

## Tenth GACD Funding Call – Strengthening Health Systems

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### Title

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Implementation research addressing strategies to strengthen health systems for equitable high-quality care and health outcomes in the context of non-communicable diseases.

### Introduction

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The tenth Global Alliance for Chronic Diseases (GACD) funding call will focus on **implementation research** addressing strategies for strengthening of **health systems** to improve equity in high quality care and health outcomes and reduce the prevalence and impact of **NCDs** in low- and middle-income countries (LMICs) and/or in underserved populations experiencing health disparities such as Indigenous Populations, in high-income countries (HICs).

**Note: Words and phrases in bold are defined in the glossary at the end of this document.**

### Specific challenge

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Chronic non-communicable diseases (NCDs) have become the leading cause of mortality, morbidity and disability globally. They have a significant detrimental impact both on the lives of the affected individual as well as their families and societies and undermine any ambition for a nation's economic growth (Murphy 2020). According to the latest Global Burden of Disease and Injury analysis, the sustained high burden of NCDs suggests that prevention and management together with health system strengthening will continue to be crucial policy priorities in the years to come (GBD 2021 2024).

Health systems in many countries have not kept pace with the rapid emergence of NCDs, that require costly long-term care and treatment. Resilient, fit for purpose health systems have an important role to play in the fight against NCDs.

An optimal health system should provide high-quality, safe, equitable, accessible healthcare, that reflects the needs of the population and enables the integration of healthcare across the care continuum; encompassing prevention, screening, diagnosis and long-term management of NCDs (Kruk 2017). While health systems across the world struggle with these challenges, this is a particular problem in LMICs that have relatively overburdened, poorly resourced and fragile health systems (Beaglehole 2008, Oleribe 2019, Aissaoui 2022, Kruk 2018, Ruano 2021, Siqueira 2021, Yip 2015) that struggle to cope with the burden of NCDs. Health inequalities, such as those linked to geographical location, socioeconomic status, sex and/or gender, are often accentuated by structural and/or systemic weaknesses such as lack of staff and appropriate medicines.

The increasing burden of NCDs on healthcare systems has spurred a greater interest in exploring strategies to tackle these conditions (Yip 2015, Zimlichman 2021) including a move from a healthcare system focussed on disease and hospital-based care, to a more holistic model, involving communities and **primary care**, and focussed on maintaining health (Hunter 2023). Fostering equity in health systems as a whole and across the care continuum is essential (Alebachew 2015, Berman 2019, Kruk 2018) and may require a transformation within the WHO defined building blocks of health systems: leadership and governance, service delivery, financing, workforce, medical products and technologies, and/or health information systems (see the **WHO framework**).

The WHO has produced a series of recommendations for strengthening health systems, to improve capacity and services to tackle NCDs, with an eye to understanding how the service improvement will be scaled up system-wide (these can be found in the [WHO NCD best buys and other recommendations for the prevention and control of noncommunicable diseases](#)). These include interventions addressing the integration of and access to care, screening, access to medicines and technologies, **task shifting** and [digital health interventions](#). Other **evidence-based** interventions for strengthening health systems to tackle NCDs have also been reported (Ganju 2020).

Implementing these strategies while retaining a focus on equity is challenging and health systems need to account for geographical disparities as well as reach communities that have traditionally suffered health inequalities (de Graft-Aikins 2014, Shrestha 2022). Equity in health requires that resources and processes are designed to promote equalisation of health outcomes for populations experiencing health disparities, to ensure similar health outcomes for all of society. Health equity is achieved when everyone can attain their full potential for health and well-being.

Evidence for how to strengthen health systems to improve services ability to tackle NCDs and ensure equitable health outcomes is emerging, mostly from research in HICs. However, implementing equity-oriented interventions for transformation and/or strengthening of health systems remains challenging and largely unexplored in underserved populations, especially in LMICs. Providing evidence on implementation strategies that can enable effective adaptation and scaling of programmes will be critical to improving survival and quality of life; as well as reducing disability, the burden of caretaking on (typically female) family members and costs of healthcare falling on households.

Applicants to the current funding call are therefore invited to propose appropriately designed and targeted **implementation research** to support health system transformation and/or strengthening using evidence-based interventions that can be adapted to, and implemented in, LMICs and populations experiencing health disparities to encourage equitable health outcomes and decrease the burden of NCDs.

## Expected impacts of this call

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The projects funded under this call will collectively:

- contribute to the [United Nations Sustainable Development Goal 3.4 to reduce premature mortality from NCDs by one third by 2030](#);
- address implementation of strategies to strengthen health systems that will:
  - expand the availability of effective, equitable, efficient, integrated, **patient-centred**, safe, and timely care for patients living with NCDs;
  - promote equitable health outcomes;
  - equitably promote the early prevention, risk reduction, and timely diagnosis of NCDs
  - decrease the fragmentation of care for patients living with NCDs, and ensure continuity of care across all stages of disease progression including prevention;
  - reduce health inequalities, in particular those linked to geographical location, socioeconomic status, sex and/or gender, race and/or ethnicity, age, disability, incapacity to self-advocate and other social and structural factors at both the local and global levels;
  - improve quality of life across the life course and extend healthy life expectancy;
  - provide evidence and recommendations to national programmes and policies;
  - inform health service providers, policy, and/or other decision makers on the effective adaptation and/or scaling up of interventions at local, regional, and national levels; and
  - improve local capacity for **implementation research**, data collection and harmonisation, and stakeholder engagement for strategies aiming to promote equitable transformation and/or strengthening of health systems to tackle NCDs.

## Scope

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### Key requirements

The aim of this call is to fund **implementation research** that will generate evidence about strategies to strengthen health systems in LMICs and/or underserved populations experiencing health disparities, including Indigenous populations in HICs.

Please note that the funding agencies participating in this call have specific requirements regarding the scope and location of projects. Applicants are advised to carefully review the [agency-specific information on the GACD call webpage](#) before submitting a proposal.

Applicants must:

- Select one or more **evidence-based** interventions (or complex interventions) focussed on building equity-orientated health systems change to tackle the growing burden of chronic conditions, including NCDs. Applicants should justify the choice of intervention(s) and provide existing evidence of the intervention's effectiveness, cost-effectiveness, sustainability, scalability and potential for long-term health and other impacts (and in what context this evidence has been generated).
- The GACD recognises that the evidence underpinning strategies to transform and/or strengthen health systems is still emerging, particularly in LMICs. It may be important to undertake formative research as a part of the project to support readiness for implementation. This requires selection of an appropriate implementation research design such as effectiveness-implementation hybrid designs (for more information about hybrid designs see [Curran et al 2012](#)).
- Explore the implementation of these intervention(s) for a selected study population(s) based in one or more LMICs, and/or underserved populations experiencing health disparities, including Indigenous populations, in HICs, taking into account the unique social, political, economic, and cultural context(s) in which the study will take place. Applicants should justify why any adaptation will not compromise the known effectiveness of the selected intervention(s);
- Provide a research plan using validated implementation research frameworks and hybrid designs;
- Have an appropriate strategy for measuring implementation research outcomes and real-world effectiveness indicators;
- Specifically address equity, ensuring that an equity perspective is adopted from the start of the project, in particular with regards to health equity and the principles of **Universal Health Coverage**;
- Engage an appropriately expert and skilled research team which can ensure a suitable multidisciplinary approach and that demonstrates equitable partnership and shared leadership between HIC-LMIC, and/or non-Indigenous–Indigenous members of the project team and external stakeholders through a clear governance strategy;
- Provide a stakeholder engagement strategy with evidence of support/engagement from key stakeholders for delivering patient-centred care and a pathway to sustain the proposed intervention (if proven effective) after the funding from the GACD grant ends;
- Provide opportunities for NCD focussed implementation research capacity building for early career researchers and team members from lower resourced environments, such as LMICs or Indigenous communities.
- Ensure meaningful involvement of early career team members, including at least one early career member as a co-investigator.
- Participate in, and contribute to, the **GACD Research Network**. At minimum, budget for two project team members to attend the three-day Annual Scientific Meeting – an in-person knowledge sharing event (location varies annually) – for each year of the project.
- Consider the ethical implications of the research, following the principles of **contextual equipoise**, as defined by Seward et al (Seward 2020), to ensure that implementation strategies will effectively

deliver the evidence-based practice in a new context.

- Adhere to the principles of the [Lusaka Agenda](#), to support intentional, robust and inclusive analysis and learning through health systems and implementation research, to inform and guide effective implementation of the Agenda at different levels.

In addition, applicants are encouraged (though not required) to:

- use mixed methods to answer research questions;
- explore how to best implement digital technology interventions;
  - In July 2021, the GACD held a workshop focusing on best practices for planning and delivering sustainable and equitable digital health interventions for NCDs in LMICs and Indigenous communities. [A summary report from the digital health workshop, which may assist with proposal planning, is available here.](#)
- explain how the team will minimise their environmental footprint when conducting this research project.

The following types of projects will NOT be funded:

- proposals with the primary aim of informing the development and/or selection of an intervention for a given context, where the implementation component will be explored in a future project (i.e. standalone feasibility projects);
- studies that cannot feasibly be completed in the life cycle of the grant (typically limited to four to five years, depending on the funding agency);
- epidemiological cohorts;
- etiological work, mechanistic, or epidemiological research, unless an essential component of a focused study to develop implementation research approaches;
- clinical trials, validation studies, or intervention efficacy studies for a new or established pharmacological agent or behavioural intervention;

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### Study population

The GACD aims to address health equity in LMICs and underserved populations in HICs, including certain Indigenous populations (please note that funding agencies have specific geographical requirements for the study population; see the call webpage for more information). The study population may include the general population, people with one or more existing NCDs, those currently without NCDs, or a combination of both. The study population may also include patients with NCDs and chronic infectious disease(s) (e.g., studies that focus on integrating NCD management into an HIV or tuberculosis clinic).

With regard to NCDs, applicants are encouraged to explore any chronic non-communicable condition (or combination of conditions), including mental health disorders, neurological disorders and sleep disorders.

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### Study design

Study teams should develop an **implementation research** proposal to assess health equity-oriented interventions with a focus on NCDs, that aim to equitably strengthen health systems. Interventions should address all aspects of a health system that are appropriate to ensuring successful outcomes.

Proposals are expected to use an appropriate research design and framework, such as feasibility studies, cluster randomised control trials (cRCTs), before and after studies, and additional implementation science classifications of study designs (e.g. hybrid designs).

The GACD do not limit applicants to any particular design; however, a validated implementation research framework must underpin the study.

For more information regarding selection of implementation research frameworks, please see the [GACD e-hub resources](#) and the [Fogarty International Centre Toolkit: Overcoming Barriers to Implementation in Global Health](#).

Examples of frameworks include (this list is not exclusive):

- Consolidated Framework for Implementation Research (CFIR)
- the context enhanced (RE-AIM) Reach, Effectiveness, Adoption, Implementation, Maintenance)
- Practical Robust Implementation and Sustainability Model (PRISM) frameworks.

Proposals would be expected to generate evidence that is of direct relevance to policymakers, communities and practitioners. Projects will require a strategy to include the relevant policy makers, local authorities, as well as other stakeholders such as community groups, or other individuals or organizations involved in the implementation of the intervention, with co-creation from the development of the project through to the knowledge translation phase. Project partners should be engaged from the beginning to contribute to the sustainability of the intervention after the end of project. Proposals must demonstrate sustainability of the strategy, beyond the lifespan of the project.

Proposals must outline a plan for the pathway to impact, or the ability to sustain interventions following the period of implementation, especially for projects that focus on structural change interventions.

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### Specific considerations for applications to a GACD funding call

Applications to GACD funding calls must consider the following:

- Implementation Research Focus
- Implementation research capacity building
- Outcome measures
- Health equity
- Sex and gender-responsive and intersectional analyses
- Working with disadvantaged populations
- Stakeholder engagement
- Equitable research partnerships
- Climate change and environmental sustainability
- Guidance for digital health interventions
- Use of Artificial Intelligence
- Compliance with international standards and best practices

For more information, please take a look at the [guidance on our website](#).

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### Assessment

GACD run a two-step review process; stage one proposals are checked, then assessed by our members of our independent peer review panel, who provide scores and comments to our funding agencies. Agencies then review the comments and scores for each proposal and create a shortlist. All proposals receive anonymized feedback from the review process.

Shortlisted proposals are invited to submit a more detailed, stage two proposal, which may also include a brief response to peer review comments. Stage two proposals are subsequently reviewed and discussed at our in-person peer review panel meeting and final scores provided to funding agencies.

For more information regarding peer review and scoring criteria, please take a look at [our peer review processes webpage](#).

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## Glossary

Term	Definition
Contextual equipoise	As opposed to clinical equipoise (genuine uncertainty within the expert medical community about the efficacy or effectiveness of the preferred treatment), Contextual equipoise requires genuine uncertainty as to whether the implementation strategies will effectively deliver the EBP in a new context. This concept helps inform ethical implications for implementation research in low- and middle-income countries that uses randomized controlled trials (RCTs). It involves considering how context shapes the mechanisms that lead to outcomes, and whether a control group is needed to evaluate a particular implementation mechanism. It also involves assessing the certainty of evidence to justify an RCT (see Seward 2020 for a fuller explanation).
Equity/Equitable	<p>The WHO defines equity is the absence of unfair, avoidable or remediable differences among groups of people, whether those groups are defined socially, economically, demographically, or geographically or by other dimensions of inequality (e.g. sex, gender, ethnicity, disability, or sexual orientation). Health is a fundamental human right.</p> <p>Health equity is achieved when everyone can attain their full potential for health and well-being (<a href="https://www.who.int/health-topics/health-equity#tab=tab_1">https://www.who.int/health-topics/health-equity#tab=tab_1</a>).</p>
Evidence based interventions	Evidence-based interventions (EBI) are defined as practices by which the provider's decision is backed by the objective data from research: this can include case studies or clinical trials for example.
GACD Research Network	<p>The GACD Research Network comprises everyone working on, or contributing to, an active or completed GACD project.</p> <p>The aims of GACD facilitating the Research Network are to:</p> <ul style="list-style-type: none"> <li>▪ Support project teams to work together effectively;</li> <li>▪ Identify common approaches and areas of collective interest;</li> <li>▪ Provide a platform for members to share knowledge and best practice;</li> <li>▪ Increase the impact of Research Programmes and the Research Network as a whole; and</li> <li>▪ Collaborate on joint initiatives and activities.</li> </ul> <p><a href="#">More information about the GACD Research Network is available here</a></p>
Health Systems	<p>Within the political and institutional framework of each country, a health system is the ensemble of all public and private organisations, institutions, and resources mandated to improve, maintain restore health (WHO, 2008). These are the organizations, people and actions, whose primary intent is to promote, restore or maintain health, and prevent disease. This includes efforts to influence determinants of health as well as more direct health-improving activities (WHO 1998). Health systems are complex and include formal healthcare delivery systems (both public and private) as well as communities, individuals and policymakers.</p> <p>Integral to health systems are factors such as prevention programs, service delivery, health workforce, health information systems, access to essential, good quality medicines, financing, and leadership/governance). Common elements in virtually all health systems are <b>primary healthcare</b> and <u>public health</u> measures (WHO 2007).</p>

Health System Strengthening:	Improving the six health system building blocks and managing their interactions in ways that achieve more equitable and sustained improvements across health services and health outcomes (WHO, 2007). This requires going beyond more limited health system support activities, to include managing the interactions between and among the building blocks, and the call for equitable and sustained improvements across health services (Chee et al, 2013).
Implementation research	<p>Implementation research is the study of methods to promote the systematic uptake of research findings and other evidence-based strategies into routine practice, and, hence, to improve the quality and effectiveness of health services and care. The primary aim of an implementation research project is to explore how to improve access to, and uptake of, a proven intervention by the people who need it, with greater speed, fidelity, equity, efficiency, cost-effectiveness, and with attention to affordability, safety, sustainability, effectivity, and quality. Further information on implementation research methodologies and frameworks can be found on the GACD <a href="#">Implementation Science e-Hub</a>.</p> <p>Questions addressed by implementation research include:</p> <ul style="list-style-type: none"> <li>▪ Which evidence-based policy or intervention is best for a new context or a target group?</li> <li>▪ What is the best way to implement it?</li> <li>▪ How can the target population be reached?</li> <li>▪ What factors might affect implementation and adoption?</li> <li>▪ How can uptake and health outcomes be improved?</li> <li>▪ Is the intervention cost-effective, affordable, and acceptable from the health system's, health care providers', patients', and/or other end users' perspectives?</li> <li>▪ How can the policies or programmes best be sustained and scaled up?</li> </ul>
Implementation research outcomes	These include implementation outcomes ( <i>e.g.</i> , acceptability, adoption, appropriateness, costs, feasibility, fidelity, penetration, and sustainability); service outcomes ( <i>e.g.</i> , efficiency, safety, effectiveness, equity, patient-centeredness, and timeliness); and client outcomes ( <i>e.g.</i> , satisfaction, function, and symptomology).
Integrated care	The management and delivery of health services so that people receive a continuum of health promotion, disease prevention, diagnosis, treatment, disease management, rehabilitation and palliative care services through the different functions, activities and sites of care within the health system (WHO and UNICEF, 2020). While the details of the definition of integrated care management (also commonly known as coordinated care management or seamless management) vary in the literature, it is commonly used to describe patient-centred care that is comprehensive and regular, rather than fragmented and episodic. In the context of this grant call, we use this term to describe care that moves away from older models of treating each chronic disease within an individual patient as a separate, distinct condition, and that focus on reacting to health crises rather than improving whole-person health throughout the life course (WHO 2016).
Intersectional	In the context of health research, intersectional analytical frameworks examine how social processes ( <i>e.g.</i> , classism, racism, ageism, ableism, <i>etc.</i> ) and social identity factors ( <i>e.g.</i> , gender, class, race, age, disability status, <i>etc.</i> ) interact to impact health outcomes.

Lusaka Agenda	<p>Developed by the Future of Global Health Initiatives (FGHI), the <a href="#">Lusaka Agenda</a> aims to provide a foundation for coordinated action between Global Health Initiatives (GHIs), through five key shifts:</p> <ol style="list-style-type: none"> <li>1. Make a stronger contribution to primary health care (PHC) by effectively strengthening systems for health</li> <li>2. Play a catalytic role towards sustainable, domestically-financed health services and public health functions</li> <li>3. Strengthen joint approaches for achieving equity in health outcomes</li> <li>4. Achieve strategic and operational coherence</li> <li>5. Coordinate approaches to products, research and development (R&amp;D), and regional manufacturing to address market and policy failures in global health.</li> </ol>
NCD (chronic non-communicable condition)	NCDs include (but are not limited to) diabetes, hypertension, cardiovascular disease, respiratory diseases, musculoskeletal conditions, certain cancers, autoimmune conditions, haematological disorders, sleep disorders, neurological disorders and mental illnesses.
Patient-centred	Patient-centred care emphasises treating patients with dignity and respect and including them in decisions about their health care. This is also referred to as ‘person-centred care.’
Primary Health Care	A whole-of-society approach to health that aims to maximise the level and distribution of health and well-being through three components: (a) primary care and essential public health functions as the core of integrated health services; (b) multisectoral policy and action; and (c) empowered people and communities. (WHO and UNICEF, 2020).
Real world effectiveness	Evidence of the benefit of an intervention in a setting similar to that where the intervention will ultimately be offered, <i>i.e.</i> , outside of the rigid environment of a randomised controlled or other trial with strict inclusion and exclusion criteria.
Stakeholders	<p>Stakeholders include anyone who is directly involved with or impacted by the GACD research project, anyone who might use the findings from GACD research projects to directly influence health policy or programmes, and the beneficiaries of such policies and programmes. Specific examples include:</p> <ul style="list-style-type: none"> <li>▪ the population targeted by the research, including research participants, NCD patients, and their families and carers;</li> <li>▪ actors engaged in the research beyond the research team, such as health facility staff, community workers, educational facility staff, civil society groups, and non-governmental organisations;</li> <li>▪ users of the research findings, inclusive of the above and health system and health service providers; and</li> <li>▪ practice and policy influencers and makers.</li> </ul>
Stakeholder engagement	<p>The process and action of identifying the appropriate people, groups, and organisations, involving them throughout the research process, responding to their input, and ensuring they can make use of the findings when the project is complete. Stakeholder engagement is critical to the success of implementation research because it:</p> <ul style="list-style-type: none"> <li>▪ ensures a common recognition of priority issues;</li> <li>▪ acknowledges that researchers and stakeholders may ask different questions and have different perspectives on what evidence is most useful;</li> <li>▪ improves the sustainability of projects and interventions beyond the grant</li> </ul>

	<p>life cycle;</p> <ul style="list-style-type: none"> <li>▪ increases buy-in for implementation of interventions;</li> <li>▪ improves opportunities for scaleup of interventions;</li> <li>▪ facilitates evidence-informed decision-making; and</li> <li>▪ increases transparency and facilitates mutual accountability.</li> </ul>
Task shifting	<p>Task shifting involves the redistribution of tasks among health workforce teams. Specific tasks may be moved, where appropriate, from highly qualified health workers to health workers with shorter training and fewer qualifications in order to make more efficient use of the available human resources for health.</p>
Universal Health Coverage	<p>Universal Health Coverage requires that all people have access to the full range of quality health services they need, when and where they need them, without financial hardship. It covers the full continuum of essential health services, from health promotion to prevention, treatment, rehabilitation and palliative care across the life course (WHO, 2023). Universal Health Coverage means that all individuals, families and communities are able to access quality health services, when and where they need them, without incurring financial hardship. Such services should be available across the full continuum of essential health services, from health promotion to prevention, treatment, rehabilitation and palliative care.</p> <p>For universal health coverage to work requires skilled health workers providing quality, patient-centred care and policymakers committed to investing in universal health coverage. The universal health care should aim to prevent and treat disease and illness and improve well-being and quality of life.</p> <p>See the <a href="#">WHO Fact Sheet on Universal Health Coverage</a> for more information.</p>
WHO framework	<p>The WHO have developed a framework, which sets goals and provides a monitoring and evaluation framework for national health systems and health-system performance (WHO, 2007). The WHO framework describes the elements of health systems in terms of Building Blocks:</p> <ul style="list-style-type: none"> <li>▪ Leadership and governance.</li> <li>▪ Service delivery</li> <li>▪ Health system financing</li> <li>▪ Health workforce</li> <li>▪ Medical products, vaccines and technologies</li> <li>▪ Health information systems.</li> </ul> <p>Several studies have used this analytical framework to study the impacts of interventions to strengthen and/or transform health systems and their performance (Obermann et al., 2016; Rakmawati et al., 2019).</p>
WHO PEN	<p><a href="#">WHO Package of Essential Noncommunicable Diseases Interventions</a> (WHO PEN) support implementation of very cost-effective interventions through an integrated care approach.</p>

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