preparation process was completed and a mini isolator was re-commissioned for this purpose following appropriate testing by Quality Control. The Department of Pharmacology at Newcastle University were contacted to establish if therapeutic drug level analysis might be possible. Local approval for pazopanib use was obtained from the Drug and Therapeutic Group and an IFR was submitted to NHS England.

Challenges It was challenging to establish a dose regimen since the recommended paediatric dose from Phase I studies of pazopanib were dependent on the formulation used.[1 4] Pharmacokinetic sampling was not possible as no assay had been developed in the UK. The lack of availability of any commercial or compassionate use liquid preparation meant that the only way of giving the drug to this child was to prepare an extemporaneous preparation, despite paucity of evidence to support the stability of the preparation. Funding was not approved by NHS England; local funding was agreed.

Outcome and Discussion The child commenced treatment with the suspension in October 2018, administered via the gastrostomy tube. By July 2019 the patient had completed 10 cycles of therapy. Treatment was well tolerated. Minor side effects included abdominal and leg pain, vomiting, and a change in hair colour. The patient has had a good clinical response and a recent scan has shown substantial improvements in morphological appearance and size of the tumour.

These results indicate that a locally prepared extemporaneous oral chemotherapy suspension can be successfully used to deliver treatment for a rare type of children's cancer. Pharmacy colleagues from across the department collaborated to facilitate this novel treatment option.

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SP5 TENFOLD MEDICATION ERRORS IN CHILDREN – WELSH PAEDIATRIC SURVEILLANCE UNIT STUDY 2017–9

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Aims To establish the incidence and characteristics of tenfold or greater and a tenth or less medication errors in children <16 years in Wales to help inform patient safety on a population level.

Method Population-based incidence study in Wales, UK, from June 2017 - May 2019 (24 months). Cases were reported from paediatricians and hospital pharmacists using the monthly Welsh Paediatric Surveillance Unit (WPSU).

Results 46 confirmed incidents in 44 children from 63 notifications were identified. Cases came from 8 hospitals in Wales with 29 (63%) from the sole tertiary hospital. Median age was 1.7 (range 1 week to 15) years and weight 10 kg (0.6 to 59).

39 (85%) were overdosing (up to 1000x fold error) and 7 underdosing. 40 different medications were involved, 16 (37%) intravenous. Of 29 cases involving enteral medication, 26 (90%) were liquid formulations. Three cases were discharge medication prescribed or dispensed incorrectly and administrated at home. Stage of errors were primarily in prescribing 37 (80%), administration 7 (16%) and dispensing 2 (4%).

18 (42%) cases reached the patient, 10 from prescribing. Seven cases were spotted after multiple doses were given. Six errors resulted in harm, three which required intensive care treatment. No deaths or permanent disabilities were reported. Half (23/46) of all errors reported and two-thirds (12/18) of cases that reached the child occurred in <10 kg children.

Several human factor themes were identified: Prescribing confusion between gram milligram and microgram (none reached patient, n=7), confusing between mg and mg/kg (n=6 including 3 underdosing errors), leading zero errors (e.g. 0.1 vs 0.001 mg, n=6) and prescribing reconciliation errors where admitting doctor attempted to prescribe chronic medication in mg by reversing calculating liquid dosage expressed in mL (n=4).

During this study period 164,000 hospital admissions occurred in children <16 years in Wales. Our data estimates a tenfold error incidence of 1:3600 paediatric admissions, with drug reaching the child in 1:9000 admissions.

Conclusion In this unique first ever population surveillance study, tenfold errors in children occurred at every stage of medication process and in the full range of care settings. Errors found were very different from those obtained from tertiary hospital single centre study and UK National Reporting and Learning System (NRLS). Strategies for error reduction will be more productive if designed across a whole national healthcare system.

SP6 BUILDING ON THE DRUGGLE: PERSONALISED FEEDBACK TO IMPROVE AND MAINTAIN GOOD PRESCRIBING PRACTICE

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Background Inspired by work from a number of other centres,[1 2] a weekly 'Druggle' was set up on our 28 cot tertiary, level 3 neonatal intensive care unit in June 2018. The Druggle is a short pharmacist-led briefing in the clinical area involving doctors and nurses, focussing on prescribing and administration issues and errors. Over the first year a concurrent zero tolerance audit shows an improvement in prescribing practice, with an increased number of charts with zero errors (63% in June 2018, 95% in June 2019). Despite the improvements in prescribing practice, average attendance at the Druggle has fallen from 17 people per week to 7 over the year. It was decided to consider personalised feedback on prescribing as a potential new mechanism to improve and maintain prescribing standards.

Aim To investigate if structured, personalised feedback to prescribers on a neonatal unit could be an innovative way of improving prescribing standards and patient safety. The project was set up to gain an insight into prescribers attitudes towards prescribing feedback and to see what impact that feedback might have on their attitudes after it had been carried out.

Method All prescribers on the unit were invited to complete an online questionnaire which included questions on previous