

current practice and agree the new standardized formulations and develop guidelines for use. These were based on European Society of Paediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN) and British Association of Perinatal Medicine (BAPM) guidelines and expert opinion.<sup>3 4</sup> Advice on stability and compounding was sought from commercial experts. Assistance to award a contract to supply the network was sought from a group purchasing organisation to ensure capacity planning and cost effectiveness.

**Results** Consensus on four concentrated formulations was agreed by the network group and all six units within the network are now successfully using these.

**Conclusion** This has been a lengthy process but it was possible to establish agreement of a structured set of standard bags that would deliver nutritionally complete PN to the cohort of babies in our network. Re-audit is now underway in house to compare to previous practice and we hope to shortly roll this audit out across the network. Future aspirations are to devise a system to manage stock control across the entire network, work towards reaching national consensus, work with commercial partners to obtain extended expiry with peditrace addition and to work in partnership with commercial companies to formulate licensed products.

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P014

## AN AUDIT ASSESSING THE PRESCRIBING OF NALOXONE IN PAEDIATRIC PATIENTS

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**Aim** To assess whether paediatric patients who were prescribed opioids, had also been prescribed naloxone.

**Methods** The audit was registered with the Clinical Audit and Effectiveness Department and ethical approval was not required. Patients who were taking weak opioids were excluded from this audit. A data collection sheet was created and data collected prospectively, over a two-month period. Forty-one inpatient medication charts were reviewed, to identify whether naloxone had been prescribed on the PRN section of the chart for patients who had been prescribed opioids, also to see whether the standards set for this audit had been met. The data was analysed with Microsoft excel.

**Results** There were 41 paediatric inpatient charts reviewed in total. Three standards were set for this audit which were derived from local 'Multidisciplinary Guidelines for Acute Pain Management in Children and Young People'.<sup>1</sup> The first standard was that 'all paediatric patients who are prescribed opioids should have naloxone prescribed' which was met by 17% (7/41) of the inpatient charts. The second standard was that 'naloxone should be prescribed on the 'when required' PRN section of the drug chart' which was met by 100% (7/7) of

the inpatient charts. The last standard was that 'the directions for naloxone should include instructions to call a medical practitioner and to immediately commence the administration, if respiratory depression is encountered',<sup>1 2</sup> which was met by 86% (6/7) of the inpatient charts.

**Conclusion** There is significant lack of naloxone prescribing in paediatric patients who are on opioids. This is reflected from the results showing that only 17% (7/41) of patients on opioids had naloxone prescribed on the PRN section of the chart. The inpatient charts which had naloxone prescribed, did not all have the correct dose and instructions on how it should be administered, only 86% (6/7) did. The results suggest that there is a lack of understanding on the importance of naloxone and how it should be prescribed on inpatient charts. The findings of this audit will be presented at the Paediatric Audit meeting and the Surgical Paediatric meeting, to educate prescribers on the importance of prescribing naloxone in patients who are receiving opioids and to reduce adverse effects that could occur due to opioid toxicity.

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P015

## YELLOW CARDS ARE STILL NOT ON EVERYONE'S TO DO LIST

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**Aim** To look at how the Yellow Card Scheme is used by health care professionals (HCPs) in child health.

**Methods** An online SurveyMonkey questionnaire was devised to look at how healthcare professionals (HCPs) have used the Yellow Card Scheme in clinical practice. It comprised of 10 questions (9 multiple choice and 1 freestyle text). What type of healthcare professional are you? Are you aware of the Yellow Card reporting scheme? Have you ever used the Yellow Card Scheme to report an adverse drug reaction? If yes, how did you make the report? (If no, select N/A) If you haven't ever reported a reaction, would you know how to? Have you ever completed an e learning module about the Yellow Card Scheme? Are you aware that parents can report adverse drug reactions using the Yellow Card Scheme? Have you ever been aware of an adverse drug reaction but decided not to report it? If yes, what was the reason you chose not to report it? (If no, select N/A) Can you think of any ways to make the Yellow Card Scheme more accessible to healthcare professionals? It was piloted on 5 HCPs and minor textual revisions made. The questionnaire was then undertaken via face-to-face interviews during June 2018.

**Results** 50 healthcare professionals completed the questionnaire: 16 doctors, 13 nurses, 8 pharmacists, 9 medical students, 2 nursing students and 2 pharmacy technicians. 43/50 were aware of the Yellow Card Scheme (10 undergraduates and 33 postgraduates). 18 participants had used the Yellow Card whilst 32 had not reported an adverse drug event. Out of the 32 respondents who had never reported a reaction, 13 (7 undergraduates and 6 postgraduates) said that they would not know how to report a reaction if required. Only 9 had completed an online e learning module about the Yellow Card

scheme. 30 participants were aware that parents could report using the scheme. 10 participants had been aware of an adverse drug reaction but decided not to report it. The most common reason for this was being too busy. The most common suggestion on how to improve accessibility to the Yellow Card Scheme was the implementation of a mobile phone application.

**Conclusion** Most participants were aware of the Yellow Card scheme although undergraduates less so. Many had reported, although some had chosen not to report because they were: too busy; not being concerned enough; not knowing how to; having forgotten. An app already exists, but awareness of this appears low, as it was the commonest suggestion to aid the low reporting.

#### P016 PARENT/CARER INTENDED NON-ADHERENCE TO THEIR CHILD'S MEDICATION REGIMEN

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**Aim** To identify intended non-adherence reported by parents/carers of children/young people taking long-term medication.

**Methods** A 10 question postal survey was sent to 180 parents of patients receiving medication via homecare at a tertiary paediatric hospital with a single repeat mailing. Demographic details collected were age, current prescribed medication and duration. Participants were asked about changes that they had made to their child's medication without consulting a healthcare professional. They were asked about delaying/not starting new medication, compliance with medication instructions, with-holding medication, altering the dose of medication, altering medication taking to fit in with daily life and strategies to aid administering medication. The data were analysed using SPSS version 23 and NVivo version 11.

**Results** The response rate was 32/180 (17.8%). The mean age of respondents was 8.4 years (range 0.83 to 17 years). One hundred and fifty-eight medications were prescribed with a mean of 5 medications per patient (range 1 to 15). In total, 16/32 (50%) respondents had made changes to their child's medication. The most common change (9/32, 28.1%) was adjusting the medication regimen to fit around daily life followed by delaying initiating a new medication (7/32, 20.6%). No respondents indicated that they had not started a new prescribed medication. Six (17.6%) respondents indicated that they had not followed the medication instructions. Four (11.8%) respondents advised that they had withheld their child's medication. Four (11.8%) respondents communicated that they had given a higher than prescribed dose and four (11.8%) a lower dose. Three (8.8%) respondents adjusted how they gave their child's medication to aid administration.

**Conclusion** Half of respondents made changes to their child's medication without consultation with a healthcare professional. Commonly changes were made to fit around daily life. The decision to prescribe medication should be undertaken in partnership with patients.<sup>1</sup> Adherence to medication in long-term paediatric conditions is particularly complex requiring parents to balance the daily needs of their child taking medication with everyday life.<sup>2</sup> Strategies to support medication adherence include self-management programmes, simplified dosing regimens and pharmacist led medication reviews.<sup>3</sup> Parents/carers

may benefit from a structured medication review for their child although further research is required to determine the effectiveness of such an intervention. This study has identified parent practices that could be included in such a review.

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#### P017 BLUE BABY BLUES – A CASE REPORT; IMPLICATIONS OF MATERNAL SELECTIVE SEROTONIN REUPTAKE INHIBITOR USE FOR SUDDEN INFANT DEATH SYNDROME

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**Background** A baby girl, (38 +2 weeks, 3.026 kg) was admitted on day 3 from home following 2 cyanotic episodes. The pregnancy was uneventful, the mother was prescribed fluoxetine 20mg daily during pregnancy.

**Investigations** Respiratory studies revealed significant hypoxia in air with episodes of hypoventilation and apnoea. Time spent below 94% saturation was 19%, 68 dips per hour >4%, pCO<sub>2</sub> was raised at 7 kPa. She had a normal cranial MRI. Genetic testing for PHOX2B polyalanine expansion mutation was normal excluding Congenital Central Hypoventilation Syndrome (CCHS).

**Outcome** Incremental increase in the prescription of low flow oxygen normalised her saturation study. She was discharged home on day 14 with an oxygen prescription for 0.5lpm and an apnoea monitor. Parents and family members were taught basic life support. Clinic follow up at 5 months shows baby is thriving, developing normally and the oxygen flow rate has been reduced to 0.3lpm following repeat saturation studies.

**Discussion** Hypoventilation is not a recognised complication of maternal fluoxetine usage. A population based health registry study found exposure to SSRI in utero increased the rate of neonatal deaths,<sup>1</sup> although a causal relationship could not be established. Two separate randomised controlled trials have looked at the relationship between maternal SSRI use and neonatal death.<sup>2 3</sup> Neither demonstrated a statistically significant correlation, although both showed odds ratios approaching statistical significance (95% confidence intervals 0.82–1.99 and 0.97–3.94 respectively). Mouse models demonstrate the respiratory response to acidosis is abolished by drugs targeting the serotonergic system.<sup>4</sup> This system is not the primary regulator of respiration,<sup>4</sup> and there may be a multi-factorial aetiology to any link between SSRI exposure in utero and the development of hypoventilation. This hypothesis somewhat correlates with the 'triple-risk model' for Sudden Unexpected Death in Infancy (SUDI), which describes three important risk factors; a critical development period, an exogenous stressor and an underlying vulnerability. It is possible that this underlying vulnerability could potentially be accounted for by down-regulation of the serotonergic respiratory response in association with maternal fluoxetine use. Fluoxetine is the preferred