

SANHANES: A unique survey series in the health landscape



Non-communicable diseases (NCDs), mainly cardiovascular diseases, cancers, chronic respiratory diseases and diabetes, represent a leading threat to human health and development. According to World Health Organization (WHO) statistics, these four preventable diseases are the world's biggest killers, causing an estimated 35 million deaths each year – 60% of all deaths globally – with 80% in low- and middle-income countries.^[1] Up to 80% of heart disease, stroke and type 2 diabetes and over a third of cancers could be prevented by eliminating shared risk factors, mainly tobacco use, an unhealthy diet, physical inactivity and the harmful use of alcohol. Unless addressed with urgency, the mortality and disease burden from these health problems will continue to increase. The WHO projects that, globally, NCD deaths will increase by 17% over the next 10 years, and the greatest increase will be seen in the African region (27%).

In relation to NCDs, when Bradshaw *et al.*^[2] conducted the first national burden of disease study for South Africa (SA) in 2000, they reported that 37% of deaths in this country were attributable to NCDs, many of which were associated with nutrition and lifestyle. In 2009, Mayosi *et al.*^[3] concluded that the burden of NCDs in SA is 'rising in rural communities, disproportionately affecting poor people living in urban settings, and resulting in an increase in the demand for care for chronic diseases'. In this regard, SA is undergoing an epidemiological transition from communicable diseases to NCDs.^[3] Recent and reliable estimates of population health parameters are therefore essential to understand the nature of the changing disease profile in the country and to translate such information into effective health promotion and disease prevention intervention programmes.

The 2012 South African National Health and Nutrition Examination Survey (SANHANES-1)^[4] is the first of a series of surveys designed to assess the health and nutritional status of adults and children in SA. The collaborative network for the design and implementation of the survey, with the Human Sciences Research Council (HSRC) as the lead partner, included the National Department of Health (NDoH), the Medical Research Council, UNICEF, Stats SA, the Programme to Support Pro-poor Policy Development (PSPD), and six universities (Free State, Limpopo, North West, Nelson Mandela Metropolitan, Stellenbosch and Western Cape). The survey was sponsored by the NDoH, the Department for International Development (UK) and the HSRC. Methodologically, SANHANES-1 provides baseline data on a representative sample of the population for future analysis over the longer term (longitudinal design of the survey), a policy approach initially adopted by the USA^[5] (National Health and Nutrition Examination Survey (NHANES)) and more recently by other countries such as Canada^[6] and China,^[7] and in Europe.^[8] The survey is unique in that it combines personal interviews with standardised physical examinations conducted by medical practitioners and nurses, diagnostic procedures and a variety of laboratory tests.

The completion of the SANHANES has facilitated both the detection and future tracking of the extent of current and emerging health priorities and the associated risk factors in the SA population of all ages. The SANHANES-1 findings provide the latest information on a broad range of health topics and associated risk factors that were beyond the scope of the previous national surveys in the health arena, and address the NDoH's priority health indicators. The findings also provide national references for, among others, measurements such as height, weight and blood pressure, and are of interest to both health practitioners and researchers. The SANHANES-1 generated data

that can be used to develop health policy and health programmes and services. It also documented the health literacy of the nation, information that is vital for planning disease prevention and health promotion intervention programmes. In relation to NCDs, the survey documented the prevalence of obesity, dyslipidaemia, diabetes, impaired glucose homeostasis, hypertension (31.8%, when defined as blood pressure of systolic ≥ 140 mmHg or diastolic ≥ 90 mmHg, or currently on antihypertensive medication) and tobacco use, as well as perception of body weight, proxies of physical inactivity and poor dietary practices.^[4] The latest evidence at the national level clearly indicates that SA indeed has a very significant burden of disease that is fuelled by a multiplicity of risk factors requiring multisectoral action and healthy public policies. Among the recommendations proposed in the report, the survey team strongly advocated the implementation and institutionalisation of the 'Health in All Policies' approach, as recently emphasised at the 8th WHO Global Conference on Health Promotion in Helsinki, Finland, in 2013.^[9] This means implementation of healthy public policies within the framework of the National Development Plan – 2030 vision. The WHO's recommended approach also means that other sectors' policies and programmes must be consistent with the protection and promotion of public health.

Following the ministerial release, the SANHANES-1 report elicited extensive national and international coverage. Subsequent to the release of the report, there has been intensive demand for the survey's data for policy formulation purposes from a number of national and provincial government departments, other than the NDoH, the Presidency, committees such as the National Surveillance System Committee and the Health Data Advisory and Coordinating Committee, academic institutions (including the Institute for Health Metrics and Evaluation, University of Washington), and NGOs and international organisations such as UNICEF, the World Bank and the WHO.

While SANHANES-2 is being planned for implementation, a number of collaborative activities have been initiated for a more in-depth analysis of the SANHANES-1 data. The latter, as per HSRC policy, will be curated in due course and made available to the broader scientific community. It is also the intention to establish a specimen bank that will be made available for such use. Further, the SANHANES team is advising the National Food Technology Research Centre in Botswana on the design of the BOTSHANES survey, due to be conducted in the third quarter of 2015.

D Labadarios

Executive Director: Population Health, Health Systems and Innovation, Human Sciences Research Council, Cape Town, South Africa

Olive Shisana

CEO, Human Sciences Research Council, Cape Town, South Africa

Thomas Rehle

Senior Programme Advisor, HIV/AIDS, STIs AND TB, Human Sciences Research Council, Cape Town, South Africa

Leickness Simbayi

Executive Director: HIV/AIDS, STIs AND TB, Human Sciences Research Council, Cape Town, South Africa

Corresponding author: D Labadarios (dlabadarios@hsrc.ac.za)

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