



Addressing infant mortality

There is a gulf between the survival of very-low-birth-weight infants in developed compared with developing countries. Velaphi *et al.* (p. 504) and an accompanying editorial by Clarissa Pieper (p. 492) challenge the existing policies for the management of such cases in South African public hospitals.

Childhood mortality rates have been used as a yardstick for measuring the development of countries. Although mortality rates for children aged between 1 month and 5 years have decreased over the last 25 years, the neonatal mortality rate (< 1 month) has remained constant. The emphasis must shift to the prevention of neonatal deaths, especially in poor countries. Only 1% of these deaths occur in high-income countries, the remaining 99% being in middle- and low-income countries.

Outcomes have improved after the implementation of neonatal intensive care, use of mechanical ventilation and exogenous surfactant, especially for extremely low-birth-weight infants. A threshold birth weight below which it is inadvisable to apply the technology of newborn intensive care will vary according to the number of patients requiring intensive care, relative survival rates and availability of resources.

At Chris Hani Baragwanath Hospital, as in many other hospitals in the public sector in the country, a cutoff point of 1 000 g has been used when deciding whether or not to offer mechanical ventilation. It is difficult to recommend a cutoff point for mechanical ventilation using gestational age because of the unreliability of this measure in such patients. On the basis of their findings Velaphi *et al.* recommend consideration of a policy to ventilate infants weighing less than 1 000 g and discuss its implications.

Provincial mortality

Building on a series of previous publications, Bradshaw *et al.* of the MRC Burden of Disease Unit provide another major revelation of the state of the health of South Africa (p. 496). Health policy is directed from a national perspective, yet provincial and local government need to respond to the specific needs of their communities. An essential element for public health planning at these levels is reliable mortality statistics. The authors describe the various models that have been used to derive the latest figures. These include addressing the misclassified AIDS deaths.

Clear provincial differences are demonstrated, with a more than 10-year difference in life expectancy in the Western Cape compared with KwaZulu-Natal. The provincial differentials in child mortality are more marked than those in adult mortality. The infant mortality rates in the Eastern Cape and KwaZulu-Natal are each more than double the rate in the Western Cape, while the under-5 mortality rates in KwaZulu-Natal and the Eastern Cape, respectively, are 2.5 and 2.3 times the rate in the Western Cape. HIV/AIDS rates vary markedly, with the

highest in KwaZulu-Natal (574/100 000) and Mpumalanga (520/100 000). The Western Cape and Gauteng have much the lowest mortality rates for infectious diseases and perinatal, maternal and nutrition-related conditions. There is surprisingly little variation between the provinces in the overall age-standardised death rate due to non-communicable diseases.

Nutritional supplements and unintentional doping

Doping in sport is big news and has big-bucks implications. The problem of unintentional doping through the use of contaminated nutritional supplements is brought home by Van der Merwe and Grobbelaar (p. 510). They state that inadvertent doping through the use of nutritional supplements is a potentially important cause of the increase of positive doping cases among high-profile Olympic athletes.

Many nutritional substances specially designed for athletes are on the market. They are promoted for their performance-enhancing properties, faster recovery during training and other supposed benefits. Athletes assume that these products do not contain prohibited substances as they are readily available without prescription and sold legally as supplements. As in many other countries, the manufacture of nutritional supplements is not regulated appropriately in South Africa. Therefore the ingredients of the supplement may not match those listed on the label of the container, and there may be batch composition differences and possible contamination with prohormones, which are prohibited substances in sport.

Contaminated supplements were identified in an ongoing study that screened over-the-counter nutritional supplements tested on volunteers. They showed that intake of microgram amounts of prohibited substances can cause an athlete to fail a dope test. Their results will interest team physicians, other clinicians and the athletes taking supplements – and influence our views of some unscrupulous suppliers whose only interest is in generating big bucks.

Student papers

New medical curricula that encourage student research projects have resulted in the *SAMJ* publishing increasing numbers of student papers, two of which appear in this issue.

Mfundisi *et al.* (p. 483) conducted a study at Khayelitsha near Cape Town. Their findings may be an important example of the hypothesised synergy between HIV treatment and prevention initiatives, with significant implications for the fight against HIV/AIDS in South Africa.

Pieter van der Bijl (p. 474) investigated the monitoring of aminoglycosides and concludes that this should be continued to observe the trends of their use and resistance patterns.

JPvN