

Heart disease research offers new interpretation of the 'spice of life'

Spices have been used in food and traditional medicine for millennia. But a new interpretation of 'SPICES' is coming to mitigate cardiovascular risk factors in carefully selected sites in parts of sub-Saharan Africa and Europe... the international research kind.



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Cardiovascular disease (CVD) is the leading cause of mortality worldwide, variably accounting for more than 50 % of all deaths in Europe and some three-quarters of those in developing countries. By 2030, it has been estimated that CVD will be responsible for more deaths than all infectious, nutritional, maternal and perinatal diseases in developing countries put together. And yet it is preventable.

Poor information and weak networks of primary care in developing countries mean patients with cardiovascular risk factors are not being diagnosed early enough to prevent the worst outcomes; heart attacks, strokes and circulatory disease leading to disability at best, and premature death, at worst. Not to mention the significant emotional and financial costs for families but also healthcare systems and society.

This is where the EU-backed SPICES project comes in. It was set up at the start of 2017 to put in place and evaluate comprehensive CVD prevention and control programmes in diverse settings. Two locations were chosen in sub-Saharan Africa; a rural and semi-urban community in a low-income country, Uganda, and a middle-income community in South Africa. In Europe, the project covers vulnerable groups in selected sites in high-income countries Belgium, France and the United Kingdom.

Interventions to prevent cardiovascular diseases have proven to work. So, the case for SPICES is strong. "Actions are possible at the community and on an individual level, both in

primary prevention (control of cardiovascular risk factors) and secondary prevention, but implementation to scale remains limited,” explains Hilde Bastiaens who is associate professor in the Faculty of Medicine at the University of Antwerp, which is coordinating the project. “So our main focus is ‘real-world’ implementation, looking at how we can scale up and support uptake of proven interventions to a larger group of people in different contexts.”

The team is focusing on implementation outcomes in key settings such as acceptability, adoption, feasibility and sustainability. At the same time effectiveness of the interventions, mainly on lifestyle behaviour change in these different contexts is also assessed. In the end, the international cooperation is expected to help the research team identify and compare the barriers and facilitators to better heart health across study contexts.

Baselines and benefits

To boost the chances of success in such initiatives, the World Health Organisation recommends the full involvement of patients/people, families, communities and health professionals. The best results come from when these parties all work together for the same purpose.

“This is why we are taking a participatory approach to the project, involving relevant stakeholders from the communities (local and regional/national) throughout the whole processes,” explains Prof. Bastiaens, the team leader.

To date, SPICES teams in Africa and Europe have carried out baseline research, including available literature reviews and a situational analysis – based on available regional figures and focus group discussions as well as individual interviews with stakeholders to understand healthcare and lifestyle practices in their respective locations. This process has helped to identify the chief on-site barriers and drivers of cardiovascular health and was the starting point of the so-called contextual implementation research protocols.

Vital international cooperation

Studying the situation in countries with different income levels is a key element in being able to develop cost-effective solutions tailored to the needs and means of the respective countries.

“Uganda is experiencing a major shift in causes of death from exclusively infectious diseases to a combination of communicable and non-communicable diseases, with CVD risk factors on the rise; and yet awareness and health system preparedness are sub-optimal,” says Geoffrey Musinguzi, SPICES project manager and principal investigator at Makerere University School of Public Health, Uganda. The project has a multi-tiered focus at the community level to boost awareness, screening and health promotion, and at the primary health facility level to strengthen diagnosis, care and management through task shifting and strategy sharing.

“International cooperation provides a platform for learning and reciprocal exchange, as well as the resources to contribute to CVD prevention in Mukono and Buikwe in Uganda,” says Dr Musinguzi. “The SPICES consortium is an excellent platform for this; we have learnt and continue to learn and exchange ideas, and we are aiming for the best results following this multi-country north-south collaboration.”

“As can be expected, large-scale international collaborations like ours can be challenging but rewarding,” adds Prof. Bastiaens. Site visits, training and knowledge-sharing are major components in the overall SPICES programme. “We are becoming a ‘learning community’ which has a positive impact on all the SPICES partners and will ultimately greatly benefit the communities we are working in.”

Project details

- Project acronym: **SPICES**
- Participants: **Belgium (Coordinator)**, France, South Africa, Uganda, UK
- Project N°: 733356
- Total costs: € 5 902 038

- EU contribution: € 5 902 038
- Duration: January 2017 to December 2021

See also

Project website:

<https://www.uantwerpen.be/en/projects/spices/>

Project details:

<https://cordis.europa.eu/project/rcn/207230/factsheet/en>

View the article online:

http://ec.europa.eu/research/infocentre/article_en.cfm?artid=50391

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