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Are we doing enough to prevent a heart disease epidemic?

This editorial is intended to provoke debate on the relevance of our contribution and its impact on the health care challenges faced by our entire population amidst the current financial and human resource constraints.

The extensive research and analysis conducted for The Lancet "Health in South Africa"-series provides a detailed assessment of the country's health status and health system.⁽¹⁾ The Series culminates in a call for action to the South African Government, universities, training institutions, health councils, researchers and civil society. Everyone has a part to play and we all must work together to strengthen the health system in South Africa - strong leadership and stewardship are critical.

One of the key messages from The Lancet South Africa-series is the problem of colliding epidemics: Fifteen years after its first democratic election and liberation from apartheid, South Africa faces colliding epidemics – explosive HIV and TB epidemics, a high burden of chronic illness, mental health disorders, injury- and violence-related deaths as well as the silent epidemic of maternal, neonatal and child mortality. These current health problems are rooted in distinctive aspects of South Africa's colonial and apartheid history that divided citizens according to race and gender.

What is relevant to the South African Heart Association pertains to our focus area. A recent report by the World Health Organisation (WHO)⁽²⁾ shows that more than half of the world's non-communicable diseases occur in developing countries. Non-communicable diseases tend to be chronic diseases of lifestyle (CDL). Heart disease and stroke are the number one killers in South Africa. One in three men and one in four women will suffer from cardiovascular disease before they are 60 years old.⁽³⁾

Information from the Heart Foundation of South Africa and the South African Medical Research Council^(4,5) shows that:

- In 1991, the annual cost of cardiovascular disease was between R4.135 and R5.035 billion, excluding the costs of rehabilitation and follow-up. This expenditure reflects 2%-3% of gross domestic product (GDP) or roughly 25% of all health-care expenditure.^(4,5)

- About three quarters of these costs were carried by the private sector.⁽⁴⁾

- The direct health care costs were estimated to be around 42% of the total costs.⁽⁴⁾ The indirect costs are more difficult to calculate since these include days lost to work, premature retirement and premature death.^(4,5)

Compared to countries such as the USA and Portugal, South Africa is already losing more people in the work-force age group (35-64) due to cardiovascular disease. These premature deaths have a major impact on the economy of the country.⁽⁵⁾

- Projections are that cardiovascular deaths will increase by 41% in this age group between 2000 and 2030.⁽⁵⁾

This cardiovascular disease burden represents a demand on the health services of South Africa far beyond the scope of its limited resources. There is a dearth of facilities and adequately trained personnel especially in the public sector to deal with advanced interventions and rehabilitation. It has therefore become critical that South Africa utilises its limited resources optimally and implement cost-effective health-promoting interventions to stem the predicted epidemic of chronic diseases of lifestyle in the face of all the other health challenges in our country.

The government has a proposed ten point plan which is to be part of the implementation of National Health Insurance (NHI). The major priorities for the five year period 2009/10-2013/14 are:

1. Provision of strategic leadership and creation of social compact for better health outcomes;
2. Implementation of NHI;
3. Improving the Quality of Health Services;
4. Overhaul the health care system and improve its management;
5. Improve human resources planning, development and management;

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6. Revitalisation of health care infrastructure;
7. Accelerated implementation of the HIV and AIDS strategic plan and the increased focus on TB and other communicable diseases;
8. Mass mobilisation for the better health of the population;
9. Review of drug policy; and
10. Strengthening Research and Development.

The above are highly commendable on paper; but in the short to medium term these may be undermined by lack of capacity. Limited resources requires creative thinking to ensure increased productivity with the same resources by, for example, paying more attention to primary prevention and early treatment of identified cases. The major challenge remains poor co-operation between health care stakeholders namely, the government agencies, health care funders, universities, training institutions, health councils, researchers and civil society.

There are as many treatment guideline protocols as there are institutions with vested interests in outcomes. Most of these are said to be cost-effective which usually refers to the use of cheaper drugs. The cost drivers in health care relate more to the treatment of complications, a fact which is usually overlooked. Treatment guidelines need to be based on outcome studies and not primarily on the cost of drugs.

There also needs to be harmonisation of treatment protocols for all stakeholders to ensure a streamlined approach to the treatment of chronic diseases of lifestyle. To mention but a few challenges:

- The government's EDL: The content on specific disease entities does not correlate with guidelines from special interest groups. The formularies and available medications are further determined by procurement and tender boards that are driven by cost, not clinical research. The formularies change with changes in loyalties between the stakeholders.
- Medical aid schemes' formularies: These protocols are driven by member options with the primary aim of cost containment and profit generation not necessarily clinical outcomes.
- Training institutions: Each institution has its own training modules with glaring differences in focus, especially on treatment guidelines used for teaching undergraduates. Variations may exist even within the same medical school's departments e.g. Internal Medicine using JNC guidelines and Family Practice teaching ESC or even WHO guidelines in both cases often failing to mention the SA treatment guidelines where available.
- Specific interest groups: The hypertension treatment guideline adopted by the South African Heart Association is not necessarily the SA Hypertension Society guideline but the ESC hypertension guideline. There was also no specific mention of endorsement of the 2006 SA Hypertension treatment guideline by the South African Heart Association that I am aware of. Other interest groups like, the Renal Society, Diabetic Society, Family Practice, Gynaecological Societies, etc., have other versions which all serve to cause further confusion.

Our resources (both human and infrastructure) are inadequate as it is at present. The imbalance in distribution of resources between private and public and between rural and urban makes the situation even worse. The rate of adequate staff training and infrastructural development will be much slower than the rate at which chronic diseases of lifestyle accelerates.

Re-training of available health workers, especially primary healthcare workers, on cardiovascular disease risk management would have a more palpable impact. This should be preceded by the harmonisation of outcomes-based treatment guidelines. It would then be easy to ensure a more uniform formulary that can be applied from primary care level with grading as the disease becomes more complicated. We should consider thinking more along the lines of jointly developed singular cardiovascular disease risk management protocols that are applicable at all levels of care and similarly executed in all local institutions including private health care.

Another area which can be exploited to add relevant clinical data is clinical research. It is understandable that contract research is utilised by pharmaceutical companies to gather data towards drugs registration by the local regulatory authorities. A window of opportunity for South Africa would be to ensure that the demographics of recruited research subjects reflect the national demographics. This will ensure that sub-study analysis of South African data becomes more informative and relevant to the targeted populations.

We therefore need to rethink the recruitment and distribution of investigators as well as the locations of research sites. The general population will also need education on the importance of clinical research. The research sites need to be accessible for the relevant study subjects.

An increase in resources does not necessarily help one deal more effectively with a situation. The other ways that I suggest include an emphatic shift of focus in favour of primordial and primary prevention and harmonisation of treatment guidelines which are based on population relevant clinical data.

REFERENCES

1. Health in South Africa. An Executive Summary for The Lancet Series: http://download.thelancet.com/flatcontentassets/series/sa/sa_execsum.pdf.
2. Jane Joubert, Debbie Bradshaw. Population ageing and health challenges in South Africa. Chapter 15:204-19. Krisela Steyn, Jean Fourie, Norman Temple (eds). Chronic Diseases of Lifestyle in South Africa: 1995-2005. Technical report. Cape Town: South African Medical Research Council, 2006.
3. Krisela Steyn. Conceptual framework for chronic diseases of lifestyle in South Africa: Chronic Diseases of Lifestyle in South Africa: 1995-2005: 1-8 [On line]. Available: <http://www.mrc.ac.za/chronic/cdl1995-2005.htm>.
4. Pestana JA, et al. The direct and indirect costs of cardiovascular disease in South Africa in 1991. S Afr Med J. 1996 Jun; 86(6): 678-84.
5. Krisela Steyn. The Heart and Stroke Foundation South Africa. Heart Disease in South Africa. <http://www.heartfoundation.co.za/docs/heartmonth/HeartDiseaseinSA.pdf>.