

The Seventh GACD research funding call: *A Life Course Approach to Common Non-communicable Disease Risk Factor Prevention and Reduction*

FULL CALL TEXT

Full title

A life course approach to common NCD risk factor prevention and reduction: Implementation research to reduce the NCD burden by targeting critical life stages and key transitions between life stages

Introduction

The Global Alliance for Chronic Diseases' (GACD) funding call will focus on **implementation research** proposals that take a **life course approach** to reducing the risks for non-communicable diseases (NCDs) in low- and middle-income countries (LMICs) and/or in disadvantaged populations in high-income countries (HICs).

While some GACD funding agencies are accepting applications that target any life stage, and one funding agency encourages applications focusing on older adults, for this call many GACD funding agencies are exclusively interested in funding projects that focus on young people (aged 10–24 years), which includes adolescents (ages 10–19) and youth (ages 15–24) [1].

Specific Challenge

Chronic NCDs, such as diabetes, cardiovascular disease, neurological diseases, respiratory diseases, certain cancers, and mental health disorders, are the leading cause of morbidity and mortality in both LMICs and HICs [2]. The COVID-19 pandemic has brought NCDs further into the spotlight, as the majority of those who have experienced severe illness and/or death have had one or more underlying NCD [3]. Reducing the burden of NCDs is therefore critical to building more resilient, equitable, and healthier societies.

The World Health Organization (WHO) acknowledges the importance of adopting a **life course approach** as a conceptual framework when exploring the physical and social hazards that may impact health [4-6]. A life course approach to NCDs may minimise the impact of exposure to known risk factors at a particular life stage and increase the likelihood of good health across the lifespan, and potentially into the next generation.

A number of behavioural change interventions, as well as those that increase the health-promoting potential of environments, are effective in reducing, delaying, or preventing NCD onset or disease progression. However, research is lacking in how to integrate such interventions into communities and health systems, and/or how to target these interventions to specific life stages, especially in LMICs and other disadvantaged populations. Applicants to the current call are invited to meet this challenge.

Scope

Summary

The aim of this call is to fund **implementation research** [7] focused on addressing **common NCD risk factors** through interventions that reduce health risk and/or enhance positive health and lifestyle behaviours in young people, and/or in other critical life stages (e.g., childhood, older adults).

Please note that the funding agencies participating in this call have specific requirements regarding the scope. Carefully review the agency-specific information on the GACD [call webpage](#) before applying.

To be eligible projects/applicants must:

- build on a life course approach and **focus on one or more critical life stage(s)**, or transitions between life stages;
- explore interventions known to prevent or delay the onset or progression of more than one NCD by focusing on **common NCD risk factor(s)**;
- justify the choice of intervention(s) to be delivered during the **selected life stage(s)** and provide evidence of the intervention's effectiveness and feasibility (especially in the context of COVID-19);
- specifically address **health equity**;
- have an appropriate strategy for **measuring** implementation research and efficacy **outcomes**;
- demonstrate a commitment to **stakeholder engagement**;
- provide opportunities for **capacity building** within project teams; and
- demonstrate **equitable partnerships** and shared leadership between HIC-LMIC, and/or non-Indigenous-Indigenous members of the project team, and between the project team and external stakeholders.

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

- conduct research on multisectoral interventions that cut across health, environmental, social, and other sectors; and
- explore interventions harnessing digital technology adaptations. (In July 2021, the GACD recently 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, which may assist with proposal planning, is available [here](#).)

The following types of projects will **NOT** be funded:

- epidemiological cohorts;
- longitudinal 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);
- etiological work, mechanistic, or epidemiological research, unless an essential component of a focused study to develop implementation research approaches; and
- clinical trials, validation studies or intervention studies of the efficacy of 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. As these types of interventions are particularly difficult to sustain and ensure equitable accessibility in low-resource contexts, these types of interventions will be held to a higher standard in terms of demonstrating 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.

Study population and life course approach

The GACD aims to address health equity in LMICs and disadvantaged populations in HICs.

In all cases, the study population may include both people with existing NCDs, those without existing NCDs, or a combination of both, but the focus must be on addressing **common NCD risk factors**. Applicants may propose implementation research focused on interventions that are implemented at the individual, family, community (*e.g.*, work or school), population, and/or structural level.

Applicants should clearly define the life stage(s) or transitions between life stages in which they will focus their research, and provide a rationale for this choice (note that some funding agencies require a focus on youth; please refer to the agency-specific information on the GACD [call webpage](#)).

Evidence-based interventions

The research to be undertaken should focus on the implementation of one or more evidence-based interventions in preventing or reducing exposure to one or more **common NCD risk factors**.

Proposals might focus, for example, on the **WHO Best Buys** [8] and/or other strategies and interventions (at a key life stage) that address: tobacco and nicotine avoidance; hypertension management, including reducing salt intake; limiting alcohol consumption, promoting regular physical activity, a healthy diet, and body weight; healthy sleeping patterns; clean air; and/or social and psychological well-being. Such strategies and interventions might focus on behavioural change and/or improving equitable access to resources necessary for health promotion.

Proposals must clearly explain the intervention and its components. Applicants must also describe the evidence that demonstrates the intervention is effective and articulate the expected outcomes. Ideally, evidence of the intervention's **real world efficacy** [9] will be supported by a well-conducted systematic review where available.

Addressing health equity

Poverty, racism, ethnic discrimination, and other inequities are directly associated with reduced potential for health promotion. 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, though if feasible, a plan for capturing **intersectional** [10] 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](#).

Outcome measures

All proposals must include **implementation research outcomes** [11].

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

Where appropriate (and permitted within the funding agency's scope), outcomes should be measured in those targeted directly as well as others who are intended to benefit from the intervention (for example, the infants of mothers who received the intervention while pregnant, or the adult parents or grandparents of children who received the intervention).

Stakeholder engagement

For implementation research evidence 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**, including decision makers such as policymakers, ministry officials, and non-governmental organisation leaders, 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 end users and the direct beneficiaries of research, such as youth groups, patients, and their carers. All stakeholders should be engaged at all stages of the research project, from initial ideation of research questions, throughout the duration of the project, and afterwards during the knowledge translation phase. More information about **stakeholder engagement**, including links to resources for planning such engagement, can be found on the [GACD webpage](#).

Implementation research capacity building

Implementation research is a relatively young discipline and the GACD is keen to increase research capacity and capability in this field among researchers, health professionals, and public health leaders through skill building, knowledge sharing, and networking. Applicants should indicate plans for capacity building within their project, especially, but not exclusively, for early career researchers and for team members from lower resourced environments, such as LMICs or Indigenous communities.

Applicants must budget for the travel and accommodation costs of having two team members, at least one of whom is based in an LMIC or other lower-resourced context, participate in the annual five day face-to-face [meeting](#) of the GACD Research Network (location to vary annually). Teams are also strongly encouraged to include one junior team member in each annual meeting for the duration of their research grant.

Equitable partnership and governance

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 on the GACD [call webpage](#). 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.

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.

Expected impacts of this call

The projects funded under this call will collectively:

- contribute to the UN Sustainable Development Goal 3.4 to reduce premature mortality from NCDs by one third by 2030 [12];
- reduce health inequities linked to socioeconomic status, sex and/or gender, race and/or ethnicity, age, 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;
- advance local, regional, or national preventive health policies addressing common risk factors for NCDs;
- improve understanding of demographic and life stage variations in managing common NCD risk factors and for sustaining positive change;
- establish the contextual effectiveness of reducing exposure to, or impact of, common NCD risk factors at different life stages, including at systems level;
- 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 harmonisation, and stakeholder engagement for management and prevention of common NCD risk factors.

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.

Detailed scoring criteria are provided in the Annex (pages 9-11).

Glossary

Term	Definition
Common NCD risk factors	Common risk factors that are associated with <i>more than one</i> NCD. Tobacco smoking, for example, is known to be associated with lung disease, cardiovascular disease, and cancer. Other common NCD risk factors include (but are not limited to) excessive alcohol, disrupted sleep, hypertension, air pollution, mental stress, insufficient physical activity, and poor diet.
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 provider's, patient's, and/or other end user's perspective? ■ How can the policies or programmes best be sustained and scaled up?
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).
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.
Life course approach	The WHO emphasises the need to prevent and manage NCDs using a life course approach [4-6]. 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).
Real world efficacy	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 [7].
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.
Structural interventions	Interventions that attempt to change the social, physical, economic, and/or political environments in order to improve health behaviours and outcomes, altering the larger social context by which health disparities emerge and persist. They can include policy-driven fiscal or legislative changes focused on social determinants of health, such as legislation around legal age access to tobacco or alcohol.
WHO Best Buys	A set of affordable, feasible and cost-effective intervention strategies that can help reduce the burden of NCDs in low-resource settings.

References

1. World Health Organization. Recognizing Adolescence. 2014. <https://apps.who.int/adolescent/second-decade/section2/page1/recognizing-adolescence.html>. Accessed 22 October 2020.
2. World Health Organization. Noncommunicable Diseases Fact Sheet. 2021. <https://www.who.int/en/news-room/fact-sheets/detail/noncommunicable-diseases>. Accessed 4 August 2021.
3. Katzmarzyk P, Salbaum M, Heymsfield S. Obesity, non-communicable diseases, and COVID-19: a perfect storm. *Journal of Human Biology*. 2020, 32(5).
4. Jacob, C.M., Baird, J., Barker, M., Cooper, C., Hanson, M. The importance of a life course approach to health: chronic disease risk from preconcept through adolescence and adulthood. WHO White Paper. 2017. <https://www.who.int/life-course/publications/life-course-approach-to-health.pdf>. Accessed 11 May 2021.
5. Mikkelsen, B. Life course approach to prevention and control of non-communicable diseases. *BMJ*. 2019;365:Suppl1.
6. International Longevity Centre – UK and the World Health Organization. A lifecourse approach to health. 2000. https://www.who.int/ageing/publications/lifecourse/alc_lifecourse_training_en.pdf. Accessed 19 October 2021.
7. Eccles M and Mittman B. Welcome to implementation science. *Implement Sci*. 2006, 1(1).
8. World Health Organization and World Economic Forum. From burden to “Best Buys”: reducing the economic impact of non-communicable diseases in low- and middle-income countries. 2011. https://www.who.int/nmh/publications/best_buys_summary.pdf. Accessed 19 October 2021.
9. Lane-Fall, M., Curran, G., Bedias, R. Scoping implementation science for the beginner: locating yourself on the “subway lin” of translational research. *BMC Medical Research Methodology*. 2019, 19(133).
10. World Health Organization. Incorporating intersectional gender analysis into research on infectious diseases of poverty: a toolkit for researchers. 2020. [Incorporating Intersectional Gender Analysis into Research on Infectious Diseases of Poverty \(tdr-intersectional-gender-toolkit.org\)](https://tdr-intersectional-gender-toolkit.org). Accessed 18 October 2021.
11. Proctor E, Silmere H, Raghavan R, *et al*. Outcomes for implementation research: conceptual distinctions, measurement challenges, and research agenda. *Adm Policy Ment. Health*. 2011;38(2):65-76.
12. UN General Assembly. 2015. Transforming our world: the 2030 Agenda for Sustainable Development. <https://www.refworld.org/docid/57b6e3e44>. Accessed 13 May 2021.

Annex: Complete call evaluation criteria

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.
- Early career investigators are included as part of the team.
- 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 COVID-19 travel restrictions or anticipated political unrest, 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.