

## Association of Paediatric Emergency Medicine

### G235 WHAT DID THE DOCTOR SAY? MEASURING INFORMATION DECAY IN A PAEDIATRIC ASSESSMENT UNIT

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**Aims** As medicine becomes more complex, the need for effective communication increases. Changes in acute paediatrics have reduced opportunities for information transfer, with more Paediatric Assessment Units (PAU's) attendances and shorter inpatient stays. However parents still expect clinicians to explain the diagnosis and management.

We therefore explored factors predicting effective information transfer to parents of children in a PAU.

**Methods** In a PAU serving 22,000 patients/yr, doctor-parent interactions were observed after consent, noting the child's demographics, presentation variables and information covered. Parents were interviewed 2–4 hours later exploring what they remembered and how their perceptions of the earlier interaction.

The study had been approved by the local ethics committee.

**Results** 20 patients, attending between 0900 and 1700 on weekdays were selected. Those not expected to stay after their consultation were excluded. Mean patient age was 7.75 yrs (range 10 months–15 years). 75% were boys. Mean number of items of information was 6.6 (range 4–10) per patient. Parents recalled a mean of 86% of these items (range 33–100%).

There was no correlation between numbers of items covered and the number remembered, nor with demographics, interaction time, perceived anxiety or departmental noise.

Those with better than mean recall more often had children who had suffered an injury rather than an illness, had overall lower illness severity (PEWS mean 0.91 vs 1.67;  $p = 0.08$ ) and had shorter overall waiting times before being seen (2.5 vs 3.9 hours;  $p = 0.08$ ) than those in the lower recall group.

**Conclusions** Despite the stressful PAU environment, we found good recall of given information in our sample group. Unexpectedly, better recall was unrelated to consultation time or items covered, but seemed better with traumatic presentations, when the child was less unwell and with shorter waits. Parents may more readily assimilate information in relation to more obvious or external conditions and when they are less stressed.

These findings suggest extra consideration is placed upon information giving when the child is particularly unwell or has an illness rather than trauma.

### G236 PREVALENCE AND MANAGEMENT OF ACUTE PAIN IN CHILDREN ATTENDING EMERGENCY DEPARTMENTS IN IRELAND VIA AMBULANCE

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**Aims** Pain is the commonest symptom in the emergency setting. It has previously been described that pre-hospital assessment of pain in children by paramedics is often inadequate and that pain severity is frequently underestimated. To date, there is no published data in Ireland on acute pain management in children, in the emergency setting. This study aims to describe the prevalence of acute pain in children presenting to emergency departments (EDs) in Ireland via

ambulance, with reference to severity, aetiology, and efficacy of current pre-hospital analgesic interventions, prior to ED arrival.

**Methods** A national prospective cross-sectional study was undertaken in 7 EDs over a 12-month period (1st November 2011 – October 31st 2012). Ethical approval was granted for this study. All children (<16 years) who attended the ED via ambulance with pain as a documented symptom during ambulance transfer were included. Patient demographics, cause of pain, vital signs (including pain scores), pre-hospital pain interventions, and initial ED management were recorded.

**Results** 5,560 children were transported to the 7 EDs by ambulance over the study period. 2,450 (44%) had a documented complaint of pain on the ambulance patient care report form. Injury was implicated in over 2/3's of cases. 60% were male with a mean age of 8 years (2 months–15 years). 24% of children had their pain formally assessed in the pre-hospital phase of care, of whom 2/3's were recorded as experiencing acute moderate to severe pain. Younger age was associated with poorest pain management. 45% of children had no documented analgesic intervention prior to ED arrival. On ED arrival, 48% of children had their pain formally documented and 56% were administered analgesia.

**Conclusion** The assessment and treatment of acute pain in children remains a significant problem in the emergency setting in Ireland. Further studies are required to formally delineate the barriers, as perceived by emergency healthcare providers, to managing acute pain in this vulnerable population. Additionally, alternative strategies must be explored both to augment the timely assessment of pain intensity, particularly in pre-verbal children, and facilitate the effective treatment of moderate to severe pain.

### G237 WHY DO CHILDREN WITH GASTROENTERITIS PRESENT TO EMERGENCY DEPARTMENTS?

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**Aims** Gastroenteritis is a significant cause of morbidity and mortality worldwide. It accounts for 10–20% of presentations to urgent and emergency care annually in the UK. Surprisingly little is known about parental expectations of care and the factors that lead to presentations by children with gastroenteritis. In this study we sought to investigate these factors in the paediatric emergency department (ED) setting.

**Methods** We conducted our study within the EDs of two large tertiary hospitals, each within a major UK city during January–March 2012. An opportunistic sample was taken. Parents/carers with children aged from six months to their fifth birthday presenting with suspected gastroenteritis were eligible. The study questionnaire was designed by the authors, informed by the available literature. In order to improve validity, the questionnaire was piloted on a small sample of parents and additionally reviewed by the National Institute for Health Research Clinical Specialities Group in general paediatrics.

**Results** The questionnaire was completed by 121 parents across the two hospitals. Parents were asked for the main reason that they had brought their child to the ED. Of seven possible responses, the most frequently chosen, was 'symptoms persisted longer than expected' (by 56%), however 46% wanted 'reassurance that there is not a serious cause'. When making the decision to come to the ED, 46% had decided alone, 40% were helped by a healthcare professional and 15% were helped by a family member. Asked about investigation expectations, 31% were expecting urine tests and 21% were expecting blood tests. Many parents were expecting treatments to be given including 38% expecting an anti-emetic, 34% an anti-diarrhoeal agent, 11% antibiotics and 55% fluids (36% by mouth, 13%

intravenously or 6% nasogastrically). When we asked what would make parents confident about going home, the most common response was 'after reassurance that the child is not dehydrated'. Other responses referred to advice or physical symptoms.

**Conclusion** Knowledge of parental expectations provided by this study, particularly with regard to expectations of investigations and treatment could enable physicians to provide more comprehensive care, with particular emphasis on explanation. This may improve parental satisfaction and reduce re-attendance.

**G238 MAKE LOVE NOT WAR: BRIDGING THE GAP BETWEEN PRIMARY AND SECONDARY PAEDIATRIC CARE**

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**Aim** To determine the number of presentations to a new Children's Emergency Department (CED) that could have been managed in primary care.

**Methods** All Patients were assessed to determine the appropriateness of attendance. Appropriateness was defined as any patient referred from primary care, or requiring any period of observation, a procedure or an investigation, or that were admitted. Patients appropriate for primary care management were defined as children that did not meet the above criteria, had a simple illness with no significant underlying pathology and were green in accordance to the NICE traffic light system. The outcome of all GP referrals was also reviewed.

**Results** 898 attendances (viral type illness 47%, injuries 32%) were reviewed. 27.4% were deemed more appropriate for primary care with 60% being < 5 years (23% < 1year). The majority (68.6%) were self-referral, 62% from within a 5miles radius and 30% from just 10 of the 111 GP practises.

16% were referred from primary care, 24.3% were admitted. The estimated minimum cost of these additional referrals was £286 520 per year, with 64.2% of these costs being children under the age of 5.

**Discussion** A large number of attendances to the CED could be managed in primary care. The health system needs to adapt in order to meet users' needs and continue the ethos of right patient right place right time. Using this audit data the local primary care Clinical Commissioning Group (CCG) and the hospital trust have worked together to implement many changes. The out of hours (OOH) service has been reinstated allowing specific patients to be triaged straight back to the primary care centre, who are prioritising seeing and calling back the under 5 year olds. CED has developed formal care pathways for common illness for use in primary care; CED is in direct liaison with the local GP forums to address concerns. Ultimately, CED services need to adapt to be able to care for an increasing volume of attendances, and primary and secondary care need to "make love not war".

**G239 REDUCING NEONATAL READMISSIONS AND RE-ATTENDANCES WITH JAUNDICE: ROLE OF TRANSCUTANEOUS BILIRUBINOMETERS**

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**Aims** Up to 60% of newborns have jaundice within the first week of life. Significant jaundice necessitates readmission to hospital. NICE guidance on neonatal jaundice in 2010 recommending checking bilirubin levels and not relying on visual inspection alone led to increased numbers of babies attending our Emergency Department

(ED). We aimed to address the raising re-attendances and readmissions to paediatrics.

**Methods** A n Audit identified increasing readmissions within the first week of life. We collected data for readmissions to wards and re-attendances to ED due to physiological jaundice. We compared readmissions prior to use of transcutaneous bilirubinometers (TCBRs) and for one month post introduction. A monthly average was used for comparison.

**Results** Over the years, the proportion of infants readmitted increased (Table 1). Most were term breastfed babies. Length of stay increased when discharged early. TCBRs can be used as a screening tool. We identified that screening by Community Midwives at home could decrease hospital referrals. TCBRs were obtained in May 2012 through charity funding.

**Abstract G239 Table 1 Readmissions within first week of life 2009-2011**

	June – Sep 2009	Sep – Dec 2010	Aug – Nov 2011
Number of readmissions for babies <1 week of discharge	26	42/72 (58%)	73/82 (89%)
Proportion readmitted for 'jaundice, poor feeding or weight loss with jaundice'	13/26 (50%)	28/42 (66%)	62/73 (84%)

Post TCBR use, average monthly re-attendances to ED fell from 40 to 16 (Table 2). Average monthly readmissions and financial costs to the Primary Care Trust (PCT) were calculated.

**Abstract G239 Table 2 Re-attendances and readmissions: pre and post TCBR use**

	Pre TCBRs 01/12–03/12	Monthly average	PCT billing	Post TCBRs introduction 06/2012	PCT billing
Time in months	3 months			1	
No of Re-attendances to ED	122	40.6	£16,916	16	£1,744
No of Readmissions	28	9.3		8	
Days of admission	78	26	£14,495	22	£7,931

**Conclusions** Introduction of TCBR's reduced attendance rates to ED, but did not significantly affect readmissions. PCT billing reduced significantly. Families could be monitored at home. We are pursuing other strategies like producing a DVD to promote awareness of jaundice and improve breast feeding support and plan to reanalyse following this.

**G240 THE ROMLA MATRICES AS A TOOL IN INVESTIGATING GUIDELINE ADHERENCE AND CLINICAL OUTCOME: ARE THEY USEFUL IN CHILDREN WITH HEAD INJURIES?**

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**Background** Paediatric head Injuries (HI) are a common presentation to emergency departments. National guidance is available to facilitate neuroimaging decision making in this cohort. However it is unclear how guidelines and their evidence base influence practise and patient outcomes. The ROMLA matrices are 2X2 classification algorithms relating evidence base adherence to either diagnostic accuracy (Rolma 1) or clinical outcome (Rolma 2).