

# Atoms



Howard Bauchner, *Editor in Chief*

## IMMUNISATIONS: UK VERSUS US

In my early travels to the UK I was struck by the very different attitudes about immunisations. The controversy over the alleged link between MMR and autism lingers, which has obviously influenced the acceptance of other vaccines. However, because the UK healthcare system actually tries to contain cost before widespread use—regardless of parent attitudes—the benefits of each vaccine is carefully considered. Hence, there is little use of either varicella or pneumococcal conjugate vaccines. As immunisations are introduced that prevent relatively uncommon disease (invasive pneumococcal disease compared with *Haemophilus influenzae* type B disease) or reduce morbidity rather than mortality (like varicella and flu vaccines), physician and parent acceptance of new vaccines may be increasingly complicated. Even in the US, the uptake of varicella vaccine has been slow. I suspect it will be a challenge to gain widespread acceptance of human papilloma and herpes simplex virus vaccines in the US, since they are clearly linked to sexual activity. Based on a 20-year surveillance study of invasive pneumococcal disease (IPD), Isaphani and colleagues from Nottingham, UK suggest that the 7-valent conjugate vaccine would reduce the amount of disease by about 84%. Increasingly in the US there are data indicating a significant reduction in IPD in adults following the introduction of the pneumococcal conjugate vaccine in children. Since our adult colleagues—at least in the US—do a relatively poor job immunising their patients it is gratifying to see that the herd immunity of certain childhood vaccines spreads to adults.

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## GROWTH HORMONE FOR SGA CHILDREN

Indications for growth hormone (GH) include: GH deficiency; short stature from Turner's syndrome; Prader-Willi syndrome; chronic renal failure; small for gestational age (SGA) children who fail to demonstrate catch-up growth; and now in the US, very short children

who demonstrate normal GH stimulation test results. Johnston and Savage review the data on the use of GH for children who were SGA. Are the gains worth the expense and the risk? I asked a group of colleagues what they would recommend to a family who had a very short child. Their responses were quite dependent on their own height: if they were short, they were far more likely to recommend the use of GH. Is GH safe? I remain confused by the data on potential problems with insulin signalling in children who are low birth weight (the newly named "The Developmental Origins of Health and Disease") and the impact of GH on insulin resistance. Johnston and Savage comment that the studies conducted to date suggest that GH is safe—I hope they are saying the same thing in another 10 years.

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## SLEEP PROBLEMS IN CHILDREN: MORE COMMON THAN ONCE THOUGHT

Sleep medicine in paediatrics is an emerging field of inquiry. Numerous reports indicate that many children have trouble falling to sleep, many struggle with obstructive sleep apnoea, and excessive daytime sleepiness is more common than once thought. In a comprehensive report from Australia, about 1 in 4 (89/361) children between the ages of 4 and 17 had a total sleep problem score—on a reliable and valid measure of sleep problems—of clinical significance. The most common sleep problems were initiating and maintaining sleep, sleep breathing, and sleep wake transition. Few of the problems varied with age. As a father of two teenagers, it is hard to convince me that certain sleep problems are not more common during the adolescent years. The authors make the point that clinicians should be more proactive in asking about sleep problems, and once they are identified intervene as necessary.

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## CHALLENGES FOR THE 21<sup>ST</sup> CENTURY

We continue to develop new and effective drugs to treat many chronic diseases. However, as pointed out in a study from Brazil, adherence with drug treatment remains highly variable despite these advances. Interestingly, most of the parents in this study of adherence with the maintenance phase of chemotherapy for acute lymphoblastic leukaemia, reported that the medical prescription was well understood, but that the main reasons for non-adherence was forgetfulness. Given the numerous advances in technology, developing a simple reminder system (a hand held or pager that vibrates; automated telephone calls; announcements on the television; a prescription bottle that rings) seems possible. Sadly many of our advances fall by the way side outside of clinical trials.

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## HEAD TRAUMA AND GUIDELINES

Both the Royal College of Surgeons (RCS) and the National Institute of Clinical Excellence (NICE) have published guidelines for the management of head trauma in children. Dunning and colleagues compared the theoretical outcome of 10 965 patients from an existing database, managed according to these two different protocols. Not surprisingly, significant differences emerged. Compared with the NICE guidelines adherence to the RCS guidelines would have resulted in a 50% skull radiograph (SXR) rate ( $v$  0.3%), a 1.6% computed tomography (CT) scan rate ( $v$  8.7%), and a 7.1% admission rate ( $v$  1.4%). This is a very important and well conducted study. Evidence based guidelines/recommendations promulgated by different groups often are not identical, produce different patient outcomes, and may shift the workload from one group to another. Three issues are not addressed in this report—implementation of the guidelines, how they do in the real world, and their impact on patient outcomes.

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