PEWS: SETTLING THE SCORE

‘Early Warning’ or ‘Track and Trigger’ charts are now a ‘must have’ for acute paediatric care. They have even found their way onto postnatal wards and into neonatal transitional care, and there has been an assumption that local units can invent their own versions without any need for a rigorous assessment of effectiveness. Chapman et al bring some welcome clarity into this area in a paper that sets out to evaluate the relative merits of 18 different systems, yet tellingly managed only to evaluate 12 of these properly. Using a case-control method in over 300 patients, the best buys were found to be the Cardiff and Vale PEWS, Bedside PEWS and Modified PEWS III. Their own local system in Great Ormond Street Hospital emerged as mediocre, and based on their results they said they plan to move to a more effective one. The authors point out that externally validated systems work best, and ‘home-brew’ ones, though superficially attractive (and possibly easier to implement because of getting local buy-in), do not necessarily do the job. See pages 487 and 479.

DOES SIZE MATTER?

One of the great difficulties in discussing outcomes of neonatal care is the lag time between the intervention and the most interesting and important end-points. By the time we know about ex-preterm patients at the end of childhood, we are reflecting on an era of neonatal care from which the world has moved on. This probably accounts for the findings that Ferguson et al report in relation to final height among ex-preterm babies. They neatly demonstrate that ‘catch up’ happens throughout childhood, contradicting old published data but very much in line with contemporary clinical experience, among babies born with an appropriate size for their gestational age. Of course being small for gestational age is a marker for many feto-maternal pathologies that lead to preterm birth, so SGA is over-represented among preterm deliveries, but the great advantage accruing to babies in the modern era is that they tend to be much better nourished during their first postnatal weeks than was the case 20 to 30 years ago. Size matters less than we might think. See page 503.

ETHNICITY, DEPRIVATION OR BOTH?

Congenital heart disease is the most important single group of congenital anomalies and its birth prevalence has long been known to vary with a number of factors, including ethnicity and deprivation. In time, accurate national data on these relationships will become available from Public Health England through the National Congenital Anomaly and Rare Disease Registration Service, but in the mean time Knowles et al have used an interesting proxy, cardiac interventions, to explore some of these relationships in children. By record linking between the National Congenital Heart Disease Audit (NCHDA) and the Paediatric Intensive Care Audit Network (PICANet) they were able to study 5350 children who had either cardiac surgery, an intensive care admission, or cardiac catheterisation. For white children, there was only a shallow gradient in the numbers of interventions by quintile of deprivation, but in contrast black and Asian ethnic minority children had a very steep gradient across the deprivation quintiles. Exactly what this means in terms of antenatal screening, care pathways and so forth is a secondary question given that these are observational data. In a similar but different vein, Jansen et al describe ethnic variations but this time in coeliac disease autoimmunity: this time it looks as if the apparent ‘protective’ effect of non-western ethnicity is mediated in part by deprivation, but other factors, such as day care attendance and CMV status also have an impact. See pages 496 and 529

BEING THERE

So: does increased duration of consultant presence affect length of hospital stay for unplanned admissions in acute paediatrics, or not? This has become a political as well as a clinical question, so these data, from Cromb et al at the Evelina Children’s Hospital will be scrutinised closely. And the answer is: No. Well, almost not. For children admitted for less than 24 hours consultant presence was associated with an average of just over half an hour’s shorter stay, and for those admitted with acute gastroenteritis, it was associated with about 9 hours’ shorter stay. Otherwise, there was no effect. Admittedly, over 3 years and 5367 admissions it was going to be hard to find effects on hard end-points such as mortality; but avoiding admissions, and getting children discharged faster, was supposed to be a major benefit which justified the cost of the much higher level of consultant presence. Some cynics may say that this result will be ignored by politicians because it does not fit with their preconceptions: have I said ‘excess of enthusiasm and belief over hard evidence’ somewhere before? See page 516.

TRAUMATIC BRAIN INJURY: MIND THE PITUITARY

TBI continues to be depressingly common in children, so looking after children post-injury is important. We know a lot more about issues with behaviour, attention and learning difficulties, and a landmark paper on rehabilitation1 has just appeared in Archives. But as Casano-Sanche argues in her narrative review, the pituitary can often get overlooked, which has significant potential implications for the follow up and care of these children. The big difficulty is the relative dearth of good follow up studies in children as compared to adults, but the suggestion is to look for hypothyroidism and adrenal insufficiency between 3 and 6 months post injury, and growth hormone deficiency at a year. See page 572.

REFERENCE