Mortality trends in South Africa: progress in the shadow of HIV/AIDS and apartheid

In *The Lancet Global Health*, Victoria Pillay-van Wyk and colleagues report a large-scale analysis of more than 8 million deaths that occurred in South Africa over a 16-year period (1997–2012). The study provides important subnational information on mortality by province and by the different communities in South Africa—a feature that is a major improvement on the previous studies of the burden of disease in South Africa and the Global Burden of Disease study—thus making this report more useful to policy makers and planners at national and provincial levels of the country. HIV/AIDS remains the leading cause of death (accounting for 50% of deaths), although deaths from the disease have decreased substantially across all provinces over the past 10 years. Although deaths related to non-communicable disease and injury have also stabilised, mortality from type 1 conditions that include infectious diseases such as lower respiratory tract infection, septicaemia, or neonatal causes have not.

Pillay-van Wyk and colleagues report an increase in age-standardised death rates from diabetes and renal disease from 1997 to 2012, substantial death rates from non-communicable diseases in individuals aged 40–44 years (earlier onset than in high-income settings), and race-related inequity in distribution of causes of death, underlining the persisting effect of the apartheid system.

Evidence of disease-disease and drug-disease interactions between HIV, tuberculosis, and non-communicable diseases is increasing. There has also been recent research into the changing epidemiology of population health towards co-existing chronic infections and non-communicable diseases. Pillay-van Wyk and colleagues cite the importance of this epidemiological interaction between communicable and non-communicable diseases in recent studies into the cardiovascular disease risk profile associated with antiretroviral therapy. Known interactions also exist between antiretroviral therapy and diabetes, and evidence of interaction between HIV and the most common non-communicable diseases, including chronic respiratory disease, is increasing. In response to these changing epidemiological patterns, the South African National Strategic Plan for non-communicable diseases seeks to address chronic infectious disease comorbidity through an Integrated Chronic Disease Management tool in order for health-care delivery, and more broadly health systems, to adapt to this population health need. This strategy is essential to prevent a reversal of the positive effects of antiretroviral therapy on HIV outcomes that have been achieved in South Africa. The differential states of epidemiological transition in different population groups shown in this study, and the importance of the differential exposures to the social determinants of health, is highlighted with the association between health outcomes and gross domestic product per head.

The importance of social determinants on population health is widely known. Beyond this recognition, key questions that still need to be addressed include research into how to best address social determinants through intersectoral collaboration. Pillay-van Wyk and colleagues identify this approach as necessary to the reduction of the heavy burden of violence and injury. However, this approach is also important for other causes of death, particularly non-communicable diseases, tuberculosis, and the type 1 conditions. At the first UN multistakeholder forum on science, technology, and innovation for the sustainable development goals (SDGs), the need for new partnerships and collaborations was underscored as necessary to achieve these goals.

HIV infection still accounts for the greatest proportion of deaths, largely driven by the inequitable exposures that affect health and the risk of acquisition of HIV faced by black Africans who constitute most of the South African population. These data are therefore important for agenda setting to address the SDGs. To achieve the population health targets, we will need to address not only the targets related to the health goal (goal 3) but also other health-related targets across other SDGs, including goals on food security (goal 2), water and sanitation (goal 6), and healthier cities (goal 11). This will necessitate thorough evidence-based assessment of the interactions between the SDGs in different contexts. This study shows that the measurement
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and monitoring of mortality trends can increasingly be done in low-income and middle-income settings and highlights the importance of strengthening surveillance systems to assess the effect of intersectoral actions to improve population health.1

South Africa seems to have turned the tide against rapidly rising mortality caused by HIV/AIDS through the application of evidence-based interventions in the health system and beyond. Future progress will depend on addressing the triple challenges of implementing interventions to end HIV/AIDS by 2030, providing universal access to quality health care for all, and eradicating racial inequality, unemployment, and poverty.4 These extraordinary challenges should be matched by the resolute application of effective interventions by all sectors of society to achieve the SDGs by 2030.

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