

### G431(P) AN AUDIT OF VACCINATION ADHERENCE AND ACCEPTABILITY OF OPPORTUNISTIC VACCINATION IN INPATIENT PAEDIATRICS

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**Aims** Childhood immunisation constitutes an effective public health intervention to prevent serious infection, yet several areas of the UK fail to achieve the WHO target of 95% vaccination coverage.<sup>1-3</sup> One strategy to improve the uptake of vaccination involves healthcare professionals identifying children in need of further immunisation and offering opportunistic vaccination.<sup>4-5</sup> We aimed to assess local vaccination adherence rates and parent attitudes towards opportunistic vaccination. This aimed to determine the feasibility of implementing a process to identify and opportunistically vaccinate children during their inpatient stay.

**Methods** A questionnaire was designed and administered by a doctor to parents/guardians of paediatric inpatients aged five years and under at a district general hospital over a four-week period. Parents/guardians who spoke no English were excluded. Vaccination adherence was assessed by discussion with parents and counterchecked using the personal child health record (red book). Acceptability of opportunistic vaccination during inpatient stay or by the GP was asked using 'yes', 'no' or 'not sure' questions.

**Results** 50 eligible families participated. 42/50 (84.0%) participants reported the child's vaccines were up to date (UTD), significantly below the WHO target ( $p=0.024$ ). Of these, 14/50 (28.0%) were verified by the red book. Verification was not possible in 29/50 (58.0%) as the red book was missing. Rates for individual vaccines were (table 1):

Abstract G431(P) Table 1

Vaccine	Number missed	Percentage missed
BCG	5/50	10.0% ( $p=0.247$ )
12 week vaccines	1/50	2.00%
12 month vaccines	3/50	6.00% ( $p=0.797$ )
3 year 4 month vaccines	1/50	2.00%

2/42 (4.76%) patients were identified as missing an immunisation (BCG) by checking the red book, despite parents reporting the child was UTD. 47/50 (94.0%) participants considered it acceptable to have catch-up vaccines in hospital prior to discharge. 3/50 (6.00%) reported 'not sure' due to limited spoken English. 48/50 (96.0%) participants considered GP-led vaccination acceptable.

**Conclusions** The audit has determined that overall vaccination adherence is significantly below the WHO target of 95% within our population and that some families were unaware that their child was not UTD with their vaccinations. Children in our population would therefore benefit from identification and opportunistic vaccination offered during an inpatient stay, which is a strategy deemed acceptable by most families.

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### G432(P) DEVELOPMENT OF SYMPTOM ASSESSMENT SERVICE AT A CHILDREN'S HOSPICE

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**Background and aims** High symptom burden has been recognised in children with life-limiting conditions (LLC) and symptom assessment and management is a core component of children's palliative care (CPC).

A previous audit highlighted a high prevalence of problematic symptoms in children accessing the hospice service prompting the development a symptom management team led by a paediatric consultant and CNS in CPC in spring 2016. All children in the earlier audited were in ACT category 3 and 4 and had diagnoses of severe disability with associated complex medical needs.

This report aims to describe the development of the service and provide data from the first year's activity.

**Methods** A record of all referrals to the team has been maintained since its inception. A retrospective chart review was performed and data was collected and recorded on an excel spreadsheet. Data recorded included description of problematic symptoms, team members involved and intervention required.

**Results** Referrals to the team are accepted from nursing and healthcare staff involved in the care of the child. A care pathway, symptom assessment tools and symptoms management plans have been developed.

To date 39 children have received support from the team, 7 of the children have died since referral. The CNS, wider nursing and multi-disciplinary team have supported all children referred. Medical assessment has been provided to 30 children. 25 children were offered a short break in the hospice to allow careful evaluation of symptoms using formal symptom assessment tools.

All children were provided with a symptom management plan and on-going support, at home, in the hospice or by telephone, individualised according to identified need. Parental and healthcare professional feedback has been positive.

**Conclusion** This report describes the initial establishment of a symptom assessment service in a children's hospice. The service has been developed in recognition of the high burden of problematic symptoms in children with severe disability and complex medical needs. It is anticipated that the service will continue to develop to meet the increasing needs of children with LLCs.

**G433(P) ASSOCIATIONS BETWEEN PRE-INJURY IMPAIRMENT AND THERMAL BURN INJURY IN CHILDREN: ANALYSES OF THE BURNS AND SCALDS ASSESSMENT TEMPLATE (BASAT) DATA**

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**Aim** A systematic review of published research on paediatric burn epidemiology in high income countries indicated a paucity of evidence regarding the association between pre-injury impairment in children and the risk of burn injuries. The aim of this study is to investigate differences in paediatric burn injuries by impairment status.

**Methods** The Burns and Scalds Assessment Template (BaSAT) was used in A and E departments in England and Wales to collect clinical and socio-demographical information on burn cases. From July 2012–November 2016, 2779 burn cases were recorded of which 1364 were suitable for inferential analyses. In this study, impairment was collated from parents/carers reports of what additional needs their children had (i.e. behavioural versus non-behavioural). The primary outcome was burn type (scalds versus non-scalds). Burn depth (full thickness (FT) versus non FT) and use of cold running water (CRW) first aid were secondary outcomes. Inferential analyses employed multivariable logistic regression in STATA v.14. Variables of interest were 90.1% to 100% complete. Unadjusted odds ratios (OR) and adjusted OR (AOR) were recorded with 95% confidence intervals (CI).

**Results** Compared to children with no impairment, children with behavioural (AOR=0.33 [95% CI: 0.03 to 3.35]) or non-behavioural (AOR=1.23 [95% CI: 0.32 to 4.35]) impairment were no more likely to suffer scalds than non-scalds. Furthermore, children with behavioural impairment (compared to non-impaired children) were more likely to have FT than non-FT burns (OR=8.33 [95% CI: 2.10 to 33.0]). This effect remained when adjusting for individual factors i.e. age and sex (AOR=5.76 [95% CI: 1.38 to 24.0]) but attenuated after adjusting for family (ethnicity, supervision levels, history of domestic violence in home and social workers) and environmental factors (IMD and location of burn event). Furthermore, children with behavioural impairment were less likely to have CRW first aid than those with no impairment (OR=0.26 [95% CI: 0.07 to 0.97]). This effect remained when individual and family factors were adjusted for (AOR=0.32 [95% CI: 0.11 to 0.88]).

**Conclusions** Children with impairment are not at more risk of having scalds compared to non-scalds; full thickness burns or lesser likelihood of having CRW first aid (after controlling for confounding factors) compared to children with no impairment.

**Acknowledgement** This project was sponsored by funds from the Scar Free Foundation, an NGO/charity involved in injury research.

**G434(P) VIOLENT YOUTH CRIME PRESENTING TO AN INNER CITY DISTRICT GENERAL HOSPITAL: CLOSING THE GAP BETWEEN PAEDIATRICS AND PUBLIC HEALTH**

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**Aims** Within an inner city borough the Child Death Overview Panel recognised an increase in deaths associated with violent youth crime, with 4 reported deaths between September 2015 and August 2016. It was unclear whether this represented a wider problem concerning violent youth crime within the local community. This study sought to investigate recent trends in youth attendances to the local Emergency Department (ED) related to violent crime.

**Methods** We conducted a single-centre retrospective observational study of all youth (<18 years) attendances to the ED of a large district general hospital, over 4 years (November 2012 – September 2016) with injuries associated with violent crime. Cases were filtered using key word search of the triage description, diagnosis field or free text fields using words associated with violent crime. Files were then manually reviewed by the authors to select relevant cases.

**Results** During the 4 year study period there were 122 ED presentations associated with violent youth crime. The average age was 14.9 years and the majority male (70.5%, n=86). During the study period the number of presentations increased from 26 in the 1st half of the study period to 96 in the 2nd half. There was a significant increase in the proportion of cases involving female patients, from 7.7% (2/26) in the first half of the study period to 35.4% (34/96) in the 2nd half (p=0.007).

A number of vulnerability factors were also frequently seen within the cohort, including past involvement of children's social care or CAMHS, a history of school exclusion or referral to pupil referral units, and a diagnosis of ADHD, Autism or cognitive delay.

**Conclusion** This study demonstrates an increase in local youth ED attendances with injuries related to violent crime, with rising numbers of female attendees over the last 2 years. This data was presented to stakeholders including representatives from Public Health, ED, the local MP and the charity sector. An application has been made for funding from the local mayor for an ED based youth worker.

**G435(P) MAKING EVERY CONTACT COUNT – A PAEDIATRIC PILOT TRAINING PROGRAMME IN WALES**

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**Introduction** A key recommendation from the RCPCH State of Child Health report includes health promotion training for health professionals in order to 'make every contact count' (MECC). In order to pilot such a resource, a Public health training programme providing an evidence-based approach to motivational interviewing for behaviour change was adapted for those within the paediatric profession.

**Methods** The 'Making every contact count' level 1 and 2 training programme was adapted and combined into a two-hour training session. This was delivered at a paediatric trainee study day in May 2017 and a health board clinical governance day in July 2017.

**Results** There were 41 trainees in attendance at the trainee study day. 14 paediatric consultants and 24 paediatric nurses attended the clinical governance session. A total of 57/79 (73%) matched pre- and post-evaluation questionnaires were included for feedback analysis. Through a 5 point Likert scale the pre-session survey highlighted 57% (32/57) strongly agreed

of the importance of MECC; this rose to 75% (43/57) post-session. 84% (47/57) were confident with MECC skills pre-session, however this fell to 77% (44/57) post-session. Individuals reported questioning their ability to discuss healthy lifestyle behaviours and recognised the benefit of a structured approach to motivational interviewing. Those confident in their knowledge base of healthy lifestyles advice rose from 11% (6/57) to 29% (16/57). Confidence in the approach to conversation rose from 38% (21/57) to 56% (31/57); and in having a response to disengagement from patients and carers rose from 22% (12/57) to 52% (29/57). Knowledge of local resources, and where to signpost individuals to, also saw a rise from 16% (9/57) to 46% (26/57), and 8% (4) to 39% (22/57) respectively.

**Conclusion** Despite the evidence base for this Public health educational programme originating from adult research, adapted to aid professionals caring for children and young people has proved its worth as a useful resource. A collaborative approach with local public health teams would allow for this programme to be developed bespoke to local areas and would be a useful tool for motivational interviewing with children, young people and their carers to improve health lifestyles.

**G436(P) PREGNANT WOMEN'S VIEWS AND EXPERIENCES OF PERTUSSIS VACCINATION DURING PREGNANCY: A STUDY IN TAIWAN**

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**Introduction** Pertussis resurgence has been a significant public health issue over the past decade in many countries including Taiwan. Maternal pertussis vaccination has been shown to be a safe and effective way to protect young infants who are not eligible to receive the vaccine. This is the new preventative vaccine policy in Taiwan and little was known about the pregnant women's attitude towards the pertussis vaccination.

**Objective** This study aims to evaluate pregnant women's attitudes about the maternal pertussis vaccine in Taiwan.

**Method** A cross-sectional questionnaire survey was conducted among the women accessing antenatal care at the Mackay Memorial Hospital in Taiwan. The vaccine uptake rate as well as how many women intended to be vaccinated were calculated and presented as percentages. Factors including demographic variables, awareness, accessibility and cost were analysed to determine the association with the women's intentions. The frequencies and percentages of the answers regarding preferred information sources and the reasons influencing their intentions were calculated.

**Results** 53 women were recruited. 73.3% of women intended to receive the vaccination but the actual uptake rate was 33.3%. 64.7% of the participants were being informed of the vaccine by their obstetricians but only 13% had a meaningful discussion with their physicians. Demographic characteristics had no significant associations with their intention to be vaccinated. The most reliable information source was their obstetricians. Vaccine safety and efficacy concerns of vaccine, perception of disease severity and susceptibilities were the most important self-reported reasons influencing their intention.

**Conclusion** Vaccine uptake among the cohort was poor although they showed the relatively high intention to vaccinate. Healthcare professionals especially obstetricians in Taiwan need to recommend the maternal pertussis vaccine and provide accurate information to increase the success of this important vaccination programme.

**G437(P) AWARENESS AND UPTAKE OF THE DEPARTMENT OF HEALTH RECOMMENDATIONS ON VITAMIN D SUPPLEMENTATION IN CHILDREN UNDER 5**

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**Background** The Department of Health currently recommends dietary vitamin D supplementation for all children under the age of 5 years.

**Aims**

- Assess parents' awareness of the recommendations for vitamin D supplementation.
- Assess current uptake of vitamin D supplementation in children under 5.
- Investigate barriers to vitamin D supplementation.

**Methods** This cross-sectional observational study used paper questionnaires to collect data over a three week period. Questionnaires were distributed to all parents and carers attending the paediatric outpatients of a district general hospital with a child under the age of 5. An information sheet outlining the current vitamin D supplementation recommendations was provided.

**Results** 28 responses were received; 54% of parents were aware of the Department of Health recommendations for vitamin D supplementation, and 46% were not.

54% of respondents were not meeting recommendations for vitamin D supplementation.

Of those not meeting the recommendations for vitamin D supplementation, 73% of parents were unaware of the current recommendations. Having now been made aware of the recommendations, these parents unanimously reported that they would consider giving vitamin D supplementation in the future.

Parents who were aware of the recommendations but not giving vitamin D supplementation reported reasons including: dislike of the vitamin drops by the child, low prioritisation to acquire the drops and the belief that varied diet, breastfeeding and outdoor play is sufficient. 75% of these parents would now consider giving vitamin D supplementation following completion of the survey.

**Conclusions** A lack of awareness of the current Department of Health recommendations has been demonstrated in our parent population. Parents who were previously unaware of the recommendations would now consider giving vitamin D supplements to their child; this suggests that parents and carers of young children are receptive to Public Health recommendations and emphasises the need for effective communication of recommendations to the target audience.

Ongoing work involves data collection in a larger cohort of patients to confirm these findings. The knowledge of healthcare professionals in relation to these guidelines will also be explored.