

were also implicated as examples of when children are less likely to receive analgesia from practitioners.

**Conclusion** The pathway to improving care must be paved with an emphasis on improvements in practitioner education and training, offering alternatives to assessing pain in pre-verbal children, exploring the intranasal route of drug delivery in managing acute severe pain, and through robustly developing evidence-based guidelines that are practitioner friendly and patient-focused.

### G244(P) YOUNG PEOPLE GET ACTIVE! FOCUS GROUP INVOLVEMENT TO IMPROVE THE EXPERIENCE OF ADOLESCENT PAEDIATRIC PATIENTS IN EMERGENCY DEPARTMENTS

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<sup>1</sup>K Sexton, <sup>2</sup>P Heinz, <sup>2</sup>K Lothian. <sup>1</sup>Clinical School, Cambridge University, Cambridge, UK; <sup>2</sup>Department of Paediatrics, Cambridge University Hospitals NHS Foundation Trust, Cambridge, UK

Recent publication of 'Standards for Children and Young People in Emergency Care Settings' has brought involvement of young people in service design into the spotlight. Whilst many studies have focussed on parental opinion, our project aimed to involve ACTIVE, a young peoples' focus group. This group of young people aged 8 – 18 years was set up 4 years ago with the aim to improve services for children at our hospital, especially for adolescents.

**Methods** The group defined their priorities for emergency department (ED) care in a brainstorming session followed by a visit to the ED in the form of a simulated patient journey.

**Results** ACTIVE identified speed of assessment, clear communication, prompt pain relief and attention to their comfort needs as well as privacy as their main priorities. On visiting the ED they pointed out areas for improvement as follows: paediatric nursing staff at pre-triage, decoration or lack thereof in certain areas of the department (but also positive comments on where this was done well), lack of privacy in defined areas and ways to communicate waiting times effectively and accurately. Whilst a dedicated 'teenage room' was not felt to be important, the need for a quiet waiting and clinical area was stressed.

**Outcome and conclusion** Studies have shown that adolescent satisfaction in the ED is often lower than that of adult patients. Young peoples' focus groups are an effective resource in the design of services and in the case of our centre have led to direct input into the re-design of our paediatric ED area (the proposed plans will be available for inspection). Feedback to young service users is important to encourage further participation and to ensure that they are aware of how their suggestions will be used.

### G245(P) PITFALLS IN WEIGHT ESTIMATION

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G Harlow, R Jayatunga. Department of Paediatrics, Sandwell Hospital, Sandwell and West Birmingham NHS Trust, West Bromwich, UK

Children and infants of different age and weight respond differently to drugs. Special care is needed in the calculation of drug doses to reduce and prevent the risk of toxicity. The 2011 Advanced Paediatric Life Support (APLS) guideline, 5th edition, includes an updated method for weight estimation for emergency situations[1].

**Aims** We aim to study our population of patients to determine whether their actual weights are congruent with the updated APLS weight estimation. We also compare with the 2005 APLS weight estimate calculation[2].

**Method** Prospective audit at a large two-site NHS trust with a 23-hour paediatric assessment unit and two in-patient wards. The catchment population for our study has a higher proportion of population in lower socioeconomic groups than the national average[3]. The age, basic diagnosis and weight of consecutive presenting

### Abstract G245(P) Table 1

Age (years)	Number of patients	Mean weight (kg)	Mean (95% CI) percentage weight difference 2005 APLS formula	Mean (95% CI) percentage weight difference 2011 APLS formulae
Less than 1	33	6.55	n/a	-8% (-2 - -15)
1	17	10.65	-6% (-16 - 3)	-6% (-16 - 3)
2	7	15.23	-27% (-49 - -5)	-27% (-49 - -5)
3	11	17.44	-25% (-38 - -11)	-25% (-38 - -11)
4	8	18.36	-15% (-41 - 12)	-15% (-41 - 12)
5	10	21.58	-20% (-40 - 0)	-20% (-40 - 0)
6	13	22.97	-15% (-26 - -4)	8% (-1 - 17)
7	20	27.65	-26% (-43 - -8)	1% (-13 - 15)
8	5	34.98	-46% (-62 - -29)	-13% (-26 - 0)
9	11	37.17	-43% (-68 - -18)	-9% (-28 - 10)
10	5	36.26	-30% (-45 - -14)	2% (-9 - 13)
11	12	37.77	n/a	6% (-17 - 28)
12	14	42.14	n/a	2% (-16 - 20)

A negative sign denotes a mean weight underestimate by the formula; no sign indicates an overestimate.

children between 1 month and 12 years were collected for 166 patients in December 2012. We aim to collect data to March 2013 with an estimated sample size of 500. Children were weighed on Seca baby/standing/chair scales (Seca, Hamburg, Germany) with children under two naked and over two wearing minimum clothing without shoes. Percentage weight difference between child's actual weight and their expected weight was calculated using both the 2005 APLS formula, weight(kg) = (age + 4) × 2 and the 2011 formulae: 1–12 months: weight(kg) = (0.5 × age in months) + 4; 1–5 years: weight(kg) = (2 × age in years) + 8; 6–12 years: weight(kg) = (3 × age in years) + 7

**Results** Table 1: Mean weight differences by age

Preliminary results outlined in Table 1 demonstrate that although the 2011 APLS calculation is better for weight estimation in our 6–12 years age group than the 2005 calculation, there is still the potential for significant underestimation of weight in all ages.

**Conclusion** Weight estimation is extremely important for paediatric resuscitation and emergency treatment. However, across all age groups weight estimation is no substitute for establishing the child's actual weight at the earliest opportunity.

### REFERENCES

- Advanced Life Support Group. APLS, Fifth Edition. Blackwell 2011.
- Advanced Life Support Group. APLS, Fourth Edition. Blackwell 2005.
- 2011 Census: Key Statistics for local authorities in England and Wales. Office for National Statistics; December 2012.

### G246(P) CHILDREN WITH CHEST PAIN – A CAUSE FOR ANXIETY BUT IS IT AN EMERGENCY?

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G Mujtaba, J Awan, C Martin. Paediatric Emergency Department, Tallaght Hospital, Dublin, Ireland

**Background** Chest pain (CP) in children is a common complaint in emergency departments, general paediatric clinics, and paediatric cardiology clinics. It can be a source of anxiety for parents, patient and physicians and can lead to a school and sports absenteeism. A thorough history and physical examination usually can determine the cause and differentiate patients who require acute intervention from those who can be managed with advice and reassurance.

**Aim** To review the presentation, and management of children presenting with chest pain to a tertiary level teaching hospital over a 12 month period. To assess diagnosis, investigations, treatment and follow up.