

Highlights from this issue

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STRATEGIES TO CONTROL PERTUSSIS IN INFANTS

The UK is in the midst of a pertussis outbreak with the highest morbidity and mortality being in young unimmunised infants. Over the last 10–15 years high vaccine coverage, the accelerated infant schedule and the inclusion of pertussis in the preschool booster have contributed to a major overall decline in incidence. However pertussis remains the most common cause of hospitalisation and death from a disease potentially preventable through the current UK immunisation programme, and continues to display 3–4 yearly peaks in activity affecting infants, adolescents and adults. Gayatri Amirthalingam reviews the evidence base for and potential strategies to control pertussis in infants. The challenge is to improve individual immunity and thereby reduce infection and transmission. The potential strategies include the introduction of an adolescent pertussis booster to compensate for waning immunity as has been introduced in USA, Australia and France, immunisation of close household contacts of newborn infants (cocooning), neonatal immunisation and immunisation of pregnant women. As the best potential option—the reasoning is discussed in the paper—immunisation of pregnant women during the third trimester has recently been introduced as an epidemic control measure in the UK. Evaluation of this by monitoring coverage and impact on disease incidence and immune response will be critical to inform the strategy for optimising pertussis control in the UK. *See page 552*

RATIONAL PRESCRIBING

WHO estimates that over 50% of medications are prescribed, dispensed or sold inappropriately and this is a significant global health issue with considerable variation between different countries. Irrational prescribing is costly for health care providers and over prescription antibiotics, for example, can lead to significant problems with resistance. Risk and colleagues investigate prescribing practices in The Gambia, West Africa across 20 government run health centres (2400 patient encounters). The median number of medications per encounter was 2.0 with antibiotics prescribed in 63% and micronutrients in 21.7%. There

was evidence of high antibiotic prescription in children with cough/coryza and diarrhoea without dehydration. The authors discuss the many reasons for this and highlight the need for high quality evidence based guidance, and nursing and medical staff education and availability. These are urgent issues that need to be addressed in order to rationalise prescribing and avoid over prescription of inappropriate medications, especially in resource limited settings. *See page 503*

ASTHMA AND TOBACCO SMOKE EXPOSURE

Childhood asthma is common with environmental tobacco smoke exposure associated with less good control and care giver 'smoking history' therefore an essential part of the assessment, particularly when symptoms are chronic. McCarville and colleagues report data from a cross sectional cohort (466 children), 58% of whom had moderate or severe persistent asthma. Exposure to environmental tobacco was defined by parental report and salivary cotinine levels (a biological marker of tobacco exposure). 50% reported that at least one household member smoked, although this was not associated with either asthma severity or frequency of exacerbations. Salivary cotinine levels however were significantly associated with frequently reported exacerbations in the last 12 months. Many factors could potentially explain this. The authors rightly conclude that use of a biological marker of environmental smoke exposure rather than reported household smoking alone may lead to improved identification of asthma related risk factors in the individual case. *See page 510*

CARING FOR CHILDREN ON HOME PARENTERAL NUTRITION

There is little doubt that home parenteral nutrition has transformed the management of intestinal failure enabling patients to be managed in the home setting. This does however present a not insignificant care burden for the parents, and the disease course can be complex with the potential for multiple life threatening complications, including central line infection. Zamvar and colleagues highlight this, reporting two complex cases both listed for intestinal

transplantation in whom the outcome was improved following a period in foster care. The discussion highlights the 'often unrecognised' parental burden of managing children with severe chronic illness/disease. In an accompanying editorial—with the somewhat provocative title Health and Social care: Will they work together for children now—the issues are explored further highlighting the importance of managing such children with an appropriate care package adequately resourced and appropriately configured to deal with the child and family's continuing health, educational and social needs. *See pages 556 and 481*

CAESAREAN SECTION AND CHILDHOOD OBESITY

There is considerable interest in perinatal risk factors for obesity and mode of delivery has been implicated, although results are conflicting as a consequence of the significant potential for confounding. Flemming and colleagues examine the association between caesarean section and childhood obesity/overweight at age 10/11 in 2988 mother child pairs. By univariate analysis caesarean section was associated with offspring obesity (OR 1.49, CI 1.1 to 2.0). Using a multiple logistic regression model, adding in pre pregnancy maternal weight which is an independent risk factor for caesarean section, the OR falls to 1.2 (CI 0.87 to 1.65), being 1.03 (CI 0.58 to 1.84) for elective caesarean section. These data are interesting and important and do not support caesarean section being a risk factor for childhood obesity with maternal pre pregnancy weight being a significant confounder in the data analysis. *See page 526*

IN F&N THIS MONTH

Madderom and colleagues report the outcome at 8 years in children with congenital diaphragmatic hernia. The relevance of gut microbiota in health and disease is explored in a leading article by Janet Berrington and colleagues from Newcastle. The important issue of posthaemorrhagic dilation: when we should intervene is addressed in an editorial by Linda Vreis which accompanies a report by Klebermass-Schrehof and colleagues who investigate the role of neurophysiological parameters in the decision making process.