

ComBaCaL is a five-year implementation research and health systems strengthening programme developing innovative solutions to non-communicable disease (NCD) care in the rural districts of Butha Buthe and Mokhotlong, Lesotho.

Diabetes, hypertension and other NCDs are the leading causes of disability and death worldwide. In sub-Saharan Africa, NCD mortality has overtaken HIV/AIDS mortality. Building on the success of HIV care, ComBaCaL is a collaborative programme between Lesotho and Switzerland that develops, tests and shares innovative approaches to expanding quality NCD care in rural Africa.



Midterm Progress Overview:

- 6,061** people screened for NCDs in the **baseline survey**
- 113** trained **village health workers** actively managing diabetes & hypertension clients
- 5,311** people in 100 cohort villages were **screened for diabetes**
- 3,339** people in 100 cohort villages were **screened for hypertension**
- 88** new **diabetes diagnoses**, **153** new **hypertension diagnoses** in 100 cohort villages
- 23** **health facilities** with updated training and expanded capacity for NCD care
- 8** **micro-enterprise projects** developed by ComBaCaL village health workers
- 8** **published articles, guidelines and reviews**, with many more in development

Bringing eHealth to village-based care

Village health workers are trained to offer hypertension and diabetes care using innovative digital tools for screening, diagnosis and treatment.



After being trained in diabetes and hypertension care, over 100 village health workers (VHWs) returned to their communities, where they enrolled 8,650 participants in a cohort study. An eHealth application with smart clinical algorithms designed by the ComBaCaL team supports the VHWs during the screening, diagnosis and treatment of diabetes and hypertension in a village. As of October 2023, VHWs in the 100 cohort study villages identified a total of 236 persons with diabetes, of which 88 were newly diagnosed. VHWs further identified 688 persons with hypertension, of which 153 were newly diagnosed.

This large-scale, cluster-randomized study evaluates which aspects of NCD chronic care can safely and effectively be task-shifted to VHWs. Participants in control villages are referred to a health centre for treatment initiation. In contrast, participants in the intervention arm receive care in the village from the VHW. The programme allows the VHWs to provide services in remote communities supported by the ComBaCaL eHealth application and under the supervision of healthcare providers of health centres and study teams.



Clinical research and scientific output

“There is a clear research gap when it comes to assessing innovative care models that support the scale-up of access to NCD prevention and care. Our aim is to close this gap.”

-Prof. Niklaus Labhardt

ComBaCaL strives to inform the community about improved interventions for NCDs throughout Lesotho, sub-Saharan Africa and beyond. Several articles, protocols, guidelines and scoping reviews have already been published which can be accessed at www.combacal.org and many more publications are in development. Researchers from the ComBaCaL team regularly share their findings through presentations and poster exhibitions at national symposia and international conferences.



Supporting NCD care at health facilities

Strengthening NCD care at all facilities in Butha-Buthe and Mokhotlong through a health system approach will increase access and improve health outcomes for people across the region.

The ComBaCaL team provides training, mentorship and supportive supervision on NCD care to the physicians and nurses at 20 health centres and 3 district hospitals. Capacity strengthening, infrastructure and medical equipment improve the quality of care provided to the communities of 23 health facilities in two districts. Newly developed cardiovascular risk factor and disease registries monitor the treatment outcomes and assist the two DHMTs in the programmatic supervision of diabetes and hypertension control programmes.

Micro-enterprise programme

Access to training, mentorship on how to establish a small business and interest-free loans for the VHWs create sustainable income opportunities beyond the ComBaCaL programme.



ComBaCaL aims to improve the long-term economic sustainability of VHWs by providing training, mentoring and financial support to enable them to develop small businesses and generate personal income. After completing the International Labour Organisation's 'Start Your Business' training, a pilot group of ten VHWs developed and proposed their business plans. Eight of these plans have already received a small interest-free loan: four egg production projects, three retail shops and one veterinary medicine supply shop. A total of 50 VHWs have now completed the training and will next develop their business plans. A dedicated micro-enterprise coordinator with a background in business management mentors and supervises the businesses grown and run by the VHWs.



Capacity strengthening

ComBaCaL supports the future of NCD care in Lesotho through training, internships and higher education for Basotho health professionals.



In addition to training village health workers and health facility staff, ComBaCaL also provides educational opportunities for Basotho health professionals and students. ComBaCaL supports the research work of nutrition, pharmacy, environmental health and nursing students from the National University of Lesotho - Faculty of Health Sciences to gain valuable field experience. Meanwhile, three Basotho health professionals are working towards their PhD in clinical research at the University of Basel in Switzerland.



ComBaCaL outlook: 2024 and beyond

Several key objectives will be completed over the next two and a half years, moving the programme further towards increased access, improved outcomes, and a better understanding of the methods best suited to bring care to remote communities.

- Continue supporting and monitoring diabetes/hypertension care at facilities
- Strengthen screening activities at 23 health facilities with an integrated one-stop approach for four diseases; HIV, TB, diabetes and hypertension
- Continue NCD mentorships and capacity strengthening
- Strengthen secondary-level NCD care in 3 hospitals
- Support DHMT-led review and supportive supervision of the NCD programme
- Continue monitoring of the ComBaCaL village cohort (100 villages where VHWs provide care for hypertension and diabetes)
- Explore the integration of HIV care into the ComBaCaL village cohort