Improving data to reduce the burden of disease – lessons from the Western Cape

The Western Cape Provincial Government initiated the collaborative Burden of Disease (BOD) Reduction Project to reduce its burden of disease and promote equity in health.[1] This shift in thinking from facilities to a population-based approach to health demonstrates increased awareness about the crucial role of upstream factors on population health. It resonates with the recommendations of the World Health Organization (WHO) Commission on Social Determinants of Health,[2] which highlights three principles of action: improve the conditions of daily life (the circumstances in which people are born, grow, live, work, and age); tackle inequitable distribution of power, money and resources; and raise public awareness about the social determinants and evaluate their health impact.

Mortality surveillance is an important foundation for monitoring health status and the impact of interventions to improve population health. While considerable progress has recently been made in the production of cause of death statistics by the South African vital registration system, there are concerns about quality, and the system has not been able to provide district and sub-district level information, which is crucial for monitoring inequities. The Western Cape BOD Reduction Project identified strengthening mortality surveillance at sub-provincial level as essential for building the district health system.

The City of Cape Town has reported cause of death statistics for more than 100 years and has tried to improve the quality of the data collection and to provide public health-orientated reports. This system was extended to the Boland/Overberg health region in 2004.[3] As part of the BOD Reduction Project the local mortality surveillance system was extended to the rest of the province, to produce mortality data for all health districts using a common methodology for data collection and analysis. Such data are important in planning and monitoring by the health districts of the province.

The Western Cape experience with mortality surveillance, notwithstanding concerns about the quality of death certification,[4] has assisted with the following:

Identifying the major health priorities. Cape Town's four leading causes of premature mortality, HIV/AIDS, tuberculosis, homicides and road traffic injuries, account for nearly half of premature mortality.

Identifying inequities. In line with the recommendations of the WHO Commission on Social Determinants of Health to monitor health inequities, the Cape Town data illustrate the importance of this. There are some sub-districts with substantially higher mortality; Khayelitsha in particular has mortality levels comparable with the high rates in other provinces (Fig. 1).[5]

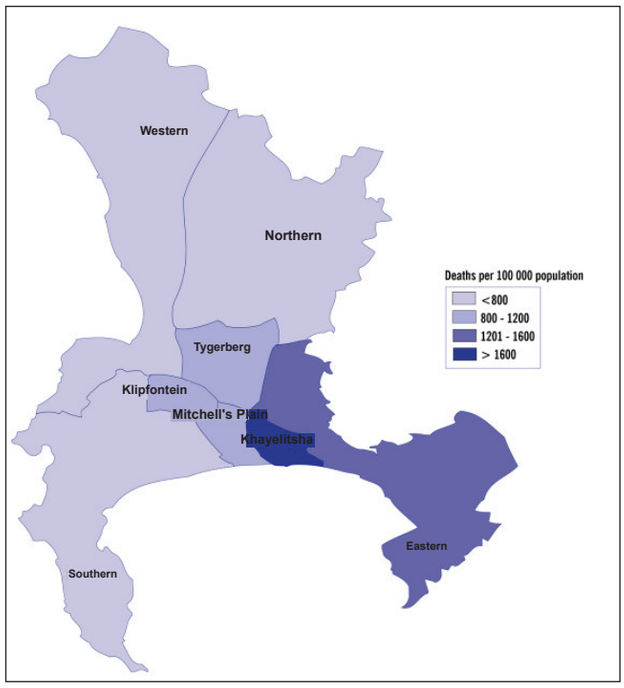

Fig. 1. Levels of mortality in the health sub-districts of Cape Town.

Evaluating priority health programmes. These data have been used to evaluate the impact of national and provincial priority programmes. For example, the Cape Town data show a reduction and levelling off in child and adult AIDS mortality respectively in 2006, indicating that the prevention of mother-to-child transmission and antiretroviral treatment programmes may be starting to have an impact. In addition, high mortality rates due to cervical cancer in Khayelitsha suggest a need to strengthen their screening and treatment programmes, taking into account the mobility of the population.

Providing accessible information for policy makers. Wide and persistent dissemination of accessible information plays an important role in engaging other sectors and empowering senior government leaders to advocate for policy formulation or change.

Advocating for an intersectoral response. The role of other sectors was highlighted by a better understanding of the province burden of disease profile. For example, the health sector can do little to prevent injuries without involving other sectors. Similarly, improving living conditions (reducing the multiple deprivation index) requires involvement from other sectors such as housing, water and sanitation.

Stepping into the data quality cycle. Involving district health authorities in mortality surveillance data processing has identified data quality concerns and opportunities for

improvement. These include limited information provided on the manner of death for injuries and common death certification errors made by doctors. The need for reliable population estimates for sub-districts and the accurate allocation of deaths to geographical areas has also been identified, which is improved by local knowledge of the region.

Mortality surveillance for deaths from injury in the Western Cape is being upgraded to incorporate electronic transfer of cause of death data from all provincial mortuaries. This is an expansion of the National Injury Mortality Surveillance System (NIMSS) established at sentinel mortuaries that will fill the gap on details about the manner of death.[6] Given the high injury burden, particularly among young adult men, this is an important addition of information to guide future interventions.

In this issue of *SAMJ* another study reports concerns about the quality of death certification[7] and replicates the findings of a study in the catchment area of Vanguard Community Health Centre in Cape Town.[4] However, of concern is that this study was conducted in a teaching hospital. These results prompted an exploration of approaches to improve the standard of medical certification. A guide was developed collaboratively by the Divisions of Forensic Medicine at the universities of Stellenbosch and Cape Town and the Medical Research Council BOD Unit, and a controlled intervention study targeted the interns at another teaching hospital.[8] The promising results highlight the scope for improving the quality of certification through training. This has prompted a revamping of the Western Cape Department of Health clinical governance system, a province-wide training initiative and a review of death certification.

We urge other provinces to take note of this mortality surveillance project, which could assist national efforts to improve the domain of health status measurement. However, revamping mortality surveillance requires leadership, strategic planning and resources. In the context of competing priorities for limited resources, the importance of good data in making informed decisions cannot be overstated.

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