Non-communicable diseases: can implementation research change the game for policy and practice?

Non-communicable diseases (NCDs) account for 74% of all deaths and 86% of premature deaths in low-income and middle-income countries (LMICs).[1] Yet, the world is far from meeting the globally agreed targets for their control.[2] Even in this unprecedented era for discovery of new therapies for NCDs, the ability to equitably deliver both old and new interventions is lagging. WHO has clear best-buys for prevention and management of NCDs,[3,4] but policy and service coverage of these interventions is poor in many countries.[5] NCD service delivery remains a crucial gap undermining efforts towards universal health coverage,[6] which increases inequities in health, poverty, and economic losses.[7]

Implementation research is a crucial tool to bridge the know–do gap, focusing on understanding the adoption, integration, and sustainability of evidence-based interventions within real-world health systems.[8,9] This research involves collaborative efforts between researchers, communities, practitioners, and policy makers to apply research methods within existing implementation cycles, aiming to enhance service delivery and address its bottlenecks. By uncovering why NCD interventions are not being implemented and testing solutions to overcome barriers, implementation research can support the effective scale-up of interventions.[10,11] For example, 1·3 billion adults globally have hypertension, with most of the affected people living in LMICs. The condition is easily diagnosed and treated using affordable generic medicines, yet only 50% of people are diagnosed and 20% receive effective treatment.[12]

However, implementation research is not a new field. 20 years ago, the Mexico Ministerial Statement on Health Research implicitly called for more implementation research, and early syntheses of evidence were produced.[13,14] There are now a range of guides, courses, and journals for implementation research;[15,16,17] and countries at all income levels have developed varying levels of expertise and experience (panel), even when

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Panel: Implementation research examples in low-income and middle-income countries

Ghana

Over the last decade, the University of Ghana School of Public Health has strengthened the capacity of different cadres of health personnel, attempting to address stakeholder power imbalances inherent in implementation research expertise. These efforts have increased the involvement of policy makers, practitioners, and end-users in implementation research. For example, implementation research done since 2023, on how to integrate non-communicable diseases care into HIV treatment in Ghana, led to a community-based care-integration framework that is being implemented in primary care centres and serving as a blueprint for tuberculosis and diabetes service integration.

Indonesia

Implementation research in Indonesia has made considerable progress for more than a decade. Universitas Gadjah Mada has been a key actor, developing training resources and training 86 postgraduate students on implementation research. One example of the university's research accomplishments is the deployment of Wolbachia technology for dengue control in Yogyakarta, which shows efficacy in reducing dengue transmission rates. The university also explores how to integrate this strategy within existing dengue control programmes, to ensure implementation of sustainable and biological methods of vector control for dengue across Indonesia[20] and policy changes in this country. The WHO Vector Control Advisory Group endorsed the public health benefits of this method of vector control against dengue,[21] leading to global recognition of Wolbachia as a crucial tool in combating dengue.

Thailand

Policy and implementation research has made a major contribution to Thailand's efforts to reach and sustain universal health coverage. A network of actors, including the Ministry of Public Health, the National Health Security Office, the Health Intervention and Technology Assessment Program, and the International Health Policy Program, supports implementation research. For example, during the formulation of the universal coverage benefit package, research focused on intervention feasibility, an important implementation outcome, and yielded additional evidence for shaping the universal coverage benefit package and fostering its sustainability beyond the usual focus on effectiveness and cost-effectiveness. Another example is the international collaboration, commissioned by the Prince Mahidol Award Foundation, to identify priority interventions for non-communicable diseases and create tools to support their implementation.[22]

this capacity is often fragile and requires further development. Despite its proven potential for impact,[9] implementation research remains underutilised and underfunded, especially in the area of NCDs.

Beyond strengthening capacities for implementation research in all countries, several issues must be addressed for implementation research to make a greater contribution to progress on NCDs. Implementation research is a collaborative enterprise, so strategies for navigating power dynamics and reconciling interests between different stakeholders are essential. Too much so-called implementation research is difficult to distinguish from traditional academic research, delinked from implementation settings, and reliant on traditional communication methods, such as journal articles that are rarely accessed by policy makers and practitioners. Despite substantial expertise in many LMICs for implementation research, institutions in most countries remain fragile and dependent on external funding bodies. The incentives for policy makers and researchers to engage in implementation research remain poorly understood or inconsistently maintained. Enabling policy-literate scientists and science-literate policy makers requires greater incentives for researchers to engage in implementation, and policy makers to engage in research.

However, solutions to these issues exist. The practice of embedded implementation research in existing health programmes involves a tight-knit partnership between researchers and decision makers, fostering continuous learning for both to improve service delivery tailored to technical, political, and cultural contexts. This shift towards an embedded approach and co-creation of research by policy makers, researchers, and practitioners also includes aligning research cycles with policy and budget cycles and clarifying language to be more responsive to the needs of policy makers, and implementers. Doing so involves understanding policy processes, engaging policy makers, aligning research and policy objectives, conducting timely and flexible research, establishing feedback and learning loops, and sharing findings tailored to policy makers' needs.

Methodological innovation is also crucial, necessitating a shift towards more effective research methods and processes tailored and designed within the specific contexts of LMICs, and the specific needs of chronic care service delivery for NCDs. Such care demands integrated service delivery with coordination across various levels of the health system, involvement of multidisciplinary teams to provide the range of required health and social services, and addressing multiple health conditions and comorbidities. To design such integrated and equitable services for NCDs effectively, research must improve implementation to address these challenges, and utilise mixed methods approaches as both quantitative and qualitative knowledge is necessary to do so.

Tension can arise between the need to embed implementation research in the realities of specific contexts and systems, and the desire, particularly in global health partners, for generalisable findings that can be applied across countries.[18] Learning across contexts and countries remains important and possible, but this requires capacity strengthening and methodological innovation in synthesizing and translating experiences.

Funding and institutional support for implementation research also need to be addressed. National and global agencies contributing to implementation research for NCDs include the Global Alliance for Chronic Diseases, the US National Institutes of Health, the Norwegian Agency for Development Cooperation, the UK Government health research bodies, and the European Commission. However, building and sustaining strong implementation research-focused institutions, and ensuring research is adapted to country needs and interests, will require greater domestic investments in LMICs. Implementation research needs to be funded as a core activity in health programmes.

Within institutions, careers in implementation research should be incentivised. This requires career pathways in universities and other knowledge institutions, opportunities to highlight and share findings beyond publication in journals (such as policy dialogues and shared platforms at different national and subnational levels for learning and decision making), resources and recognition for implementation researchers, and clear demonstration of problem-solving effects of implementation research findings for policy makers and implementers.

In conclusion, aligning interests, innovating on methods, mobilising sustainable funding, and building institutions can support implementation research as a systematic practice in service delivery and policy implementation, to accelerate coverage of NCD interventions and the introduction of current innovations.

The upcoming Fourth High-level Meeting of the UN General Assembly on the Prevention and Control of NCDs in 2025[19] provides a key opportunity to anchor implementation research as a crucial tool to translate political commitments into policy and implementation worldwide.

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