



Unabated rise in number of adult deaths in South Africa

To the Editor: Mortality statistics are a fundamental cornerstone of the health status data needed for planning and monitoring the impact of health programmes. In developed countries, such data are generated through the death registration system, dating back to the 19th century in the case of the UK and Sweden. Until recently, South Africa's death registration system was recognised as inadequate to provide such statistics for the majority of the population,¹ but the post-Apartheid government has prioritised the collection of such statistics, as evidenced by a new-found collaboration between the Departments of Health and Home Affairs and Statistics South Africa.² Registration of adult deaths improved from about 50% in 1990 to over 90% in 2000³ as a result of the incorporation of the former homelands as well as national efforts to improve coverage. However, the production of timely cause of death statistics remains a challenge; the most recent year with full officially published statistics is 1996.⁴

As the HIV/AIDS epidemic is expected to raise mortality at an unprecedented rate, there is an urgent need for more up-to-date statistics. The plan to roll out a massive treatment programme with a large budget makes it imperative to assess the impact of such a programme. A rapid surveillance system to monitor the changing age pattern of registered deaths was developed by the MRC and UCT in 1998,³ drawing on data from the population register maintained by the Department of Home Affairs. Focusing on adults, for whom registration is more complete, initial findings released in 2001 demonstrated a clear shift in the age distribution of deaths towards an increase in young adult mortality.³ Careful analysis taking into account both population growth and the increasing registration of deaths demonstrated rapidly changing death rates following an age pattern consistent with the heterosexual HIV/AIDS epidemic.

Statistics South Africa adopted this system of rapid reporting of the deaths registered on the population register.⁵ In addition, they processed a 12% sample of certificates for 1997 - 2001⁶ which demonstrated a rapidly changing profile in the cause of death profile with increases in the proportion of deaths due to HIV, TB, pneumonia and diarrhoea, all indicator conditions of AIDS. The data revealed a marked decrease in the proportion of deaths due to unnatural causes (i.e. injuries) and the continued high proportion of ill-defined signs and symptoms (12.1%). The increase in the AIDS indicator conditions strongly suggests that in some cases incomplete details are provided on the chain of events leading to the immediate cause of death, resulting in an under-reporting of AIDS deaths. The lack of reliable certification of AIDS makes it necessary to: (i) track the

number of deaths from all causes; and (ii) use alternative approaches such as modelling the epidemic to obtain reliable estimates of the real number of deaths due to AIDS.

More up-to-date data on the number of registered deaths on the population register show a steady increase in the number of adult deaths between 1998 and 2003 (Fig. 1). These empirical data also show continuing shifts in the age distribution of the deaths with a large increase in the number of young adult deaths particularly marked for women (Fig. 2). The number of adult deaths on the population register increased by 68% during this 6-year period (Fig. 1). Part of this rise could be attributed to population growth (approximately 12%) and part to improved registration, both of persons on the population register and of deaths (less than 10% assuming that registration has not achieved full coverage), leaving a real increase of more than 40%. In the case of women aged 20 - 49 years, there has been an increase of 190% in the deaths registered which corresponds to a real increase in mortality of more than 150% once population growth and possible improvement in registration are taken into account.

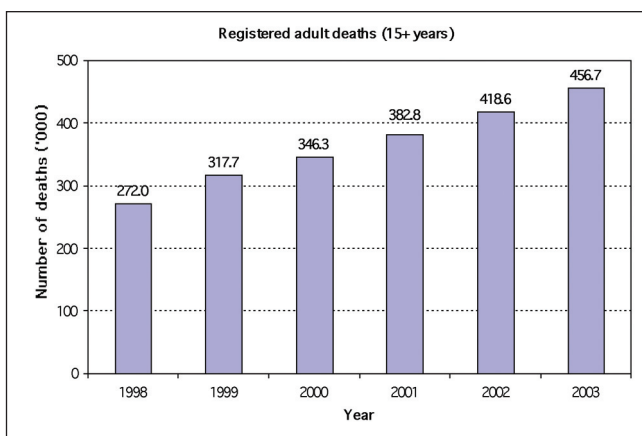


Fig. 1. Number of adult deaths from the population register, 1998 - 2003.

The uncertainty about the precise number of AIDS deaths should not allow people to dismiss the impact of HIV/AIDS on mortality. There has been a massive rise in the total number of adult deaths in the last 6 years. Given the ages at which these additional deaths occurred and the change in the cause of death profile, they can largely be attributed to HIV/AIDS. Such rises in the mortality should renew Government's resolve to implement the comprehensive plan to prevent and treat HIV/AIDS as rapidly as possible.

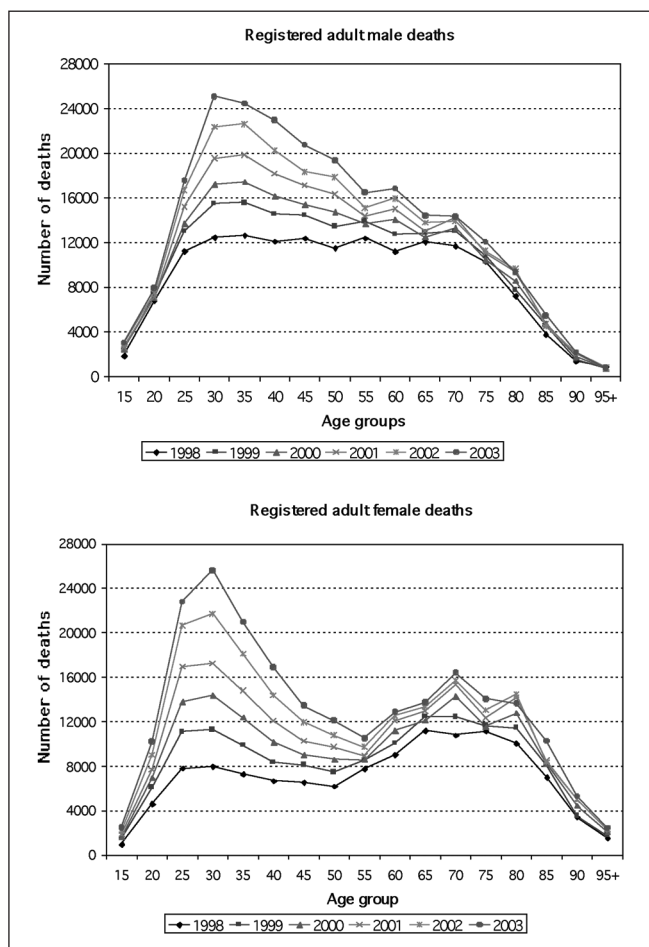


Fig. 2. Age distribution of the adult deaths from the population register, 1998 - 2003.

Debbie Bradshaw

Burden of Disease Research Unit
Medical Research Council of South Africa

Ria Laubscher

Biostatistics Unit
Medical Research Council of South Africa

Rob Dorrington

Centre for Actuarial Research
University of Cape Town

David E Bourne

School of Public Health
University of Cape Town

Ian M Timæus

Centre for Population Studies
London School of Hygiene and Tropical Medicine
London
UK

1. Botha JL, Bradshaw D. African vital statistics — a black hole? *S Afr Med J* 1985; **67**: 977-981.
2. National Health Information System of South Africa. Project Report: Vital Registration Infrastructure Initiative by the Department of Health, Home Affairs and Statistics South Africa: Department of Health, Pretoria, 1999. <http://196.36.153.56/doh/nhis/vital/docs/vregistra.html> (accessed 2 Mar 2004).
3. Dorrington RE, Bourne D, Bradshaw D, Laubscher R, Timæus IM. *The Impact of HIV/AIDS on Adult Mortality in South Africa* (MRC Technical Report). Cape Town: Medical Research Council, 2001.
4. Statistics South Africa. *Recorded Deaths, 1996* (Report No. 03-09-10 (1996)). Pretoria: Statistics South Africa, 2000.
5. Statistics South Africa. *Advance Release of Recorded Deaths 1997 - 2000* (Statistical Release P0309.1). Pretoria: Statistics South Africa, 2001.
6. Statistics South Africa. *Advance Release of Recorded Deaths 1997 - 2001* (Statistical Release P0309.1). Pretoria: Statistics South Africa, 2002.

IN BRIEF

Birth weight and lung function in midlife

Some studies have reported an association between birth weight and adult lung function, while others have denied this relationship. A recently published study in *Thorax* (2003; **58**: 1061-1065) aimed at investigating this association, controlling for maternal factors.

In 381 subjects tested, a statistically significant linear trend was observed between birth weight and forced expiratory volume in 1 second (FEV₁) and forced vital capacity (FVC). This trend remained significant after adjusting birth weight for gestation, parity, sex, mother's height and weight, and smoking history.

The study found that low birth weight predicts lung function at mean age 47 years. This supports the 'fetal origins hypothesis' that impairment of fetal growth is a significant influence on adult lung function. It contrasts with the lack of relationship found in previous studies. The current study was designed to include a wider range of lung function than previous investigations.