

Atoms

Howard Bauchner, Editor in Chief

SAVING THE LIVES OF CHILDREN

The Integrated Management of Childhood Illness (IMCI) approach has been developed by the WHO and UNICEF to impact on the common causes of mortality in young children—acute respiratory infection, diarrhoeal disease, malaria, measles, neonatal causes, malnutrition, and HIV/AIDS. In an important report from South Africa, Chopra and colleagues, using a pre-post design, describe significant changes in a number of process measures, including improvement in assessment of co-morbidity and danger signs in sick children (eg, lethargic/unconsciousness, vomiting), rational prescribing, and first dose of appropriate treatment provided in clinic. A number of other important process measures, such as treatment of anaemia and prescribing of vitamin A, did not change. These results are not surprising—it will take many years of concerted effort to implement IMCI around the world and potentially longer to determine, using a rigorous trial design, if mortality improves. Because of the highly variable nature of health care delivery and the specific causes of mortality in individual communities, the IMCI approach to care will be difficult to implement, and even harder to measure its impact. These investigators are to be congratulated for their effort!

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RECURRENT ABDOMINAL PAIN AND FAMILIES

Often the richness and complexity of medicine are found in qualitative studies. Lindley and colleagues describe the tangled web of functional abdominal pain, consumerism, and psychological health. In an accompanying perspective, Dr Eccleston further discusses how the modernisation of the NHS is impacting on the doctor-patient (family) relationship. The objective results of this study are not surprising—children with recurrent abdominal pain (age range 8 to 15 years) whose parents accept psychological referral are more likely to improve than children whose parents refuse such referral. This is consistent with a recent report that detailed significant and prevalent psychopathology in a group

of young adolescents with recurrent abdominal pain who were screened in a primary care clinic¹. About 80% of 42 adolescents had a mental health disorder (anxiety, depressive, emotional, disruptive, or conduct disorder) compared with just 15% in an age-matched control group. It is the interaction between satisfaction, patient-centred care, and consumerism that makes this report fascinating.

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STROKE – IS IT RELATED TO THROMBOPHILIC CONDITIONS?

The advances in our knowledge of thrombophilic conditions over the past decade have been stunning. Protein C, protein S, antithrombin deficiencies, activated protein C resistance, the thrombophilic mutations factor V Leiden, thermolabile methylene tetrahydrofolate reductase (MTHFR C677T), prothrombin G20210A, and raised total plasma homocysteine, have all been described. In a systematic review of 18 case-control studies involving 3235 patients and 9019 controls, investigators from Great Ormond Street found a significant relationship between protein C deficiency and MTHFR C677T mutation and arterial ischaemic stroke (AIS). None of the other thrombophilic conditions were significantly associated with AIS. These are somewhat curious findings because of the “well described” relationship between many of these thrombophilic conditions and stroke, particularly in case-series. The strength of this study is that it included only studies with valid controls.

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HYPERBILIRUBINAEMIA: IS IT POSSIBLE TO PREDICT?

In the US, the increase in breast feeding rates and early hospital discharge have led to renewed concern about very elevated bilirubin levels leading to kernicterus. Concerns about kernicterus have led the British Paediatric Surveillance Unit to study the incidence of severe hyperbilirubinaemia. In this issue, Keren and colleagues from the Children's Hospital of Philadelphia compared a pre-discharge total serum bilirubin (TSB) level with a clinical risk factor score (birthweight, gestational age <38 weeks, oxytocin use during delivery, vacuum extraction, exclusive breast feeding, and breast and bottle feeding) in 899 full or near term infants who had both pre- and post-discharge bilirubin levels. The primary outcome was a post-discharge of total serum bilirubin level >95% on an hour specific bilirubin nomogram. Unfortunately, although both measures could be made sensitive by varying risk score or pre-discharge TSB used to predict the outcome, the specificity was poor. Both measures identified many more infants at risk for elevated post-discharge TSB >95% than actually occurred. This “negative” study is very important. Until further studies are done, TSB should not become another vital sign performed on all newborn infants.

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TEACHING CHILDREN ABOUT RESEARCH AND RCTS

Very little work has been done about educating children regarding the four major concepts of informed consent in a randomised clinical trial (RCT): the meaning of randomisation, safety and effectiveness, voluntariness, and avenues of redress. Currently, for most studies investigators obtain consent from parents rather than children. In a study involving 374 children aged 9–11 years, Barnett and colleagues randomised children to three education formats: question and answer, story format, or text format. They found that the story format was significantly better than the other two in improving children's knowledge of the essential components of consent. We are a long way from obtaining consent from children rather than parents—it would be labour intensive and there also would be concerns whether the children truly understood the meaning of consent. That said, this is an important study—one that shows it is possible to teach children about the important elements of giving consent.

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REFERENCE

1 Campo JV, Bridge J, Ehmann M, et al. *Pediatrics* 2004;113:817–24.