

Background This preliminary audit aimed to assess the feasibility of referring children presenting to a UK District General Hospital Emergency Department (ED), seeing 27500 children per year, to their own Primary Care General Practitioner (GP) following an initial assessment in the ED.

Method One hundred and fifty-two patients were assessed by a Consultant in Paediatric Emergency Medicine in the ED during the triage process. Those fulfilling the audit inclusion criteria were referred directly from triage to their own off-site Primary Care GP for a same-day assessment.

Results Only ten patients (6.6%) fulfilled the inclusion criteria for referral to Primary Care and seven (70%) of these were accepted, none of whom were referred back to the hospital acutely by their GP. The median time spent in the ED for the 152 patients assessed in the audit was 1 hour 12 minutes and for the 10 patients referred to Primary Care was 31 minutes.

Conclusions Only a small number of children assessed in the audit were suitable for referral to Primary Care. The assessment and referral process was not a good use of Emergency Department resources.

The absence of a valid and reliable screening tool or early warning score to predict the safe discharge of children from an ED reduced the number of children that could be referred directly to primary care from the ED.

Further multi-centre work is required to evaluate a clinical decision-making framework to enable the accurate assessment of children for their safe discharge or referral from an ED.

1480 CHILD ABUSE DETECTION AT THE EMERGENCY DEPARTMENT USING A NEW PROTOCOL BASED ON PARENTAL CHARACTERISTICS

doi:10.1136/archdischild-2012-302724.1480

H Diderich. *Emergency Department, Medisch Centrum Haaglanden, The Hague, The Netherlands*

Background and Aims The number of children identified as victims of child abuse in the Emergency Department represent only the tip of the iceberg. The "Hague-protocol" takes a new and successful approach to the recognition of child abuse at the E.D.

Methods These new guidelines call for notification to the Reporting Center for Child Abuse and Neglect when an adult patient who is responsible for children at home, visits the E.D. because of either 1) Substance abuse 2) Suicide attempt 3) Domestic violence. A before and after study was done at E.D.'s of five hospitals in an urban region in the Netherlands.

Results In the two years prior to the introduction of the protocol, a total of 4 parents were reported. After the guidelines were issued in 2007 the number of suspected child abuse cases reported to the Reporting Center, based on parental characteristics, rose substantially. A total number of 107 cases were reported in 2008, 149 cases in 2009, and 126 cases in 2010. Results indicate that child abuse was confirmed in the large majority (92%) of the reported cases. In 5% of the cases child abuse could not be confirmed and in 3% of the cases it was concluded that there was no child abuse.

Conclusion The Hague-protocol can substantially improve and increase the detection rate of child abuse cases via the E.D. Parental characteristics can be strong predictors of child abuse, and can be included in E.D.'s guidelines to help identify new cases of child abuse.

1481 TRENDS IN PAEDIATRIC ACUTE ASTHMA MANAGEMENT IN THE REPUBLIC OF IRELAND: A COMPARISON BETWEEN COMMUNITY AND HOSPITAL PRACTICE

doi:10.1136/archdischild-2012-302724.1481

^{1,2}J Cronin, ¹J Pollock, ³T Grant, ^{1,2}S McCoy, ⁴N Breen, ¹S Walsh, ^{1,2,5}R O'Sullivan. ¹Paediatric Emergency Research Unit; ²National Children's Research Centre, Our Lady's Children's Hospital Crumlin; ³Centre for Support and Training in Analysis and Research (CSTAR); ⁴Department of General Practice; ⁵Department of Paediatrics, University College Dublin, Dublin, Ireland

Introduction The prevalence of childhood asthma in Ireland is amongst the highest in the world. We aim to compare the management of this condition by Emergency Physicians (EPs), Paediatricians and community-based General Practitioners (GPs).

Methods A standardised online anonymous survey was conducted of senior EPs, Paediatricians and General Practitioners (GPs) in Ireland. 15% of GPs nationally were chosen using a computerised randomization method. A postal survey was sent to those GPs for whom an email address was not available.

Results We received 344 responses, giving an overall response rate of 52.3% (EP: 67.6%; Paediatricians: 51.3%; GP: 50.6%).

Over 70% of paediatricians and EPs use spacer devices for mild and moderate episodes; 78% of GPs use spacers for mild asthma, however this drops to 38% for moderate episodes. Paediatricians and EPs differed in their choice of first-line intravenous bronchodilators with paediatricians choosing salbutamol (48.3%) most frequently and EPs choosing magnesium (48.3%). Whereas almost all respondents felt that severe asthma should be referred to an ED, over 85% of paediatricians and EPs felt that moderate attacks should be referred compared to 13.7% of GPs. Over 90% of all respondents would welcome a national guideline on the management of acute paediatric asthma exacerbations.

Conclusion This is the first study of its kind internationally to compare management of this important and common condition across the relevant specialties. The results of this survey support the development of a national guideline for acute paediatric asthma management.

1482 PAEDIATRIC TRAUMA TRANSFERS: ARE WE FAST ENOUGH?

doi:10.1136/archdischild-2012-302724.1482

N Cooper, K Parkins, D Grainger. *North West and North UK Paediatric Transport Service, Central Manchester Foundation NHS Trust, Warrington, UK*

Background Children with traumatic brain injury (TBI) require rapid stabilisation and transfer to a paediatric multi-trauma centre (pMTC) within 3 hours (4 hours if rural) of injury (UK guidelines 2010). In our region transfer of children is either by local hospital team or regional paediatric transport service (NWTs started November 2010).

Methods Retrospective 16 month audit patients with TBI transferred into 2 regional pMTCs, identifying severity of injury, areas of delay, length of stay (LOS) on PIC and survival to hospital discharge.

Results 56 patients with TBI were identified. Median time of arrival at pMTC 355 minutes (IQR260–495), 210 minutes for time critical injuries (IQR180–270).

Areas of delay identified:

- Referral time post injury - median 115 minutes (IQR90–172)
- Insertion of invasive lines e.g. arterial or central in 54%
- Neurosurgical Intervention at adult MTC in 4 patients
- Local team vs NWTs = 210 vs 431 minutes

Patients transferred by NWTs were more likely to have severe head injury and multi-trauma. However, median LOS was similar (local team 3.5 (IQR 2–10) vs NWTs 3 (IQR 1–6) days). Overall mortality rate was 6% (national mortality = 10%).

Conclusions Transfer children with TBI within 3–4 hour national target remains challenging. However, regional LOS and mortality rate remain low. This audit highlights the need for early referral, in line with the recent Trauma Network guidelines. The use of

peripheral or intraosseous line(s) and full non-invasive monitoring, ensuring patients are well oxygenated and have an adequate BP may also improve transfer times.

1483 BURTON PAEDIATRIC EARLY WARNING SYSTEM SCORE

doi:10.1136/archdischild-2012-302724.1483

¹M Ahmed, ¹D Sobithadevi, ¹R Lall, ¹A Ghose, ²S Boswell, ³T Reynolds. ¹Paediatrics; ²Paediatric Research Nurse; ³Clinical Chemistry, Burton Hospitals NHS Foundation Trust, Burton Upon Trent, UK

Background Early warning scores compliment clinical decision making and can identify trends depicting deterioration in patient's condition. Age appropriate Burton Paediatric Early Warning System (BPEWS) score charts were developed in 2011 using nine indicators which included physiological parameters, therapeutic intervention and doctor/nurse concern.

Aim To assess the usefulness of BPEWS as a reliable and valid indicator for all children in need of urgent medical assessment and intervention.

Methods A retrospective analysis of all children transferred to paediatric intensive care setting over the preceding 12 months was carried out to validate BPEWS charts. Detailed case notes review was undertaken to evaluate if BPEWS could have been useful to alert us of patients' deterioration in the 24 hour period prior to transfer. Each case note was assessed by two reviewers.

Results An average of 8.7 sets of observations per patient was recorded in the 24 hours period prior to intensive care transfer. Of the 200 sets of observations recorded in 23 patients, 93% sets would have triggered based on BPEWS. 44% sets of observation scores were in amber (4–7) while 35% were in red (>7) category. Average highest BPEWS score was 9.5 (range: 4–19). In 43% and 57% of patients, highest BPEWS score fell in amber and red category respectively.

Conclusions BPEWS score charts are effective in identifying children at risk of sudden deterioration. Timely identification is likely to enable early action to reduce the risk of death or serious morbidity thus improving the outcome of care given to hospitalised children.

1484 ACCURACY OF A SEQUENTIAL APPROACH TO IDENTIFY YOUNG FEBRILE INFANTS AT LOW RISK FOR INVASIVE BACTERIAL INFECTION

doi:10.1136/archdischild-2012-302724.1484

^{1,2}S Mintegi, ³S Bressan, ¹B Gomez, ⁴L Da Dalt, ⁵I Olaciregui, ⁶M De La Torre, ⁷M Palacios, ⁴P Berlese, ⁸A Ruano, ¹J Benito. ¹Pediatric Emergency, Cruces University Hospital; ²Department of Pediatrics, University of the Basque Country, Bilbao; ³Department of Pediatrics, University of Padova, Padova, Spain; ⁴Ospedale Ca' Foncello, Department of Pediatrics, Treviso, Italy; ⁵Pediatric Emergency, Donostia University Hospital, Donostia; ⁶Pediatric Emergency, Niño Jesús University Hospital, Madrid; ⁷Pediatric Emergency, Navarra University Complex, Pamplona; ⁸Pediatric Emergency, Basurto University Hospital, Bilbao, Spain

Introduction Nowadays it is possible to manage as outpatients selected young febrile infants with low risk criteria for serious bacterial infection. A sequential approach, evaluating, firstly, the appearance of the infant, secondly, the urinalysis, and, finally, the results of the blood biomarkers, including procalcitonin, may identify better low risk febrile infants suitable for outpatient management.

Objective To assess the value of a sequential approach ("step by step") to febrile young infants in order to identify low risk patients suitable for outpatient management and compare it with other ones previously described (Rochester criteria and Lab-score).

Methods A retrospective comparison of three different approaches ("step by step", Lab-score and Rochester criteria) was made in 1123 febrile infants less than 3 months of age attended in seven European Pediatric Emergency Departments.

Results Of the 1123 infants (Invasive Bacterial Infection - IBI-, 48; 4.2%), 488 (43.4%) were classified as low risk criteria for IBI according to the "step by step" approach (vs 693–61.7% with the Labscore and 458–40.7% with the Rochester criteria). The prevalence of IBI in the low-risk criteria patients was 0.2% (95% CI 0–0.6%) using the "step by step" approach (vs 0.7%–95% CI 0.1–1.3% with the Lab-score and 1.1%–95% CI 0.1–2% with Rochester). Using the "step by step" approach, 1 patient with IBI was not correctly classified (2.0%, CI95% 0–6.12) vs 5 using the Labscore or Rochester (10.4%, CI95% 1.76–19.04%).

Conclusions A sequential approach to young febrile infants including procalcitonin identifies better patients more suitable for outpatient management.

1485 ENDOSCOPIC ASPECTS OF INHALED VEGETABLE FOREIGN BODIES IN CHILDREN

doi:10.1136/archdischild-2012-302724.1485

J Buzarov. Institute for Respiratory Diseases in Children-Kozle, Skopje, FYR Macedonia

Inhaled foreign bodies are very serious problem in the pediatric pulmonology since they increase the rate of morbidity and mortality. Aim of this study was analysis of endoscopic changes caused by vegetable foreign bodies (VFB) in correlation with their long - standing in the bronchial tree.

Material and Methods In ten years period (2002–2011) inhaled foreign bodies were removed in 219 children (age 6 mths–14 yrs), 60.27%–male and 39.73%–female. Most of the children (57.50%) belong to the youngest group of age (1–2 yrs). The inhaled foreign bodies were from organic origin in 208 (94.97%). Of these, 203 (92.69%) were with vegetable origin. The most commonly found grains were peanuts (57.14%). Inhaled foreign bodies were single object in 123 (56.16%) while in 96 (43.80%) they were multiple.

Results Endoscopically we found: Insignificant inflammation (some hours presence of VFB) in 48 (23.64%) Significant inflammation - vulnerable mucous membrane (VFB with presence more than 3 days) in 78 (38.42%) Severe inflammation - manifest inflammation (VFB more than 7 days presence) in 77 (37.93%). In this group of children we detected:- granulomatous formations 57 (82.60%)–decubital changes 28 (40.57%)–mucopurulent secretion 41 (59.42%).

Conclusion Severity of the endoscopic changes was closely correlated with the quality of the foreign body (vegetable ones), the period of lodgement and the age of the patients. Timely broncoscopic extirpation of VFB decreases the percentage of complications and represents the most successful and only logically carried out therapeutically procedure.

1486 VALIDATION OF ADVANCED PAEDIATRIC LIFE SUPPORT FORMULAS FOR WEIGHT CALCULATION IN A MULTI-ETHNIC POPULATION

doi:10.1136/archdischild-2012-302724.1486

¹C Seddon, ¹L Lockett, ²S Dhanjal, ¹M Eisenhut. ¹Paediatrics; ²Luton & Dunstable Hospital NHS Foundation Trust, Luton, UK

Background In 2011 the advanced life support group (alsg) of the United Kingdom introduced a new formula for calculation of weight from age for paediatric emergencies. We present the first study validating this formula in a multi-ethnic population and comparing its performance to the formula currently used by the European Resuscitation Council (ERC) and other formulas.

Methods Prospective audit of weight versus calculated weight comparing alsg formula with ERC guideline, the Luscombe, Argall and Best Guess formulas analysed for gender, age and ethnic groups.

Results We included prospectively 599 children aged 1 month to 12 years of age. There were 157 Asian, 268 Caucasian and 174