P37 A MODEL FOR REDUCING PAEDIATRIC PRESCRIBING ERRORS IN SECONDARY CARE

Kate Morgan*. *Royal Gwent Hospital*

10.1136/archdischild-2020-NPPG.46

Background A prescribing error is a preventable error that may lead to inappropriate medication use and patient harm (1). Prescribing errors are particularly important in paediatrics where dose calculations are complicated and small errors can result in significant morbidity and mortality.¹ In 2017 pharmacy data showed that paediatric prescribing errors were an issue at our Hospital regarding the severity and high numbers of errors, especially for antibiotics and analgesia.

Objectives To achieve a zero prescribing error rate for paediatric within the hospital.

Method

1. Form the Paediatric Medication Errors Prevention (PMEP) group consisting of the Paediatric Consultant, Paediatric Pharmacist, Children's Assessment Unit Sister and Practice Education Senior Nurse.
2. Paediatric Pharmacist to record and feedback all paediatric prescribing errors weekly at Doctors' handover.
3. Paediatric Pharmacist/Nurses to DATIX report all significant medication prescribing errors
4. Paediatric Pharmacist to produce and communicate monthly pharmacy prescribing newsletter.
5. Paediatric Pharmacist to produce quick reference charts for the drugs with the most common prescribing errors e.g. antibiotics and analgesia
6. Paediatric Doctors to request a second check from another Doctor or Ward Sister when prescribing any medication on the drug chart of take home prescription.
7. Paediatric Pharmacist to target Doctors' induction to improve prescribing and implement a prescribing test.
8. Doctors to complete reflections for errors with their educational supervisors.

This study did not require ethics approval.

Results Following implementation of the above strategies, there was a 33% reduction in the number of prescribing errors recorded by the Paediatric Pharmacist daily intervention log from 2017/2018 to 2018/2019. There were 163 prescribing errors for 2017/2018 compared to 110 for 2018/2019.

Conclusion The formation of the PMEP group and implementation of strategies to reduce paediatric prescribing errors has positively impacted on reducing the error rate at the hospital. It has also raised awareness of the necessity to report all errors and actively find ways to prevent these from re-occurring. Further work is required to reduce these errors to zero including targeting non paediatric teams prescribing on paediatrics and implementing Pharmacists prescribing on consultant ward rounds. Future work would also include replicating this model in other specialities e.g. neonatal intensive care to achieve the same success rate in reducing medication errors.

REFERENCE

1. Davis T. Paediatric prescribing errors. *Arch Dis Child*. 2011;**96**:489–91. Accessed via <http://adc.bmj.com> on 2/4/19.

P38 AN AUDIT OF ANTIBIOTIC USE IN THE TREATMENT OF NEONATAL NECROTISING ENTEROCOLITIS (NEC): WHAT DO WE USE AND HOW LONG FOR?

Stephen Morris, Kimberly Mak*, Rebecca Lisseter. *Leeds Teaching Hospitals NHS Trust*

10.1136/archdischild-2020-NPPG.47

Introduction Necrotising enterocolitis (NEC) is a serious condition in premature infants involving inflammation, and potentially necrosis, of the bowel. Several contributory factors have been identified; including prematurity, infection and reduced gut perfusion.¹ It has previously been reported that there is widespread variation in the treatment of NEC², including the use of antibiotics.³ This is due to a lack of evidence evaluating which treatment option is most effective.

Optimising the use of antibiotics for treating NEC is an opportunity to support the wider, global initiative of antimicrobial stewardship.⁴ Ensuring we use only the necessary course of antibiotics will reduce the spread of resistance and lower risks of potential adverse effects. Our local NEC treatment guideline states that the first line antibiotic regimen should be amoxicillin, gentamicin and metronidazole for up to 10 days treatment.

Aim The aim of our audit was to identify the type of antibiotics and the duration of therapy used to treat NEC within a single UK tertiary children's hospital providing neonatal intensive care and neonatal surgery.

Methods A retrospective audit was conducted over a five month period between August and December 2018. The neonatal database (Badger®) was used to identify patients with a confirmed diagnosis of NEC. Our electronic prescribing software (MedChart®) along with patient medical notes was then used to determine the antibiotics used and the prescribed length of treatment. A re-audit was also conducted over a 5 month period between January and May 2019.

Results We identified seven patients with confirmed diagnosis of NEC. The median gestational age was 30+6 weeks (range 29+4 to 36+1 weeks) and the median birth weight was 1530 grams (range 780 to 2100 grams). Four patients required surgery that involved laparotomies and bowel resections. No patients had allergies to penicillins.

The most frequently prescribed antibiotic regimen was ceftazidime, vancomycin and metronidazole (n=4). Other regimens included meropenem and vancomycin (n=2), and amoxicillin, gentamicin and metronidazole (n=1). The median course length was 10 days (range 2 to 16 days). These results were presented to a neonatal surgery quality improvement meeting in January 2019.

During the re-audit period, five infants were identified. The median gestation was 28+3 weeks (26+1 to 37+0 weeks) and median birth weight of 1310 grams (range 620–2090 grams). 3 patients had laparotomies and none had allergies to penicillins. In this cohort, the most popular regimen was amoxicillin, gentamicin and metronidazole (n=4), followed by ceftazidime, vancomycin, and metronidazole (n=1). The median course length was 11 days (range 5 to 12 days).

Conclusion Our initial audit confirmed that considerable variation still exists in the antibiotic regimen used and the duration of treatment. We also found that patients were

frequently not treated according to the local guideline. The initial audit results were used to highlight the issue to our surgical and neonatal teams. After the re-audit, it is clear that this approach improved the compliance with the guideline in terms of which antibiotics were used. However, we also found that the duration of treatment still varied considerably.

REFERENCES

1. Neu, J. and Walker, W.A. Necrotizing Enterocolitis. *New England Journal of Medicine*. 2011;**364**:255–264.
2. Zani A, Eaton S, Puri P, et al. International Survey on the Management of Necrotizing Enterocolitis. *Eur J Pediatr Surg*. 2015;**25**:27–33.
3. Blackwood, B.P., Hunter, C.J. and Grabowski, J. Variability in Antibiotic Regimens for Surgical Necrotizing Enterocolitis Highlights the Need for New Guidelines. *Surgical Infections* **18**:215–220
4. World Health Organisation. Global action plan on antimicrobial resistance. [Online]. 2015. [Accessed 24th June 2019]. Available from: <http://www.who.int/antimicrobial-resistance/global-action-plan>

P39 PHARMACY PREPARATIONS FOR THE BIRTH OF TWINS TO AN EBOLA SURVIVOR

¹Fiona Marra, ²Gayle Robertson, ¹Joanne Gallagher, ¹Peter Mulholland*. ¹Royal Hospital for Children, Glasgow; ²Pharmacy Distribution Centre, Glasgow

10.1136/archdischild-2020-NPPG.48

Background A 43 year old patient previously treated for re-activation of Ebola Virus Disease¹ presented to hospital with a twin pregnancy. As a conservative precaution, Remdesivir was obtained for potential use in the mother and the neonates.

Method All literature was reviewed on the drug in trial and restricted license, along with drugs previously administered in this patient. The recommendation was made to consider Remdesivir and Favipiravir. The patient had received Remdesivir with probable benefit in the past. As the drug is unlicensed, the clinical team from Gilead, California were closely involved. Details of drug dosage and side effects were provided following a non-disclosure agreement. Preparations were made for an import licence following approval by NHS Greater Glasgow and Clyde health board and the Medicines and Healthcare products Regulatory Agency to import the product from California into the UK.

Temperature monitored storage was arranged in advance and the drug appropriately stored. The pharmacy manual was supplied by Gilead and worksheets were prepared in advance.² A small team of out of hours aseptic pharmacists and technicians were briefed in order to facilitate immediate supply if required. Based on published data, there were no known drug interactions and no contra-indications to breastfeeding.³

Outcome In the weeks leading up to the delivery the infectious diseases pharmacist, aseptic lead pharmacist and neonatal pharmacist were on call for that period to then cascade requirements down to other pharmacy staff, if required out of hours. The twins were delivered safely with no issues for the neonates or the mother.

REFERENCES

1. Jacobs M, et al. Late Ebola virus relapse causing meningoencephalitis: a case report. *Lancet* 2016;**388**:498–503
2. GS-5734 for Injection Pharmacy Manual rev 2.1, Gilead Sciences Inc, Foster City CA94404
3. WHO R&D Blueprint – Ad-hoc Expert Consultation on clinical trials for Ebola Therapeutics, <http://www.who.int/ebola/drc-2018/summaries-of-evidence-experimental-therapeutics.pdf?ua=1> accessed 20th May 2019

P40 A QUALITATIVE STUDY ON THE SUPPLY OF SPECIALIST MEDICATION IN CHILDREN AT THE INTERFACE OF CARE

¹Ka Mei Camie Ng*, ²Hong Thoong. ¹UCL School of Pharmacy; ²Great Ormond Street Hospital, London

10.1136/archdischild-2020-NPPG.49

Aim To explore the views and experiences of healthcare professionals in primary care around the supply of specialist medication after a child is discharged from a specialist paediatric centre and suggest ways to improve it.

Method A qualitative study conducted with semi-structured interview via telephone was carried out to explore the views of primary pharmaceutical advisors on the supply of specialist medicine in children. Participants were identified by reviewing outpatient prescriptions from 19 November 2018 to 30 November 2018. Telephone interviews were recorded on interview forms, as the form of data. Framework analysis was used to analyse the data.

Results A total of 109 outpatient prescriptions with 56 Clinical Commissioning Groups (CCGs) were identified. 8 CCG pharmaceutical advisors were recruited. Four key themes were identified.

Theme 1: In order to overcome issues around the supply of specialist medicines, it is important to understand different supplying considerations in primary care. Factors including patient clinical status, GP's expertise and confidence in prescribing and shared care agreement.

Theme 2: Actions that are untaken by primary care to solve supplying issues include drug alternatives, direct communication between clinicians and the clinical input of pharmacists.

Theme 3: Views on current shared care arrangements were generally negative. For example, participant 2 expressed: 'Good principle... but they are too wordy, they are 10 pages long'.

Theme 4: Views on improvement in continual medicines supply included participants explaining the lack of understanding between GP and Specialist. Participant 1 commented, 'Specialist has to understand we lack the expertise to prescribe the drug. It is not just about money...'.
Conclusion Currently there is a lack of an integrated system in medicines supply at the tertiary to secondary/primary care interface. In order to deliver continuity of patient care, there is a need for different healthcare professionals to break down preconceptions and understand the pathway and policy involved in different care setting. A shared care should involve patient and carers, GP and the hospital consultant when making decision on the child's health. Moreover, pharmacists in different settings have an active role in medicine optimisation and it is important to value their opinions to improve the continuation of specialist medicines supply.

P41 PHARMACOKINETICS-BASED ESTIMATION OF EVOLOCUMAB DOSING FOR HOMOZYGOUS FAMILIAL HYPERCHOLESTEROLEMIA (HOFH) IN PATIENTS AGED 6 TO 12 YEARS OLD

Chris Paget*, Adam Sutherland. *Manchester University NHS Foundation Trust*

10.1136/archdischild-2020-NPPG.50

Background Homozygous familial hypercholesterolaemia (HoFH) is a rare genetic disorder characterised by high