

Atoms

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DO PARENTS AND PHYSICIANS SHARE THE SAME VALUES?

Clinical decisions should be governed by knowledge, experience and patient preference. The influence of each of these domains varies depending upon the actual clinical question, setting, available information, and the power of our own experience and those of our patients to influence decisions. For example, in the acute care setting, when a young infant is ill, I have never had a parent participate actively in decision making. In general, most parents leave it to clinicians to provide the best possible care. However, the decision making process should change when a problem is more long-standing and there is uncertainty as to what should be done. This is particularly true for end of life decisions. Knowles and colleagues found that parents and health professionals place similar values on different aspects of quality of life and agree that there are states of health worse than death. Professor Alan Craft, former President of the College, expands on this paper, suggesting that the era of paternalism is ending and greater transparency is now necessary in medicine. I remain perplexed about a number of issues involving clinical decision making. Regardless of data, my most recent experience with a particular medical problem still plays a prominent role in how I make decisions. For example, although I am well aware that bronchodilators have a very limited role in the treatment of infants with bronchiolitis, if I have had some recent success, despite the evidence, I am more willing to once again use bronchodilators. Second, patients do not always make decisions based upon data. How do we reconcile evidence-based medicine with patient-centred care, specifically when they may conflict with one another? Lastly, because of the internet, more and more parents have access to

medical information—sometimes this is quite helpful, but at times this information is inaccurate, and makes participatory decision making more difficult.

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THE COMPLEXITY OF THE 2 BY 2 TABLE

The 2 by 2 table, which generates sensitivity, specificity and positive and negative predictive values, is an enduring legacy of epidemiology. Sensitivity and specificity are generally considered fixed values of a diagnostic test (if it is reliable), while positive and negative predictive values vary with prevalence. This is particularly important when considering diagnostic tests, which are often developed in referral populations, and then applied to more general, and usually healthier, populations. Dr Malcolm Coulthard suggests a new measure—the proportionate reduction in uncertainty score. He believes that positive (and negative) predictive values “double-count” data and do not accurately reflect the contribution of a specific value to diagnostic uncertainty. Hopefully his measure will become more popular than likelihood ratios.

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ESTIMATING WEIGHT – IS A NEW FORMULA NECESSARY?

In a brief, but important study from Sheffield, Drs Luscombe and Owens describe a new formula for estimating the weight of children between 1 and 10 years of age. Likely reflecting the obesity epidemic, in a sample of over 17 000 children, they found that the traditional formula (weight in kg = $2 \times (\text{age in years} + 4)$) underestimated children's weights by about 19%. Using linear regression, they developed a new formula (weight in kg = $3 (\text{age}) + 7$), which they indicate underestimates weight by about 2.5%. Given how often we use estimated weight in pediatrics, during cardio-pulmonary resuscitation, or for fluid administration, pain medications or antibiotics, estimating weight accurately is important.

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THIS MONTH IN FETAL & NEONATAL

- The rates of autopsy have fallen dramatically over the past 30 years. They are no longer considered an essential part of medicine. In an intriguing report, Hagmann and colleagues describe the utility of postmortem magnetic resonance imaging. See page F215
- Should all newborns undergo pulse oximetry prior to discharge? In a review that summarises 10 studies (and 45 000 newborns), Dr Valmari from Finland, concludes that pulse oximetry is not sensitive enough as a measure to serve as an independent screen. See page F220
- Two papers and a perspective, shed light on neonatal transfer—an important topic for health planners and parents. Kempley and colleagues, in a study from 45 hospitals in London and southeast England, report that response times have improved from a median of 2 hours in 2001 to 1.45 hours in 2004. Crusack, Field and Manktelow, reporting on the former Trent Health Region, found no decline over a 10-year period in the percentage of inappropriate transfers. Gorm Greisen from Denmark, an editorial board member, comments on these two papers and the complexity of establishing regionalised neonatal services. See pages F159, F181 and F185