GACD INTERNATIONAL EXPERT ADVISORY GROUP MEETING

25TH-26TH OCTOBER 2023

WELLCOME BUILDING, LONDON

PARTICIPANTS

Chair:

- Marleen Temmerman - The Aga Khan University, Kenya

Group members:

- Cathy Vaughan - University of Melbourne, Australia
- Natasha Howard - South Australian Health and Medical Research Institute, Australia
- Paulo Schor - Universidade Federal de São Paulo, Brazil
- Nancy Edwards - University of Ottawa, Canada
- Monika Arora - Public Health Foundation of India, India
- Nikhil Tandon - All India Institute of Medical Science, India
- Nyovani Madise - African Institute for Development Policy, Malawi
- Maria Cordina - University of Malta, Malta
- Bente Mikkelsen - World Health Organisation, Switzerland
- Moffat Nyirenda - MRC/UVRI & LSHTM Unit, Uganda
- John Hurst - University College London, United Kingdom
- Kelly Rose-Clarke - Kings College London, United Kingdom
- Enola Proctor - Washington University in St Louis, United States
- Josh Rosenthal - National Institutes of Health, United States

GACD Associate Member Representatives:

Virtual

- Pat Ridgway - NHMRC, Australia
- Marcia Scazufca - FAPESP, Brazil
- Marc Cohen - CIHR, Canada
- Linda Diaz - CIHR, Canada
- Aya Yagi - AMED, Japan
- Makiko Kusama - AMED, Japan
- Jurairat Phromjai - HSRI, Thailand

In person

- Greg Owsianik - European Commission, Belgium

- Johan Louw - SAMRC, South Africa
- Aaron Holliday - MRC, United Kingdom
- Megan Gaffey - DHSC, United Kingdom

GACD Staff:

- Morven Roberts, CEO
- Carolyn Johnson, Programme Manager

1. Welcome and Introductions

The Global Alliance for Chronic Diseases International Expert Advisory Group (IEAG) meeting was held in person, over the 25th and 26th of October 2023. The agenda for the meeting can be found at **Error! Reference source not found.**. The meeting was chaired by Professor Marleen Temmerman.

The Chair invited participants to introduce themselves and their expertise. Details regarding expert group members and their affiliations can be found at **Error! Reference source not found.**2. The members brought a wide range of expertise and perspectives including implementation science, health economics, health systems, pharmacy and policymaking to the discussions.

The Chair of the GACD Strategy Board (Barbara Kerstiëns) joined virtually to welcome members and thank them for their contributions.

2. Purpose of the Meeting

Morven Roberts, CEO of the GACD, gave a brief introduction to the GACD and the aims of the meeting. The slides for this presentation can be found at Appendix 3.

In brief, Dr Roberts reminded participants of some key features of the GACD:

- An alliance of funding agencies working with a common mission with three key strategic approaches:

    - joint research calls
    - capacity strengthening
    - collaboration for impact
- Key focus areas:
    - Chronic Non-Communicable Diseases (NCDs)
    - Implementation Research
    - Lower- and middle-income countries (LMICs), underserved, and Indigenous populations in high income countries (HICs)

Dr Roberts explained that in developing its future plans, the GACD Strategy Board had agreed to continue a focus on implementation science for chronic non-communicable diseases and that there was an appetite to tackle the complexity of more 'real-world' approaches. Dr Roberts noted that the aim of the meeting was to obtain expert advice on priority areas and recommendations for potential future call themes, where the key criteria included:

- Alignment with GACD mission
- Importance to policymakers in low- and middle-income countries.
- Readiness for Implementation Science (e.g., established effective interventions)
- Potential to achieve a measurable public health impact on Chronic NCDs/ Clustered Conditions
- Likelihood to attract research proposals (i.e., field where there is adequate expertise)

3. Discussion Sessions

The Group was asked to channel their advice, with two group members assigned to initiate discussions in each session. The group worked initially through the following key prompts:

- Risk factors and prevention
- Environmental risk factors and the impact of climate change on NCDs
- Implementation at the Intersection of infectious diseases and NCDs
- Non top five NCDs- including chronic kidney disease
- Implementing digital health and Artificial Intelligence based interventions
- Capacity Building, Equity and Sustainability in Global Health Research.

These were followed by an open session at the end of the meeting, designed to capture any additional considerations that had not been covered in previous sessions. In addition, there were points for reflection and consolidation on both days.

Slides and notes used by Group members can be found at **Error! Reference source not found.**.

Risk factors and prevention

- **Nancy Edwards (University of Ottawa, CA)**

Professor Edwards offered a perspective based on a consideration that GACD may focus on primary prevention and that it was willing to foster multi-sector interventions that might bring about multi-sector impact and systems' change. She noted that traditional public health thinking about risk factors tends to focus on individual level (micro-level) interventions and in particular behaviour change strategies. In many instances however e.g., tobacco control has taken multiple inter-sectorial strategies to bring about change.

Professor Edwards noted that how we think about and describe "risk factors" and which of those are 'modifiable' affects our selection of interventions, the choice of studies considered adequate to confirm

effectiveness, the types of study designs and the outcome indicators used for implementation science, the populations studied, and the sectors (and partners) in which we work.

- **Kelly Rose-Clarke (Kings College London, UK)**

Dr Rose Clarke focused on mental health and suggested that a focus on interventions in schools could be an effective setting for interventions to tackle NCD risk factors.

Dr Rose-Clarke suggested that GACD:

- Prioritize interventions addressing social determinants
- Look at community, institutional and policy determinants
- Child and adolescent mental health held an opportunity for impact
- School-based prevention and promotion
- Expand the geographic scope

Environmental risk factors and the impact of climate change on NCDs

- **Josh Rosenthal (NIH, US)**

Dr Rosenthal discussed the impact of climate change on NCDs, noting that climate change is often a multiplier of other risk factors for NCDs, such as poverty, gender, or access to care. Dr Rosenthal noted that causal pathways are increasingly clear between heat, and extreme weather events (storms, floods, wildfires, droughts) and the attributable risk of such events are being defined for conditions such as mental health, and cardiovascular disease. Dr Rosenthal commented that as yet there may be a paucity of health focussed climate change interventions, however there was the potential to undertake implementation research on the co-benefits for health from interventions already designed and deployed to tackle climate change. Engaging across sectors would be crucial to progressing this area.

- **Natasha Howard (SAHMRI, AU)**

Professor Howard focussed on social and cultural determinants of health, emphasising the importance of fife circumstances such as access to secure housing, quality health services, healthy food, education, work opportunities and meaningful connections with others, which can have a serious impact on the health and wellbeing of Aboriginal and Torres Strait Islander peoples. Professor Howard noted the need to take advantage of scientific advancements and consider new technologies including precision medicine, whilst accounting for ethical, social justice and cultural perspectives of the target population.

Implementation at the Intersection of infectious diseases and NCDs

- **John Hurst (UCL, UK)**

Professor Hurst provided a perspective on infections and their interactions with NCDs, noting the greater recognition of the co-morbidity and issues in the context of chronic infection and non-communicable disease rather than the acute infections. Professor Hurst covered several major points including:

- numerous studies have documented the co-occurrence of infectious diseases and NCDs
- certain risk factors, such as poor nutrition, physical inactivity, and tobacco use, are common to both infectious diseases and NCDs
- efficient and effective health systems needed to be equipped to manage both infectious diseases and NCDs. Integrated healthcare delivery models have been explored to ensure comprehensive care for those affected.
- vulnerable populations, or those with limited access to healthcare, may bear a disproportionate burden

of both infectious diseases and NCDs.

- The need for prevention and intervention, including vaccination, lifestyle interventions, and improving healthcare infrastructure.
- better understanding of the epidemiology of infectious diseases and NCDs in tandem.
- Development of Global Health Policies addressing the intersection of these diseases

Professor Hurst also noted the importance of sustaining funding for existing, productive projects and emphasised that the top 5 NCDs such as respiratory disease and type 2 diabetes have not been solved and therefore should not be ignored.

- **Moffat Nyirenda (MRC LSHTM Uganda Unit, UA)**

Professor Nyirenda further highlighted the case for integrating care across infectious conditions and NCDs, noting that there are common risk factors and overlapping high risk populations, including poverty, overcrowding and poor sanitation that impact both chronic infectious disease and NCDs. Professor Nyirenda emphasised the shared long-term care needs, including:

- Retention in care
- Uninterrupted supply of medicines
- Adherence
- Screening for complications
- Addressing stigma

Professor Nyirenda emphasised the learning from the successful INTE-AFRICA project, integrating management of HIV, Diabetes and Hypertension in sub-Saharan Africa.

Non top five NCDs- including chronic kidney disease

- **Nikhil Tandon (AAIMS, IN)**

Professor Tandon discussed three major NCDs not included in the WHO top 5 NCDs, yet which are major causes of concern.

- Chronic kidney disease
- Metabolic dysfunction-associated steatotic liver disease (MASLD) – formerly known as Non-alcoholic fatty liver disease (NAFLD)
- Youth onset diabetes – Type 1 Diabetes / Youth onset Type 2 diabetes

Professor Tandon emphasised the greater burden of these conditions in LMICs and underlined the issues of access to treatment, diagnosis and screening as well as stigma associated with certain conditions, in particular youth onset diabetes.

- **Maria Cordina (University of Malta, MT)**

Professor Cordina focussed on pharmacotherapeutic management of NCDs, noting that drugs are the mainstay of management of NCDs. Professor Cordina raised several issues, including:

- Availability - 2 billion people have no access to basic medicines
- Accessibility – Geographical and HR issues
- Affordability - Up to 90% of the population in developing countries purchase medicines through out-of-pocket payments
- Safe & effective - increasing numbers of substandard and falsified medical products

Implementing digital health and Artificial Intelligence based interventions

- **Paulo Schor (FAPESP, Brazil)**

Professor Schor discussed the rapid progress of new technologies, such as digital health and Artificial Intelligence (AI) interventions, and the opportunities that could be applied to NCDs, noting that ensuring health equity was critical in this area, and that use of such technologies was not possible without additional capacity and training.

Professor Schor emphasized the success of technologies for retinal imaging, but noted the regional and socioeconomic disparities were key risks for the uptake of technology.

- **Cathy Vaughan (University of Melbourne, AU)**

Professor Vaughan noted the range of uses for novel technologies, from health promotion and prevention interventions, to monitoring adherence to treatment. Professor Vaughan also commented on the major challenges to technology focussed interventions including:

- Equity of access (in relation to, for example, gender, disability, age, socioeconomic status, education, language, mobility, geography)
- Inclusiveness and quality of data used to develop algorithms/train deep neural networks (challenge and an opportunity)
- Translation of digital innovation in diagnosis, screening, monitoring etc. into actual interventions that improve outcomes
- Standards of evidence and proliferation of junk tech
- Weakness of ethical and governance frameworks, particularly across jurisdictions

Professor Vaughan sounded several noted of caution, reiterating the issues of equity or access, but also raising issues of data safety and security, lack of transparency and accountability.

Capacity Building, Equity and Sustainability in Global Health Research

- **Nyovani Madise (AFIDEP, MW)**

Dr Madise focussed on capacity sharing, noting the importance of bi-directional, cross-cultural, transdisciplinary knowledge sharing, involving key practitioners.

Dr Madise noted several key points for sustainable capacity strengthening, including:

- Engaging stakeholders early for impact and sustainability
- Bi-directional sharing of knowledge and training
- Embed initiatives in existing programmes e.g., graduate training
- Develop skills for cross-cultural collaborations, policy engagement
- Providing flexible mechanisms/support for female researchers
- Be there for the long haul –Median 66 months (Bates et al., 2011)
- Local co-leadership, progressing to full ownership

Dr Madise noted that gender continues to be an issue in global health research and encouraged GACD to continue to develop resources to support women in research. Dr Madise also commented on the issue of involving stakeholders and policymakers early in the research process, to ensure wider uptake of successful interventions.

- **Bente Mikkelsen (WHO, CH)**

Dr Mikkelsen gave a brief reminder of the need to retain lessons learned from the COVID pandemic, noting that the momentum of progress in curbing NCDs has stagnated since 2010.

Dr Mikkelsen raised three key questions

1. Where is the capacity building needs for implementation science greatest? How can they best be addressed? Beyond the academic investigators, where is there a capacity need?
2. How can we sustain the successful interventions after implementation?
3. How can we ensure that collaborative research is fair, and all have a meaningful role to play?

Dr Mikkelsen also emphasized the need to learn from successful implementation of existing, cost-effective packages of interventions (such as the HEARTS package and HPV vaccination to tackle cervical cancer) and the need to emphasize more inclusive, equitable research, including lived experience partners and policymakers from the initiation of a project.

What are we missing?

- **Enola Proctor (Washington University, USA)**

Professor Proctor reminder the Group of the key constructs of implementation research, focusing on:

- The evidence-based intervention/ program/ treatment/innovation/"thing"
- Contextual understanding
- Partnerships
- Implementation strategies
- Implementation outcomes

Professor Proctor underlined the issues of context and complexity in implementation design and that outcome emphasis would vary depending on the design chosen, and this should be taken into consideration.

Professor Proctor emphasized the need to learn from implementation strategies for infectious disease, and the requirement for capacity strengthening in implementation science, potentially via partnered training, mentoring and collaboration.

- **Monika Arora (PHFI, IN)**

Professor Arora emphasized the need to include people with lived experience at every stage of research, to ensure needs are being met. Professor Arora also suggested key priority topics for implementation research focused on NCDs, include:

- One Health
- Multi-Morbidity
- Universal Health Coverage and NCDs
- Mental Health Integration under 5X5 strategy
- Research to Policy and Program Action
- Health Promotion and Prevention
- Impact of Capacity Building
- Commercial Determinants of Health (CDOH)

Professor Arora also noted the need to learn from previous successful interventions, in particular tobacco cessation programmes, but reminded Group members of the need to continue to support such initiatives, with changes in technology and platforms leading to new issues.

4. Key points

The discussion sessions provided productive, broad ranging, challenging, ambitious ideas with perspectives on the importance, timeliness, and opportunities for implementation research. The Group agreed several key points, both for future call topics, but also in relation to capacity strengthening and ensuring robust design of projects.

The Group raised several points relating to implementation research study design:

- Need robust, flexible designs accounting for complexity (process variables)
- Accounting for differences in context
- Use of appropriate outcome measures (interim measures, proximal indicators, timing)
- Intersectionality and interdisciplinarity should be appropriately reflected within project teams
- Co-creation, scoping and framing with target populations with an understanding what 'evidence-based' really means, especially when considering co-created projects
- Integration of all stakeholders (including people with lived experience, nurses, family members)
- Embed capacity strengthening in project design
- Enhancing equity (covering geography and gender) in project teams
- Balance of immediate needs and long-term needs
- Importance of language, in particular regarding advocacy and communications

These issues should be emphasized and accounted for in future call texts.

Several additional suggestions were offered, with regards to future funding areas. Group members recognised that whilst there may be a temptation to move to support new emerging areas, GACD should continue to support:

- Sustainable and scalable funding for existing studies
- Implementation science examining strategies that aim to support the achievement of NCD targets
- Studies of interventions that will benefit multiple conditions, for example pulmonary rehabilitation
- Studies focussed on the communication of risk and prevention.

The Group suggested several themes that could be important components within future funding calls:

- Addressing the social and structural determinants of health
- Implementation strategies within non healthcare settings (schools, workplace, community)
- Focus on critical target groups (childhood, adolescence, mobile populations)
- Where there are co-benefits from climate change interventions not directly aiming to improve health (e.g., transportation, urban planning)
- Strategies to address issues in health systems (task shifting, access to care, access to medicines)
- Integrated care pathways and lessons learnt from infectious disease (care continuum, multiple conditions and including infections).

These were further discussed and incorporated into suggested topics for future funding calls.

Importantly, the Group also reflected that some topics were not yet ready for implementation science through lack of a sufficient evidence base or knowledge. A valuable suggestion was however to use the power of the GACD Research Network to create focus groups that might explore these topics which included:

- Artificial Intelligence
- The role of acute infections in exacerbating NCDs
- Health interventions related to climate change.

5. Recommendations to GACD

Drawing on points raised in the discussions over the two days, several priority topics for future GACD annual coordinated calls, likely to produce evidence and outcomes with impact emerged, including:

- Implementation research focussed on **children and adolescents and NCDs**, researching interventions for prevention, screening, and management of NCDs in younger people. This 'umbrella approach' might include the significantly increasing burden youth onset diabetes, less researched risks including social determinants, air pollution, alcohol, and wider range of NCDs including sickle cell disease.
- Implementation research in Non healthcare settings, including schools, workplace, pharmacy, community, family, faith-based organisations, online communities, and housing facilities. Interventions focussing on both prevention and management of NCDs.
- Implementation research centred on Health Systems. This could embrace access to healthcare, task shifting, primary healthcare and access to medicines, integrated systems, and the care continuum.

Further topics held potential but may benefit from additional time for preliminary projects to reach a point of readiness before funding calls could be launched:

- Implementation research focussed on the commercial determinants of health
- Implementation research to address environmental health and NCDs (in particular air pollution)
- A further call for scale up projects to build and progress activities supported in earlier GACD funding calls, such as lung diseases or mental health.