



Highlights from this issue

Nick Brown , *Editor in Chief*

A VEIN OF FORM

In footballing vernacular (and I'm an ardent student) a 'vein of form' means a good run. For whatever reason 'something' gelled, continues to gel and there are no reasons to see an end to the gelling. The reasons can be purely sporting (the mix of players, the 3-5-2 vs the 4-2-3-1 formation) or related to the aura a winning side builds, respect (timidity and fear perhaps) induced by the seeming insuperability of the side. But, what does this mean now and in the long term? The bottom line is that outcomes (results) breed outcomes, an area under scrutiny in this issue. From causation to interpretation, our papers illustrate this more articulately than my ungainly analogy manages.

PREMATURITY: DECODIFYING OUTCOMES

This issue is rich with detail on research and perspectives on the developmental trajectories of preterm babies equally relevant for non-neonatologists as those whose day jobs are NICU-based. 'But isn't this old hat?' I hear you protest... Emphatically 'no', as the surface has only really been scratched especially in the previously-considered-risk-free late preterm and early groups. Neora Alterman and colleagues' analysis of educational outcome by degree of prematurity in babies recruited in the UK Millennium Cohort Study included 12 081 children assessed at 11 years by parental report. The overall prevalence of SEN of 11.2% and, by GA subgroup, was inversely associated with gestational age: at <32 weeks the prevalence of 27.4%

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with an adjusted relative risk of 2.9 (95% CI 2.0 to 4.1). Those born at early term (37–38 weeks), a much larger contributor numerically at a population level, were at higher risk of SEN (aRR=1.33; 95% CI 1.11 to 1.59). Think about this the next time you reassure the parents of a 38 week gestation baby that 'there's no need for follow-up as we don't see problems at this age'.

Neil Marlow puts the population attributable risks in perspective, argues the case for health-educational linkage and for looking beyond the (let's be honest) rather crude dichotomy of the SEN label.

Lex Doyle and colleagues reviews of outcome data in extremely preterm babies over time using data from various sources: the Victoria cohort studies from 1991, the Victoria Cerebral Palsy (CP) register and other comparable studies. Progress has been slow and erratic: progress in CP but the academic performance gap worsened. Without refinements to ante- and post-natal identification and intervention this discussion will simply continue. *See pages 842, 833 and 834*

MICROCEPHALY

It's well known that microcephaly (<2SD below the mean) of any degree is predictive of later developmental, hearing and visual problems with a clear dose response association. The Zika-related epidemic microcephaly epidemic in the mid 2010s focused on the most severely affected babies but the population attributable risks of more subtle damage both at an individual level and outside the Brazil and Caribbean epicentres. The findings from two national surveillance studies estimating the degree of Zika virus related congenital microcephaly from the Australian and Canadian Paediatric Surveillance Unit/Programmes by Carlos Nunez's and Shaun Morris' groups respectively go some way to answering this. Data from the 2016–18 (Australia) and 2016–2019

(Canada) estimate similar incidences of microcephaly (1.12 and 0.45 babies/10 000 births) with extremely few being Zika related.

A high proportion of babies in both studies had associated dysmorphology and, sadly but unsurprisingly, fared badly. In a knight's move thinking way, there's an additional lesson here. Despite the low incidence so far outside South and Central America, we can't completely count on the geographical and meteorological fastidiousness of the *aedes aegyptae* mosquito: remember how easily Yellow fever and Dengue sneaked into the US from South East Asia some decades ago the aedes larvae vector crossing the oceans nestling in pools of water in the base of untreated rubber tyres. Aedes is simply a metaphor of the way in which our fates/outcomes are all interconnected and that Global health (and no one needs reminding as the pandemic continues to ebb, flow and confound and ice caps melt) isn't about low and middle income countries alone. *See page 849*

PARENTERAL NUTRITION

Far from being the finished article, parenteral nutrition continues to evolve. In a 'Voices from history' piece, Rachel Pybus and John Puntis outline its heritage from William Harvey's discovery of circulation in the 17th century to a period of awakening in the wake of, in 1949, work by the Medical Research Council showing that the components of proteins (digested casein, amino acids and polypeptides), could be administered intravenously. The idea gained traction and popularity during the 1970s with breakthrough ideas in the means of adding the 'other components', lipids and to this day is finding new uses in areas unimaginable in the heady post war era. *See page 921*

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