

Atoms



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VARIATION AND QUALITY

The initial descriptions of variation in medical care have led to and fuelled international concerns about quality of care. Although differences are expected, particularly when there is clinical uncertainty, the extent of variation in many diagnostic and therapeutic manoeuvres is concerning. Much of the National Service Framework is focused on reducing variation and improving quality. Sawczenko and colleagues found extensive variation in the initial care of 739 children diagnosed with inflammatory bowel disease between June, 1998 and June, 1999. Two variables—the size of the “reporting” centre (number of new cases during the study year) and the type of specialist involved (paediatric versus adult gastroenterologist)—account for much of the variation. These findings are consistent with the published literature in this area. In general, quality improves as volume increases, although there is likely a plateau effect for most medical conditions. Secondly, physician discipline (generalist versus specialist, adult versus paediatric) impacts on diagnostic and therapeutic decisions. The struggle for most health care systems will be linking patients with the “best” physicians (and centres of excellence) and monitoring those physicians to ensure that they truly provide evidence-based, effective care, that is patient centred.

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ASSESSING NUTRITIONAL STATUS

The nutritional status of children with chronic disease impacts on morbidity and mortality. For decades, nutritional status has been assessed by measuring weight and serum total protein, albumin, and vitamin levels when indicated. In part because of the epidemic of obesity, progress has been made in understanding the impact of specific hormones on nutritional status. Investigators from Paris describe the relationship between insulin-like growth factor 1 (IGF-1) levels and lean body mass in 24 children with cystic

fibrosis. Children with cystic fibrosis can lose skeletal muscle function regardless of body weight and this maybe reflected in lean body mass. They found that IGF-1 was a more sensitive measure of malnutrition than either prealbumin or retinal binding protein. Whether we can alter IGF-1 levels, improve nutritional status, and impact on health status of children with cystic fibrosis remains to be seen.

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THE IMPACT OF INDUSTRIAL POLLUTION

Both in the UK and US our water, air, and soil contain far less pollutants than in the 1950s and 1960s. For countries developing new economies, or those emerging from the dissolution of the former Soviet Union, attention to the medical impact of industrial development will be a struggle. In a disturbing report from the Aral Sea region (Kazakhstan, Turkmenistan, Uzbekistan) it appears that children living in areas polluted by the use of insecticides, pesticides, and heavy metals had evidence of compromised renal tubular function. Renal tubular function was measured by urinary B2 microglobulin and N-acetyl- β -D-glucosaminidase levels. Because we are aware of and can better measure the potential impact of environmental pollutants, countries with new industries may be subject to more scrutiny than were countries that developed their industrial base in the middle part of the last century. It can be difficult and expensive for countries to expand their economic base and protect the environment (and the health of their citizens) simultaneously.

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IMPROVING THE HEALTH OF CHILDREN WITH DIABETES

An increasing number of studies in both adults and adolescents with diabetes indicate that improved glycaemic control, usually measured by HbA1c levels, reduces the risk of microvascular complications, such as retinopathy. Although continuous insulin pump infusion technology was developed in the UK in the 1970s, Torrance and colleagues suggest that over the past two decades this approach to therapy has won wider acceptance outside of the UK. In a review of insulin pumps, they summarise the data indicating that “tight” glycaemic control is likely to improve long term health outcomes, complications of insulin pump therapy, and the ABCs of patient, pump, and insulin selection. In the US, virtually all children with insulin dependent diabetes are cared for by paediatric endocrinologists, and in many cases diabetologists. This highly centralised approach to care is less common in the UK, and hence, the importance of this review.

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NEWS AND NOTES—US

Health care costs are once again spiralling out of control in the US. After a period of annual increases of about 5%, it appears as though we will see yearly increases above 10% for the next 3–5 years. In my home state of Massachusetts a family plan now costs about 6500L (large employers often pay anywhere between 60% and 90%), about 1/3 higher than in any other state. In the 1990s we focused our concern for these increases on for-profit health insurers and managed care health systems, while in the past 2–3 years the pharmaceutical industry has become the focus of our anger. Virtually all experts agree that many factors contribute to rising costs, including extraordinary technological and therapeutic advances and an aging population. I am pleased to say that more “experts,” including some politicians, now acknowledge that containing costs will only be possible if we rein in administrative overhead, currently about 20%, and begin to reduce the expense of end-of-life care. This latter issue is relevant in most countries.

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