff responded, 45.5% were doctors and 54.5% were nursing staff. The response rate was 53.8%. 78% of respondents reported being part of a difficult intubation over the last 5 years. The main problems identified, prior to the implementation of the neonatal intubation drug kits, included the intubation process (51.5%), preparation and communication prior to intubation, (13.6%), time drawing up intubation drugs (10.6%) and the patient having a difficult airway (9%). 87.2% found the premade intubation kits very useful, none of the respondents thought the kits were not useful. Four themes were found irrespective of whether the respondent was a doctor or member of nursing staff. The themes were: they made the process easier; quicker; reduced risk of error and helped provide better patient care. When asked if any complications