Ninth GACD Funding Call

Title

Implementation research for management of multiple long-term conditions in the context of Non-Communicable Diseases (MLTC NCDs)

Introduction

The ninth Global Alliance for Chronic Diseases (GACD) funding call will focus on **implementation research** that aims to improve the availability of effective, equitable, efficient, integrated, **patient-centred**, safe, and timely care for people living with **multiple long-term conditions including non-communicable diseases (MLTC NCD**, also known as **NCD multimorbidity)** in low- and middle-income countries (LMICs) and/or in disadvantaged 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

MLTC NCD refers to the co-occurrence of multiple chronic conditions, at least one of which is an NCD. Chronic NCDs include cardiovascular disease, respiratory diseases, certain cancers, musculoskeletal disorders, diabetes, hypertension, haematological disorders, sleep disorders, and mental illness. The high prevalence of MLTC NCD is projected to rise with the ageing world population and the increasing burden of NCDs. MLTC NCD has a profound impact on patients, and is associated with premature death, physical disability, substance abuse, poor quality of life, depression, and financial difficulties from high costs of care. It is also associated with difficulties in adherence to and high rates of adverse effects from treatment with multiple medications. In addition, due to poor health and the complexity of managing their conditions, patients with MLTC NCD are high utilisers of health care, straining already over-burdened health care systems, especially in low-resourced contexts.

Addressing MLTC NCD demands a shift from fragmented models of care, that treat individual health issues separately as they occur, to a more holistic **integrated care** model that provides a whole person focus on health management. In keeping with the principles of **Universal Health Coverage**, the World Health Organization advocates that health systems move towards offering a continuum of quality NCD preventative, diagnostic, curative, rehabilitative, and palliative care services, that are available and accessible to all, independent of economic circumstances.

Evidence for how to manage MLTC NCD is emerging, mostly from research in HICs. This evidence suggests that primary healthcare, integrated and coordinated care, patient-centred interventions, digital health technology, and optimised medication therapy are key to improved management of MLTC NCD. However, implementing **patient-centred** strategies for treating MLTC NCD remains challenging and largely unexplored in disadvantaged contexts, especially in LMICs. Adapting and scaling such models is critical to improving quality of life; reducing disability; reducing the burden of caretaking on (typically female) family members and reducing health system costs.

Applicants to the current funding call are invited to explore how such interventions can be adapted to, and implemented in, disadvantaged contexts.

Expected impacts of this call

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;
- decrease the fragmentation of care for patients living with multiple chronic conditions, and ensure continuity of care across all stages of disease progression;
- expand the availability of effective, equitable, efficient, integrated, **patient-centred**, safe, and timely care for patients living with MLTC NCD;
- reduce health inequities; and
- improve local capacity for **implementation research**, data collection and harmonisation, and stakeholder engagement for MLTC NCD management.

Scope

Key requirements

The aim of this call is to fund **implementation research** that will generate evidence about when, for whom, and under what circumstances, **patient-centred** approaches can improve **integrated care** for patients with MLTC NCD in LMICs and/or for patients in disadvantaged populations, including certain 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) known to promote integrated management of chronic conditions, including NCDs**.** Applicants should justify the choice of intervention(s) and provide evidence of the intervention's effectiveness, acceptability, feasibility, and potential for long-term health and other impacts. The GACD recognises that the evidence for how to manage MLTC NCD is still emerging, particularly in LMICs. A limited period of testing the effectiveness of an intervention that your team has adapted for local implementation is therefore usually appropriate.
- Explore the implementation of these intervention(s) for a selected study population(s) based in one or more LMICs, and/or disadvantaged or 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 or hybrid designs;
- Have an appropriate strategy for measuring implementation research outcomes and real-world effectiveness outcomes and indicators;
- Specifically address 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 after the funding from the GACD grant ends;

- Provide opportunities for 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.

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

- use mixed methods to answer research questions;
- adopt a **life course approach,** adapting the intervention to one or more key life stage(s) critical for reducing the onset or progression of MLTC NCD;
- 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:

- projects focused on primary prevention of NCDs or other chronic conditions;
- 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;
- 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;
- Some, but not all agencies will accept proposals focusing on interventions that use pharmacological agents and/or biomedical devices. Proposals focussing on these types of interventions must show evidence of their effectiveness (including affordability) in low-resource contexts.

Study population

The GACD aims to address health equity in LMICs and disadvantaged 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 patients with existing MLTC NCD, or existing NCDs (*e.g.*, studies focusing on rolling out screening services for multiple NCDs). The study population may also include patients with chronic infectious disease(s) (*e.g.,* studies that focus on integrating NCD management into an HIV or tuberculosis clinic) or a mixture of both.

Study design

Study teams should develop an **implementation research** proposal to assess **patient-centred** interventions focused on patient management or self-management or, interventions that transform communities, clinical practice, and/or health systems.

The following are potential interventions or strategies that applicants may consider in their implementation plan (please note that this is not an exhaustive list):

- Strategies for improving MLTC NCD identification, stratification/staging, management, and/or monitoring such as investigating strategies for adapting and implementing the protocol(s) described in the WHO Package of Essential NCD Interventions (**WHO PEN**) that address MLTC NCD management. For example, projects may focus on integrating NCD care into clinics that typically focus on the management of infectious diseases, such as HIV or tuberculosis clinics, or the integration of NCD care into maternal and child health clinics;
- Strategies to streamline and improve quality of care among individuals with MLTC NCD to reduce fragmentation of services, including task-sharing and/or the use of clinical decision-making tools;
- Strategies that optimise appropriate medication and (non-pharmacological) therapeutic prescribing, adherence, and/or reduced drug interactions/ adverse effects;
- Interventions that improve transitions through the health system, from community to primary to tertiary care and beyond, such as to home care or hospice;
- Health behavioural change interventions that target different risk factor clusters (e.g., exercise, nutrition, tobacco, alcohol and substance abuse).

It is expected that projects will focus on management of patients with existing MLTC NCD and will not focus on prevention of MLTC NCD (though projects focusing on the secondary prevention of increased severity of existing NCDs through risk factor management are welcome). Projects that focus on screening initiatives should focus specifically on screening for MLTC NCD and must also investigate strategies for the timely management or referral of identified cases.

Applicants must describe the evidence that demonstrates the intervention is effective and justify why the intervention is likely to also be effective in the selected study population(s). Ideally, evidence of the intervention's **real-world effectiveness** will be supported by a well-conducted systematic review where available. However, the GACD recognises that the evidence for how to manage MLTC NCD is still emerging, particularly in LMICs. Using an implementation hybrid design in testing the effectiveness of an intervention that your team has adapted for local implementation is therefore usually appropriate.

The GACD do not limit applicants to any particular design for testing effectiveness of the intervention; however, a *validated* implementation research framework must underpin the study.

For more information regarding selection of implementation research frameworks, please see the Fogarty International Centre Toolkit: Overcoming Barriers to Implementation in Global Health.

Outcome measures

The proposal's primary outcome measures must be **implementation research outcomes** to assess MLTC NCD. With regard to MLTC NCD, applicants are encouraged to explore any combination of chronic conditions, including mental health disorders and sleep disorders. The specific combination of conditions should be justified using local or regional epidemiological data about their co-occurrence. Outcome measures should appropriately address implementation tackling MLTC NCD, and not focus on one condition. Applicants must also include appropriate interim outcomes and consider the feasibility of health outcomes.

Proposals should also contain a strategy for measuring other secondary outcomes (or proxy outcomes) that demonstrate the intervention's **real-world effectiveness** in the local context and target populations. To

improve data standardisation, wherever feasible applicants are encouraged to use measures developed by the GACD for monitoring patient-centred MLTC NCD outcomes in LMICs. Other health or non-health outcome measures, especially those identified as important by patient participants and/or critical for advancing **Universal Health Coverage**, are also welcome.

Health equity

Universal Health Coverage advocates for the availability of quality affordable health, across the life course, for everyone. Poverty, racism, ethnic discrimination, and other inequities are directly associated with reduced potential for equitable access to quality care. All projects should consider the social determinants of health and discuss their potential impact on the effective implementation of the intervention(s). If there is a focus on a particular population (*e.g.*, gender, race and/or ethnicity), then the reason for this should be justified.

In order to promote health equity, studies should aim to address differences in intervention access, uptake, and effectiveness in socially disadvantaged groups and develop strategies for reducing inequities. To facilitate this process at the data analysis stage, studies should be designed to address such differences. At a minimum, studies should capture sex and/or gender differences. If feasible, a plan for capturing **intersectional** impacts on health outcomes should be included in the analysis strategy. Guidance for conducting sex and/or gender-responsive and intersectional research is available on the GACD call webpage.

Stakeholder engagement

For implementation research to have a strong likelihood of being taken up into policy or practice and informing the scale up of effective interventions, it is vital that project teams engage the appropriate **stakeholders**. These include decision makers such as policymakers, ministry officials, non-governmental organisation leaders and community leaders. It is important to include stakeholders who can help sustain the project's implementation, facilitate scale up, and use the knowledge generated from the project after the grant ends.

Stakeholders also include patients, their family members and carers. Their contributions should be nurtured through meaningful engagement from the outset, not only as participants in the research undertaken. Patient engagement throughout the research project is critical to developing **patient-centred** models of care.

Applicants are required to show evidence of appropriate stakeholder engagement in their proposal and include letters of support from proposed stakeholders where possible. All stakeholders should be engaged at every stage of the research project, from initial ideation of research questions, throughout the duration of the project, and afterwards during the knowledge translation phase. Applicants must also provide a clear plan for continuing to engage with stakeholders. More information about **stakeholder engagement**, including links to resources for planning such engagement, can be found on the GACD resources webpage.

Capacity development and knowledge sharing

Implementation research is a relatively young, but rapidly expanding, discipline and GACD is keen to strengthen research capacity and capability in this field among researchers, health professionals, and public health leaders through skill building, knowledge sharing, and networking.

Implementation research capacity development

- Applicants should indicate plans for capacity development within their project, especially, but not exclusively, for early career researchers and for team members from lower resourced settings, such as LMICs or Indigenous communities.

Knowledge sharing through the GACD Research Network

The GACD Research Network comprises everyone working on, or contributing to, an active or completed GACD project. The aim is to facilitate and enhance collaboration, networking, and knowledge sharing among project teams funded under GACD. Inter-project knowledge sharing is expected to increase the impact of the research undertaken (more information about the GACD Research Network is available here).

- Applicants must budget for the travel and accommodation costs of two team members to participate in the GACD Annual Scientific Meeting, an in-person meeting of the Research Network (location varies annually), for each year of their project.
    - The two delegates should be representative of the diversity of the full project team, with at least one delegate being a project team member from a LMIC and/or a project team member from an Indigenous community. We strongly encourage project teams to involve early-career researchers in the Annual Scientific Meeting.
- Applicants should ensure resources (time, personnel) in their project plan are allocated to complete a short annual project update for GACD.
    - To optimise and expedite knowledge sharing across the Research Network, all GACD project teams are requested to submit an annual project update for the duration of their project activities and a shorter annual update for three years after their project ended. The updates do not have to be submitted by the Principal Investigator or the project manager; however, the completion of the update should be coordinated across the whole project team and all project sites.
- Applicants should ensure resources (time, personnel) in their project plan are allocated to preparing and delivering a short presentation to the Research Network each year.
    - All GACD project teams, including those whose projects are completed, are invited to present an oral update on their project's progress (or, in the case of completed projects, on sustainability and impact) as part of the Research Programme workshop (an online satellite event of the GACD Annual Scientific Meeting). This involves preparing a short presentation of approximately five minutes (+/- slides) that is delivered to other Research Network members during an online event.

Equitable research partnerships

Equity considerations also extend to the governance of project teams in order to ensure fair and equal collaboration, especially between HIC–LMIC and non-Indigenous–Indigenous partners (both collaborations within the research teams and with community partners). Resources for planning equitable research partnerships are available from UKCDR.

Proposals should outline equitable governance arrangements in place for your projects, provide evidence of joint leadership and management positions on the project team, and specify equitable approaches to data ownership.

Climate change and environmental sustainability

All project teams should endeavour to minimise the environmental footprints of their projects; for example, by replacing international flights with video calls where possible. Subject to the funder's criteria, project teams may budget for carbon offset purchases for necessary flights.

Use of Artificial Intelligence

GACD understand that the use of artificial intelligence (AI) tools in healthcare is a rapidly developing field. Applicants are requested to ensure any applications using AI tools comply with the rule set out by their funder.

We recommend applicants take caution when using generative AI tools in the preparation of grant applications, given it may not be possible to monitor or manage subsequent use of information entered into generative AI databases.

Compliance with international standards and best practices

It is expected that all research conducted under and funded by this initiative will comply with relevant internationally accepted standards and best practices. These include:

- Standards for Reporting Implementation Studies (StaRI) Statement;
- standards relevant to specific study designs including SPIRIT and CONSORT for clinical trials, and STROBE for observational studies. All standards can be found on the website of the EQUATOR Network;
- ethics and other governance requirements as applicable in the countries where the research will be conducted;
- registration of all systematic reviews in a publicly accessible registry before commencement of the review;
- registration of all clinical trials before recruitment of the first trial participant in a publicly accessible registry that is acceptable to the WHO or the International Committee of Medical Journal Editors (ICMJE); and
- reasonable measures to ensure that sponsors, researchers, and institutions publish or otherwise disseminate the analysis of data and interpretation of research results (*i.e.*, the findings) in a timely manner without undue restriction.

Glossary

Term	Definition
GACD Research Network	The GACD Research Network comprises everyone working on, or contributing to, an active or completed GACD project. The aims of GACD facilitating the Research Network are to: ▪ Support project teams to work together effectively; ▪ Identify common approaches and areas of collective interest; ▪ Provide a platform for members to share knowledge and best practice; ▪ Increase the impact of Research Programmes and the Research Network as a whole; and ▪ Collaborate on joint initiatives and activities. More information about the GACD Research Network is available here
Implementation research	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 Implementation Science e-Hub. Questions addressed by implementation research include: ▪ Which evidence-based policy or intervention is best for a new context or a target group? ▪ What is the best way to implement it? ▪ How can the target population be reached? ▪ What factors might affect implementation and adoption? ▪ How can uptake and health outcomes be improved? ▪ Is the intervention cost-effective, affordable, and acceptable from the health system's, health care providers', patients', and/or other end users' perspectives? ▪ How can the policies or programmes best be sustained and scaled up?
Implementation research outcomes	These include implementation outcomes (*e.g.,* acceptability, adoption, appropriateness, costs, feasibility, fidelity, penetration, and sustainability); service outcomes (*e.g.,* efficiency, safety, effectiveness, equity, patient-centeredness, and timeliness); and client outcomes (*e.g.,* satisfaction, function, and symptomology).
Integrated care	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 (2). 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.
Intersectional	In the context of health research, intersectional analytical frameworks examine how social processes (*e.g.*, classism, racism, ageism, ableism, *etc*.) and social

	identity factors (*e.g.*, gender, class, race, age, disability status, *etc.*) interact to impact health outcomes.
Life course approach	The WHO emphasises the need to prevent and manage NCDs using a life course approach. While the term can have different meanings, for the purposes of this funding call, we use the term life course approach to mean targeting a specific critical period that impacts health over the lifespan and potentially into the next generation. Taking a life course approach is central to meeting the objectives of universal health care, as it promotes health at every stage of life, including at the end of life. In practice, taking a life course approach typically means adapting an intervention to improve acceptability and effectiveness among one or more specific life stages (preconception, pregnancy, infancy, childhood, youth, adulthood, and older adulthood), as well as during key transitions within or between life stages (such as high school graduation or retirement).
Multiple Long-term Conditions	Multiple long-term conditions (MLTC) are defined as the existence of two or more long-term conditions in a single individual. In the context of this call, one of these must be a chronic non-communicable disease of long duration, as defined below.
MLTC NCD/ NCD multimorbidity	MLTC NCD or NCD Multimorbidity is commonly defined as the co-occurrence of two or more chronic diseases in a patient (Skou et al, 2022). Chronic diseases include NCDs such as diabetes, hypertension, cardiovascular disease, respiratory diseases, musculoskeletal conditions, certain cancers, haematological disorders, sleep disorders, and mental illnesses, which can be complicated by chronic infectious diseases such as tuberculosis, hepatitis, HIV and long COVID-19. MLTC (Multimorbidity), unlike comorbidity, does not distinguish between the first condition (index disease) that arises in the patient and later illness. Within this call text, the GACD uses the term MLTC NCD to refer to cases of multimorbidity where at least one of the chronic conditions is an NCD.
NCD (chronic non-communicable condition)	NCDs include diabetes, hypertension, cardiovascular disease, respiratory diseases, musculoskeletal conditions, certain cancers, haematological disorders, sleep 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.'
Real world effectiveness	Evidence of the benefit of an intervention in a setting similar to that where the intervention will ultimately be offered, *i.e.,* outside of the rigid environment of a randomised controlled or other trial with strict inclusion and exclusion criteria.
Stakeholders	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: ▪ the population targeted by the research, including research participants, NCD patients, and their families and carers; ▪ 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; ▪ users of the research findings, inclusive of the above and health system and health service providers; and ▪ practice and policy influencers and makers.

Stakeholder engagement	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: ▪ ensures a common recognition of priority issues; ▪ acknowledges that researchers and stakeholders may ask different questions and have different perspectives on what evidence is most useful; ▪ improves the sustainability of projects and interventions beyond the grant life cycle; ▪ increases buy-in for implementation of interventions; ▪ improves opportunities for scaleup of interventions; ▪ facilitates evidence-informed decision-making; and ▪ increases transparency and facilitates mutual accountability.
Universal Health Coverage	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. For universal health coverage 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. See the WHO Fact Sheet on Universal Health Coverage for more information.
WHO PEN	WHO Package of Essential Noncommunicable Diseases Interventions (WHO PEN) support implementation of very cost-effective interventions through an integrated care approach.

References

Boehnke JR, Rana RZ, Kirkham JJ, et al Development of a core outcome set for multimorbidity trials in low/middle-income countries (COSMOS): study protocol *BMJ Open* 2022;12:e051810. doi: 10.1136/bmjopen-2021-051810

Fogarty International Centre Toolkit: Overcoming Barriers to Implementation in Global Health: available at: https://www.fic.nih.gov/About/center-global-health-studies/neuroscience-implementation-toolkit/Pages/default.aspx (accessed 03/05/2023)

GACD Digital Health Workshop Summary: available at https://www.gacd.org/perch/resources/admin/gacd-dhw-summaryv2.pdf (accessed 03/05/2023)

Skou ST, Mair FS, Fortin M, Guthrie B, Nunes BP, Miranda JJ, Boyd CM, Pati S, Mtenga S, Smith SM. Multimorbidity. Nat Rev Dis Primers. 2022 Jul 14;8(1):48. doi: 10.1038/s41572-022-00376-4. PMID: 35835758; PMCID: PMC7613517.

WHO Factsheet – Universal Health Coverage: available at https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-(uhc)#:~:text=Overview,need%20them%2C%20without%20financial%20hardship. (accessed 03/05/2023)

WHO package of essential noncommunicable (PEN) disease interventions for primary health care: available at https://www.who.int/publications/i/item/9789240009226 (accessed 03/05/2023)

WHO Guidelines on the use of Digital Health Interventions for NCDs: https://www.emro.who.int/noncommunicable-diseases/digital-health/index.html.

WHO Fact Sheet on Primary Health Care https://www.who.int/news-room/fact-sheets/detail/primary-health-care (accessed 12/06/2023)

WHO Guidelines on Multimorbidity: https://apps.who.int/iris/bitstream/handle/10665/252275/9789241511650-eng.pdf (accessed 12/06/2023)

Annex 1: Scoring criteria

Proposals will be evaluated against the following criteria, with each criterion weighted equally:

- relevance and quality of the project to this grant call;
- quality of the team;
- feasibility of the project; and
- expected impact of the project.

Reviewers will be asked to evaluate the applications based on the 'relevance and quality of the project,' the 'quality of the team,' the 'feasibility of the project,' and its 'potential impact.'

These criteria should be weighted equally. The detailed scoring criteria is described below.

Relevance and quality of project

- The proposal is responsive and relevant to the funding call.
- There is sufficient evidence of the effectiveness of the intervention(s), in similar populations or contexts.
- Proposal uses implementation research approaches that are justified and supported by the published literature to explore adaptation, scale up, and sustainability of evidence-based interventions.
    - Implementation research framework(s) are selected and justified.
    - Specific implementation outcomes and impacts are identified, and there is a clear plan for how to measure these variables, using tools that are locally validated whenever possible.
- The proposal has appropriately accounted for ethical and context considerations that might arise, according to agency-specific guidance. Ethical considerations might be related to:
    - working with vulnerable life stages (such as youth, pregnant women, or older adults);
    - working with other disadvantaged people (*e.g.*, members of the LGBTQ+ community, people living with physical or mental disability);
    - power dynamics and cultural differences between high income country (HIC) and low- and middle-income country (LMIC) team members and stakeholders; and
    - power dynamics and cultural differences between non-Indigenous and Indigenous team members and stakeholders.
    - Note: This list is not exhaustive; other ethical considerations should be accounted for as appropriate.
- Where feasible, the research will yield evidence on the cost-effectiveness of the proposed implementation strategies.
- Proposal adequately justifies the need to implement the proposed intervention or program by providing details about the current situation in the selected community or context that will receive the intervention.

Quality of team

The types of expertise that are required to be included on each team may vary by funding agency. However, across all GACD projects, the following criteria must be met:

- Teams must be multidisciplinary. Teams should collectively have all the expertise needed to undertake the proposed implementation research, including one or more implementation research experts.
- There is evidence of equitable partnership between HIC and LMIC team members (for projects taking place in LMICs) and between non-Indigenous–Indigenous team members (for projects taking

place in Indigenous communities). This includes, but is not limited to, evidence of joint development of and consensus around governance plans, shared leadership and management positions on the project team, and appropriate approaches to ownership of the data generated through the study.

- There should be evidence of meaningful involvement of early career team members in the research process. At least one early career individual should be named as a co-investigator.
- There is a detailed capacity building plan for the professional development of researchers and practitioners on the project team, especially, but not limited to, in the field of implementation research. Capacity building should extend to early career investigators and investigators from resource-poor contexts but may also include more senior team members without implementation research expertise.
- There is sound evidence that stakeholders, such as decision-makers and service delivery partners, have been actively involved in the research process including the selection and adaptation of the intervention and the research design.
- There will be continuous demonstrable engagement (from project ideation, through the duration of the project, and afterwards through the sharing of learnings) with public, patient, community stakeholders, and/or other beneficiaries of the project.
- There will be continuous demonstrable engagement (from project ideation, through the duration of the project, and afterwards through the sharing of learnings) with policymakers, practitioners, non-governmental organisation leaders, and/or other relevant stakeholders.
- Research teams will exhibit equity, diversity, and inclusion practices appropriate for the context(s) in which they are working.

Feasibility of project

- Major scientific, technical, or organisational challenges have been identified, and realistic plans to tackle them are outlined.
- Intervention strategies take into account the socio-political, cultural, policy, and economic contexts of their study settings. The proposal articulates how these factors, and their impact, will be analysed.
- Applicants identify any external factors that might disrupt their projects, such as humanitarian issues that include natural disasters (e.g., hurricanes), armed conflict, forced displacement, and major disease outbreaks (e.g. COVID-19) and develop appropriate contingency plans.
- The proposal identifies social inequities (for example, related to age or gender) that may impede access to or uptake of the intervention or limit its effectiveness in disadvantaged groups, and provides a plan for overcoming these threats to health equity.
    - If there is a focus on a particular population (*e.g.*, gender, race and/or ethnicity), then the reason for this should be well-justified.
    - Wherever possible, projects should design their projects to be able to detect any outcomes differences by sex and/or gender.
    - Applicants provide a reasonable plan to capture data about the socioeconomic status, race and/or ethnicity, and other relevant factors of their study sample and the population from which the sample was drawn, in order to be able to consider the generalisability of their findings across different demographic, socioeconomic, and geographically disparate populations.
- Appropriate measures of process and outcome evaluation (including for both implementation and effectiveness outcomes) have been included. Projects are expected to be able to track clinical, public health, policy, and/or health system outcomes.
- The proposal includes a clearly articulated governance plan.
- There is a clearly articulated and robust study design for addressing implementation research questions.

- Detailed, clear, and logical implementation and scale up plans are described. A reasonable timeline is outlined. The plans are feasible for addressing the proposed research question(s).
- The budget and budget justification are feasible and realistic for the context where the research will occur. Together, they account for the full range of costs necessary to complete the project.
- There is a clear plan for dissemination of findings and knowledge translation.

Potential impact

- There is strong likelihood of contributing to the outputs listed in the 'Expected Impacts' section of this call text.
- The project has clear value for money.
- The project appropriately leverages existing programs and platforms (*e.g.*, research, data, delivery platforms), if relevant.
- There is potential for sustaining the intervention(s) at scale.
- There is potential for the translation of the findings, methodologies, and frameworks into different settings.

Annex 2: National Contacts

Contact details for all funders participating in the joint call are listed below:

GACD JOINT CALL SECRETARIAT

Contact: Carolyn Johnson

Email: funding@gacd.org

Country	Funding organisation	Contact person(s)	Email
Australia	NHMRC	Melanie Morris	international@nhmrc.gov.au
Brazil	FAPESP	Ana Paula Yokosawa	AYokosawa@fapesp.br
Japan	AMED	Keiko Saito and Makiko Kusama	chikyukibo@amed.go.jp
South Africa	SAMRC	Johan Louw	johan.louw@mrc.ac.za
Thailand	HSRI	Jurairat Phromjai	jurairat@hsri.or.th
United Kingdom	MRC and NIHR	Aaron Holliday	International@mrc.ukri.org

Annex 3: Funder rules and requirements

Applications to the GACD Joint Application System may also require the submission of additional information on national funding platforms. All applicants must have fulfilled both joint and national requirements for an application to be eligible. The information provided below is a brief summary of funders' requirements. Please refer to funder websites and contact the respective person for full details.

National Health and Medical Research Council (NHMRC), Australia		
Overview	Funding agency website link	https://www.nhmrc.gov.au/funding/international-collaborative-health-research-funding
	Link to agency-specific application form	Applicants intending to apply for funding from NHMRC should advise of their intent to participate in the call via email to international@nhmrc.gov.au. Applicants proposing to undertake research which specifically relates to the health of Australian Aboriginal and Torres Strait Islander peoples must address NHMRC's Indigenous Research Excellence Criteria in their pre-application. Applicants invited to submit a second stage proposal who are applying for funding from NHMRC, are required to complete an application form in NHMRC's Sapphire grants management system by the NHMRC deadline. The NHMRC application will include a budget justification. The final full application submitted to the GACD portal must be uploaded to Sapphire in the NHMRC application. See Appendix C of the NHMRC-GACD 2024 Guidelines for guidance.
	Agency specific deadlines	NHMRC deadline for submission of second stage proposals (invited applications only): 03 October 2024 5pm ACT local time.
	Total budget available for the call	AUD $3 million
	Approximate number of projects to be funded through this grant call	2-3 projects
	Permitted project length (in years)	1-5 years
Scope	Eligible Conditions	NHMRC will accept applications addressing multiple long-term conditions including non-communicable diseases (MLTC NCD) as defined in the Ninth GACD Funding Call document on the GACD website.
	Eligible experimental approaches	NHMRC will accept experimental approaches as defined in the Ninth GACD Funding Call document on the GACD website. In addition, NHMRC will accept applications focusing on interventions that use pharmacological agents and/or biomedical devices. Proposals focussing on these types of interventions must show evidence of their effectiveness (including affordability) in low-resource contexts.
Specific National Rules	Principal Investigator	At the time of acceptance and for the duration of a grant the Chief Investigator A must be an Australian

		or New Zealand citizen, or a permanent resident of Australia, or have an appropriate work visa in place. The Chief Investigator A must also be based in Australia for at least 80% of the funding period. Where the work will be mainly carried out in low- and middle-income countries (LMICs), it would be expected that at least one Chief Investigator (other than CIA) on the application will be from the country where the work will take place. Where the work will be mainly carried out to address health inequities in Aboriginal and/or Torres Strait Islander communities, it would be expected that at least one Chief Investigator on the application will be a representative from these communities. For information regarding funding to support overseas grant activities see Section 5 of the NHMRC-GACD 2024 Guidelines.
	Co-funding considerations	The GACD encourages applicants to apply for co-funding.
	Project location	The project may take place: - In one or more LMICs (as defined by the World Bank) - In Aboriginal and/or Torres Strait Islander communities in Australia.
	Eligible institutions	Approved NHMRC Administering Institutions www.nhmrc.gov.au/funding/manage-your-funding/nhmrcs-administering-institutions
	Eligible costs and specific funding conditions	Direct research costs and salaries. See Section 5 of the NHMRC-GACD 2024 Guidelines for further information.
Resources	Please provide a link to your agency's guidance on equality, diversity and inclusion best practices, if available, and links to any other relevant policies	NHMRC's gender equity strategy: https://www.nhmrc.gov.au/research-policy/gender-equity/nhmrc-gender-equity-strategy-2022-2025 The National Statement on Ethical Conduct in Human Research (2023): https://www.nhmrc.gov.au/research-policy/ethics/national-statement-ethical-conduct-human-research NHMRC's strategic framework for improving Aboriginal and Torres Strait Islander health through research: https://www.nhmrc.gov.au/about-us/publications/road-map-3-strategic-framework

	Further information	Information on the NHMRC-GACD 2024 grant opportunity will be provided on the NHMRC webpage when available. NHMRC-GACD 2024 Guidelines will be published on GrantConnect as a grant opportunity. For questions about the NHMRC process, please contact international@nhmrc.gov.au

São Paulo Research Foundation (FAPESP) - Brazil		
Overview	Funding agency website link and contact	**Ana Paula Yokosawa, Deputy Manager – ayokosawa@fapesp.br**
	Link to agency-specific application form	n/a
	Agency specific deadlines	n/a
	Total budget available for the call	n/a
	Approximate number of projects to be funded through this grant call	Up to 3
	Permitted project length (in years)	Up to 5 years
Scope	Eligible Conditions	FAPESP will agency accept applications involving both NCDs and infectious disease for this call
	Eligible experimental approaches	For implementation science projects around effectiveness interventions of therapeutics or devices, alone or in combination with behavioural strategies, there must be strong pre-existing evidence of their effectiveness and affordability in the target life stage(s) AND in low-resource contexts similar to the ones where the research will be undertaken. FAPESP funding cannot be applied for the development of a pharmaceutical agent nor a biomedical device.
Specific National Rules	Principal Investigator	The Principal Investigator must be based at a higher education or research institution in the state of São Paulo. International collaborations are encouraged. A full list of eligibility requirements is available at https://fapesp.br/tematico.
	Co-funding considerations	FAPESP encourages applicants to seek co-funding from another agency participating in the call
	Project location	Higher education or research institutions based in the state of São Paulo All requirements are available at https://fapesp.br/tematico.
	Eligible costs and specific funding conditions	a) Equipment; b) Consumables; c) Services; d) Travel expenses (air tickets and per diems), including for visiting researchers; e) Fellowships https://fapesp.br/tematico
Resources	Please provide a link to your agency's guidance on equality, diversity and inclusion best practices, if available, and links to any other relevant policies	FAPESP does not have its own policy. Applicants can consult the guidance provided by other GACD funding agencies such as NHMRC Please also see FAPESP's policy on working with youth and/or other vulnerable populations https://fapesp.br/boaspraticas/2014/FAPESP-Code_of_Good_Scientific_Practice.pdf

	Further information	Applicants must also submit a copy of the first stage application through the SAGe system.

Japan Agency for Medical Research and Development		
Overview	Funding agency website link	https://www.amed.go.jp/en/index.html
	Link to agency-specific application form/LoI	https://www.amed.go.jp/koubo/index.html
	Agency specific deadlines	n/a
	Total budget available for the call	10 million JPN per year
	Approximate number of projects to be funded through this grant call	0-1
	Permitted project length (in years)	4 years
Scope	Eligible Conditions	Applications involving both NCDs and a combination of NCD/infectious diseases are eligible
	Eligible experimental approaches	Projects with a focus on therapeutics are also eligible to apply
Specific National Rules	Principal Investigator	The Principal Investigator must be based at an eligible institution in Japan, in line with AMED eligibility policy provided in the supplemental application guidelines. It is not permitted for the same person to be a Principal Investigator on more than one proposal submitted to this GACD funding call.
	Co-funding considerations	Applicants to AMED cannot apply for co funding from another agency participating in the call.
	Project location	AMED only supports projects that target populations in low- and middle-income countries.
	Eligible costs and specific funding conditions	See the supplemental application guideline on AMED's web site.
Resources	Please provide a link to your agency's guidance on equality, diversity and inclusion best practices, if available, and links to any other relevant policies	AMED does not have its own guidance. Please refer to the other GACD funding agencies' guidance, including those of the NHMRC and the UK MRC.
	Further information and contact details	For any questions regarding the AMED process, please contact Keiko Saito and Makiko Kusama. contacted at: chikyukibo@amed.go.jp

South African Medical Research Council		
Overview	Funding agency website link	https://www.samrc.ac.za/
	Link to agency-specific application form	n/a
	Agency specific deadlines	n/a
	Total budget available for the call	This will be a contribution to the total MRC-NIHR budget
	Approximate number of projects to be funded through this grant call	1-2
	Permitted project length (in years)	3-5 years (as per the UK MRC-NIHR guidelines)
Scope	Eligible Conditions	Applicants must adhere to the UK-MRC/NIHR requirements.
	Eligible experimental approaches	Applicants must adhere to the UK-MRC/NIHR requirements.
Specific National Rules	Principal Investigator	PI should have a South African identity number (or permanent SA residence).
	Co-funding considerations	SAMRC **requires** co-funding with UK MRC/NIHR.
	Project location	The project must take place in South Africa or the African Continent.
	Eligible costs and specific funding conditions	Applicants must adhere to the UK-MRC/NIHR requirements.
Resources	Please provide a link to your agency's guidance on equality, diversity and inclusion best practices, if available, and links to any other relevant policies	https://www.samrc.ac.za/research/ethics/guideline-documents (Under Department of Health, the "Ethics in health research" link) https://www.samrc.ac.za/research/ethics/SOP
	Further information and who to contact	For any questions about the SA MRC process, please contact Professor Johan Louw: johan.louw@mrc.ac.za

Health Systems Research Institute Thailand		
Overview	Funding agency website link	https://www.hsri.or.th/
	Link to agency-specific application form	n/a
	Agency specific deadlines	n/a
	Total budget available for the call	300,000 USD
	Approximate number of projects to be funded through this grant call	1-2
	Permitted project length (in years)	As projects require co-funding with another agency taking part in the call, please refer to the co-funding agency specific information.
Scope	Eligible Conditions	Proposals should focus on implementation research in the context of the health systems.
	Eligible experimental approaches	Both therapeutic and clinical research are eligible
Specific National Rules	Principal Investigator	The Principal Investigator must be based in Thailand.
	Co-funding considerations	Applications for HSRI funding **require** co-funding with another agency taking part in the call
	Project location	Projects must be based in Thailand or the Association of South East Asian Nations (ASEAN)
	Eligible costs and specific funding conditions	Funding will be awarded according to the HSRI Standard Terms and Conditions. The majority of funds contributed by HSRI will be for the exclusive purpose of funding research in Thailand or international collaborative research where the Principle Investigator is a Thai researcher.
Resources	Please provide a link to your agency's guidance on equality, diversity and inclusion best practices, if available, and links to any other relevant policies	https://www.hsri.or.th/handbook
	Further information	For any questions regarding the HSRI process, please contact Dr Jurairat Phromjai: jurairat@hsri.or.th

United Kingdom Medical Research Council and National Institute for Health and Care Research		
Overview	Funding agency website link	https://www.ukri.org/what-we-do/browse-our-areas-of-investment-and-support/global-alliance-for-chronic-diseases/
	Link to agency-specific application form/LoI	n/a
	Agency specific deadlines	n/a
	Total budget available for the call	£5M
	Approximate number of projects to be funded through this grant call	3-4
	Permitted project length (in years)	3-5 years
Scope	Eligible Conditions	MRC and NIHR will accept applications addressing multiple long-term conditions including non-communicable diseases (MLTC NCD) as defined in the Ninth GACD Funding Call document on the GACD website
	Eligible experimental approaches	We encourage applicants to refer to the new framework on complex interventions to improve health – UKRI
Specific National Rules	Principal Investigator	The Principal Investigators applying to MRC and NIHR for this call must be hosted by a UK institution which is eligible for Medical Research Council funding. The Principal Investigator must work in partnership with co-investigators based in low- or middle-income countries (LMICs) where the work will take place. Co-investigator organisations can be based overseas. In addition to the eligible research organisations outlined in the MRC guidance for applicants, the following organisations are eligible to host Co-Investigators on applications to the MRC and NIHR. All organisations must have sufficient capacity to deliver research projects, including robust financial management processes: • **Higher education institutions based in low- and middle-income countries (LMICs)** – A university or institution based in an LMIC with degree awarding powers recognised by the government in which the organisation is based. • **Research institutes based in LMICs** – A research focused institution based in an LMIC funded by the government of the country in which the organisation is based or by a not-for-profit organisation. • **Research focused non-profit organisations based in LMICs** – A not-for-profit

		organisation based in an LMIC with dedicated research capacity. • **Non-profit organisations** – A not-for-profit organisation based in an LMIC. This can include grassroots organisations, and community groups and does not have to have specific research capacity. Investigators from high-income countries outside of the UK are not eligible to apply as Principal Investigators but can be named as Co-Investigators with justification for why the expertise they are providing cannot be found in the UK or an LMIC. Where there is engagement from individuals based in government agencies, international intergovernmental organisations (e.g., WHO), or other stakeholder organisations (e.g. industry collaborators) it is expected that their costs will not be covered by the grant. In exceptional circumstances it may be possible to include costs associated with staff members of government ministries, where a proportion of their time is spent working on the project. The costs of named government officials must be discussed and agreed before submission, please contact Aaron Holliday at international@mrc.ukri.org
	Co-funding considerations	Applicants to the MRC and NIHR can apply for co-funding with other GACD funding agencies. To encourage this, where the review panel assigns two or more top-scoring applications the same score, and there is insufficient funding to award all of these applications, priority will be given to applicants who have applied for co-funding. Please contact funding@gacd.org to discuss opportunities for co-funding before applying.
	Project location	Studies funded through the MRC and NIHR should focus upon countries with low- or middle-income economies. OECD definitions of low- and middle-income economies can be found at DAC List of ODA Recipients.
	Eligible costs and specific funding conditions	MRC and NIHR will fund research projects between 3 and 5 years in duration. Information about eligible costs can be found here: https://www.ukri.org/councils/mrc/guidance-for-applicants/costs-we-fund/ Funding will be awarded in line with standard MRC practice. If a grant is awarded, the MRC will provide

		funding for the UK investigators' costs at 80 per cent of the Full Economic Cost and the Research Organisation(s) must agree to find the balance of FEC for the project from other resources. There is a strong expectation that most of the costs requested will go to low- and middle-income country partners. The UK MRC and NIHR require proposals with co-investigators based in low- or middle-income countries. One hundred percent of their direct costs and up to 20% of their direct costs as indirect costs can be funded. These costs should be listed as 'Exceptions' on the budget template that is uploaded. If a co-investigator is based in a high-income country they can be included in the proposal and can claim 100% of essential direct costs but cannot claim any indirect costs. However, we recommend that applicants keep costs claimed by non-UK high income country partners to a minimum.
Resources	Please provide a link to your agency's guidance on equality, diversity and inclusion best practices, if available, and links to any other relevant policies	Equality, diversity and inclusion – UKRI MRC ethics guidance can be found here: https://www.ukri.org/councils/mrc/guidance-for-applicants/5-ethics-and-approvals/5-2-human-participants-in-research/ UKRI safeguarding policy can be found here: https://www.ukri.org/about-us/policies-standards-and-data/good-research-resource-hub/preventing-harm-in-research/
	Further information	For questions about the MRC-NIHR process, please contact international@mrc.ukri.org