



GACD

GLOBAL ALLIANCE FOR CHRONIC DISEASES
AN ALLIANCE OF HEALTH RESEARCH FUNDERS



GACD STORIES OF IMPACT

Case studies of implementation
research evidence to tackle NCDs



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Introduction

Foreword

At GACD, everything we do is driven by one powerful goal: to ensure our research creates a tangible, positive difference for people living with non-communicable diseases (NCDs) across the globe. We achieve this by strategically funding work with the highest potential to inform and transform national and international policy for NCD prevention and control in low- and middle-income countries (LMICs).

This compendium is a celebration of change. Inside, you will find a selection of case studies that bring GACD projects to life, shining a light on where evidence has truly become the engine driving necessary change. More than just results, these stories share vital insights into the 'how': what key ingredients, collaborations, and moments allowed these projects to take hold and create lasting impact in diverse communities.

These featured stories span various countries and NCDs, offering just a taste of the inspiring work underway. We encourage you to explore the full collection of case studies on our website: **www.gacd.org/our-impact/case-studies**

For those interested in the academic rigour behind the impact, all related publications can be found via GACD's interactive portal: **www.gacd.org/resources/publications**

Finally, I extend my gratitude to the dedicated GACD project teams. Thank you for your commitment to developing this evidence and for partnering with me to share these impactful stories.

Enjoy the read!

Margaret Bee
GACD Senior Impact & Policy Manager

About GACD

Non-communicable diseases (NCDs) are responsible for over 70% of all deaths globally, affecting people of all age groups, regions, and countries. Further, NCDs disproportionately affect people in low- and middle-income countries (LMICs). Cardiovascular diseases, cancer, chronic respiratory diseases, and diabetes account for 80% of all premature NCD deaths.

While many proven interventions against NCDs exist, there can be significant challenges in implementing these effectively in diverse settings and different contexts. With a focus on implementation research, Global Alliance for Chronic Diseases (GACD) seeks to provide the evidence necessary to reduce inequalities in coverage and outcome and support evidence-based policymaking in building programmes to enhance public health.

GACD brings together major international research funding agencies specifically to address the growing burden of NCDs in LMICs and in underserved groups experiencing health disparities such as Indigenous Populations, in high-income countries (HICs) by building evidence to inform national and international NCD policies and contribute to the achievement of the Sustainable Development Goals under section 3.4.

The GACD:

- Invests in impactful NCD implementation research;
- Builds implementation science capacity and capability in relation to NCDs;
- Facilitates collaborations and partnerships to support GACD investment and impact.

Since our launch in 2009, our Associate Member funding agencies have funded over 200 research projects in six different priority conditions, in addition to our calls focused on prevention in key life stages, healthy cities and management of multiple long term conditions.

The Associate Members are supported by a dedicated GACD staff team which is hosted at the Wellcome Trust.

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The Friendship Bench: Bridging Zimbabwe's mental health treatment gap

Globally, millions of people are suffering with mental health conditions and have no access to evidence-based interventions. The Friendship Bench (FB) is a successful programme that was developed in Zimbabwe in 2006 to bridge this gap. FB uses a task-shifting approach to support those dealing with “kufungisisa”, a term locally understood as an equivalent of anxiety and depression.

Community health workers (CHWs) who are employed by health authorities, are trained to deliver basic counselling and problem-solving therapy to support clients. They offer one-to-one counselling sessions, which take place on wooden benches near community clinics, ensuring accessible mental health support. Clients who need a higher level of care are referred to health care professionals at primary or tertiary care level.

A quantitative survey was conducted in three cities in Zimbabwe (Harare, Gweru and Chitungwiza) to assess aspects that determine the programme's quality and to identify barriers and enablers of success. Data was gathered through: Observations in 36 primary health clinics, interviews and focus group discussions (FGDs) with 152 key stakeholders, a stakeholder meeting to discuss preliminary results and foster knowledge exchange. Key stakeholders were the Harare, Gweru, Chitungwiza city health authorities, health care workers such as nurses, community health workers and their direct superiors, the district health promotion officers and service users.

Since 2016, City Health departments have overseen the Friendship Bench programme. Preliminary clinic visits were conducted to assess its performance and adoption and establish data collection methods. Findings revealed that smaller clinics achieved better reach and implementation outcomes with a higher uptake rate among screened clients compared to medium and large clinics. Adoption was measured by the presence of a functional bench and service availability.



Challenges included limited data on support sessions due to clients privacy concerns, low number of clients during visits and poor quality recordings. Process fidelity issues were noted, with some CHWs providing advice instead of using the problem-solving approach.

In general, programme effectiveness depended on the level of support received by the delivering agents and engagement from health authorities. Smaller clinics, where less differing demands were placed

on delivering agents and their supervisors, provided better support and served as key entry points. Clients were only referred to larger clinics for advanced care needs. To strengthen implementation, integrating FB data into the existing health information system was recommended for ongoing monitoring, quality assurance, and referrals.

The findings were shared at a meeting with 50 key stakeholders, and through 25 focus group discussions and interviews with 152 stakeholders, enablers were identified on programme adaptability, strong design, effective communication, and proven evidence of impact. A supportive learning climate and internal leadership were deemed essential, alongside structured incentives, clear goals, and performance feedback. To address these needs, feasible strategies were identified.

Champions were trained to advocate for the programme, an incentive and reward structure was introduced, and CHWs were integrated into clinical meetings to share insights. An implementation blueprint was developed to ensure applicability of recommendations. A participatory workshop refined implementation strategies, focusing on three core areas: sensitization and site preparedness, recruitment and training of staff, and

The programme has been adopted in the National Strategic Plan and has been rolled out nationwide since 2022, in collaboration with the Ministry of Health and Child Care (MoHCC). This expansion has provided access to mental health support for 775,680 clients. This initiative is supported by WHO's Special Initiative for Mental Health, with Zimbabwe selected as one of the participating countries.



programme implementation which included aspects such as community buy-in, client flow, monitoring and evaluation and stakeholder engagement.

This project was one of several Friendship Bench research initiatives conducted within the same time frame and results were aiming to influence policy. Insights from the project have been integrated in the Ministry of Health's strategies for improving mental health care. The FB programme has also contributed to policy change leading to the inclusion of mental health support within HIV programmes.

Beyond Zimbabwe, the Friendship Bench model has been adapted for different populations with ongoing research in South Africa, Malawi and Vietnam. The programme is also being implemented in the US, Canada, Colombia and Tanzania, expanding its impact globally.

This research was funded by the UK Medical Research Council under the Global Alliance for Chronic Diseases (GACD) Mental Health Research Programme.

For more information about this project, please contact Ricardo Araya, King's College London, UK or Ruth Verhey, Friendship Bench, Zimbabwe.

Integrating tobacco cessation within TB programmes in Pakistan, Bangladesh, and Nepal

Tuberculosis (TB) continues to be a substantial global health issue, with many TB patients living in Pakistan, Bangladesh, and Nepal. The high prevalence of tobacco smoking in these populations exacerbates the issue as TB patients who smoke are at higher risk of faster and more severe disease progression and have a greater likelihood of dying from TB.

Supporting TB patients to quit smoking can help them to recover from their TB, protect their families and live healthier lives. Although effective, evidenced-based interventions to help people quit smoking exist, their implementation across different health systems remains inconsistent.

The GACD-funded TB and Tobacco project sought to address this implementation gap and improve the health of TB patients through integrating smoking cessation interventions into routine TB care in Pakistan, Bangladesh, and Nepal.



All TB patients who smoked received behavioural support delivered by TB health workers. In addition, half received a smoking-cessation drug Cytisine while the other half received placebo. The research took place between November 2015 and October 2019.

Policy engagement activities took place in all three countries and brought together those involved in policy making for TB programmes to learn about the study's findings and discuss how to incorporate these within their policies and plans. The project aimed to engage with policymakers from the beginning but had different levels of success in each country.

The study found that short and simple counselling provided by a TB health worker in routine care helped almost a third of TB patients who smoked to quit, and that those who quit smoking had significantly better TB outcomes than those who didn't. Cytisine did not offer much additional benefit.

Embedding the research within TB programmes was a key implementation strategy, which worked well in Pakistan where members of the provincial and federal government were involved as researchers within the team. It was more challenging in Nepal due to the changing structures and personnel due to Federalisation. In Bangladesh the centralised nature of government and frequent turn-over within the National Tuberculosis Programme also raised challenges.

The project team engaged with the World Health Organization (WHO) at regional and global levels and brought together WHO TB staff and WHO tobacco control staff.

The project investigated the potential for scaling up the simple counselling intervention. This helped the project team to identify levers for change within the health system and to gain insights on what enabled impact. These findings coupled with detailed discussions with national TB programme staff helped the project team to identify the following health systems changes needed for scale up:

- Changing reporting forms to include tobacco;
- Adding training on cessation support to the routine TB programmes; and
- Revising TB policies.

The research has led to increased integration of tobacco cessation within National Tuberculosis Programmes in Pakistan, Bangladesh, and Nepal.

This has generated impact on policy, training, integration within routine care and surveillance at national and global levels:

POLICY

Inclusion of tobacco cessation support in Pakistan Chest Society's national TB clinical guidelines and Pakistan's national strategic plan.

TRAINING

Inclusion of tobacco cessation within national training guidelines in Nepal.

Ministry of Health and Family Welfare in Bangladesh committed to providing tobacco cessation training to TB health workers.

Across the three countries, 137 TB health workers have been trained in tobacco cessation using the project's training materials.

Following the end of the project, further health worker training has taken place within the TB programme in Bangladesh and Pakistan.

INTEGRATION IN ROUTINE TB CARE

Integration of tobacco cessation within routine care in all 121 TB clinics in Khyber Pakhtunkhwa Province in Pakistan.

TB PROGRAMME SURVEILLANCE

In Pakistan, the addition of tobacco smoking status to the routine TB recording system will remind health workers to ask all patients (est. 218,222 annually) about their tobacco use.

In Bangladesh, the National Tuberculosis Programme technical committee plan to include tobacco within TB surveillance.

In addition to national impact in all three countries, the research has led to global impact:

Inclusion of key messages from the study's behaviour support intervention within the WHO TB-Tobacco mHealth guide which is now being rolled out in Egypt and India.

Inclusion of the study's recommendation within the International Union against TB and Lung Diseases' white paper on the integration of tobacco within TB programmes.

This research was funded by the European Commission under the Global Alliance for Chronic Diseases (GACD) Lung Diseases Research Programme.

For more information about this project, please see the project website [<https://tbandtobacco.org/>] or contact Kamran Siddiqi, York University, United Kingdom.

Scaling up an mHealth-based school education programme to reduce salt intake in China

Excessive salt intake is the leading dietary risk factor for premature death and disability in China. Strategies such as setting maximum sodium targets and front-of-package labelling have proven effective in reducing salt intake, but these approaches are mainly suitable for pre-packaged food products. Although discretionary salt use during cooking or at the table remains the major source of dietary sodium in most countries, no effective and scalable programmes targeting this type of salt use have been successfully replicated across different regions or populations.

In China, 80% of dietary salt is added during cooking. The EduSaltS project seeks to assess the effectiveness and feasibility of an mHealth-based school-student-family health education platform, developed from the project team's previous "Small Hands Leading Big Hands" interventions (validated by randomized controlled trials of School-EduSalt in 2013-2014 and AppSalt in 2017-2019) and the WHO conceptual framework for developing a scaling-up strategy.

Featuring standardized, auto-delivered online and offline cartoon lessons, activities, and timely performance evaluations, the EduSaltS platform was implemented as an innovative primary school health education course from 2020 to 2023 in three cities in Northern, Central and Southern China.



The education programme covered 308 schools in the selected districts of the three cities, with all 1,644 grade 3 classes and 72,498 students and their families participating over two school terms. The registration rate and course completion rate reached 98.0% and 83.5%, respectively. Pre-post evaluations showed that salt reduction knowledge, attitudes, and behaviours increased by 25% among children and 15% among adults, with a reduction of 0.4g in salt intake among adults.

A parallel randomized controlled trial conducted demonstrated that the scale-up intervention reduced adult salt intake by 1g per day and lowered both systolic and diastolic blood pressure by more than 2 mmHg. These results strongly indicate that the EduSaltS platform is effective and scalable. If integrated into the national school education system, it could benefit the entire population.

Furthermore, the project activities have generated significant impacts on policy, practice, capacity building and multisectoral coordination:

POLICY INTEGRATION

During the 2023 and 2024 Steering Committee meeting it has been proposed that the innovative model of the EduSaltS project be integrated into the current national health education curricular, so that the school-based salt reduction intervention could be scaled up in the whole of China; and the representative of the Ministry of Education highly recognized the EduSaltS outputs, showing huge potential for policy integration into the national education system. Moreover, EduSaltS program has contributed to a policy brief document “Deepening the Action on Salt Reduction in China – CHRPS Strategies”, which has been submitted to the National Health Commission for China’s salt reduction policy improvement.

MULTISECTORAL COORDINATION

The local health and education authorities, the health facilities and schools have established a collaborative partnership demonstrating strong multi-sectoral collaboration which is essential to advance school-based health education programme in China. Through mobilizing stakeholders, EduSaltS has successfully explored an effective and efficient scale-up approach.

CAPACITY BUILDING

A great number of community health workers, schoolteachers and school chiefs from non-health sector have received knowledge on salt and health, leading to increased health awareness and behaviours among wider beneficiaries. Most importantly, the EduSaltS model has been presented as one of the best cases of setting-based health education and promotion for capacity building during the National Health Education and Health Promotion Conference in 2023, thus

making remarkable contribution to the public health capacity strengthening in China.

GLOBAL IMPACT

In 2021 the school-based salt reduction model has been recognized as one of the best practices by GACD and it featured in the BBC StoryWorks Facing Forward series, hosted by the NCD Alliance: *The cultural sensitivities of salt reduction* and as GACD case study *Reducing salt intake through a school-based education programme in China*. From 2020-2024, EduSaltS partners have facilitated hundreds of students to participate in the Global Art Competition organized by World Hypertension League to celebrate the World Hypertension Day. Partially due to the contribution of EduSaltS, The George Institute for Global Health, China was awarded 2024 Organizational Excellence Awards in Global Hypertension Control by the World Hypertension League. The successful scale-up of EduSaltS program will have major public health implications to many developing countries where dietary salt mainly comes from salt added during cooking or at the table.

The project partners will continue their efforts to ensure the sustainability and scalability of the EduSaltS system across the whole of China through high-level policy advocacy and programme integration into the existing national system. This would be of great significance for achieving China’s goal of reducing salt intake by 20% by 2030 and contribute to Healthy China Actions.

This research was funded by the UK Medical Research Council and the UK National Institute for Health and Care Research under the Global Alliance for Chronic Diseases (GACD) Scale Up Research Programme.

This project was co-led by Queen Mary University of London, The George Institute for Global Health (China), and Chinese Centre for Health Education.

For further information about this project, please contact Feng He, Queen Mary University of London, or Puhong Zhang, The George Institute for Global Health China.

Scaling up the Community Health Assessment Program in the Philippines (CHAP-P): Preventing hypertension and diabetes through primary healthcare

The Philippines, like many low- and middle-income countries (LMICs), experience high prevalence rates of non-communicable diseases (NCDs) especially hypertension, diabetes and their associated complications. About 90% of the population are at risk of developing these conditions, posing significant challenges to the health system. Due to geographical and cultural diversity, access to health services and programmes to prevent NCDs is challenging.

The Community Health Assessment Program in the Philippines (CHAP-P), tested through a large cluster randomized controlled trial, was proven to be effective in reducing the risks of hypertension and diabetes in selected rural communities.

Building on this success, the CHAP-P research team secured further funding to scale-up this programme to the Zamboanga Peninsula Region in Southwestern Philippines. This scale-up effort was also supported by contributions from the local government (including human resources and funding for medications).

The Community Health Assessment Program in the Philippines (CHAP-P) is a community-based screening and health promotion initiative, aimed at improving access to essential health services and reducing the burden of NCDs through a health system-based intervention.



It has been adapted from a Canadian model, focusing on the assessment and education of NCDs, especially cardiovascular risk factors and diabetes. CHAP-P operates through bi-monthly sessions facilitated by trained community volunteers ('Barangay' Health Workers). During these sessions, community members attend walk-in health risk assessments, blood pressure and blood sugar screenings, and receive health education. Participants are also referred for medical consultation or to community health resources as needed.

Similar to the Philippines Department of Health's Essential Non-communicable Disease Programme (PhilPEN), CHAP-P also provides screening, education, and referrals without requiring specialist involvement. However, it incorporates a clinical decision support system through a CHAP-P smart database to facilitate risk assessment and personalized health education for participants. Currently, the CHAP-P research team and leaders from the Philippine's Department of Health are working towards the integration of the CHAP-P and PhilPEN programme to enhance the effectiveness and sustainability of both initiatives.

CHAP-P focuses on community dwelling older adults (aged 40 and above) in rural municipalities. Sessions are held in Barangay (Village) Health Stations or other accessible community-based locations. For the scale-up project, the CHAP-P was implemented in three provinces of the Zamboanga Peninsula Region: Zamboanga Sibugay, Zamboanga del Norte, and Zamboanga del Sur. Five public health personnel, including community volunteers and rural health nurses and midwives, from each 'barangay' were trained to implement CHAP-P in their respective areas. A total of about 1,500 public health personnel were trained to implement CHAP-P.



The scale-up project began in April 2019 and has included a range of activities to ensure effective implementation and evaluation. These include stakeholder engagement, interviews to assess willingness and readiness, health personnel training, fidelity checks, acceptability and appropriateness assessments, randomized community trials, and sustainability assessments. The project has been granted an extension until 2026 to complete its research and implementation goals, due to delays caused by the COVID-19 pandemic, which limited community engagements to virtual platforms and delayed training of health personnel.



Policymakers were actively engaged throughout the project ensuring strong collaboration at all stages. Stakeholders, including leaders from Regional Department of Health, were involved in conceptualizing and planning of the programme, including how the CHAP-P could be effectively adapted to the Philippine health delivery system. Key implementers such as the Barangay Health Workers were also involved in project implementation. By the end of the project, knowledge translation efforts included presenting the results to other regions, and to the regional and provincial health offices. Early and active participation from the policymakers at all levels created a sense of shared-ownership which was instrumental in successfully scaling-up CHAP-P across the region.

The intervention improved access to crucial health services such as screening, health education and referral for hypertension and diabetes.

This offered affordable and appropriate care for at-risk individuals in the community. CHAP-P's scalability and the involvement of community health workers offer a cost-effective strategy for NCD management, especially in low-resourced areas with the potential to positively impact health systems and outcomes. The programme required some initial investment and organizational changes, but evidence suggests that CHAP-P is likely to lead to significant long-term benefits.

CHAP-P achieved significant individual and community-level outcomes. Participants experienced improved clinical outcomes, including reductions in blood sugar, blood pressure, and weight/BMI. Patient behaviors and knowledge of NCDs and their complications improved, along with increased medication adherence.

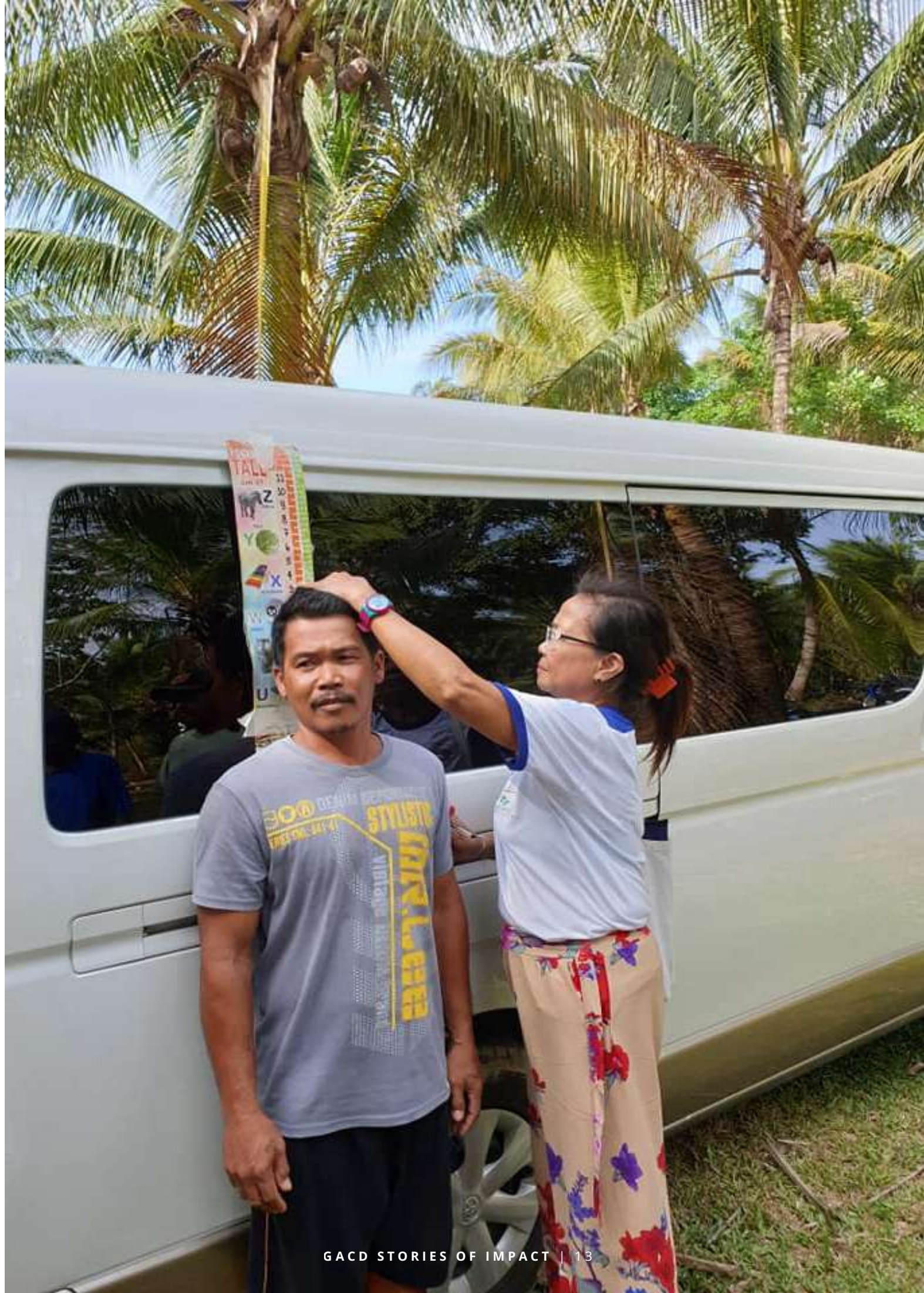
At the community level, volunteers were equipped and engaged in providing NCD services at the grassroots level. In addition, the lowest organizational level of the health system (Barangay Council) developed an initiative to address their NCD issues through fund allocation for medications and resources.

CHAP-P was effective in improving community level outcomes related to hypertension, diabetes, and cardiovascular risk factors. Locally, these impacts can reduce the burden of NCDs by lowering morbidity and mortality rates and associated health costs. Rural areas where CHAP-P was proven to be effective represented typical rural communities in the Philippines, where healthcare access is more limited. The scalability outcomes show its potential impact to benefit other rural communities in the Philippines. The project team intends to share the results with the National Office of the Department of Health (DOH) in the Philippines and to propose the scale-up of CHAP-P nationally.

The best practices guides developed during the scale-up process can be used as a framework for national implementation. This could significantly reduce the burden of hypertension and diabetes in rural communities nationwide. Furthermore, CHAP-P can be adapted to other LMICs with similar settings and healthcare infrastructure, using the guides and best practices developed during the CHAP-P scale up in the Philippines.

This research was funded by the Canadian Institutes of Health Research under the Global Alliance for Chronic Diseases (GACD) Scale Up Research Programme.

For more information about this project, please see the project's website [fammed.mcmaster.ca/research/research-programs-projects/projects/chap-p/] or contact Gina Agarwal, McMaster University, Canada.



Strengthening collaboration between healthcare providers and communities for hypertension and diabetes prevention and control in Vietnam

As one of the world's rapidly ageing populations, Vietnam faces many challenges in community healthcare, especially regarding noncommunicable diseases (NCDs), despite its relatively low per capita income. In 2019, NCDs accounted for 73.7% of Vietnam's total disease burden and mortality nationwide. In response, the Vietnamese government has diligently developed a comprehensive national strategy to address the escalating prevalence of NCDs, emphasizing the critical roles of primary healthcare (PHC) facilities and active community engagement in improving individuals' access to NCD care.

Among NCDs, hypertension and diabetes mellitus are the most prevalent chronic illnesses. However, rates of detection, treatment, and access to healthcare services for managing these conditions remain notably restricted. According to the Ministry of Health in Vietnam, a significant portion—up to 56.9% of those diagnosed with hypertension and nearly 70% with diabetes mellitus remains undiagnosed. Only 13.6% of those diagnosed with hypertension and 28.9% of those diagnosed with diabetes mellitus are managed at healthcare facilities.

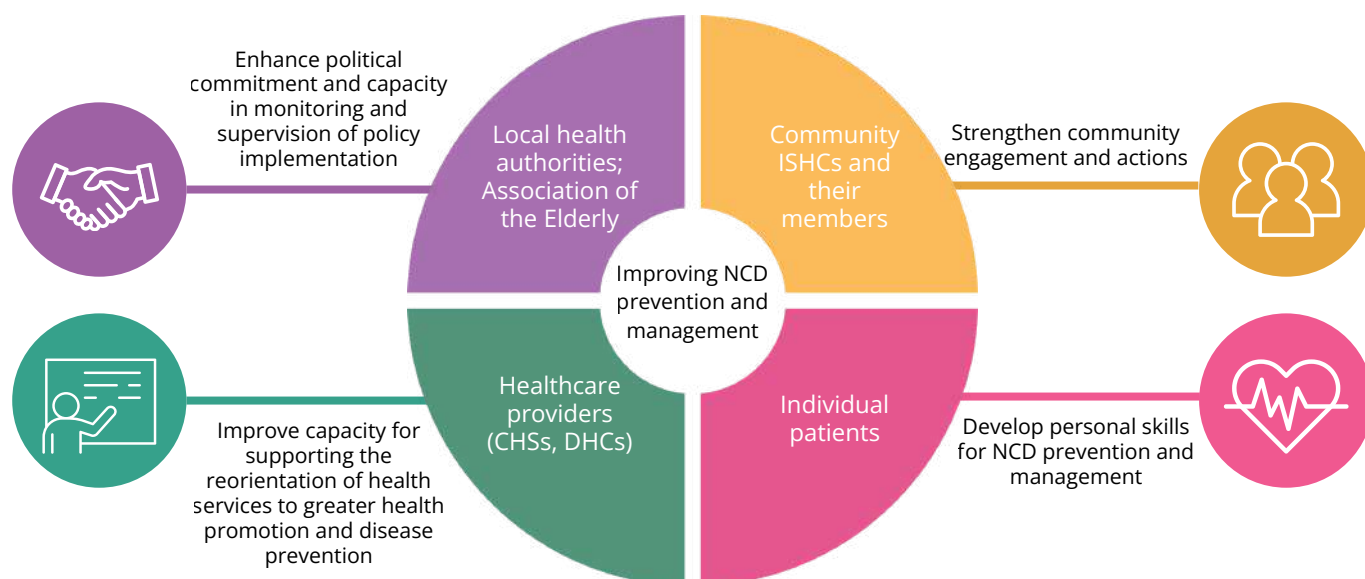
Given this scenario, the imperative lies in the development and expansive adoption of community-based care models, which represent a crucial strategy in extending the reach of NCD treatment within the community.

The Scaling-Up NCD Interventions in South-East Asia (SUNI-SEA) project developed a comprehensive approach, linking community groups, primary health care facilities and decision-makers in a joint programme to improve the prevention and management of NCDs. The project was implemented in collaboration with the Ministry of Health between 1 January 2019 and 30 June 2023.

The basic concept is that shifting hospital-based care for NCDs to community-based health promotion and screening combined with primary healthcare-based early diagnosis and treatment is effective and saves costs. It will improve quality of life of citizens, increase productivity of society and save costs for medical care for complications related to NCDs.

The SUNI-SEA team in Vietnam analysed the needs of the country for enabling the comprehensive approach for community health and primary healthcare and developed an action plan for four target groups as shown in the figure on the following page.





In Vietnam, a community-based intervention model has been put in place. It promotes a coordinative and collaborative approach between Commune Health Stations (CHSs) in communes, wards, and towns and Intergenerational Self-Help Clubs (ISHCs) in hypertension and diabetes mellitus prevention and management activities. ISHCs are equipped with the knowledge and skills to conduct bi-annual screening for hypertension and diabetes mellitus risk factors, provide health education, classify risk levels, and refer individuals at high risk to healthcare facilities. The clubs promote healthy lifestyles and self-care practice of their members.

Health staff from primary healthcare facilities, specifically CHSs and district health centres (DHCs), are trained to enhance their knowledge about hypertension and diabetes mellitus. The facilities strengthen their connection with ISHCs through screening and communication sessions about NCDs, held at the clubs. They also receive high-risk community members who are advised by the ISHCs to consult a health facility and provide diagnosis and regular management for those with a confirmed diagnosis.

The Vietnam National and Provincial Associations of the Elderly, a semi-governmental organisation supported by HelpAge International in Vietnam, engaged with the Department of Health from the outset of the project to propose the collaboration to strengthen support for health care activities in ISHCs. In August 2022, the Ninh Binh Association of the Elderly and the Department of Health officially signed a Joint Collaboration Agreement outlining specific roles and tasks, aiming to scale up the healthcare activities for ISHC members and other community members. The agreement includes commitments to provide screening, health education, and monthly monitoring for NCD risk factors.

The Ninh Binh Association of the Elderly also partnered with the Department of Population and Family Planning for communication sessions at the ISHCs, organising media events and resource mobilisation from the private sector.

Although the SUNI-SEA project has come to an end, other organisations replicate the model and establish new ISHCs across the province, in accordance with the Government of Vietnam's Decision 1336 to



“Before joining the club, I had never received a health check-up. At the club screening event, I was detected to be at high risk of hypertension and was referred to the commune health station. I was diagnosed with hypertension and given a monthly prescription of medicine. The club health volunteers, and commune health station staff advised me to exercise, follow a healthy diet and take medicines regularly, eat more fruits and drink a lot of water. Thanks to the club, my hypertension was detected early, and I started treatment. My condition has now improved.”

Ms Ninh Thi Hoa, Member of
Lien Huy Intergenerational Self-
Help Club, in Ninh Binh province

replicate the ISHC model and Decision 1579 on the health care programme for older people (2021-2030). The Government of Vietnam is expanding this model to 6,000 new ISHCs in the coming years.

There are still gaps that need to be addressed. For primary healthcare facilities, coordination will be more effective if financial mechanisms are put in place to encourage health workers to strengthen screening, prevention, and management of NCDs in their community. Access to medicines to treat hypertension and some co-morbidities must be improved. At the national level, negotiations for a Joint Collaboration Agreement between Vietnam Association of the Elderly and Ministry of Health are necessary to promote practice in the communities and are ongoing. At the community level, formal connections between ISHCs, the Association of the Elderly and the health sector must be established.

SUNI-SEA presents a future outlook in a policy brief. This brief presents the synergy model in Vietnam, intervention activities and results, gaps in the implementation and recommendations to strengthen synergies between primary healthcare providers and communities for the prevention and control of hypertension and diabetes.

This research was funded by the European Commission under the Global Alliance for Chronic Diseases (GACD) Scale Up Research Programme.

For further information about this project, please see the project website [www.suni-sea.org] or contact Jaap Koot at the University Medical Center in Groningen, the Netherlands.



Empowering people with diabetes in South Africa through the Group Empowerment and Training (GREAT) project

Type 2 diabetes affects the lives of one in four South Africans over the age of 45, placing a heavy burden on families and communities. Beyond the costs of routine care, diabetes complications such as stroke, heart attacks, kidney failure, nerve damage, amputations and blindness perpetuate cycles of poverty and strain already overburdened health services. Today, type 2 diabetes is the leading cause of death in South Africa.

The South African National Department of Health acknowledges that gaps in disease prevention, early diagnosis, adequate treatment, counselling and patient education on diabetes contribute to this crisis. The National Strategic Plan for the prevention and control of NCDs sets targets to improve the early detection and treatment of NCDs: 90% of adults will know if they have raised blood glucose, 60% of those with raised blood glucose will receive intervention and 50% of those receiving an intervention will achieve control of their diabetes.

However, primary care clinics in South Africa are overwhelmed with patients who experience long waiting times and brief consultations with clinicians who may have poor communication skills and lack expertise in lifestyle and behaviour modification. This limits the provision of effective patient education and counselling.

The Group Empowerment and Training (GREAT) for diabetes programme was developed to fill this gap through the empowerment of men and women living with diabetes who are dependent on the public sector primary care services in South Africa.

Previous research found that GREAT for diabetes is a feasible and cost-effective intervention in South Africa and between 2019 and 2023, a scale-up project was launched to test the implementation of GREAT for diabetes across South Africa.



Supported by the South African National Department of Health who found the initiative to be “appropriate, acceptable, and aligned with national policy”, GREAT was implemented in five of the nine provinces. Engagement with provincial policymakers was more challenging and varied between the provinces.

The programme consists of four group sessions led by trained facilitators, each lasting 60-90 minutes with 10-15 patients with type 2 diabetes. Group sessions foster solidarity and encourage self-management of diabetes and the four sessions within the programme each focus on a different aspect of diabetes care including:

- Understanding your diagnosis
- Medication use
- Lifestyle changes
- Preventing complications

The facilitators of group sessions for patients are trained through three-day workshops. To encourage attendance, the group sessions are scheduled on the same day as the patient’s usual appointment and dispensing of medication is prioritised for those who attend the GREAT for diabetes session.

When the COVID-19 pandemic delayed implementation and in-person activities for roughly two years, the project team developed a WhatsApp Chatbot that continued to provide accessible content for self-management of type 2 diabetes.

The GREAT for diabetes approach enhances the relationship between the healthcare workers and the patients through a model based on a guiding style of communication that was derived from motivational interviewing. The guiding style emphasises a collaborative approach with ideas evoked from the patients, empathetic engagement and respect for people’s choices and control; as opposed to directive, inflexible, and prescriptive instructions.

Among the patients who attended the GREAT for diabetes sessions, there was an improvement in knowledge, diet, and physical activity, as well as an improved control of blood glucose and blood pressure. It has been reported that patients have taken what they learned in group sessions back to their communities and families. When patients are empowered to self-manage their diabetes, the burden on the health system is reduced and patients can work and provide for their families.

When patients are empowered to self-manage their diabetes, the burden on the health system is reduced and patients can work and provide for their families.

Of the five provinces where GREAT for diabetes was implemented, the greatest success was in the Western Cape, where implementation and scale up has been sustained.

In the Metro Health Services of the Western Cape, all four substructures have now adopted GREAT for diabetes and two have incorporated it into their operational plans, meaning that implementation is monitored and reported on regularly.

In large part, the success of this project in the Western Cape can be attributed to a close collaboration between researchers, the Provincial Department of Health and the local district management teams. The Western Cape district health services have been supportive of the GREAT for diabetes initiative and some districts have provided funding to print materials and run training. Sustaining implementation in other provinces after the disruption of COVID-19 was challenging.



Although provincial managers in Northern Cape and KwaZulu-Natal continue to espouse support, this has not led to sustained implementation in these provinces.

The results informed a programme theory, which describes the key factors influencing successful implementation of GREAT for diabetes. This programme theory can be used to guide further scale up in each province and scale out to provinces that have not yet implemented GREAT for diabetes. The National Department of Health expressed their desire to see GREAT for diabetes incorporated into the model of care in each province, but as provinces have autonomy over their own budgets national scale up will require further buy-in from provincial policymakers.

In the future, the project hopes to engage community health workers to promote prevention of type 2 diabetes. The programme may be adapted to support the initiation of insulin. The ultimate goal of GREAT for diabetes is to integrate group empowerment and training sessions into the model of care until it is adopted on an institutional level in all primary care facilities.

This research was funded by the South African Medical Research Council under the Global Alliance for Chronic Diseases (GACD) Scale Up Research Programme. Implementation was supported by the World Diabetes Foundation.

For more information about this project, please see the project website [<https://great.sun.ac.za/>] or contact Robert Mash or Darcelle Schouw, Stellenbosch University, South Africa.



Transforming mental health: Standardising the treatment, prevention, and management of depression in China

Depression, characterised by persistent low mood or loss of pleasure or interest in activities for long periods of time, has become a major public health problem especially in low- and middle-income countries (LMICs). Early screening for depressive symptoms and timely identification of depressive disorders may improve health outcomes for affected individuals and the cost-effectiveness of mental health programmes.

The Depression Cohort in China (DCC) was conducted in 80 primary care centers in Shenzhen by a team of researchers from Sun Yat-Sen University, University of Toronto and Shenzhen Nanshan Center for Chronic Disease Control. The project which ran from 2018 to 2023, explored the standardisation of prevention and treatment of depression including depression screening, detection, and treatment for local residents. The project established a depression cohort of more than 5,000 residents through primary care centers. Among these, about 4,000 were sub-threshold depressed (i.e. participants with depressive symptoms (PHQ-9>5) without meeting the diagnostic criteria of a major depressive episode).

During the 12-month follow-up period after the baseline screening, 5.97% of these sub-threshold depressed individuals were first diagnosed with Major Depressive Disorder (MDD).

A key aim of the project was to integrate the research findings into mental health policy. The project team collaborated with policymakers from the project's inception, regularly reporting project progress to the public health department, sharing findings with mental health policymakers, and discussing how they can be integrated into the subsequent health policies and plans. This close connection encouraged policymakers to pay attention to the importance of depression prevention and treatment in communities and led to an agreement that the project's evidence should be translated into actionable policy.



In 2021, based on the preliminary findings of the project, the Health Commission in Shenzhen Nanshan District officially issued a policy document named 'A Protocol of Community-based Depression Prevention and Treatment'.

The objectives of the protocol included:

- Establishing community-based models of depression prevention and treatment including screening, referral, and regular follow-up
- Using digital tools for interventions and management
- Cultivating the general practitioners about depression recognition
- Establishing a system for mental health crisis intervention
- Mental health knowledge dissemination

This policy change has had a significant impact by expanding project coverage, training healthcare providers, integrating screening into routine care, and digital management.

- **Expanding project coverage:** After the policy document was issued, the project established and promoted a community-based model for depression prevention and treatment in Shenzhen Nanshan District. Over 80 primary care centers joined the project to conduct the depression screening.
- **Training:** The project held an academic forum on 'Depression in the community' for five consecutive years, training over 400 general practitioners to screen for depression effectively.
- **Integrating screening into routine care:** General practitioners selectively screen and refer individuals with sub-threshold depressive symptoms during routine visits (about 100,000 individuals annually).
- **Digital management:** The project developed a smartphone application to manage all the routine activities including enrollment screening, follow

-up management and referrals. The project also developed a Wechat mini-programme to provide Internet-based Cognitive Behavioral Therapy (ICBT).

The project has led to provincial and national impact: 'The application and promotion of the Community Model of Depression Prevention and Treatment' model was promoted in Guangdong Province, which led to the introduction of governmental policies, and the adoption the model in many general hospitals.

The implementation of the project attracted the attention of the National Center for Mental Health (a national-level technical institution focused on mental health under the National Health Commission) and was awarded the 'Excellent case of the construction of national psychological service system'. The National Center for Mental Health included the project as a reference for the construction of 'Depression community population cohort' in China's '2030 Brain Initiative', with the project team participating in the construction of the cohort as one of the partners. The community-based model of depression prevention and treatment will be introduced nationwide.

Upon completion of the GACD grant, the project secured additional funding from the local government in Guangdong Province. This funding allows for the continued implementation of community-based depression apply it to various populations.

This research was funded by the Canadian Institutes of Health Research and the National Natural Science Foundation of China under the Global Alliance for Chronic Disease (GACD) Mental Health Research Programme.

For more information about this project, please contact Ciyong Lu, Sun Yat-Sen University or Roger S. McIntyre, University of Toronto or see the project website: https://www.sznsmbby.cn/Category_1505/Index.aspx

Assessing the WHO strategy to eliminate Cervical Cancer: Insights from the PRESCRIP-TEC Project

Cervical cancer remains a global health challenge. With an estimated 604,000 new cases and 342,000 deaths worldwide in 2020, cervical cancer is the fourth most frequently diagnosed cancer and the fourth leading cause of death from cancer among women. Most cases and deaths occur in low- and middle-income countries (LMICs).

Infection with high-risk human papillomavirus (hrHPV) is the main risk factor for the development of cervical cancer. HrHPV testing offers higher sensitivity compared to Visual Inspection of the cervix with Acetic acid (VIA) and cytology. The option of self-sampling for hrHPV testing has the potential to increase uptake of cervical cancer screening through reducing socioeconomic, cultural and logistical barriers to participation in screening. The World Health Organization (WHO) recommends hrHPV testing (either self-sampled or provider-collected) as the primary screening test.



The Prevention and Screening Innovation Project – Towards Elimination of Cervical Cancer (PRESCRIP-TEC) was developed in alignment with the WHO strategy for eliminating cervical cancer. Aimed at providing evidence for the feasibility of this strategy and supporting the WHO call to action, the initiative was implemented in Bangladesh, India, Uganda, and the Slovak Republic from February 2021 until January 2024, with continued efforts in India until November 2024.

The project used hrHPV testing through self-collected sampling as the primary screening tool, followed by VIA in Asia and Africa, or Pap smear cytology in Europe. There was a direct treatment of pre-cancerous lesions or referred women for further treatment if needed. The team also validated an Artificial Intelligence Decisions Support System (AI-DSS), which aimed to reduce inter- and intra-observer variation in VIA. A communication strategy was developed to sensitise women to perform HPV testing and attend follow-up screening if needed.

The project performed studies to analyse individual and health systems factors contributing to uptake of the screening and performed a cost effectiveness analysis.

To raise awareness and encourage women to perform HPV testing and attend follow-up screenings, a comprehensive communication strategy was developed.

Studies were conducted to analyze individual and health system factors affecting screening uptake, and a cost-effectiveness analysis was performed.

Community sensitisation has been implemented, by reaching out to local decision makers, health officials, local government organisations, as well as individual women and men through meetings, personal contacts, and social media. Government organisations were closely involved in the development and implementation of the project. There was also close contact with the International Agency for Cancer Research to share experiences.

The Artificial Intelligence Decision Support System (AI-DSS) device has been validated in India, Bangladesh and Uganda.

Important lessons from the PRESCRIP-TEC project are:

UNDERSTAND THE LOCAL CONTEXT

The HPV prevalence rate varies considerably from 2% in rural Asia, to 6% in Europe and over 20% in Africa. Prevalence is even higher in specific groups and is around 30% in women living with HIV (WLHIV) or sex workers. This means that the public health problem is not equally spread globally. When it comes to priority setting, it may be relevant to start with specific groups in countries (WLHIV and sex workers) and high-prevalence countries first, when addressing the elimination of cervical cancer as public health problem.

Research in PRESCRIP-TEC showed that decision-making about participation in cervical cancer screening in many cultures is not with the women (alone), but often together with family members, especially husbands or mothers-in-law. In the poorest and lowest educated groups other decision-makers in the household may even decide instead of the women involved. In communication about the

importance of cervical cancer screening it is essential to approach the decision-makers in the household as well. Especially in remote rural areas establishing personal contacts, using traditional means of communication, is the best way to sensitise women and their families.



INNOVATE APPROACHES IN USING HRHPV TESTS

The home-based self-collected hrHPV test is a very successful approach for achieving high uptake of cervical cancer screening. The project reached over 90% uptake of tests. In all four countries, PRESCRIP-TEC engaged community volunteers for distributing and collecting tests. The engagement of community health volunteers, who are trusted, and who are part of the community, helps to convince women to take the test. Their work can reduce the workload of professional health workers.

Although hrHPV testing is the preferred option as initial cervical cancer screening test, at this moment in time, it is difficult for most low- and middle-income countries to implement this screening tool in primary healthcare (PHC). hrHPV testing requires laboratories which are too sophisticated for resource-constrained settings (electricity, constant temperature, qualified staff). In addition, the present test is too expensive to be affordable for most countries. The prices of hrHPV tests must come down considerably, to less than US\$ 15 per test. There is a challenge for the industry to develop a cheap point-of-care HPV test, in analogy of the HIV test that has been developed. Only under these conditions of cheaper and easier testing, national HPV screening programmes are feasible.

FOLLOW-UP AFTER HRHPV TESTING

The follow-up by VIA or Pap-smear after initial HPV testing is important for early detection of pre-cancerous lesions. The PRESCRIP-TEC achieved a 70% follow-up. Follow-up requires women to come to a PHC facility, and is more demanding, in terms of time and costs. Financial barriers were important obstacles, especially in poorer families, where the husband or mother-in-law decides. It is therefore important to improve access to primary healthcare.

Direct treatment when pre-cancerous lesions are found during VIA, is important. It saves women time and costs. This ensures a high uptake of treatment of pre-cancerous lesions. However, it means that all clinics where cervical cancer screening is performed, must be equipped with machines for ablative treatment. This requires an investment, and supplies, as well as maintenance costs. In the PRESCRIP-TEC project the costs were around US\$ 5 per women treated.



INVEST IN TECHNOLOGY

Artificial Intelligence Decision Support System during VIA is a promising technology. The project has shown that it is feasible under resource-constrained settings. However, it requires good training of staff, as taking high quality pictures suitable for the AI algorithm is not easy. The validation of the algorithm developed by Manipal Academy of Higher Education in India is not yet concluded, but with further developments AI will contribute to quality assurance and task shifting in cervical cancer screening.

IMPROVE KNOWLEDGE AND SKILLS OF HEALTH WORKERS

For cervical cancer screening programmes, it is important to have qualified staff in place, capable of performing VIA (or Pap smear). VIA is an investigation with high intra- and inter-observer variation, and therefore should be performed by personnel with experience and practical knowledge. Turn-over of staff in some of the PRESCRIP-TEC research sites affected the quality of VIA. If the screening is integrated into regular health services, regular supervision should take place, and regular refresher courses are important. With the current technology remote consultation by gynaecologists is an option, as was applied in the project. Quality assurance is important in the cervical cancer screening programme.

WHO STRATEGY

The WHO cervical cancer screening strategy is cost-effective in terms of life years saved, but not affordable for most low- and middle-income countries. Therefore, costs must come down. This can partially be achieved by economies of scale once screening is implemented country wide. Once it is implemented at a large scale, unit costs will come down. Costs of community sensitisation can be reduced when screening is fully integrated in regular healthcare, and the population is more knowledgeable (demand creation). Community health volunteers are very helpful and relatively cheap in the strategy. As mentioned above, cheaper costs of HPV tests will contribute to affordability as well. Eventually, the AI-DSS can contribute to cost reduction by task shifting.

The PRESCRIP-TEC project has shown that indeed the WHO strategy towards elimination of cervical cancer as public health problem is a viable strategy.

This research was funded by the European Commission under the Global Alliance for Chronic Diseases (GACD) Cancer Research Programme and the Ministry of Science and Technology, Department of Biomedical Technology in India.

For further information about this project, please see the project's website [<https://prescriptec.org>] or contact Jaap Koot at the University Medical Center in Groningen, the Netherlands.



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