

## EDITORIAL

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## Implementation research for maternal, newborn and child health

### BACKGROUND

The Alliance for Health Policy and Systems Research (AHPSR) partnered with the World Health Organization (WHO) Department of Maternal, Newborn, Child and Adolescent Health (MCA) to prepare a supplement to *Acta Paediatrica* to present results from selected implementation research studies that tested and documented the delivery of proven maternal, newborn and child health (MNCH) interventions in different countries and contexts. This editorial provides background information on how these studies were selected by WHO and an overview of the different studies in the context of the thinking on implementation research at the time they were developed.

A persistent challenge to achieving national and global goals for MNCH is the implementation and scale-up of policies, programmes and interventions that can save lives and improve health. Simply evaluating effectiveness of an intervention is not enough; there must also be an explicit focus on implementation that is systematic and robust.

Implementation research seeks to understand implementation and scale-up processes and the role of contextual factors on success, measure impact and identify where adaptation is needed. Such research can generate knowledge needed for policymakers and practitioners to accelerate work to strengthen health systems and improve health outcomes (1–3).

Increasingly, implementation research has gained prominence in the public health arena as a vital tool to advance and attain global health goals as organisations such as the WHO utilise it to achieve department and programme targets. In 2010, the Implementation Research Platform (IRP) was established as a platform to share and learn about implementation research experiences among the AHPSR, WHO/MCA, the Special Programme for Research, Development and Research Training in Human Reproduction (HRP) and the Special Programme for Research and Training in Tropical Diseases (TDR). Today, the IRP comprises more than 10 departments and programmes within WHO, contributing to the advancement of the field through development of guidance and toolkits. The IRP today supports over 100 research studies addressing a range of health and disease areas.

### OVERVIEW OF THE IMPLEMENTATION RESEARCH STUDIES

This supplement presents implementation research supported by AHPSR and WHO/MCA conducted in eight countries: China, Egypt, India, Lebanon, Kenya, Nepal, Pakistan and Syria. Studies were selected through two processes held in 2013. First, WHO supported research priority setting workshops in collaboration with the

Ministry of Health (MOH) in several countries to identify country-specific implementation research questions related to barriers in scaling up evidence-based MNCH interventions. The respective MOH then invited local research groups to submit letters of intent addressing the country-specific implementation research questions.

MOH officials and international experts determined a shortlist, and research teams were invited to a proposal development workshop facilitated by external and WHO experts. A unique feature of this initiative was the requirement that research proposals be jointly developed by researchers and programme implementers as well as a requirement that each research team include at least one national, regional or district programme implementer/policymaker.

In a second process, an international open call was issued for implementation research to improve MNCH. The call contained the same requirements for the active participation of implementers directly involved with MNCH programmes. Also, similar to the first process, letters of intent were selected after expert review, and the research teams were invited to a proposal development workshop.

Engaging policymakers and implementers in both processes was intended to ensure the research was relevant and responded to the specific needs of the programme and health system. In addition to the rigour and appropriateness of methodologies proposed, a key criterion for selection considered a study's likelihood of influencing programme and/or health system processes.

Diverse service delivery issues are highlighted within the different studies, including 1) addressing access barriers to reaching health services, 2) improving quality of healthcare services and 3) strengthening motivation and performance of community and facility-based health workers. While focusing on different MNCH problems and solutions, one main objective unifies all of the studies: identify and test an implementation strategy to inform sustained scale-up of the intervention in a specific health system context.

Four of the studies examined the effect of interventions on community health worker (CHW) performance. Three papers specifically looked at the delivery of integrated community case management (iCCM) of childhood illnesses by CHWs in rural Haryana, India (4), and in Homa Bay County, Western Kenya (5, 6); one study looked at an intervention to enhance supportive supervision of lady health workers (LHWs) on iCCM of childhood pneumonia and diarrhoea in Badin District, Pakistan (7). Another study tested an mHealth intervention to improve knowledge and skills related to MNCH care of accredited social health activists (ASHA) in Bharuch and Narmada districts of Gujarat, India (8).

The remaining four papers include a study in three districts of Nepal (9), testing a performance-based management system to improve health worker performance related to MNCH care delivery; a study in Arghakhanchi District, Nepal (10), on how to implement and scale up maternal and near-miss reviews; another study integrating labour companionship in three public hospitals in Egypt, Lebanon and Syria (11); and a study using the plan–do–study–act (PDSA) cycles to develop a strategy for delivering an intervention to increase antenatal care use among clan members in Liangshan Yi Autonomous Prefecture, China (12).

Although these studies focus on the development of implementation strategies, they also capture impact on key MNCH outcomes, as policymakers are interested in seeing how the intervention can be delivered within their specific health system context but also in affirming that the interventions can improve outcomes within their health system context.

#### DIVERSITY IN IMPLEMENTATION RESEARCH DESIGNS

Considerable discussion remains concerning what methods and designs are appropriate to answering implementation research questions (13). This supplement assembles a range of examples along the spectrum of implementation research, from effectiveness studies with some considerations of implementation to those that assess the sustainability of economic costs of implementation and scale-up (2). The varied study designs and implementation approaches reflect the evolving nature of implementation research evident in public health practice.

Numerous frameworks for implementation research have emerged in recent years. Despite differences, commonalities centre around describing and/or guiding the process of translating research into practice (process models); understanding and/or explaining what influences implementation outcomes (determinant frameworks, classic theories, implementation theories); and evaluating implementation (evaluation frameworks) (14). The approaches employed within the studies in this supplement often combine two or even three of the aims, with tension between the importance of focusing on the ‘how’ and other qualitative aspects of implementation and the desire to demonstrate outcomes and impact.

Implementation research studies also vary in approaches to scale-up. Barker and colleagues (15) gathered dominant themes from existing scale-up frameworks and proposed four steps for scaling up health interventions: (1) set-up which prepares the ground for introduction and testing of the intervention that will be taken to full scale; (2) develop the scalable unit which is an early testing phase; (3) test of scale-up which tests the intervention in a variety of settings that are likely to represent different contexts that will be encountered at full scale; and (4) go to full scale which progresses to a larger number of sites.

The approaches captured in this supplement generally fall into Steps 1 and 2, developing an implementation

strategy and identifying important considerations to contribute to country discussions on implementation and scale-up. The implementation research teams involved therefore shared a common frustration. Despite interventions deemed national and government priorities, despite having taken important measures to move to scale up after the study end, including dedicated time and effort to engage important government officials and key stakeholders, and implementation led by the district health team, projects of this scope and within limited time frames (about two years) often do not allow for moving to Steps 3 and 4.

At the time of publication, several of the projects reported elements of scale-up including successes in integrating the work into national guidelines, and continued efforts to advancing implementation to other sites (e.g. the health worker motivation strategy in Nepal outlined in Baral et al., 2018) (9). Box 1 provides an example of how two projects have been scaled up (an example of iCCM in Kenya (3,4) and in community-based services for pneumonia in Pakistan (5)).

Most of the studies presented herein started with an intervention identified as a priority within the national MNCH strategy. All studies were conceived to ensure involvement of the Ministry of Health and delivery through the public health system. A predesigned notion of how to implement in one or two sites was proposed and negotiated with key stakeholders, and most importantly, government representatives were in general part of the Study Steering Committee. District health services or facility management were often one of the primary actors. The Research Team supported implementation activities and ensured the data collection component of implementation research. In some studies, an iterative approach allowed for implementation to be modified during the study based on mechanisms in place to monitor and to capture lessons. Some studies were designed to show effectiveness and had a less flexible design but included qualitative methods to capture perceptions of acceptability and feasibility. All studies had an intent to capture lessons that could assist in pursuing scale-up discussions. The different articles share those lessons and conclude with what needs to be addressed to ensure scale-up.

Since the conception of these studies in 2013, understanding of implementation research and its use has evolved, and methods and designs have expanded. Embedding implementation research into core health system functions is increasingly seen as important for successful implementation (16). Commitment to scale up is foreseen from the design of the research, stemming from the recognition that most public health interventions are not introduced as free-standing programmes but rather as modifications or enhancements to an existing and dynamic health system. Implementation research embedded as part of a continuous learning cycle within the system can provide real-time knowledge on how interventions can be brought to scale within the context of that system. Policymakers and implementers at different levels should be engaged as co-investigators and involved, as appropriate, in different phases of the research project. This

**Box 1** Scale-up of iCCM**Kenya (3,4)**

Following the implementation research project in Homa Bay County, there has been increased interest to invest in community health services and in particular CCM for pneumonia.

- 1 Several national guidelines and tools were finalised and rolled out in all areas where the national community health strategy has been implemented. These include (i) the national iCCM implementation guideline, (ii) national iCCM monitoring and evaluation framework, (iii) CHW treatment and tracking register, (iv) Community Health Extension Worker (CHEW) supervision manual, (v) simplification of iCCM training materials and job aids for the CHWs to reach out to illiterate populations.
- 2 iCCM has been scaled up to two additional counties, Siaya in Western Kenya and the Turkana (a nomadic community) in the North Rift Valley.

**Pakistan (5)**

Following the implementation research project in Badin District of Sindh Province, there has been increased interest in improving the quality of supervision of the lady health workers by lady health supervisors through the use of mobile phones.

- 1 The capacity-building project was extended to a second district in rural Sindh, Mirpur Khas
- 2 The government of Sindh Province upgraded the curriculum for lady health supervisors with support from a donor-funded project, Umeed e Nau, to incorporate the use of mobile phones to improve the quality of door-to-door preventive healthcare services delivered by lady health workers.

will further enhance the relevance of the research and ensure greater ownership and use of the findings.

**CONCLUSION**

This supplement brings together diverse studies along the spectrum of implementation research with varied research designs delivered in different health systems. Important lessons for implementing priority MNCH interventions and important reflections for scale-up within the health systems are provided. The lessons set forth herein can contribute to achieving universal health coverage, to strengthening implementation of important MNCH interventions and to strengthening implementation research approaches.

**CONFLICT OF INTEREST**

The authors have no conflict of interest to disclose.

**DISCLAIMER**

Anayda Portela and Nhan Tran are staff members of the World Health Organization. The authors alone are responsible for the views expressed in this publication and they do not necessarily represent the views, decisions or policies of the World Health Organization.

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