Scaling-up Packages of Interventions for Cardiovascular Disease Prevention in Selected Sites in Europe and Sub-Saharan Africa

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SPICES is an acronym that stands for Scaling-up Packages of Interventions for Cardiovascular Disease Prevention in selected sites in Europe and Sub-Saharan Africa. This project aims to implement and evaluate comprehensive cardiovascular disease prevention programmes in sites in Belgium, France, South Africa, Uganda and the United Kingdom. It is an implementation science project funded by the European Commission through the Horizon2020 research and innovation action.
In the Antwerp region, practice nurses in 5 GP group practices have been successfully trained in both profiling patients for their personal CVD risk and lifestyle coaching. During our participatory approach and the evaluation of the implementation process, the Antwerp SPICES Team has learned several lessons, and accordingly, the intervention was adapted in collaboration with the GP practices.

Lessons such as the supervision moments with a motivational interviewing expert to support the practice nurses in the coaching; the development of a manual for coaching and a specific patient recruitment poster/leaflet that is now used in all the practices. In the evaluation, we noted various facilitators within the GP practices including the support from the whole practice team and the match with the mission and vision of the practice.

Positive aspects, perceived by the GP practice team, included the training, the support of the SPICES team and the quality of the intervention program. Despite these positive evaluations and the clear interest of the practices in prevention, several barriers were experienced, like limited resources and time, language and communication problems and the recruitment of vulnerable people, which make it challenging for the GP practices. A prominent impact of SPICES has been the opportunity to extend prevention tasks within GP practices.
The Health information Kiosk, situated at a square in a vulnerable community, aims at increasing health literacy levels of both the people and the community partner organizations.

The kiosk offers a great opportunity to reach out to vulnerable people and integrate the SPICES CVD prevention activities. This low-threshold setting for health advice was set up in 2021 in close collaboration with the SPICES team and linked with several surrounding community organizations. It takes time to build trust, nevertheless a major success of the Kiosk so far is the prominence within the community.

The implementation and profiling of participants in the Health Kiosk has come to an end now. Profiling was organized with the support of partnering community organizations such as adult educational centres for reaching vulnerable people (LIGO). In collaboration with medical students, the SPICES team organized another profiling event in the Health Kiosk. These sessions will be regularly organized in the future. Currently, researchers of the SPICES team continue to look for opportunities and possibilities to sustain the health Kiosk in the Community.
A PhD in the bag!

SPICES Uganda Team

Rawlance Ndejjo, who coordinates the SPICES Project in Uganda successfully defended his PhD in Medical Sciences at the University of Antwerp on 22nd September 2021. Rawlance’s PhD was embedded within the SPICES project in Uganda and his thesis title was: Cardiovascular disease prevention in Mukono and Buikwe districts in Uganda: evidence to implementation. His supervisors were: Prof. Hilde Bastiaens (SPICES Belgium, University of Antwerp) and Dr. Geoffrey Musinguzi (SPICES Uganda - Makerere University/University of Antwerp) and Prof. Rhoda Wanyenze (SPICES Uganda - Makerere University). Congratulations Dr. Rawlance Ndejjo!

SPICES intervention rolls to the last cycle

As per the stepped wedge design of the SPICES Uganda project (the intervention is stepped up every six months and control sites eventually become intervention sites), intervention implementation rolled to the last cycle of implementation in June 2021.

This cycle commenced with 10-day health worker training on cardiovascular disease prevention and management with up to 58 health workers trained.

Additionally, five health centre IIs were provided with equipment to support screening and management of cardiovascular diseases. These facilities are: Kabanga, Nagojje and Kyabazaala in Mukono district and Njeru West and Wakisi in Buikwe district.

Rawlance (middle) poses for a photo with his supervisors Prof. Hilde Bastiaens (SPICES Belgium, University of Antwerp) and Dr. Geoffrey Musinguzi (SPICES Uganda - Makerere University/Univerist of Antwerp) and members of his examination committee: Prof. Veronique Verhoeven (extreme left) and Prof. Casas Ruiz (extreme right).
This was then followed by training of 20 community health workers within the new sites. Overall, over the SPICES project implementation period, a total of 366 health workers and 80 CHWs have received the training. Meanwhile, the usual project activities at the health facility (screening for CVD risk, care and management) and community (health promotion and profiling) levels have continued in all project sites.

A cross section of health workers during training at Kyabazala HC III.

Ministry of Health conducts monitoring visit to SPICES sites

In November, the SPICES Project hosted the Assistant Commissioner for Non-Communicable Diseases at the Ministry of Health, Dr. Gerald Mutungi, on a 3-day visit to assess implementation progress and engage with project implementers and beneficiaries. Dr. Mutungi visited several health facilities and communities that are recipients of the SPICES project and thanked the health workers and CHWs for their continued work to keep the intervention going. He expressed that as partners on the project, they were pleased with project implementation and are continuing to learn how such interventions can be adopted and scaled up in other areas.

Kenneth Sebuweera, a SPICES project community-based health promoter reviews data collected by community health workers during a feedback meeting in Wakisasi parish, Buikwe district.

The facility Data Clerk takes Dr. Gerald Mutungi (blue suit, seated) through his screening results at Nakifuma HC III in Mukono district as Dr. Geoffrey Musinguzi (standing), the SPICES Uganda Principal Investigator,
Rolling out CVD interventions in rural and peri-urban settings of South Africa

B M, Makgahlela, Nancy Malema, and Tholene Sodi

The COVID-19 pandemic has continued to disrupt the smooth running of the SPICES research project in South Africa. Despite this challenge, we have started rolling out the interventions in the participating clinics and local communities as from the beginning of August 2021. This has become possible after the government’s decision to ease some of the restrictions pertaining to COVID-19.

Professor Malema with the assistance of Mrs Kgotla, a professional nurse and SPICES PhD candidate, went on to re-train Community Health Workers (CHWs) on the intervention protocols from the 29 July - 12 August 2021. Upon conclusion of the re-training, cycle one interventions were rolled out from the 16th August to 13th September.

The intervention programme is being delivered in the homes of 60 participants who were found to be at moderate risk of developing CVD. An intervention tool was designed and is used to record all the interventions. To date, group health education regarding prevention of CVD is given at all the clinics.

Health workers are orientated on the INTERHEART Risk Assessment tool with the hope that it will be adopted and be used. Each clinic is allocated 2 days. Cycle 2 of interventions commenced in November 2021. The 3rd and last cycle started in January 2022. The SPICES research team has continued to hold regular meetings while disseminating some of the project work in academic peer reviewed journals. To date 4-peer reviewed journal articles and 2-book chapters have been published.
SPICES Sussex Completes Implementation Phase and Prepares to Showcase Project Outputs

At Sussex, the SPICES project is now at the end of the implementation phase with participants having completed the full 6 months coaching with Community Health Volunteers in December 2021. Currently, qualitative and quantitative data is being collected from project stakeholders such as participants, volunteers, community leaders and project staff members. These data will be analysed and written up into two primary outputs: (1) an implementation effectiveness paper, which will use the qualitative and quantitative post-intervention data to assess the impacts of the coaching intervention on the participants; and (2) a process evaluation of the project, which will use qualitative data collected from volunteers, key individuals, and staff members to understand the decision making and operational factors affecting the implementation of the SPICES Sussex project.

To promote the sustainability of the project, the Sussex team is working closely with the Sussex Health and Care Partnership’s Integrated Care System (ICS), a key regional public health authority which are part of NHS England. The partnership is aimed at setting up a pilot project which will see the SPICES infrastructure and volunteer base continue with a greater degree of integration with local health provision through primary care networks in the communities in which they operate. We hope that by working closely with local primary care networks we can improve the recruitment of participants and add community-based capacity for local health provision.
The project has also now completed the development stage of the healthyheartsproject.co.uk/ website; an m-health tool which users can use to check their CVD risk and to set new lifestyle goals.

This tools is at its evaluation stage which includes a qualitative study based on ‘Think Aloud’ methods to test for usability and acceptability, and quantitative study which collects survey data on heart health knowledge and awareness before and after the use of the website. In addition, the team is leading the production of a systematic review of risk communication literature, and a cross-cutting micro-case study analysis of the SPICES consortium.

Finally, perhaps the biggest news for the SPICES Sussex team has been the departure of Dr Catherine Topham who has left the team for a new post at the National Institute for Health Research within their Clinical Research Network. Catherine’s contribution to the SPICES Sussex team cannot be understated.

She was instrumental in setting up the implementation project by building and maintaining close links with the community organisations involved in the project and by producing and maintaining most of the materials that supported and enabled participants and volunteers in the coaching intervention.

Her farewell meal brought the team together at a Japanese restaurant in Brighton. This was the first time the full team had been in the same room together since February 2020. Although Catherine will be sorely missed by the team, her new office is in the same building that we all work in.

Farewell meal for Dr Catherine Topham (extreme right)
SPICES Nottingham team

The SPICES Nottingham study site presents an opportunity to supplement the NHS Health Check programme for the over 40s with community-based screening of CVD risk for all adults. The initial objective of the team was to improve people’s risk profiles and modify lifestyles; increase the proportion of people receiving appropriate CVD medication; and mitigate the number of people developing complications such as stroke and myocardial infarction.

By working pro-actively in communities we were able to test the usability of CVD risk profiling surveys for administration by non-clinical staff and volunteers, identifying CVD risk factors and providing personalised lifestyle counselling, with high risk individuals recommended to seek primary care support.
Screening was carried out in 30 community venues and two large city workplaces (Rolls-Royce plc and Nottingham City Council) with a total of 500 participants taking part in the study as well as senior stakeholder support. With the onset of COVID-19, the team remained resilient and explored opportunities to embed and sustain SPICES activities in vulnerable Nottingham neighbourhoods.

It should be noted that the global growth of CVD prevalence includes increasingly early onset of CVD morbidity and fully 10% of our Nottingham participants aged under 40 were measured as being at high risk compared to 16% of those aged 40 or over. Clearly there is room for a population-based approach to identifying CVD risk which is pro-actively offered to all adults.

Due to COVID 19 restrictions it was not possible to deliver the planned community-based lifestyle and behaviour coaching interventions which were to follow the initial round of risk profiling. Nevertheless, a series of individual risk reviews carried out by telephone during 2020 and early 2021 indicated that the community-based risk profiling and counselling programme was sufficient in itself to have motivated change and reduce measured CVD risk in 68% of participants who took part in the reviews, with 18% registering no change in risk, and 14% slightly increasing their risk. During COVID lockdown in Nottingham, many of our study participants took up walking and became more aware of the links between lifestyle and health.
In France, the SPICES project is carried out in “Pays Centre Ouest Bretagne” (COB), a rural setting in the centre of Brittany.

Currently, the 24-month data collection has been completed and data analysis is ongoing with the statistics unit of the University Hospital of “Centre Hospitalier Regional et Universitaire de Brest”. Despite the challenges of follow up due to COVID-19 restrictions, this site has been able to complete its follow up of participants. In addition, SPICES Brest has over the last four years made appearances in 16 newspaper articles, 2 local TV programmes, 1 local radio programme to showcase project activities, create awareness and recruit participants.

There has also been strong collaboration with all local politicians (mayors, parliamentarians, senators) of the Cob county as well as partnerships with all city halls that provided space for cardiovascular risk screening and data collection.
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EDITORS:
Prof. Hilde Bastiaens
Dr. Geoffrey Musinguzi
Associate Prof. Linda Gibson
Prof. Jean Yves Le Reste
Prof. Harm Van Marwijk
Prof. Tholene Sodi

PROF. HILDE BASTIAENS
Project Coordinator
University of Antwerp
Gouverneur Kinsbergen Centrum
Doornstraat 331
2610 Wilrijk
Belgium
hilde.bastiaens@uantwerpen.b

DR. GEOFREY MUSINGUZI
Project Manager
University of Antwerp
Building R
Universiteitsplein 1
2610 Wilrijk (Antwerp)
Belgium
mgeof@musph.ac.u

CONTRIBUTORS
SPICES teams in Uganda
South Africa
Belgium
France
United Kingdom

EDITOR-IN-CHIEF
Nchafack Almighty

GRAPHICS DESIGN
Ubangoh Loretha
@crowngraphix

Universiteit Antwerpen
NOTTINGHAM TRENt UNIVERSITY
Pomorska University of Gdański
Brighton and Sussex Medical School