

submitted for monthly review. The process thereafter consisted of three stages: a letter of recognition from the lead consultant and senior sister; a summary detailing the event and its learning points was prepared for the FERF noticeboard (located so staff, patients and their families could view it) and each individual FERF was discussed at the Risk Forum Meeting.

**The results** A simple impact analysis was made after a six month pilot. We quantified feedback by category and semi-qualitatively assessed the impact of the FERF concept on attitude and team morale.

The results of this analysis demonstrated an increase in the amount of formal positive feedback being received by all members of the team. Morale has been sustained beyond the pilot and many respondents reported a positive change in their attitudes towards other team members.

While larger scale work is needed to further evaluate FERF as an educational intervention, the extraordinarily positive results from the pilot unequivocally suggest that the concept is worth pursuing. Recognising excellence should become part of everyday practice and appraisal.

### G79(P) INVESTIGATION OF CHILDREN WITH SUSPECTED SKULL FRACTURE – SERVICE EVALUATION AT TWO CENTRES

<sup>1</sup>K Stone, <sup>2</sup>M Lyttle. <sup>1</sup>Southmead Emergency Department, North Bristol NHS Trust, Bristol, UK; <sup>2</sup>Emergency Department, Bristol Royal Hospital for Children, University Hospitals Bristol NHS Foundation Trust, Bristol, UK

10.1136/archdischild-2015-308599.78

**Background and aims** Half a million children attend UK Emergency Departments (EDs) due to head injury (HI) annually. Most have a mild HI, but early identification of those with serious traumatic brain injury (TBI) is crucial. The risk of TBI is significantly higher in the presence of a skull fracture. Cranial bone ultrasound (CRUSS) is an emerging investigation to identify or exclude fractures while avoiding radiation burden. We aimed to assess current imaging practice and evaluate CRUSS accuracy to determine whether its use could reduce CT scanning rates.

**Methods** Retrospective chart review over twelve months at two sites:

Site One: Tertiary Paediatric ED

Site Two: District General Hospital ED seeing adults and children.

All children 0–16 years (except for suspected abuse cases) receiving imaging for HI, identified via radiology electronic databases, were included.

**Results** 2,233 and 804 children were seen due to HI at Sites 1 and 2 respectively, of which 26 (1%) and 38 (5%) fulfilled selection criteria. Imaging modality rates are presented in Table 1. Most received CT; only a small number (4) had CRUSS – of these, all were neurologically stable, two were delayed presentations ( $\geq 24$  hrs after injury).

**Abstract G79(P) Table 1** Imaging modality rates

|            | Site 1   | Site 2   |
|------------|----------|----------|
| CT only    | 21 (81%) | 33 (87%) |
| US only    | 2 (8%)   | 0        |
| SXR only   | 0        | 4 (11%)  |
| SXR and US | 2 (8%)   | 0        |
| SXR and CT | 1 (4%)   | 1 (3%)   |

Site 2 had a higher CT rate overall (1% vs 4%). There were seven delayed presentations at Site 2 – five could have benefited from USS rather than CT if the service was available.

**Conclusions** CRUSS may have a role in both acute and sub-acute HI, whether as a decision making aid or diagnostic tool. Its accuracy and utility cannot be determined due to the low numbers in this study. However, we have demonstrated that it is being used, and as this use is likely to increase, further prospective research is required to fully determine its role.

### G80(P) OPTIMISING MULTIVITAMIN SUPPLEMENTATION IN PAEDIATRIC EMERGENCY DEPARTMENT (ED) PATIENTS – A HEALTH PROMOTION INITIATIVE

S Hartshorn, M Murphy. Emergency Department, Birmingham Children's Hospital, Birmingham, UK

10.1136/archdischild-2015-308599.79

**Aims** Vitamin D deficiency is an increasing problem within the UK, particularly in high-risk groups. Clinical manifestations include seizures and cardiomyopathy in infants, muscle weakness, non-specific abdominal pain, poor growth and rickets. Current recommendations are that all children from six months to five years of age receive 7 – 8.5 micrograms of vitamin D per day (Department of Health and Chief Medical Officers). The British Paediatric and Adolescent Bone Group advocate that exclusively breastfed infants receive vitamin D supplements from soon after birth.

The Government's 'Healthy Start' programme aims to prevent deficiency by providing multivitamins (A, C and D) free to families on income support. Some Clinical Commissioning Groups (CCGs) fund these vitamins beyond the scheme - in the case of our own CCG, this is for all children aged 6 months – 3 years inclusive.

Healthy Start vitamins have been available within our ED for some time, with a poster campaign in the ED waiting room encouraging parents/carers to request them. In view of our particular high risk populations, and the large number of cases of vitamin D deficiency diagnosed within our ED, we sought to optimise the provision of Healthy Start vitamins.

**Methods** Our ED documentation card was modified to prompt the nurse/clinician to routinely ask parents/carers of infants and children 3 years and below if they were currently receiving multivitamins. When this was not the case, a bottle of the Healthy Start vitamin drops was offered, together with a written information booklet about the scheme.

We compared the number of bottles of vitamins supplied before and after this change, by reviewing the logsheet entries for each issue.

**Results** Number of patients receiving Healthy Start vitamins:

| Time Period | Dates                   | Number of patients | Average number of patients per month |
|-------------|-------------------------|--------------------|--------------------------------------|
| Pre-change  | March to Sept 2014      | 12                 | 1.7                                  |
|             | Mid-Oct to mid-Nov 2014 |                    |                                      |
| Post-change | (one calendar month)    | 52                 | 52                                   |

**Conclusion** Patient attendances to EDs provide opportunities for clinicians to support national health promotion campaigns. This can be optimised by incorporating health promotion questions as a standard aspect of clinical care. The next stage of this initiative will be an audit of the new multivitamin process, to ensure that

all eligible patients have been targeted, and to exclude a “drop-off” in compliance.

**G81(P) SAFETY OF “SINGLE CHECKER” PATIENT GROUP DIRECTIVES FOR SELECTED MEDICATIONS DURING INITIAL NURSE ASSESSMENT IN THE EMERGENCY DEPARTMENT (ED)**

<sup>1</sup>C Bird, <sup>1</sup>S Hartshorn, <sup>2</sup>A Sinclair. <sup>1</sup>Emergency Department, Birmingham Children's Hospital, Birmingham, UK; <sup>2</sup>Pharmacy Department, Birmingham Children's Hospital, Birmingham, UK

10.1136/archdischild-2015-308599.80

**Aims** Innovative ways to optimise ED patient flow, without sacrificing quality of care, are at a premium.<sup>2</sup> Within our own paediatric ED, it was observed that inefficiency occurred whenever a triage nurse had to leave the assessment room in order to find a colleague to check the dose of a Patient Group Directive (PGD), including those for simple, over-the-counter medications. Doubt has been cast on the efficacy of double checking in all but high risk medications.<sup>2</sup>

We aimed to evaluate the safety of a “single checker” PGD process at triage for paracetamol (pain and fever), ibuprofen (pain and fever), oral rehydration salts (ORS) and topical 4% tetracaine gel (Ametop) to improve patient flow.

**Methods** Single-checker PGDs were devised for the medications and indications listed above, to be used exclusively within the triage/assessment area by nurses who had completed PGD competency training. The process change was approved by the Trust Drug and Therapeutics Committee, after assurance that robust safety nets were in place (including the production of weight/dose tables for paracetamol and ibuprofen which were displayed in the assessment room).

At launch, a 3 month audit (August–October 2011) was conducted, in which all single checker PGDs were logged.

Subsequently, the hospital incident reporting system was reviewed for any medication errors associated with PGDs from ED.

**Results** During the first 3 months of the use of single-checker PGDs, no errors in dose were identified.

To date, no medication errors associated with ED PGDs have been identified within the hospital incident reporting system.

Benchmarking data regarding the prevalence of this practice within EDs in the PERUKI network will be identified.

**Conclusion** There were no drug errors with single checking by protocol of simple emergency medications at triage, within one of the UK's busiest paediatric EDs. Further research is required to quantify the time and resources saved on the patient journey.

## REFERENCES

- 1 Sinclair D. Emergency department overcrowding – implications for paediatric emergency medicine. *Paediatrics Child Health* 2007;**12**:491–494
- 2 David U. Double checking: does it work? *Can J Hosp Pharm*. 2003;**53**:167–169

**G82(P) EXPLORING THE ACCEPTABILITY OF A CLINICAL DECISION RULE TO IDENTIFY PAEDIATRIC BURNS DUE TO MALTREATMENT**

<sup>1</sup>EL Johnson, <sup>1</sup>SA Maguire, <sup>2</sup>LI Hollén, <sup>1</sup>AM Kemp. <sup>1</sup>College of Biomedical and Life Sciences, Cardiff University, Cardiff, UK; <sup>2</sup>Centre for Child and Adolescent Health, University of Bristol, Bristol, UK

10.1136/archdischild-2015-308599.81

**Objective** A Clinical Decision Rule (CDR) was developed from a systematic review and epidemiological study to identify burns due to child maltreatment. Prior to an implementation evaluation, we wish to explore clinician's response to the CDR, and the likelihood that it would influence their decision making.

**Methods** A semi-structured questionnaire of 55 Health professionals in 8 Emergency Departments (3 paediatric) and two burns unit's explored demographics, recognition of maltreatment utilising four case vignettes (1: suspect maltreatment, 2: consider maltreatment, 1: likely unintentional), and likelihood of taking action recommend by CDR. Analysis: Fisher's exact test and logistic regression.

**Results** In an analysis of potential variables, (professional grade, child protection (CP) training or paediatric burns training), the most influential in accurately identifying maltreatment was professional grade (Odds Ratio 2.95, 95% CI 1.39–6.25). Lower grade doctors were most likely to take the action recommended by the CDR, whilst higher grade doctors would do so with a proviso e.g. senior CP colleague advice. More CP training did not correlate to accuracy in identifying suspected or concerning cases, but did correlate with correctly identifying the unintentional case ( $p = 0.041$ ) and with a proviso to taking CDR recommended action ( $p = 0.056$ ). Paediatric burns training was not an influential variable.

**Conclusions** While lower grade doctors are the least accurate at identifying burns due to maltreatment, they are the most likely to follow this CDR. However, those with the least knowledge of CP are least likely to follow the CDR recommended action.

**G83(P) EMERGENCY DEPARTMENT MANAGEMENT OF CHILDREN WITH DECOMPENSATING INHERITED METABOLIC DISEASE**

<sup>1</sup>MW Gillam, <sup>2</sup>E Chronopoulou, <sup>3</sup>MD Lyttle. <sup>1</sup>General Practice, Great Western Hospital, Swindon, UK; <sup>2</sup>Emergency Medicine, Royal Bristol Hospital for Children, Bristol, UK; <sup>3</sup>Metabolic Medicine, Royal Bristol Hospital for Children, Bristol, UK

10.1136/archdischild-2015-308599.82

**Background and aims** Metabolic decompensation may occur in patients with disorders of intermediary metabolism during intercurrent illness. Early intervention strategies are crucial in order to halt decline. This poses a particular challenge in emergency departments (EDs), particularly at peak times. Impending deterioration may not be clinically apparent, and so may not result in prioritisation for initial assessment or subsequent triage categorisation. It is therefore crucial to ensure appropriate care pathways are in place, yet there are no existing national guidelines regarding timeliness of ED assessment for these patients. We therefore aimed to assess current practice to inform service development.

**Methods** Retrospective electronic database and medical chart review over a 3 month period. Nine standards were set through consensus between the ED and inherited metabolic disease (IMD) teams, relating to timeliness, notifications and assessment criteria (grade of clinician and assessment performed).

**Results** Of 38 IMD presentations, 30 were deemed at risk of decompensation due to their condition. 33 (92%) had an electronic diagnosis alert, 28 (83%) had a specific electronic ED management plan. 21 (54%) were triaged within 15 min of arrival, and following triage 8 (21%) and 19 (50%) were seen within 10 and 30 min respectively. There was no apparent correlation with triage category. 8 were discharged prior to senior review 6 of which were at risk of decompensation. 13 of the