

# Atoms



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## QUALITY, QUALITY, QUALITY

The NHS is undergoing a 10 year modernisation plan, which is expected to cost billions of pounds. Government has pledged that spending on health will rise and be similar to many other countries in the European union. How to measure quality and assess whether this investment is returning dividends is difficult to do—certainly care should be more convenient. The time waiting for procedures, admission to hospital, and in accident and emergency (A&E) departments should decline. Care should be more consistent with guidelines and presumably of higher quality. As described by the Institute of Medicine in the US, a 21st century health care system should be safe, effective, patient centred, timely, efficient, and equitable (1). In this issue, Armon and colleagues describe the impact of integrated care pathways (ICPs) on the management of diarrhoea and seizure in a single paediatric A&E department. ICPs are more prescriptive and comprehensive than clinical guidelines, detailing essential steps of care (nursing, medical, laboratory) in patients with particular problems (a specific diagnosis or set of signs and symptoms). They found that care was more consistent with guidelines, inappropriate laboratory tests declined and waiting time fell. This report is an important part of the quality revolution for a number of reasons. The authors detail errors of commission (too many tests), which in a system needing resources may be as important as errors of omission. Second, the methodology used, a pre-post design, although not as rigorous as a randomized clinical trial, is a critical part of the quality landscape. Berwick has argued that the assessment of quality is likely to entail alternative research methodologies. An extension of pre-post design is time-series analysis in which the slope of change is compared using a number of assessment points prior to an intervention to the slope of change after an intervention. This should correct for changes that would have occurred despite the intervention. Finally, this report highlights the need for data in order to assess quality. Unfortunately,

high quality, reliable data from various aspects of the health care system are difficult to obtain.

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## INTERNATIONAL GUIDELINES

We are pleased to publish the European Society for Paediatric Endocrinology and Lawson Wilkins Pediatric Endocrine Society consensus statement on diabetic ketoacidosis for a number of reasons. First, it represents a significant effort of two distinguished societies from different countries that worked together to improve the health of children. Second, despite labelling this a consensus statement, each individual statement is accompanied by a rating of evidence. Third, the increasing incidence of type 1 and type 2 diabetes sadly leads to more episodes of DKA. Fourth, the consensus statement includes important information about the frequency, morbidity, and management of DKA.

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## CARING FOR SEVERELY DISABLED CHILDREN

Most health care systems struggle to provide care for children with severely disabling conditions. The care is usually complex, often involving a great deal of coordination between medical and educational specialists, and these children are often admitted to hospital, further complicating coordination of care. In this issue, five articles address topics related to the care of children with cerebral palsy, severe learning difficulties, various genetic disorders, and neuromuscular disease. Mahon and Kibirige found that respiratory tract infections and seizures were the main reasons for referral and admission. Yates and colleagues describe admission to a paediatric intensive care unit (PICU), largely for respiratory support, for a group of 28 children with neuromuscular disorders. Four of the 28 children died in the PICU. Katz and colleagues report the utility of non-invasive positive pressure ventilation (NPPV) in neuromuscular disease. They conclude that NPPV can reduce hospitalisations for this group of children. A group from Oxford describe the relative efficacy of brief treatments for sleep problems in 66 severely learning disabled children. We have found sleep problems to be a major issue for parents who care for children with these conditions. Repeatedly parents want to discuss the issue of sleep, obviously because of its potential to make their lives so difficult. Finally, Caulton and colleagues report an important, but relatively simple intervention—longer standing in non-ambulant children with cerebral palsy. They found that longer standing improved proximal tibial bone mineral density. We invite more articles on the care of children with complex chronic medical conditions, particularly studies that address issues of adherence, coordination and patient centred care, and use of information technology.

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## PRIMARY CARE PAEDIATRICS AND CHILD HEALTH

This issue of ADC contains a series of papers that focus on the provision of primary care services for children. Although many factors impact on such services, I have been impressed that two issues are of particular note. First, parents want high quality care but prefer not to travel far. This is a struggle because local care is often inconsistent with the theme of regionalisation of services and data that indicate quality and high volume care are related. Second, the reduction in work hours for physicians and more involvement of specialists in care requires greater coordination of services. We must harness the power of information technology to help us solve this problem.

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## REFERENCES

- 1 Committee on Quality of Health Care in America, Institute of Medicine. Crossing the Quality Chasm. National Academy Press: Washington, D.C., 2001.