

CDIA

Chronic Disease Initiative for Africa – December 2014 – Issue 3

CDIA is a collaborative research initiative that develops and evaluates models for chronic disease care and prevention of risk factors.



Finding new approaches

As we reach the end of another successful year we are proud to present our third and final newsletter of 2014.

In this issue you will read about CDIA research into curbing South Africa's obesity problem and finding new, targeted measures to change the prevalence of smoking in black communities. We also reveal the outcomes of recent research into cardiovascular disease and reveal a novel screening programme which has the potential to prevent diabetic blindness.

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Getting to the bottom of the disparity in cardiovascular disease



Thandi Puoane

The CDIA has participated in a study to find out why more people die from cardiovascular disease in low-income countries than in high-income countries.

Rates of cardiovascular death are on the decline in wealthy countries, but that drop has not been recorded in poorer nations. In fact, more than 80% of the deaths from the disease now occur in low- and middle-income

countries. To better understand why one population fares better than another, a new global study, the Prospective Urban Rural Epidemiologic (PURE) cohort study, examined what factors beyond risk burden contribute to the disparity.

“Comparing different levels of socio-economic development helps us understand why people with the same conditions die or suffer more in low-income countries than in affluent ones,” says Thandi Puoane, professor of Public Health at the University of Western Cape and Chronic Disease Initiative for Africa (CDIA) affiliate who participated in the study.

“With this study, our hope was to identify the factors that are contributing to the differences in disease patterns in these countries, and then come up with interventions.”

A truly global initiative, the PURE study involved more than 150 000 adults from urban and rural communities in 17 different income level countries. The known traditional risk factors for cardiovascular disease that have been identified by the INTERHEART study, the PURE study is therefore trying to identify the ‘cause of the cause’. Using the INTERHEART risk score, a multi-factored scorecard for determining risk burden without laboratory testing, the study confirmed previously documented cardiovascular disease disparity.

Based on factors including dietary habits, diabetes, high blood pressure and family history of heart disease, high-income countries were found to have the highest risk factors. However, rates of cardiovascular events and death were found to be the lowest in this group.

In low-income countries, risk-factor burden was found to be much lower, but the results revealed the highest rates of disease and death. Average rates were recorded in middle-income countries.

The findings suggest influences other than risk factors are contributing to disease outcomes. According to the study, better control of hypertension and access to information of high-income countries may mitigate risk factor levels in those countries.

Puoane further explains that other factors including the environment, level of awareness and the availability of healthcare also played a part. In wealthier countries, there were greater food choices, including access to healthy food options and produce, and better health facilities compared to lower income countries. Subjects in wealthier countries were also better informed about their health compared to their counterparts in low-income countries.

“We have to plan interventions and policies to make the necessary resources available to prevent death from cardiovascular disease.”

“While it is common in high-income countries, we found it is uncommon for patients and health workers in poor countries to take a more active role in their health,” she says.

Indeed, the healthcare system was also identified as a contributing factor. According to Puoane, the study identified some people who were not aware that they had hypertension and several participants who had been diagnosed with hypertension, yet their disease was not controlled.

“Some of our findings show that although people in upper-income countries are exposed to risk factors, the care for example, is much better than the lower-income countries,” says Puoane.

The results of the PURE study cast light on the disparity in health outcomes for cardiovascular disease that patients experience, not just because they are at risk, but because of socio-economic factors that limit their chances of getting and staying well. For Puoane, it should serve as a catalyst for making some fundamental changes.

“If people are diagnosed, the environment is conducive, the healthcare system recognises them and treatment is available, they will live longer and with a better quality of life,” she says. “We have to plan interventions and policies to make the necessary resources available to prevent death from cardiovascular disease.”





Tackling SA's obesity problem

Vicki Lambert

The National Research Foundation has awarded a significant grant to CDIA researcher and UCT Professor Vicki Lambert to find practical ways to address and curb obesity among South Africans.

The latest data shows that South African children will have a shorter life span than their parents due to too much fast food and too little physical activity, says University of Cape Town (UCT) researcher Vicki Lambert, a professor in the MRC Research Unit for Exercise Science and Sports Medicine and senior researcher for the Chronic Diseases Initiative in Africa (CDIA).

"The situation requires an urgent response," she says. "Among other things, we need to reclaim our neighbourhoods. It seems the days of cricket in the streets and riding bikes are gone, we need to bring those activities back."

Professor Lambert – one of the country's leading experts on obesity – has just received a substantial grant from the National Research Foundation (NRF) to help find practical solutions to South Africa's obesity problem, which was highlighted by the recent study in the *Lancet*, which named SA as the country in Sub-Saharan Africa with the most overweight people.

The same study found that seven out of 10 women are overweight – which places a huge burden on an already-strained healthcare service, as obesity is linked to life-threatening conditions like heart disease, stroke and diabetes.

"It seems the days of cricket in the streets and riding bikes are gone, we need to bring those activities back."

Professor Lambert was awarded R750 000 over two years, along with post-graduate bursary support, for the Competitive Grant for Rated Researchers for her work on STOP-SA, an acronym for 'Slow, Stop or Stem the Tide of Obesity in the People of South Africa' (STOP-SA).

"We need to urgently look at how we can stop South Africans from leading unhealthy lifestyles by providing them with practical alternatives," says Professor Lambert.

Targeting the fight against smoking

New research from the CDIA into the prevalence of tobacco use in Cape Town's black community reveals that there are more younger compared to older men who are smoking, and that the habits of women are being affected by urbanisation and stress.

According to Nasheeta Peer, corresponding author of the study and researcher at the Non-communicable Disease Research Unit at the South African Medical Research Council (MRC), these results suggest anti-smoking interventions are not reaching this population.

"One would have hoped that almost two decades of legislation to curb advertising, along with negative associations around smoking, would have resulted in a decreased smoking prevalence in women and young men," she says. "We were surprised to find uptake is still high among young men, with no change in women."

The Cardiovascular Risk in Black South Africans (CRIBSA) study aimed to determine, among other cardiovascular disease risk factors, the prevalence of tobacco use in 2008/09 and to compare that with a similar study conducted in 1990. Additionally, the study examined the influence of external factors such as socio-demographics and psychosocial stress on cigarette smoking.



Nasheeta Peer

"We need more targeted interventions, rather than the general ones we have at the moment."

Based on a random sample of more than 1 000 men and women in the townships of Langa, Guguletu, Crossroads, Nyanga and Khayelitsha, where the prior study was conducted in 1990, scientists found an overall decrease in the prevalence of tobacco use among men 35 years and older, but an unchanged and high rate of 57% in 25- to 34-year-old male smokers.

Although at a rate lower than their male counterparts, smoking prevalence remained unchanged in women, with 8% still smoking. These findings suggest anti-smoking efforts such as legislation and rising cigarette prices have not affected this group. Shifting social patterns may also have played a part, according to Peer.

"By knowing these factors and the trends, we can determine what interventions are necessary for this community, where the weak spots are and who needs our focus."



Karen Hofman

CDIA research team finds way to prevent diabetic blindness

A CDIA-affiliated research team has discovered a cost-effective way to screen for blindness in diabetic patients – a novel method that will not only improve the lives of thousands of patients, but will also mean a cost saving of millions for the healthcare system.

Up to 16 000 diabetics become blind each year in South Africa due to a lack of adequate screening for diabetic retinopathy. It is the most common cause of incidental blindness in adults worldwide and in South Africa, it is the third leading cause of blindness.

A recent Medical Research Council study stated that 61% of the South African population is overweight. The link between obesity and diabetes is well-proven and according to recent estimates, 9.7% (over four million South Africans) aged 30 and older have diabetes.

“This has serious implications, not only for those with diabetes, but also for the public healthcare service, which has to treat and manage the condition,” says Professor Naomi Levitt, head of the Division of Diabetic Medicine and Endocrinology at the University of Cape Town (UCT) and director of the Chronic Diseases Initiative for Africa (CDIA). She led a team of CDIA-linked researchers, which included researchers from Stellenbosch University and the Wits School of Public Health, in a study for a new screening programme for diabetic blindness.

The researchers used a mobile retinal camera to screen for diabetic retinopathy on 14 541 patients at primary healthcare clinics in the Western Cape. Photographs were taken of patients’ eyes and readings made by trained specialists, but researchers found that even if non-ophthalmologists read the photographs, diabetic retinopathy could be detected.

“The study was very insightful, the figures speak for themselves,” says Professor Levitt. “If we could stop people with diabetes from becoming blind, that would be a saving of around R168 million per year for government and our already overburdened healthcare system.”

“The problem with diabetic retinopathy is that it is usually only diagnosed when the condition is at an advanced stage. But retinopathy is preventable and treatable if detected early,” says Professor Karen Hofman, who collaborated with Professor Levitt on the study. She is the director of the PRICELESS SA (Priority Cost Effective Lessons for System Strengthening South Africa) initiative at the Wits University School of Public Health.

“Using the mobile retinal camera to screen for blindness is highly cost-effective. The costs of screening and follow-up treatment are less than the expense of one year of a disability grant,” Professor Hofman said.

“If we could stop people with diabetes from becoming blind, that would be a saving of around R168 million per year for government and our already overburdened healthcare system.”

The new test costs R190. In 2014, blind people in South Africa qualified for a disability grant, which is about R16 200 on an annual basis. Up to 55% of people with diabetes are likely to suffer from retinopathy, i.e. damage to the vessels in the retina of the eye. Screening at primary care level, where most patients receive care, is inadequate. It is believed that less than 20% of people with diabetes have their eyes routinely examined – although 32% of patients complain of vision difficulties.

Professor Levitt says, “This is unacceptable. We must improve the quality of care for patients with diabetes at primary care level in the public sector.

“Retinal screening programmes have the potential to prevent blindness and can help keep people employed and mobile for longer. It will also mean a significant cost saving for the Department of Health. In the future, with newer cameras and software, it is likely that this affordable intervention may become even less costly. But most importantly, no real monetary value can be given to preserving sight,” says Professor Levitt.

She adds, “Increasing access to this innovative screening and related treatment is pivotal for the growing numbers of people with diabetes, not only in South African but in the world. Even if only 65% of diabetic patients agree to screening and treatment, it will still be cost-effective.”

