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Highlights from this issue

Nick Brown, *Editor in Chief*

WORLD CUP WINNERS...

Hugo Lagercrantz's editorial (*see page 1005*) based on the recent *Lancet* paper by Zylbersztejn examining relative child mortality in Sweden and England reinforces some home truths. Unsurprisingly, as the largest contributor to the numerator, the greatest difference is in neonatal outcome and this (one can only infer) must in part be due to network organisation. Almost all extremely preterm deliveries take place in eight central tertiary units, minimising high risk ex utero transport. This, coupled with generally better antenatal health and care of high risk mothers through, for example, the routine use of interpreters for immigrant families. As a 'half Swede' (genetically, linguistically and geographically), I feel reasonably well placed to make a judgement on the relative merits of each system. This piece should help you to do so too and is my editor's choice of the month.

GLOBAL CHILD HEALTH

Clinical information networks have received a great deal of attention, but few pieces describe their potential as well as that by Imiru and colleagues (*see page 1013*) at the KEMRI institute in Kenya. They describe the evolution of a national network as a learnt health system within child health over 5 years, the main aim of which is to improve care through standardising good practice and the promotion of basic technologies and research. Jointly initiated by the Kenyan Government, the Kenyan Paediatric Association and the University of Nairobi, these bodies contribute authority and coordination, professional endorsement and funding and technical expertise respectively. Recent examples include the now near universal implementation of the paediatric admission record and mid upper arm circumference

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(MUAC) as a routine part of the examination as a screen for severe acute malnutrition. These successes should not bely the facts that such programmes need continued effort and that short term 'bullets' rarely enhance long term sustainability.

VOICES: HISTORY OF NEPHROLOGY

One of the premises of the new 'Voices' section was the preservation of child health history, both out of respect to our roots and to place today's practice into context. As part of this series, Tse and colleagues mark the 50th anniversary of the European Society of Paediatric Nephrology (*see page 1010*). The society was founded in Glasgow in 1967 and in a piece (and video) celebrating advances since its inauguration and the life and work of Gavin Arneil who died earlier this year. The reminiscences of the pioneers in the field (and remember how recently dialysis became feasible) form part of the oral history of child health and are respectfully recorded in this piece and on the society website: www.youtube.com/c/ESPNhistory.

WHEN IS EQUIVALENCE NOT NON-INFERIOR?

As the result of enthusiasm to replace expensive, difficult to administer or side effect ridden standard treatment with an alternative of comparable effect, there has been a recent surge in interest in paediatric non-inferiority and equivalence studies. However, they are poorly understood both at statistical and philosophical levels. Often confused, they are inherently different to both 'standard' superiority trials and to each other. This is why Aupiais' and colleagues' systematic review (*see page 1067*) is so refreshing. Of the 125 eligible studies (all of which postdate 1991), the majority were non-inferiority drug studies. In less than a third were all the components required for an adequate sample size estimate available at the outset, many were underpowered and in a number a continuous outcome chosen instead of a more informative (but sample size demanding) dichotomous one. These are still early days for such studies and, having been involved with such a trial

myself in Pakistan I can appreciate this piece even more.

PRIMARY OBESITY PREVENTION

As interventions to treat obesity have been (let's be honest) almost universally disappointing, the focus has shifted to primary prevention. The association between rapid early (infant) weight gain (one predictor of which is formula feeding) and later obesity has been consistently demonstrated and with this in mind, the WHO and UK infant energy intake recommendations were revised (to approximately 85% of the preceding values) in 2004 and 2011 respectively. Lakshmann and colleagues sought to address this (*see page 1054*) with an ambitious parallel limb randomised controlled trial in milk substitute fed infant/parent dyads aimed at feeding behaviour modification. Families were randomised at 14 weeks and the intervention (delivered by trained facilitators) included three motivational components in order to: facilitate the reduction reduce formula milk intake to levels compatible with the WHO EAR for energy; to promote responsive feeding and to monitor growth to prevent excess weight gain defined as a change in z score of $>+0.67$. Though there were significantly smaller milk volume intakes between 2 to 6 months in the intervention group and a small reduction in early weight gain (-0.08 (95% CI -0.17 to -0.004) SDS) at 6 months this was not sustained. At 12 months, there was no difference in change in z score (baseline adjusted difference -0.04 (-0.17 , 0.10) SDS) or calorie intake with 16% of all children exceeding the WHO recommendation and $>40\%$ of intervention group children gaining weight faster than the cut-off.

This, conveniently brings us round full circle to pre-primary prevention: in Sweden breast feeding rates at 4 months are of the order of 75% (Socialstyrelsen 2017) and in the UK of the order of 23% exclusive breast feeding at 3 months. One way or another, as David Barker told us many years ago, we simply need to start earlier.