**Community child health and accident & emergency**

**G54 A SURE START INITIATIVE TO REDUCE ACCIDENT AND EMERGENCY ATTENDANCES: ADULT EDUCATION HELPS PARENTS MANAGE COMMON CHILDHOOD ILLNESS**

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**Aims:** Studies have suggested that professionals have considerable potential to empower parents to look after their own children when they have an acute illness by sharing knowledge and skills. The aims of this study were to develop a training package on common childhood illnesses for delivery to parent groups by a health professional and to undertake an initial evaluation of its effectiveness.

**Methods:** A group of ‘Sure Start’ parents identified their concerns when their children had an acute illness. They felt that anxieties might be reduced if they were knowledgeable about these illnesses and requested group training. A training package was developed and delivered to six successive groups. The final package consisted of six sessions of two hours, held over consecutive weeks. The package was evaluated using Kirkpatrick’s hierarchy of levels of evaluation of an educational intervention. Outcome measures used were parental satisfaction, knowledge gained and attendance at A&E and GP surgeries.

**Results:** 44 parents registered for the course. Attendance rates were 96%, with 100% attending at least five of the six sessions. A qualitative and quantitative analysis of the data provided strong evidence of the value of the course in terms of parental satisfaction and knowledge gained. There were 170 sessional response sheets completed. Parents indicated high levels of satisfaction; 298 positive and 39 negative responses. The difference in knowledge test scores between intervention and control groups was highly significant. Mean for the control group was 22.19, v intervention group was 29.44 (p<0.0005). Within the timescales and limitations of the study it could not be shown that an intervention scheme to categorise study type.

**Conclusion:** Initial evaluation has shown that an effective training package has been developed to address parental concerns and increase parental knowledge. Future research needs to focus on more effective ways of evaluating the higher levels of Kirkpatrick’s hierarchy.

**G55 ETHICS APPROVAL—WHO NEEDS IT?**


Authors submitting abstracts to the annual meeting of the RCPCH are required to state whether ethics consent has been sought. Last year, assessors for the community child health sessions in 2002 were distributed to participants attending the Community Paediatric Research Group (CPRG) summer meeting. They recorded independently whether they thought ethics approval was required. Members were divided into 4 groups of five and allocated one quarter of the abstracts. They attempted to reach a consensus about the need for approval and used a pre-defined scheme to categorise study type.

**Results:** 84/86 abstracts were included. 32 (38.1%) had obtained ethics approval. Prior to discussion, the CPRG members agreed on the need (or not) for approved abstracts (κ=0.42). Group consensus was particularly poor for research involving case note reviews and use of existing datasets.

**Conclusion:** Amongst researchers, there is a marked variation in practice and considerable dissension about the need to seek approval from ethics committees. We suggest that there is a need for wider debate.

**G56 ROAD-RELATED DEATHS AND INJURIES IN IRISH CHILDREN—WHAT LESSONS SHOULD WE LEARN FROM OUR FELLOW EUROPEANS?**

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**Background:** For road-related accidents, mortality rates in under 15 year olds per 100 000 in Sweden [2.32] and the UK [2.54] are much lower than Portugal [8.03]and Ireland (3.61).

**Aims:** To study all road-related deaths and injuries in under 15 year olds in Ireland over a 5 year period (1996–2000) and to assess what enforcement measures could be suggested to reduce this road toll.

**Methods:** For pedestrian injuries or road traffic accidents, police assistance is required and at the time a detailed form is completed by the attending officer and sent to the NRA for analysis. Details re the severity of injury, road and road conditions and safety measures such as seat belts and seat position were collected. Injuries were sub-classified as fatalities, serious (detained in hospital, fractures, severe head injury, severe internal injuries or shock requiring treatment) and minor. All data was entered into an SPSS database.

**Results:** Of 6045 childhood road-related injuries, 155 (2.5%) were fatal, 731[12%] were serious and the remainder were minor. The age group 13–15 years had the highest mortality (p <0.001*) and the age group 0–3 years had the lowest injury rates and mortality. Of all road-related injuries, cyclists accounted for 10% (n=607), pedestrians 28.4% (n=1711) and car-occupants 61.5% (n=3719). Of car-casualty fatalities (n=69), 5 were drivers (7.2%), 22 (32%) were front seat passengers and 42 (61%) were rear-seat passengers. Seat belt wearing was documented in only 23% (n=16) of car-casualty fatalities and only 15% (n=53) of those injured seriously. Pearson chi-squared tests confirmed a significant relationship between seat belt use and the severity of injury (p <0.001*). For pedestrian injuries (n=1719), 61 (3.5%) were fatal and 261 (15.2%) were serious. The age group 13–15 had the highest prevalence and severity of pedestrian injuries. Of 607 bicycle injuries, 25% were fatal and 117 (19%) were serious. Only 26 children (4.3%) wore a helmet at the time of injury and just 1 of 25 fatalities had documented helmet use.

**Conclusions:** The above figures indicate that child passenger restraint, seat belt and bicycle helmet use are unacceptable low in Ireland. We need to adopt approaches found to be successful in the UK and Sweden to reduce this terrible toll.

**G57 AETIOLOGY OF BURNS IN ADOLESCENTS ADMITTED TO A PAEDIATRIC BURNS UNIT**

A. Kelly, A. Young. Paediatric Burns Unit, Frenchay Hospital, Bristol

**Background:** Literature searches reveal little regarding adolescent burn injuries in comparison to younger paediatric patients who usually sustain scalds.

**Aims:** To identify the aetiology of burns in the age group 10–17 years.

**Method:** Retrospective collection of information from case notes of patients admitted during five years from 1 January 1997–1 January 2002 to our burns unit.

**Results:** Case notes of 93 patients were studied. There were 74 (80%) males and 19 (20%) females. Medical attention was sought within 1 hour by 49 (53%) and within 3 hours by 71 (76%) after the injury. 82 (88%) presented to the Accident and Emergency department. Most burns were less than 10% of total body surface area (87, 94%), 39 (42%) involved a flammable substance, 23 (25%) with petrol. A bonfire was involved in 20 (22%) cases and 16 of these also involved a flammable substance. Burns caused by flammable substances affect mainly males almost exclusively (38 of 39 cases). There were no cases of female burns caused by petrol. 21 (23%) of burns were caused by hot water scalds. 8 of these were due to hot drinks and 3 due to kettle spillage. Two involved bath water and both of these had chronic medical conditions. 9 (10%) of burns were due to cooking with hot fat. Other causes included 4 cases due to candles, two cases of electrical burns and two due to burns on car exhausts. There was only one case of a burn caused by fireworks.

**Conclusion:** Burns in adolescents are usually caused by flammable substances and affect males predominantly. Accident prevention would be best directed towards this group.
**G58 MEASURING QUALITY OF LIFE AFTER TRAUMATIC BRAIN INJURY: WHICH QUALITY MEASURE IS MOST SENSITIVE TO THE EFFECT OF TBI IN CHILDREN?**

A.L. Curran, H. Miller, R. McCarter, P.M. Sharples, and the Kids Head Injury Study Group. Bristol

**Introduction:** Cognitive and behavioural deficits after traumatic brain injury (TBI) are well recognised but few data exist concerning their impact upon functional health status. There is no general agreement concerning which quality of life measure is most sensitive to the effect of TBI in children.

**Aims:** To measure functional health status 6 months after TBI in children using the Health Utilities Index Mark 3 (HUI3) and the Pediatric Quality of Life Measure (PedsQL) and to compare these two outcome measures.

**Methods:** Longitudinal prospective follow up study of a cohort of children admitted to hospital for TBI compared to normal uninjured controls. The Glasgow Coma Score (GCS) on hospital admission was used to classify TBI children into severe (GCS 3–8), moderate (GCS 9–12) and mild (GCS 13–15) categories. Functional health status was measured by maternal report using the HUI3 and the PedsQL.

**Results:** 42 TBI children and 21 non-injured controls were recruited. At 6 months from injury the HUI3 results were as follows (control subjects in brackets): 25% (0%) were perceived by their parents to have impaired cognition and emotional health, 12.5% (5.6%) had problems with pain, 12.5% (0%) problems with vision, 10.5% (0%) problems with selfcare, 8.4% (0%) problems with speech and 4% (0%) problems with dexterity. Results of the PedsQL, administered at the same time to the same group, showed that 77% (24%) had problems with emotional functioning, 42% (0%) problems with physical functioning, 48% (14%) problems with school, and 59% (10%) problems with social functioning.

**Conclusion:** Measuring functional health status in children is still in its infancy. Our data suggest that both the HUI3 and PedsQl differentiate between TBI children and uninjured controls but that the PedsQL is more sensitive to change in functional health status following head injury than the HUI3.

**G59 MANAGEMENT OF ADVERSE VACCINE EVENTS IN CHILDREN IN ENGLAND AND WALES**

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**Aims:** To evaluate management of adverse vaccine events in children.

**Methods:** Specialists were identified by asking all District Immunisation Coordinators (DICs) [192] in England and Wales to name their Local Expert Advisor (LEA) for adverse vaccine events in children. All identified LEAs (220) were sent a 2-part questionnaire:

i) 4 case scenarios: each describing a specific adverse event [local reaction, fever, convulsion, collapse] temporally related to routine administration of DTP/Hib, Men C, and Polio vaccines, followed by questions on management of further vaccinations and likelihood of causality.

ii) workload questionnaire: covering frequency of vaccination queries, source of queries, and provision of specialist clinics.

**Results:** 85% [163] of DICs responded, identifying 220 LEAs. 61% [134] of LEAs recommended the highest concordance in management was reached for the case scenario of a local reaction, 57% of respondents opting for acellular pertussis (Pa); least concordance was reached for the case scenario of a collapse/hypotonic-hyporesponsive episode, where 38% opted for Pa and 27% for omitting pertussis. The 2 most popular options throughout were Pa or continuing vaccinations as normal, but significant numbers (= 25% for all scenarios) opted for other management such as omitting pertussis, delaying vaccines, or giving vaccines at separate sites. There were also divergent views on whether the event was related to the vaccination. Local service arrangements varied widely, particularly regarding provision of specialist immunisation clinics.

**Conclusions:** Consensus on how to manage adverse vaccine events is lacking. Further work is needed to gather evidence on outcomes of different modes of management, to determine case definitions of adverse events and consensus management plans, and to establish the best means of service delivery for these children.

**G60 CHILD HEALTH INDICATORS OF LIFE AND DEVELOPMENT (CHILD2000)—A FRAMEWORK FOR THE MEASUREMENT OF CHILD HEALTH IN EUROPE**

M. Blair, L. Kohler, R. Mechtler, M. Rigby. Imperial College, London, Nordic School of Public Health, Sweden, Johannes Kepler University, Linz, Austria and Keele University UK

**Aim:** To develop a set of child focussed and child centric indicators in order to compare the health of children in Europe and inform child public health policy.

**Background/methods:** There are 70 million children under 18 living in the EU. Some comparative data exists but this is not readily available and visible to policy maker. Health status, process, and determinants were considered by an international panel from 17 countries in relationship to burden load, vulnerability, and evidence based interventions using widely accepted tariffs for cross country inclusion through a process of literature search, iterative consensus, and external expert peer review.

**Results:** 38 indicators were developed; 5 demographic and socio-economic, 11 child health status and wellbeing (mortality, morbidity, injuries, mental health), 12 health determinants, risks and protective factors (parental, child lifestyle, other) 10 health system and policy (quality, social policy and physical protection). Statistical offices in at least 4 countries are now compiling sample data sets based on these. Data items will become mandatory as part of wider EU health monitoring policy. It is clear that a number of indicators can only be collected as part of existing and new survey methods.

**Conclusion:** A consensus was reached and a framework developed for the measurement of child health. Implications for child health in the UK are discussed.

**G61 AN EVALUATION OF THE PERSONAL CHILD HEALTH RECORD TRANSLATED INTO TURKISH**

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**Introduction:** Research indicates that parent-held Personal Child Health Records (PCHR) are well-accepted and liked by both parents and health professionals, have retention rates in the order of 90% and are more thoroughly completed than clinic records. Cross-cultural issues that may impact on their effectiveness have not previously been examined. From 1994 to 1997 a directly translated Turkish edition of the PCHR was available to families in City and Hackney, but was not re-printed on the grounds of cost. This study sought to evaluate the acceptability, educational value and usefulness of this Turkish language PCHR as reported by parent.

**Methods:** A Turkish interviewer carried out a semi-structured interview with 63 Turkish and Kurdish parents. The covered topics on feeding, immunisation, child safety and sleeping position from the PCHR, background information about the participants, and their views on how to improve the PCHR.

**Results:** 68% preferred the Turkish edition, and a further 28% wanted a combined Turkish and English version. Written information about feeding and immunisation were understood by 11% to 69% of parents. Pictures, detailing child safety information, were understood by 48% to 60%. For the “sleeping position” pictures, 3% thought that it showed that their baby had to sleep prone and a further 5% did not know. 43% volunteered ideas to improve the PCHR, including guidance about acute illnesses, feeding, and other parenting issues. 17% were unable to read or write.

**Conclusions:** The Turkish language PCHR was extremely popular with parents. They felt it should be re-introduced. Pictures, with minimal text, were the more effective means of communicating simple educational messages, but, in the current form, are open to some concerning misinterpretations. The literacy levels within a community in question are an important consideration when introducing translated materials.

**G62 MATERNAL AND CHILD RISK FACTORS FOR FAILURE TO THRIVE: WHICH ARE MOST IMPORTANT?**

C.M. Wright, K.N. Parkinson. Department of Child Health, University of Newcastle upon Tyne; Department of Child Health, University of Glasgow

**Aims:** The Millennium Baby Study recruited 1011 mothers of 1029 infants shortly after birth to study the respective influences of child and maternal factors on the incidence of weight faltering (failure to thrive).
Methods: Parents received 5 self-completion questionnaires over the first year which each included a core group of questions used to generate scores of the child’s appetite, oro-motor dysfunction and averting feeding behaviour, as well as maternal feeding anxiety and feeding promotion. Data were also collected on maternal education, deprivation, lifestyle and eating attitudes (Dutch scale). Routinely collected weights and the Edinburgh postnatal depression score (EPDS) completed at 3 months by the health visitor were also forwarded to the project office. Weight faltering was defined as weight gain (Thrive Index, TI) below the 5th percentile from birth to any one other sustained weight faltering was defined as two or more TI below the 5th percentile over the first year.

Results: 73% mothers returned at least one questionnaire and two or more weights were available for 87%. EPDS scores were available for 77% mothers, of whom 98% (13%) had scores >1.2. Infants of these mothers were more likely to falter at 3 months (p=0.004) this effect persisted as a non-significant trend at 6 months, but not at a year. No other maternal psycho-social factor related to risk of weight faltering at any age. At 6 weeks only low appetite and oro-motor dysfunction independently predicted weight faltering (odds ratio (OR) 2.7 p=0.002 and OR 2.1 p=0.02 respectively). Low appetite at 6 weeks was also the strongest independent predictor of sustained weight faltering (OR 2.4 p=0.007) with only high maternal promotion of feeding also a significant predictor (OR 1.6 p=0.046).

Conclusions: Faltering infant weight gain in the UK seems to relate more to clinic features in the infant or the feeding relationship than maternal psycho-social factors.
patients; none had a positive CSF. A lumbar puncture was performed in 32 patients. Of these, 27 were admitted and observed, none had a subsequent diagnosis of meningitis. The remaining 5 patients were discharged home from the ED after a period of observation. Discharge diagnoses were upper respiratory tract infection (18 infants), urinary tract infection (8), chest infection (3) and other (12).

**Conclusion:** Infants with simple febrile convulsions need careful evaluation for the possible cause of the fever. A period of observation is often useful. In the absence of other features of meningism a lumbar puncture is not mandatory but should be considered where dictated by the clinical condition of the child.


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**Abstract G67**


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**Background:** Rapid identification of invasive bacterial infection (IBI) in children remains difficult and a source of great concern. Procalcitonin (PCT) has been proposed as an early specific marker of IBI. PCT-Q is a recently developed bedside test for the semiquantitative detection of PCT. It can be performed in a general practice, A&E or ambulatory care unit.

**Aim:** To determine whether PCT-Q might be a useful test for IBI in children presenting to general practices, A&E or ambulatory units.

**Methods:** Children were classified according to clinical and laboratory data. Data described in table 1 is for 31 cases analysed to date.

**Results:** PCT concentrations can be identified within the ranges <0.5 ng/ml, 0.5–2 ng/ml, 2–10 ng/ml or >10 ng/ml. The capacity of PCT-Q to distinguish IBI from other causes is examined in table 2.

**Conclusions:** PCT-Q might be very useful for differentiating severe bacterial disease from other infection in infants and young children. The test can be performed at the bedside, making it available for use in general practice.

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**Abstract G67, Table 1**

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<td>IBI</td>
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<td>Isolate in blood or CSF (or urine in children &lt;6/12)</td>
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<tr>
<td>Local BI</td>
<td>6</td>
<td>Isolate and local infection (e.g. skin or respiratory tract)</td>
</tr>
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<td>Possible BI</td>
<td>8</td>
<td>No causal agent found, but child received antibiotics</td>
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<tr>
<td>Probably viral</td>
<td>2</td>
<td>No causal agent found; full recovery without antibiotics</td>
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<tr>
<td>Viral</td>
<td>3</td>
<td>Positive viral identification on microscopy or serology</td>
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<td>Not infected</td>
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<td>Alternative diagnose made</td>
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**Abstract G67, Table 2**

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<th>&gt;10</th>
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<tr>
<td>Specificity</td>
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<tr>
<td>Negative predictive value</td>
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<td>63%</td>
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<tr>
<td>Positive predictive value</td>
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