to the needs of children and their parents. Further research is required to explore the views of children and bereaved parents who have experienced deferred consent.

**P08 BACKGROUND INCIDENCE TRENDS OF INTUSSUSCEPTION AMONG CHILDREN IN ENGLAND: RETROSPECTIVE ANALYSIS USING HOSPITAL EPISODE STATISTICS AND DATA LINKAGE TO COMPARE HES WITH THE BRITISH PAEDIATRIC SURVEILLANCE UNIT**

1. L. Samad, 1M. Cortina-Borja, 1A. Sutcliffe, 2S. Marvin, 3C. Cameron, 1H. El Bashir, 1R. Lynn, 1B. Taylor. 1Institute of Child Health, University College London, London, UK; 2Paediatric Surgical Unit, Sheffield Children's NHS Foundation Trust, Sheffield, UK; 3Health Protection Scotland, NHS National Services Scotland, Glasgow, UK; 4British Paediatric Surveillance Unit, Royal College of Paediatrics and Child Health, London, UK

**Aims** To estimate background trends in intussusception admissions prior to the introduction of rotavirus vaccine in the UK. To compare the quality of Hospital Episode Statistics (HES) with intussusception data from the British Paediatric Surveillance Unit (BPSU).

**Methods** Retrospective analysis of the NHS inpatient HES was carried out to estimate background intussusception trends in the paediatric population in England from 1995 to 2009. Data linkage was performed between HES and previously obtained BPSU data on intussusception among infants from March 2008 to March 2009.

The ICD-10 intussusception codes (K56.1, K38.8) were used to identify cases in HES (1995–2009). Incidence trends were calculated using the Office for National Statistics live births and mid-year population estimates as denominator.

We performed probabilistic data linkage to match HES records with BPSU cases, followed by a manual review to confirm the status of matched (and possibly matched) pairs (2008–2009). Capture-recapture methods allowed assessing the accuracy of HES and completeness of both data sources for intussusception. Validated incidence rates in infants were obtained following data linkage.

**Results** Of 11,259 intussusception records identified in HES and after excluding 2538 (22.5%) duplicates, 8721 (77.5%) cases were retained for trends analysis. A significant decline in background trends was observed predominantly among infants from 86.0/100,000 in 1997 to 34.0/100,000 in 2009 (60% reduction, p = 0.001). Seasonal modelling showed a significant excess of intussusception cases in winter and spring during 1995–2009 (p = 0.001, n = 4957 infants).

Data linkage between 254 intussusception cases in HES and 190 cases previously obtained via the BPSU (2008–2009) resulted in 163 matched pairs. Completeness of reporting was 85.8% for HES (163/190 BPSU cases) compared to 81.5% for BPSU (163/200 HES cases). The predictive positive value of HES was 78.7% (200/254 confirmed cases). The Lincoln-Petersen estimate yielded a total of 233 intussusception cases (95% CI: 227.4 to 238.8). The estimated annual incidence of intussusception among infants in England increased from 24.2/100,000 (unvalidated) to 28.9/100,000 (validated) (2008–2009).

**Conclusions** Background intussusception trends have declined among infants in England. The high accuracy and completeness of HES for intussusception highlight the usefulness of routinely collected data in monitoring rotavirus vaccine safety in England.