98 mmol/L of chloride which matches serum exactly and is considered isotonic. Sodium chloride 0.45% only contains 77 mmol/L of sodium and sodium chloride 0.9% contains 154 mmol/L chloride, hence the reasons for hyponatraemia and hyperchloraemia when using these types of fluids. The audit results match what is reported in other controlled trials of fluid choices in that an isotonic fluid should be used as the chosen fluid when hydrating paediatric patients. A further audit in July 2018 would be beneficial to check that patients are continuing to benefit from the introduction of this fluid and not experiencing iatrogenic metabolic disturbances, but also look at other electrolytes such as potassium and to see if adherence to the guidelines has improved.

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P039

CONSIDERATION OF GUANFACINE FOR ADDITION TO THE ADHD PATHWAY FOLLOWING REVIEW OF EFFECTIVENESS

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Background Intuniv (guanfacine hydrochloride) is indicated for the treatment of attention deficit hyperactivity disorder (ADHD) in children and adolescents 6-17 years old for whom stimulants are not suitable, not tolerated or have been shown to be ineffective. In June 2016 the decision by All Wales Medicines Strategy Group (AWMSG) was that cost effectiveness had not been proven making it difficult to add the drug to our local prescribing formulary. Initially Individual Patient Funding Requests (IPFR) were submitted but this was not a sustainable approach. Following discussion at Women and Children's Clinical Board Medicines Management Group it was agreed that a Non Formulary request could be used if each was approved by the Community Child Health Clinical Director and Directorate Pharmacist and both stimulants and atomoxetine had been tried unless contraindicated. This would allow us to gain much needed experience of using the drug and allow us to evaluate where it should sit within the treatment pathway.

Aim To review the effectiveness of guanfacine in all children and young people for whom an IPFR or Non Formulary Form had been approved over 12 months May 2017 – April 2018

Methods Children and young people were identified from the IPFR and Non Formulary forms. The forms provided information on reasons for considering guanfacine, clinician and patient identifiers, other data, date, reason and age at initiation was collected from medical notes and electronic clinical system (PARIS). The maintenance dose, any side effects and assessment of effect as well as reason and date stopped, if relevant were recorded.

Results 22 children and young people were reviewed consisting of 6 IPFR's and 16 non formulary forms. 100% of patients had previously taken stimulants and atomoxetine. 5 patients never started guanfacine.

17 patient's notes were reviewed. Average age at initiation was 13 (range 8-17).

9 (53%) patients have continued on guanfacine and the average maintenance dose was 3 mg daily (range 1–4 mg). 6 (35%) had a good response, 1 (6%) had some benefit, 2 (12%) limited benefit but better than no medication.

8 (47%) patients stopped treatment. 4 (24%) stopped due to increased challenging behaviour/anger/character changes, 1 (6%) borderline BP and dizziness, 1 (6%) no response, 1 (6%) substance misuse and non-compliance, 1 (6%) vomiting, 76% were requested by CAMHS clinicians, 24% requested by community paediatricians.

Conclusion Guanfacine is an effective alternative treatment for some ADHD patients with a different mode of action and different side effect profile. A small number of patients would benefit from its inclusion in the Formulary. The children and young people on guanfacine had already had stimulants and atomoxetine unless contraindicated; historically the alternative for them has been non pharmacological interventions. Half of the patients on guanfacine received benefit. An Implementation Planning Document (IPD) has been submitted to the Clinical Board requesting addition to the formulary as a Hospital Only (HO) medicine and inclusion in the ADHD pathway. AWMSG are not due to review guanfacine.

P040

MONITORING DEFIBROTIDE USAGE IN PAEDIATRIC PATIENTS UNDERGOING HSCT WITH KNOWN RISK FACTORS FOR DEVELOPING VOD/SOS

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Aim Defibrotide is licensed for the treatment of hepatic venous occlusive disease (VOD) following haematopoietic stem cell transplant (HSCT). Up to April 2015 defibrotide was used as prophylaxis against VOD in our HSCT patients who were considered at high-risk for developing VOD. This practice was discontinued due to the lack of evidence of efficacy and increasing costs of the drug. The aims of this audit were to identify patients undergoing HSCT who had one or more risk factors for the development of VOD, to measure the incidence of VOD in this patient cohort after the discontinuation of prophylactic defibrotide and calculate the cost savings associated with the discontinuation of prophylaxis.

Methods All patients who underwent HSCT between Oct 2015 and Dec 2016 were included. Patient's medical records were reviewed and risk factors for VOD were identified. Risk factors for developing VOD post HSCT in our patient cohort were defined following a literature review of peer-reviewed papers identifying paediatric specific risk factors.^{1 2} These were namely: patients aged ≤ 2 years, patients receiving a second transplant, conditioning with IV busulfan $\pm$ cyclophosphamide, and previous treatment with gemtuzumab or zoledronic acid. The theoretical dose of defibrotide for patients with known risk factors was calculated based on their weight at start of conditioning and the duration of treatment was based on the number of days conditioning the patient received plus 30 days following the date of transplant. The cost of a theoretical course of defibrotide for these patients was calculated to determine cost savings.

Results Of the 27 patients included in the study, 16 (59%) had one or more risk factors. The most common risk factor identified was conditioning with busulfan in patients ≤ 2 years

of age (26% of patients). At present no patient post HSCT has developed VOD requiring treatment. One patient developed sub-clinical VOD which required no treatment and resolved spontaneously. Another patient received defibrotide as prophylaxis for VOD due to severe liver dysfunction prior to HSCT. There were substantial cost savings following the discontinuation of prophylactic defibrotide with a total of 2876 vials (180 vials/patient) saved during this time period.

Conclusion This audit validates our decision to discontinue use of prophylactic defibrotide and reserve its use for treatment of early VOD.

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P041

MORAL DILEMMAS AND ETHICAL DISCOMFORT IN PAEDIATRIC PHARMACISTS

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Situation A five week old infant admitted to a tertiary paediatric hospital with coryzal symptoms on a background of Edwards Syndrome (Trisomy 18) and congenital cardiac disease. Despite her grave prognosis, she was intubated and ventilated. She spent many months in hospital, eventually having surgical repair of her cardiac defect which had little or no effect on her clinical condition. She was discharged to a children's hospice after seven months in our hospital (with short periods at home and her local hospital), at the age of eight months, for end of life care. As pharmacists actively involved in her care, but with limited input to her ethical situation, we suffered moral distress.

Background Edwards Syndrome is a rare genetic condition which occurs in 1 in 5000 live births. Infants are severely disabled. Accurate figures for miscarried or terminated pregnancies are not available. Only 8% of babies survive beyond one year unless they have a less severe form (mosaic or partial).¹ Our patient had a post-natal diagnosis and her parents were determined that she be given every opportunity that would be offered to a non-Edwards child. We are three pharmacists who work in paediatric intensive care and paediatric cardiology. We were actively involved in the care of this patient and her family for several months. Although we work closely with the multidisciplinary team, we were not included in discussions about appropriateness of interventions. We were however, expected to speak to her parents about medicines on a regular basis, including during a very difficult and prolonged wean of sedation which was causing physical distress to the patient and her parents.

Outcome Being involved in interventions which are unlikely to improve or extend a patient's life is difficult, but especially so when you have had little or no influence on the original decision. The eventual outcome was exactly as predicted on admission: she was discharged to a hospice and expected to deteriorate slowly. Her discharge was written by one of the

PICU pharmacists and her parents were counselled by another, so we were involved until the end of her admission.

Discussion As a pharmacy team, we only have each other to talk to: our distress cannot compare to that of medical or nursing staff who are more closely involved in the patient. We are limited in what we can discuss outside of work due to patient confidentiality. With the relatively recent introduction of pharmacist independent prescribing in our PICU and cardiology wards, we are often asked to prescribe outwith our comfort zone and are able to refuse. As our prescribing roles become more embedded, our comfort zone will expand and we will be expected to prescribe in morally ambiguous situations such as this one. Studies have shown that community pharmacists are prone to moral distress,² as they work in a highly regulated profession and their actions are often bound by laws and contracts over which they have little control, and in hospital we suffer the same fate.³

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P042

EVALUATION OF 'LET'S TALK MEDICINES' HELPLINE

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Introduction Studies and research have shown that providing patient education through knowledge and counselling of the disease process and subsequent treatment empower patients and carers to improve patient's health. Through understanding rationale for treatment, implications of non-compliance, non-adherence, disease progression and adverse effects of therapy, pharmacy staff are perfectly placed to empower patients and carers with evidence based knowledge and information to make their own educated decisions regarding therapy. The 'Let's Talk Medicines' telephone service was set up in 2015 for exactly this purpose. It is a dedicated medicines information (MI) service aimed at patients, parents and carers, giving the opportunity to ask questions and obtain advice from specialist paediatric pharmacists about their child's medicines once leaving the hospital. The services have vastly expanded over the last 2 and half years with the addition of an email address as an alternative means for contact. The helpline number and email address are heavily publicised to parents and carers through posters throughout the hospital, details published on all paediatric discharge summaries and printed information cards given to all outpatients during counselling.

Aim To evaluate the service progression by analysing the sheer volume and types of queries over the last 3 years to identify how beneficial the novel service has proven to be.

Methods To retrospectively analyse data from 3 monthly reports over the last 2.5 years of the service to identify number of calls, emails, types of queries received and users of the service.

Results The current service relies on all members of the pharmacy team answering calls on a dedicated patient line on an