

Africa needs to up its research game to fight non-communicable diseases

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Non-communicable diseases are the current leading [cause of death](#) worldwide. And the burden is increasingly shifting from developed to developing countries.



There's a lack of research that deals specifically with conditions in African countries. Shutterstock

But it's only been over the last 20 years that the threat of non-communicable diseases has been taken seriously in developing countries. Noncommunicable – or chronic – diseases are those of long duration and generally slow progression. The four [main types](#) are cardiovascular diseases (like heart attacks and stroke), cancer, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and diabetes.

In Africa, some policy responses over the last two decades include the [WHO Strategy on non-communicable diseases](#) and the [Brazzaville Declaration](#). Another was the [regional multi-stakeholders' dialogue](#) held in Johannesburg in 2013.

At a country level, for example, South Africa has a number of policies in place, including a national plan for non-communicable diseases and salt reduction regulations.

But these policies and other initiatives have been less than optimal. [Studies](#) show that non-communicable diseases are gaining more ground among the top causes of deaths in South Africa.

[Death rates](#) from non-communicable diseases are decreasing worldwide. But the pace at which they're decreasing in African countries is slow: so slow that, if the prevailing situation continues, virtually no African country will meet the Sustainable Development Goal of reducing these deaths by 30% by 2030.

One of the big gaps on the continent is a lack of research that deals specifically with conditions in African countries.

How we got here

Awareness about non-communicable diseases has grown exponentially since the late 1990s. It started with a 1997 World Health Organisation (WHO) [report](#) that confirmed the rapid emergence of chronic diseases in developing countries.

The report showed that nearly half of the 52 million deaths recorded in the world in 1996 were due to chronic diseases. At least 67% of these happened in developing countries.

This report served as one of the foundations of a World Health Assembly [resolution](#) passed two years later on non-communicable disease prevention and control. By 2000 a global strategy for the prevention and control of non-communicable diseases [had been adopted](#).

This marked the start of a cascade of global initiatives on non-communicable diseases including high-level United Nations summits in [2011](#), [2014](#) and [2018](#).

At regional and country levels, policies and actions on non-communicable diseases were also developed.

These advances have led to non-communicable diseases [being arrested in developed countries](#). But this isn't the case in developing countries.

One of the reasons for African countries' under-performance is a lack of locally relevant knowledge. This would contextualise prevention and control solutions developed in other parts of the world, and make them more efficient in the African setting.

Context matters

In general, interventions to prevent and control non-communicable diseases have been mostly developed from western populations. They require some adaptations to work in other settings.

Different non-communicable diseases and their determinants are not distributed in similar ways across populations. Because of these variations, it is always important to fully understand what the priority is for an emerging non-communicable diseases and what's driving it in particular settings. In this way prevention and control actions can be guided in the right direction.

For instance, cardiovascular diseases are the most common non-communicable diseases in most settings. But coronary heart disease (diseases of the heart vessels) are predominant in western countries, while cerebrovascular disease (diseases of the brain vessels) are predominant in Africa. High blood lipids (dyslipidemia) is a major driver of coronary heart diseases, while high blood pressure is a major driver of cerebrovascular diseases.

Lifestyles interventions (including diet and physical activity) are cornerstones of prevention and control. But dietary patterns and physical activity habits vary substantially across populations.

Steps being taken

The South African Medical Research Council has responded to the dire need for context specific knowledge by

establishing a dedicated research unit. It looks at prevention, detection and control of non-communicable diseases in South Africa, with a major focus on cardiovascular diseases.

Prevention consists of measures to stop the acquisition of the disease among healthy people, or to stop or slow the progression among those with the disease. This should include actions that target the entire population, such as South Africa's salt legislation. It should also include actions targeting individuals. One example is screening to detect undiagnosed disease.

The management of non-communicable diseases and risk factors consists of drugs and non-drug treatments. Procedures are also developed to keep the disease under control. For example, research among disadvantaged black and mixed-ancestry South African communities has generated unparalleled data to characterise the burden of cardiovascular disease in these population groups.

Subsequently, the unit developed and tested approaches to easily identify people with major non-communicable diseases – such as diabetes mellitus – who were unaware of it. These approaches also identified people who were more likely to develop the disease in future.

Another focus area for the unit is people living with HIV. Research programmes have been initiated to improve the prevention, detection and management of common non-communicable diseases in people with HIV.

Lastly, the unit is helping to develop a critical mass of researchers. These people are crucial if we're to conduct the full scope of research required to inform non-communicable diseases prevention and control. Time and resources are being invested in training PhD and Masters graduates, post-doctoral fellows and junior researchers on various aspects of non-communicable disease research.

Lessons from Africa

Research conducted in Africa can also inform action on non-communicable diseases in other parts of the world.

One example is knowledge generated from [research](#) into task-shifting to improve access to care. This was developed in Cameroon in the late 1990s and early 2000. Task-shifting – or task delegation – consists of empowering low-level health staff to execute tasks usually performed by highly skilled health workers.

The results of this research, plus similar projects conducted in other countries in the region, have been incorporated in many [initiatives funded](#) by the Global Alliance on Chronic Diseases. One example is training nurses to diagnose and treat common non-communicable diseases. These would usually be managed by physicians. Another is training community health workers to execute non-communicable diseases risk screening. This task is usually performed by nurses.

Collaboration, and teaching

In the context of limited resources, research must ensure there's collaboration and capacity development. Collaboration among researchers, with healthcare providers, policy makers and other stakeholders will help minimise research costs. It will also improve the uptake and incorporation of research findings in guidelines and policy documents.

Training for researchers, healthcare providers and others involved in research will also reduce research costs substantially. It will also help to build the critical mass of researchers we need.

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