Lessons Learned from the Scale-Up Experience of Six High-Impact Interventions in Reproductive, Maternal, Newborn, and Child Health (RMNCH)

June 2014

This report was made possible by the generous support of the American people through the United States Agency for International Development (USAID), under the terms of the Leader with Associates Cooperative Agreement GHS-A-00-08-00002-00. The contents are the responsibility of the Maternal and Child Health Integrated Program (MCHIP) and do not necessarily reflect the views of USAID or the United States Government.

The Maternal and Child Health Integrated Program (MCHIP) is the USAID Bureau for Global Health's flagship maternal, neonatal and child health (MNCH) program. MCHIP supports programming in maternal, newborn and child health, immunization, family planning, malaria, nutrition, and HIV/AIDS, and strongly encourages opportunities for integration. Cross-cutting technical areas include water, sanitation, hygiene, urban health and health systems strengthening.

Table of Contents

List of Figures and Tables

Acknowledgments

The Maternal and Child Health Integrated Program (MCHIP) is the United States Agency for International Development (USAID) Bureau for Global Health's flagship maternal, neonatal, and child health program. MCHIP supports programming in maternal, newborn, and child health; immunization; family planning; malaria; nutrition; and HIV/AIDS and strongly encourages opportunities for integration. Cross-cutting technical areas include water, sanitation, hygiene, urban health, and health systems strengthening.

This report was made possible by the generous support of the American people through USAID, under the terms of the Leader with Associates Cooperative Agreement GHS-A-00-08-00002-00. The contents are the responsibility of MCHIP and do not necessarily reflect the views of USAID or the United States Government.

This report was authored by Ann Larson, Jim Ricca, Jessica Posner, and Laura Raney. Amanda C. Little contributed several of the analyses used in the paper. Anne LaFond and Natasha Kanagat provided direction and Khatidja Naithani assisted on technical and administrative matters.

The initial adaptation of the ExpandNet framework for analysis of MCHIP's scale-up experience was developed with members of the MCHIP Monitoring and Evaluation team (Vikas Diwevedi, Molly Strachan, and Barbara Rawlins) and intensively tested by the Newborn team with examples of scale-up of Helping Babies Breathe (HBB) (working in close collaboration with Joseph de Graf Johnson, Rachel Taylor, Goldy Mazia, Stella Abwao, and Magdalena Serpa). Rebecka Lundgren of Georgetown University's Institute for Reproductive Health provided key advice on the measurement issues for retrospective evaluation of scale-up.

The following people shared information and insights about scaling up specific interventions: Elaine Roman (malaria in pregnancy); Ann Pfizer, Molly Strachan, Giulia Besana, Elaine Charurat, Chrisostom Lipingu (postpartum family planning); Serge Raharison, Dyness Kasungami, Rebecca Levine (integrated community case management); Sheena Currie, Jeff Smith (uterotonic use immediately following birth); Magdalena Serpa, Rachel Taylor, Robert McPherson (HBB); Rebecca Fields, Robert Steinglass, and Asnakew Tsega (new and underutilized vaccine introduction).

The in-depth case studies of scale-up efforts were immeasurably assisted by Rajesh Khanna, Prakash Philip, Bulbul Sood, Somesh Kumar, and Vivek Yadav in India and Mamadou Kani Konaté, Aissatou Aida Lo, Drissa Bourama Ouattara, N'Toumbi Tiguida Sissoko, and Modibo Kante in Mali.

Abbreviations

ANC	Antenatal care
CHW	Community health worker
DRC	Democratic Republic of the Congo
FP	Family planning
GDA	Global Development Alliance
GOI	Government of India
HBB	Helping Babies Breathe
HMIS	Health management information system
iCCM	Integrated community case management
IPTp	Intermittent preventive treatment [for malaria] in pregnancy
MCHIP	Maternal and Child Health Integrated Program
MiP	Malaria in pregnancy
MCH	Maternal and child health
MNCH	Maternal, newborn, and child health
MOH	Ministry of Health
NGO	Nongovernmental organization
NUVI	New and underutilized vaccine introduction
PCV	Pneumococcal conjugate vaccine
PMI	President's Malaria Initiative
PPFP	Postpartum family planning
PPH	Postpartum hemorrhage
PPIUD	Postpartum intrauterine device
RMNCH	Reproductive, maternal, newborn, and child health
SBA	Skilled birth attendant
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
UUIFB	Uterotonic use immediately following birth
WHO	World Health Organization

Executive Summary

The Maternal and Child Health Integrated Program (MCHIP), the flagship maternal and child health program of the United States Agency for International Development (USAID), has worked in over 50 low- and middle-income countries since 2008. One of MCHIP's cross-cutting themes was to support governments to bring high-impact health interventions to scale. This review draws on 18 case studies involving MCHIP support to scale up six health interventions.

The research team conducted desk reviews for each case study based on project documents and published and gray literature, supplemented by in-country teams' self-assessments of progress in institutionalizing the intervention and interviews with technical team members at MCHIP headquarters.

Using the ExpandNet framework, every scale-up effort can be described as operating within a context-specific interaction of the following elements: the innovation (i.e., intervention), the environment, the organizational user(s) (i.e., the implementer(s)), and the resource team (i.e., managers of the scale-up process). Each scale-up effort must make strategic choices about how to expand the intervention and use implementation strategies to advance the process of scale-up. These implementation strategies can be categorized broadly as advocacy and dissemination, mobilizing resources, changing organizational processes, monitoring and evaluation, and engaging clients.

The 18 cases of scaling up MNCH interventions demonstrate some good scale-up practices. Almost all employed a comprehensive approach, seeking to address how the new practices would be supported through a variety of components of the health system. The interventions drew on robust evidence of effectiveness, but were implemented in ways which were congruent with national health systems and structures. Despite the considerable diversity in the interventions, contexts, stakeholders, and available resources, the review identified several key lessons for designing and implementing scale-up efforts that cut across these various experiences.

Lesson learned about the environment

- The congruence of current global opportunities and long-standing national priorities and experiences is a window to advocate for and launch a scale-up effort.

Lessons learned about the resource team

- Scale-up efforts are most likely to run efficiently when resource teams have dedicated people who are viewed with respect and have extensive networks within government.

- Management and coordination of many stakeholders is difficult, as they can introduce different agendas, even while potentially bringing in more resources.

Lessons learned about advocacy and dissemination

- Without government ownership and leadership, the scale-up of an intervention cannot achieve lasting health benefits. Although pilots and advocacy can help to create an environment for government ownership, without high-level commitment effectively communicated to every level of the health system, other scale-up strategies should not be attempted.

- Pilots and targeted research projects should be designed to inform implementation and not only as a tool to demonstrate proof of concept for the sake of advocacy.

- Unless they occupy senior decision-making roles, clinical champions have a useful but relatively limited role to play in scale-up efforts.

- Clarity about what constitutes the intervention is best articulated in policies and guidelines that describe what is expected of frontline workers, their managers, and other parts of the system. Failure to gain buy-in at an early stage will result in slow or uncoordinated adoption that will resemble a project rather than an approach by the national health system.

- Creating spaces that allow for frank appraisal of progress and development of a shared view of how to address obstacles and shortcomings will increase ownership of the intervention and encourage stakeholders to support continuous improvement.

Lessons learned about resource mobilization

- Resources from development partners are valuable in meeting the additional costs of scaling up an initiative; however, there needs to be discussion in the design phase of how to transition to financially supporting the sustained practice.

- Adding new, trained workers will make the adoption of interventions easier, but if salary support is short lived, this can be a problematic strategy.

- Adding new tasks to existing health workers is effective in expanding a service to more beneficiaries, but the service's successful adoption requires either careful piloting in realistic settings or intensive support during implementation.

Lessons learned about organizational processes

- Scaling up with a "quality end in mind" is needed. Seeing scale-up efforts through a quality lens requires looking beyond training to how the new practice is performed in the workplace and incorporating strategies to reinforce high-quality performance within the scale-up plan.

- Providers who have been trained are often unwilling or unable to train other providers at their work site about a new skill unless it is already an institutionalized practice.

- Strategies are needed to aid newly trained workers to apply their skills in the workplace. In clinical settings, this may require repeated interventions for up to 18 months in some workplaces where there is a lack of other systems to hold workers accountable.

Lesson learned about monitoring and evaluation

- Resource teams need to identify the quality and coverage indicators and targets they expect to achieve, collect data to monitor performance, and have mechanisms to respond to findings and share widely what they have learned.

Lesson learned about client engagement

- Clients are potential allies in scaling up health interventions. Their role in demanding the service should be harnessed by involving community members' perspectives in the design and implementation of scale-up efforts.

Lessons learned about service expansion

- Rapid national scale-up of interventions should not be attempted before (1) the necessary training materials, supplies, and equipment are available; and (2) there has been practical in-country experience of successfully institutionalizing the intervention in facilities or communities with the same level of support as will be available to the new sites.

- Donors and other development partners can support scale-up efforts by working with governments to achieve long-term objectives rather than only having a viewpoint of short, project-style cycles and funding.

- Scale-up efforts do not need to insist that all sites implement an intervention the same way. As long as the essential elements regarding safety and quality are retained, encouraging districts and facilities to adopt their own strategies and to provide opportunities for sharing their lessons can increase ownership of the intervention and hasten the process of institutionalizing it.

This review concludes by highlighting approaches which should be incorporated in future programs. These consist of ensuring that scale-up plans go beyond addressing national policy by working closer to the ground to expand and institutionalize the new processes needed to implement the intervention. This requires a focus on supporting quality service delivery, encouraging community members and beneficiaries to demand services, continuous monitoring of outcomes and building processes that will be effective once the intervention is institutionalized.

Introduction

Between 2008 and 2014, the Maternal and Child Health Integrated Program (MCHIP), USAID Bureau for Global Health's flagship, worked in more than 50 low- and middle-income countries in Africa, Asia, Latin America, and the Caribbean to improve the health of women and children. MCHIP worked on programming in maternal, newborn, and child health (MNCH); immunization; family planning (FP); nutrition; malaria; and HIV/AIDS. MCHIP's first objective was to help countries scale up evidence-based high-impact interventions. Working with USAID missions, governments, nongovernmental organizations (NGOs), local communities, and partner agencies, MCHIP assisted scale-up efforts by supporting field-based implementation and providing global technical leadership and advocacy.

Over the final year of the program, MCHIP chose six high-impact interventions that collectively spanned the breadth of the reproductive, maternal, newborn, and child health (RMNCH) spectrum and into which it had put the most effort to scale up. This review draws on three country examples of scaling up each of these six technical interventions to draw conclusions on effective strategies and lessons learned that could be applicable to new initiatives. It also draws lessons from program learning activities carried out by the individual technical teams and from in-depth case studies of three selected examples (integrated community case management [iCCM] in Mali; postpartum family planning [PPFP] in India; and Helping Babies Breathe (HBB) in Bangladesh and Malawi). The framework, methodology, and results are described, followed by lessons learned.

SCALE-UP FRAMEWORK

A large body of literature has emerged on what is required to scale up effective interventions for development. In the health field, the ExpandNet framework is one of the most frequently cited (ExpandNet, 2009, 2010). ExpandNet is a network of global health professionals which had its origins in a series of projects related to strengthening reproductive health capacity in developing countries (Simmons & Shiffman, 2007).

ExpandNet defines scaling up as "**deliberate efforts to increase the impact of health innovations tested in pilot or experimental projects so as to benefit more people and to foster policy and program development on a lasting basis**" (ExpandNet, 2009, p. 1).

The most important features of this definition are the following:

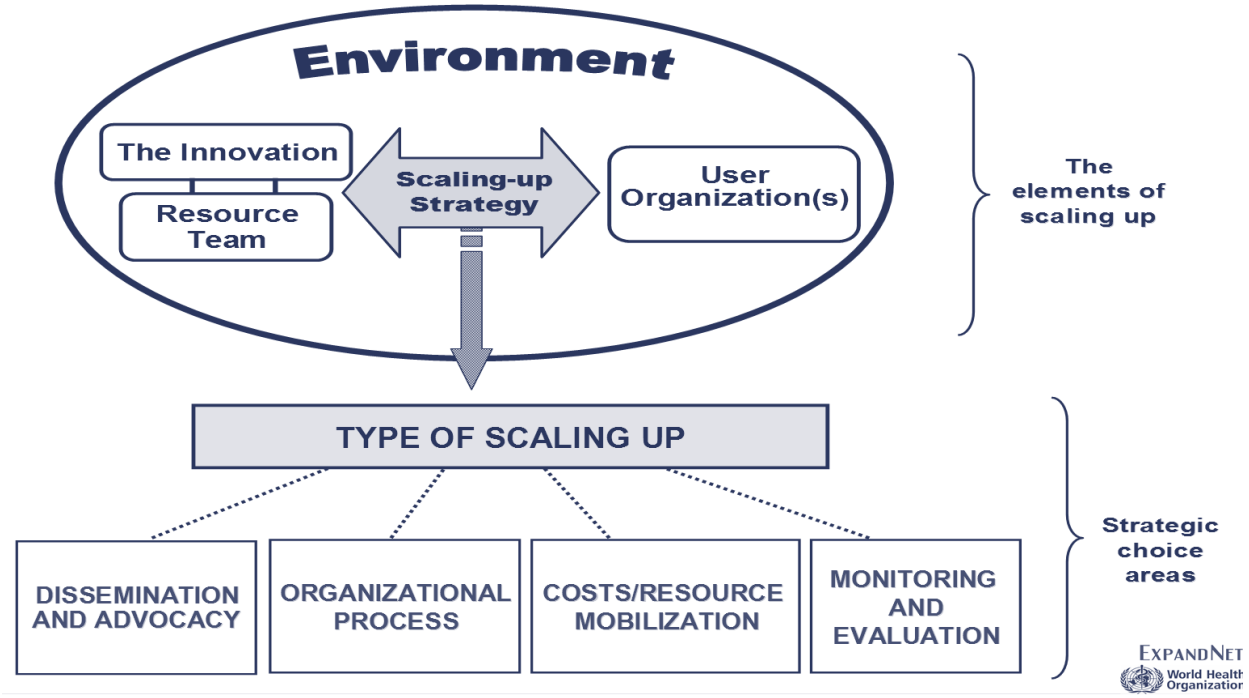
- Scale-up is a deliberate process involving explicit goals and thorough planning.
- Scale-up efforts occur after there is evidence that the innovation will be effective in that setting.
- The intent of scale-up is to benefit more people by expanding access and use of the innovation.
- The establishment of supportive policies and routine service delivery processes is essential in order to institutionalize the innovation and achieve lasting benefits.

The ExpandNet framework was not used explicitly by any of the MCHIP technical teams. However, at the most general level, the framework offers a common language and way to conceive the scale-up experience. The way that scale-up is described in the ExpandNet framework also closely conforms to the issues encountered and strategies employed in scale-up of interventions supported by MCHIP.

Partly as a description of reality and partly as a way of encouraging deliberate actions by program managers, donors, and technical advisors wishing to scale up an intervention (i.e. an "innovation" in the framework), ExpandNet conceptualized the elements of the scale-up process in the diagram shown in Figure 1 (ExpandNet, 2010):

- A proven procedure, technology, health care practice, or health care cadre which is new to the setting (**innovation**)
- implemented in a country context (**environment**)
- by implementing organization(s) (**user organization[s]**)
- guided by a group of people responsible for managing the scale-up process (**resource team**)
- employing deliberate actions to achieve scale-up objectives (**strategies**).

Figure 1: ExpandNet scale-up framework



Strategies for Scale-Up

As shown in Figure 1, ExpandNet defines four broad strategies ("strategic choice areas") to drive the scale-up process: dissemination and advocacy, organizational process, costs/resource mobilization, and monitoring and evaluation (ExpandNet, 2009, 2010). No two scale-up efforts are alike, as multiple strategic choices must be made concerning implementation, given the nature of the environment, innovation (i.e., intervention) and capacities of the resource team and organizational user.

Dissemination and advocacy involve communicating information about the intervention, promoting its benefits, and explaining how it is to be implemented. Dissemination and advocacy strategies include mechanisms to tell a compelling story about the benefits of the intervention and the progress of scaling it up. These can be formal mechanisms such as large meetings, launches, coordinating committees, policies and guidelines, and training and orientation sessions. Dissemination and advocacy also occur through regular engagement with informal networks of decision makers, policy advisors, health service providers, and civil society.

Scaling up involves changing **organizational processes** at the national, regional, district, facility, and community levels to accommodate the intervention. The organizational processes most frequently employed in scaling up are training of providers and often their managers and support staff, follow-up and ongoing supervision, quality assurance procedures, and strengthening logistics and supply chains.

Resource mobilization needs to occur to meet the additional costs of scaling up, such as advocacy, coordination and planning, purchasing of supplies, training, and monitoring and evaluation. These additional recurrent costs and are usually met through a combination of national government and development partners' funds. In most settings, external support will not be available to sustain an intervention once the intervention has been institutionalized and expanded through the national health system. Identifying ongoing funding mechanisms is essential for sustainability and is a scale-up activity itself.

Monitoring and evaluation activities are needed to assess the process, outcomes, and impact of moving to scale. The information that needs to be collected and shared to inform the scale-up efforts is rarely available through normal data-collection processes, so parallel systems are often needed to produce timely information to inform action.

Scale-Up Outcomes

The ExpandNet framework defines two desired outcomes of scale-up: spread of the intervention to reach more people (i.e., increased coverage) and institutionalization, termed "horizontal" and "vertical" scale-up, respectively. However, because the terms "horizontal" and "vertical" have other connotations in the global health field, they will not be used in this document. Instead, the outcomes will simply be referred to as "expansion" and "institutionalization."

OBJECTIVES OF THE SCALE-UP REVIEW

Several MCHIP technical teams compiled multicountry assessments of scale-up processes supported by MCHIP partners or colleagues in other international programs (Gomez, Dickerson, & Roman, 2012; MCHIP, n.d.; Smith, Currie, Perri, Bluestone, & Cannon, 2012; Starbuck, Raharison, Ross, & Kasungami, 2013). These assessments supply lessons specific to their technical programs (e.g., malaria in pregnancy [MiP]). The purpose of this review is to synthesize the experience across six interventions with the goal of encouraging learning across program areas and identifying findings that could be applicable to new initiatives.

A note on language is needed. The term "innovation" has not been deemed appropriate by all stakeholders to describe what countries were scaling-up because the interventions were not always particularly novel. So when describing the specific scale-up efforts, this review will use the term "intervention." As with the ExapndNet term "innovation," this should be understood to mean not simply the specific technical intervention like "misoprostol at home birth" but also the other essential operational elements like the distribution mechanism, essential counseling elements, and client follow-up, for instance.

This review:

- describes scale-up experiences for multiple RMNCH interventions and settings using the ExpandNet framework,
- shows outcomes in institutionalizing and expanding the coverage of the interventions, and
- draws conclusions on effective strategies and lessons learned.

THE CASE STUDIES

The review is based on 18 case studies of six high-impact interventions supported by MCHIP between 2008 and 2013. The interventions were chosen to represent the breadth of RMNCH programming. For each intervention, there are three cases where MCHIP participated in national scale-up efforts and, in one case, a global effort. The cases are shown in Table 1.

Table 1: Scale-up case studies, by intervention and country

INTERVENTION	COUNTRIES		
PPFP	India*	Philippines	Tanzania
Newborn resuscitation (Helping Babies Breathe or HBB)	Bangladesh**	Colombia	Malawi**
Uterotonic use immediately following birth (UUIFB) to prevent postpartum hemorrhage (PPH)	Global	India	Mozambique
iCCM of childhood illnesses	Democratic Republic of the Congo (DRC)	Mali*	Rwanda
Prevention of MiP focusing on intermittent preventive treatment in pregnancy (IPTp)	Burkina Faso	Ghana	Kenya
New and underutilized vaccine introduction (NUVI), specifically pneumococcal conjugate vaccine (PCV) to prevent meningitis and pneumonia	Kenya	Malawi	Tanzania

* In-depth in-country case study carried out in addition. **synthesized in-depth process documentation and evaluative activities

Scale-up efforts are collaborative. The review uses MCHIP technical advisors' documentation and reflections to describe the 18 scale-up experiences but does not seek to attribute the results described to the actions taken by MCHIP. Rather, the analysis incorporates the scale-up-related activities performed by all actors as well as the outputs and outcomes that occurred in each country.

METHODS

The review and assessment of the scale-up efforts in which MCHIP participated was undertaken in six stages over an eight-month period:

1. In late 2013, in-country teams completed scale-up matrices describing changes in the institutionalization and coverage of the interventions from 2008 to 2013.
2. Summaries of the 18 scale-up cases were prepared based on the matrices and relevant project documents and reports in the published and gray literature.
3. Key informant interviews with MCHIP technical leaders were conducted to clarify the case descriptions and provide additional insights about scale-up experiences.
4. Data from the 18 cases were synthesized to identify patterns and explain outliers.
5. Group discussions were held with MCHIP intervention team leaders to validate the conclusions.
6. Two in-depth country case studies were conducted (PPFP in India; iCCM in Mali) to gather more in-depth information and to validate general conclusions. The case studies are written up separately but inform the conclusions drawn in this document.

Matrices to Measure Institutionalization

Scaling up requires a systems approach involving all components of the health system, including the clients it serves. The MCHIP Learning, Monitoring, and Evaluation team developed a matrix to measure the extent to which scale-up efforts achieved the objective of institutionalizing the intervention. The use of measures of health system functioning as a planning and evaluation tool for scale-up was familiar to the MCHIP technical teams because the Learning, Monitoring, and Evaluation team had previously developed scale-up maps to characterize the scale-up process. These scale-up maps are infographics that illustrate change over time in the integration of the intervention within the different components of the government health system. Scale-up maps were developed and applied across multiple countries to evaluate programs in iCCM (MCHIP, 2013), MiP (Gomez et al., 2012), and UUIFB (Smith et al., 2012). Technical program leaders reported that they had successfully used scale-up maps as simple, visual tools in stakeholder workshops planning the introduction of new vaccines and PPFP.

Building on these scale-up maps, MCHIP mapped the components to the six WHO health system building blocks (World Health Organization [WHO], 2007), further dividing them into 12 health system components, as shown in Table 2. A shortcoming of the WHO building blocks is that they are exclusively about the supply of health care and prevention. Following the practice of others, MCHIP included community demand to the WHO building blocks.

Table 2: Health system components used to describe institutionalization of scale-up efforts

WHO BUILDING BLOCK	HEALTH SYSTEM COMPONENT
Governance	Policy
	Planning
	Coordination
	Leadership
Finance	Finance
Health Information	Monitoring and evaluation
Commodities and Supplies	Commodities and supplies
Human Resources	Personnel
	Training
Service Delivery	Quality improvement
	Supervision
Community Demand*	Demand creation and client engagement

*MCHIP addition

Each of the 12 components was scored using a five-point scale to measure progress toward institutionalization. A score of 0 meant there was no activity occurring in the country related to that element with respect to the intervention (e.g., if the component was health information, then there was no activity to include information or indicators in registers or to report on the innovation). A score of 4 indicated that the national government through the Ministry of Health (MOH) had fully adopted and integrated the components needed for the intervention and made it a sustainable part of the routine practice of the health service. Scores between 0 and 4 describe a gradient from some discussion within government, to isolated piloting or testing of the components needed for the intervention (usually with external assistance), to expanding the components for the intervention with the involvement of the government and significant external assistance, to full integration within routine government processes.

MCHIP country office staff completed the institutionalization matrix in consultation with representatives of the MOH and other relevant technical agencies. Scores were given for each health system component to indicate the level of institutionalization at the beginning of the MCHIP program (usually 2008) and at the end of 2013. The completed matrices were reviewed by the relevant MCHIP technical team leader before being sent to the research team. See the annex for an example.

Limitations of Analysis

The review methodology has a number of limitations which affect the results and interpretation. The case selection was purposive. Teams were directed to choose the countries for which they felt the most progress on scale-up had been made. The final selection of the 18 cases out of a pool two to three times larger of scale-up efforts which MCHIP supported was a collaborative exercise among the MCHIP leadership and technical teams. There was a "success" bias to the selection, as the review was intended to highlight lessons learned; when scale-up efforts fail to progress, it is difficult to draw many lessons. There was also a bias toward efforts in which MCHIP was more intensely involved. Neither the success nor the MCHIP involvement biases necessarily distort the findings, but each may affect the ability to generalize findings. Although MCHIP involvement is the common thread, the technical teams had diverse roles across the 18 cases, ranging from global advocacy to day-to-day support of implementation. However, because of the nature of the selection, none of the cases involve scale-up efforts which were entirely funded by the national government.

The review is limited to activities during the MCHIP funding period of 2008–2014. The cases represent efforts at various stages of the scale-up process, from achieving universal coverage of a new vaccine to only achieving endorsement of a new national policy. In all cases, the scale-up efforts were built on a foundation of current and previous health programs. In some cases, the scale-up process was ongoing or even just beginning by the end of the period; in other cases, scale-up efforts—or MCHIP's involvement in them—ended two or three years ago. Achieving impact at scale may require several externally-supported efforts beyond the one described here.

The data used to describe the scale-up cases and identify lessons learned also have a number of limitations. The institutionalization matrices included descriptions of the scale-up activities. These were supplemented with published and gray literature; however, detailed information was not available for every case study, especially those for which MCHIP took a minor supporting role in the scale-up effort. This limitation was mitigated by providing several opportunities for technical leaders to review the material and obtain input from colleagues more familiar with country programs when possible.

Scoring the institutionalization of the intervention across the 12 components was a qualitative exercise by the country teams, despite the numeric scoring. The involvement of government representatives and other technical advisors in the assessment meant that the institutionalization scores have internal validity. However, the scores were not calibrated for external validity. Comparisons of scores across interventions and health system components should be interpreted with caution and are intended to be suggestive of patterns rather than definitive. The MiP technical team used a somewhat different matrix format, with a scoring system that focused on performance rather than institutionalization, which has some bearing on how the outcomes for that intervention are interpreted.

Measures of the expansion of the interventions within countries—including the geographic/administrative areas involved, the population covered, utilization rates, and health impact—proved difficult to obtain. Since most of these programs are recent, impact evaluations are rare. Only two cases (Bangladesh and Malawi HBB) had conducted outcome evaluations

with comparisons. For most of the 18 cases, information was available on the numbers of districts involved in scale-up and the numbers of people trained. In one-third of the cases, there was no information on the number of people receiving the new service or the proportion of all eligible people—such as pregnant women—who received the new service. Where data were available, direct comparison of the measures across interventions and sometimes between countries with the same intervention could be problematic. For example, "number of districts implementing intervention" may mean staff at one or all facilities have been trained. Population figures may not be relevant if the intervention is only applicable to a subsection of the population, such as underserved villages.

Results

The results are presented in three sections. The first section introduces the interventions and 18 case studies. The second section summarizes the scale-up outcomes. The third section uses the ExpandNet framework to describe the elements and strategies used to institutionalize and expand coverage of the interventions and seeks to identify the essential strategies for successful scale-up efforts.

THE SCALE-UP EXPERIENCES STUDIED

Table 3 gives a brief description of the six health interventions and the scale-up approach taken in each setting. All scale-up efforts were adapted to the specific national context. For three interventions, scale-up involved nationwide introduction (HBB, MiP/IPTp, NUVI/PCV); in two, the intervention was introduced in selected sites or regions (PPFP and iCCM); and in one, the scale-up effort involved advocacy and policy development (UUIFB).

Table 3: Overview of the six innovations and the focus in the 18 case studies

INTERVENTION	PROGRAM DESCRIPTION	SETTING-SPECIFIC SCALE-UP APPROACH
PPFP	▪ Increasing the capacity of health workers with regular contact with women receiving antenatal care (ANC) or in the labor ward or postpartum period to raise awareness and counsel on PPFP. ▪ Positioning intrauterine contraceptive devices placed within 48 hours postpartum as a suitable PPFP method. ▪ Building capacity of skilled birth attendants (SBAs) to undertake safe postpartum intrauterine contraceptive device (PPIUD) insertions soon after delivery.	▪ All countries focused on sites and jurisdictions selected for their expected ability to reach the largest number of clients and have the most influence in national institutionalization. ▪ India's scale-up effort focused on building capacity for facilities with high utilization to offer PPIUD services within a PPFP framework. ▪ Scale-up efforts in the Philippines and Tanzania built capacity of a range of health workers to incorporate PPFP counseling and services into their routine tasks, including PPIUD in selected large facilities.
HBB	• Based on a global implementation package, HBB teaches an evidence-based basic newborn resuscitation protocol aimed at improving the skills of practitioners attending births to recognize and respond to babies not breathing at birth. • HBB training materials consist of training modules (guidelines, standard teaching materials, and simulation-based teaching methods) and a package of equipment (a practice neonate mannequin, an innovative multiple-use suction bulb for clearing newborns' airways, and a low-cost bag and mask ventilator).	▪ In Bangladesh, Malawi, and Colombia, a two-day in-service competency-based training was rolled out nationwide with follow-up skills practice. In all three countries, resuscitation equipment was provided. There were also efforts to include key elements in the health management information system (HMIS) and supervisory system. ▪ In Bangladesh, the training has been included in pre-service nursing and medical curricula. ▪ In Colombia, HBB was integrated into the national Integrated Management of Neonatal and Childhood Illnesses program as the resuscitation module.

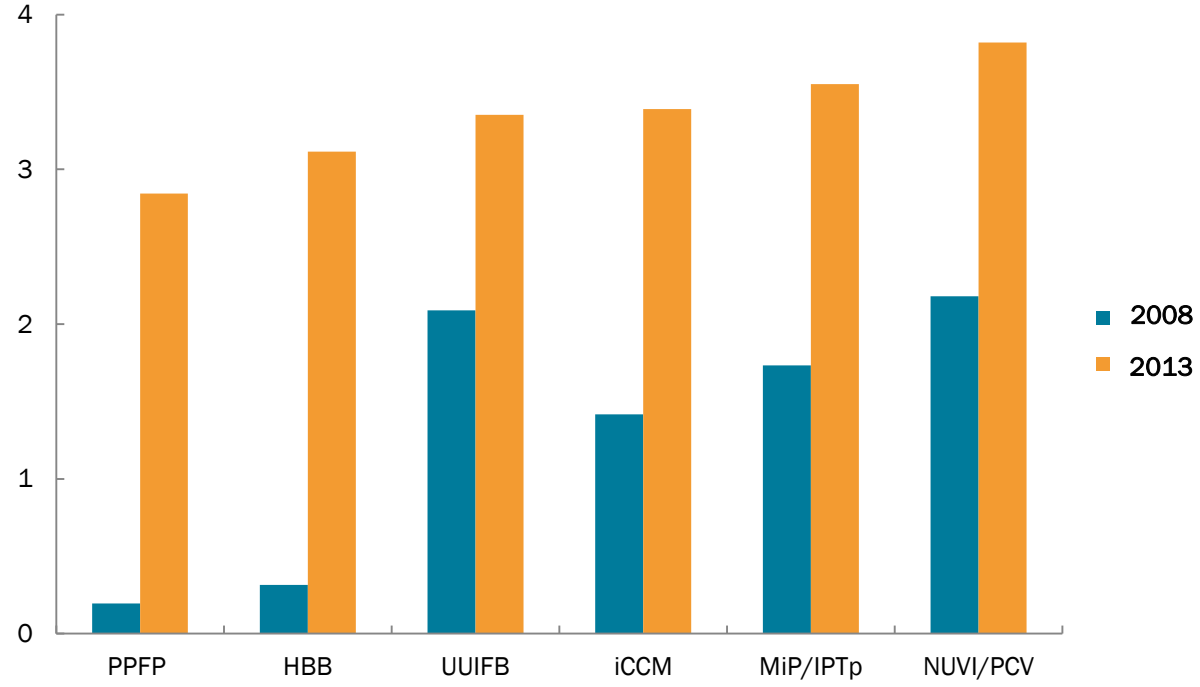
INTERVENTION	PROGRAM DESCRIPTION	SETTING-SPECIFIC SCALE-UP APPROACH
UUIFB to prevent PPH	Two uterotonic drugs are used, depending on the setting: ▪ Oxytocin is administered by injection if the birth is at a facility with appropriate storage and SBAs. ▪ Misoprostol tablets taken immediately after birth are for women delivering at home or in a community-based setting. Tablets may be provided at time of birth by an SBA or traditional birth attendant or distributed in advance to the woman for self-administration.	▪ The global scale-up effort advocated for advanced distribution of misoprostol by generating and sharing evidence of safety and effectiveness. ▪ Mozambique and India already had established oxytocin as a PPH preventive for births in government facilities. Policies for advanced distribution of misoprostol had been developed in both countries by end of the review period as a result of in-country advocacy.
iCCM	iCCM of childhood illness is an approach to reduce morbidity and mortality of children under five years old in hard-to-reach or underserved communities, delivered by community health workers (CHWs) (paid or volunteer). CHWs provide first-line treatment for malaria, pneumonia, and diarrhea and referral for serious cases.	▪ In DRC, the iCCM program was already in place by 2008. The scale-up effort supported the government to increase the number of communities served. ▪ In Rwanda and Mali, scale-up efforts built on previous experiences of community-based programs delivered by NGOs or government CHWs. Rwanda's scale-up effort involved all urban and rural communities; Mali's scale-up effort targeted communities five kilometers or more from health centers in five of the eight regions.
MiP focusing on IPTp	IPTp with an antimalarial to pregnant women early in the second trimester and once a month up to the time of delivery is one component of a three-pronged approach to reducing the number of women contracting malaria while pregnant. The other two components of the MiP approach are ▪ case management of pregnant women with malaria through detection and treatment and ▪ use of insecticide-impregnated (or insecticide-treated) bed nets by women during their pregnancy. Scale-up of MiP requires collaboration between malaria control and maternal health units.	Kenya, Ghana, and Burkina Faso already had MiP policies and strategies in place which were strengthened during the review period. MCHIP and others placed effort on encouraging integration of policies and closer cooperation between the malaria and maternal and child health (MCH) authorities within the MOH. All countries reviewed and harmonized policies, had training, and engaged in community education and promotion involving all malaria-affected regions.
NUVI, specifically PCV	Introduction of PCV into the existing national immunization program's health service.	In Malawi, Kenya, and Tanzania, scale-up effortsinvolved preparing for the national introduction of the new vaccine through development of guidelines on eligibility, training, supply chain and vaccine management, and monitoring and evaluation.

OUTCOMES: INSTITUTIONALIZATION AND EXPANSION OF INTERVENTIONS

Institutionalization

Figure 2 displays the mean institutionalization scores derived from the scale-up matrices. The six high-impact RMNCH interventions had varying success in institutionalization, but all demonstrated improvements. There is relatively low variability between mean scores in 2013 for the six interventions, which range from 2.8 to 3.8 on a scale of 0 to 4, but a larger range across the 18 settings: from 2.2 to 4.0. The duration of the scale-up effort explains part of this pattern. PPFP, HBB, and misoprostol (UUIFB) are relatively new interventions on the global health agenda, whereas oxytocin was well established. While iCCM was new in two of the three countries, the scale-up efforts built on existing community-based primary health care programs. IPTp was already part of the ANC and malaria control programs of the three countries. Although PCV was a new vaccine, it was being introduced into well-functioning national immunization programs in all three countries.

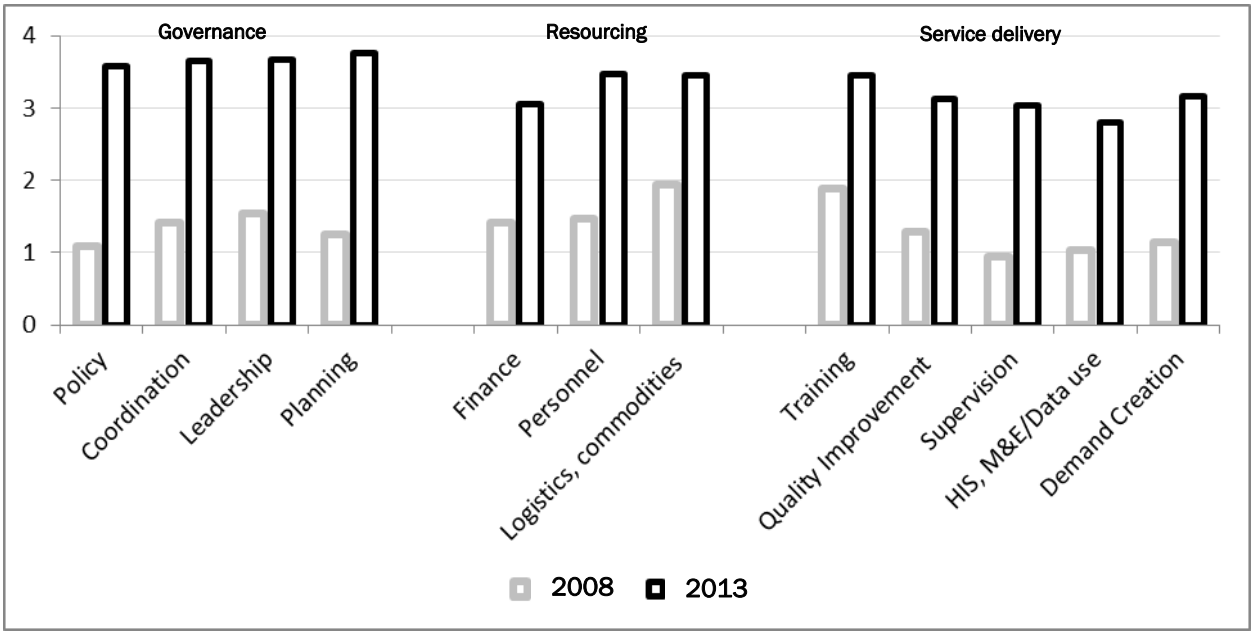
Figure 2: Overall institutionalization scores by intervention, 2008 and 2013



By the end of the period (2013), the aggregated institutionalization scores across all 18 case studies show that the governance components of policy development, coordination, leadership, and planning had increased from a low baseline of under 2 to a high level of over 3 (Figure 3). The mean resourcing scores were lower than the governance scores, with finance being the lowest. These lower scores indicate a continued reliance on development partners or inadequate financial, personnel, and supply systems to expand or maintain the innovation. Training scored fairly high but the other service delivery components (i.e., quality improvement, supervision, and data use) had lower scores. Institutionalization of demand creation or community engagement scored slightly higher.

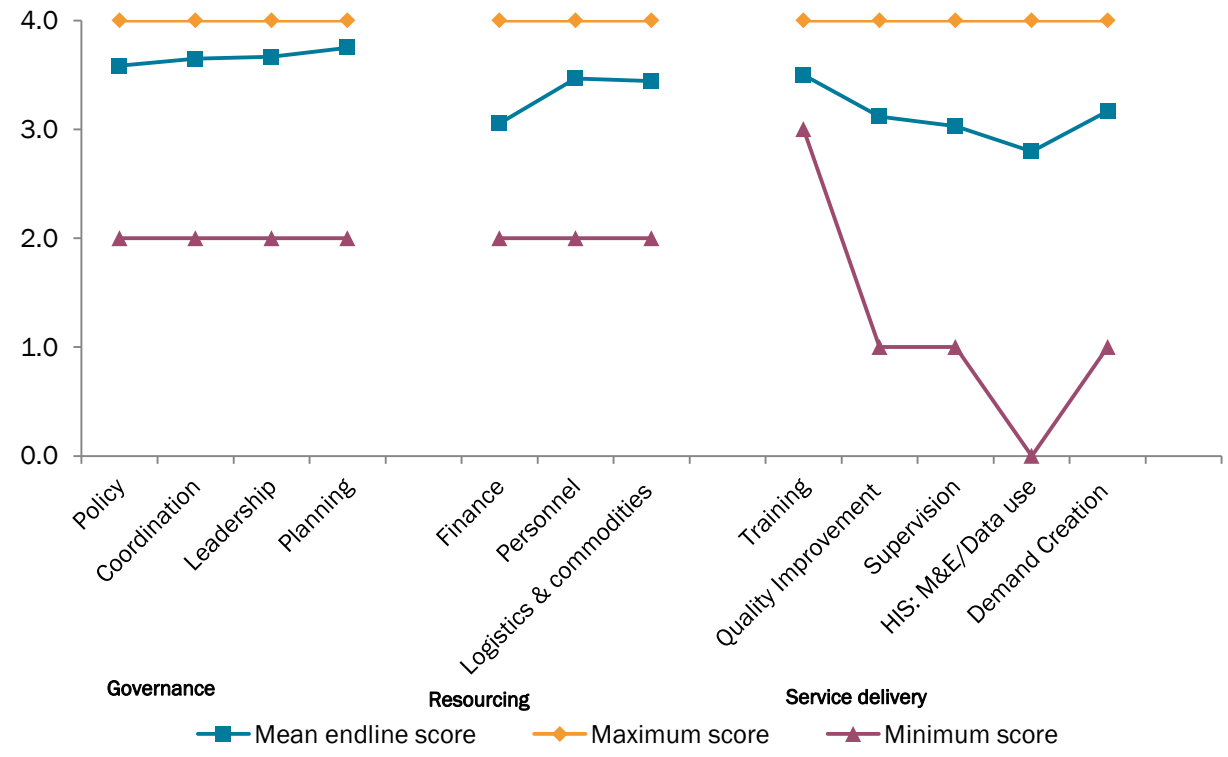
The maximum and minimum institutionalization scores in Figure 4, show that the institutionalization scores varied more for some health system components than others. By the end of 2013, all 18 settings scored at least a 2 for governance and resourcing (finance, personnel, and supplies). In some settings, key service delivery components had not been institutionalized.

Figure 3: Mean institutionalization scores by health system component across 18 case studies



Abbreviations: HIS, health information system; M&E, monitoring and evaluation

Figure 4: Mean institutionalization scores by health system component across 18 case studies with maximum and minimum scores



Service Expansion / Coverage

Table 4 summarizes the expansion of the interventions through the national health systems and to intended beneficiaries. The trend is that interventions with higher institutionalization scores reached a higher proportion of the population. (For ease in interpretation, all tables in this review are ordered by increasing achievement in institutionalization at the end of the review period, also shown in Figure 2.)

Table 4: Expansion and coverage of the six innovations in 18 case studies by December 2013

INTERVENTION (MEAN 2013 INSTITUTIONALIZATION SCORE)	EXPANSION OF THE INNOVATION TO FACILITIES, AREAS, AND HEALTH WORKERS	COVERAGE OF INNOVATION AMONG INTENDED BENEFICIARIES
PPFP (2.8)	▪ In India, PPIUCD introduced in at least two sites in 19 states and in all district-level facilities in six states. ▪ In the Philippines, 40 percent of districts have a PPFP program, and the 10 facilities with PPIUCD services reach 31 of the country's 81 provinces. ▪ In Tanzania, 500 health workers have been trained and 14 percent of districts are implementing PPFP.	▪ By the end of the period, PPIUCD acceptance rates* in sites where the service was introduced in India averaged between five and 10 percent. ▪ In Philippines, the percentage of women counseled ranged from six to 80 percent in the 10 facilities where PPIUCD was introduced.
HBB (3.1)	▪ Almost all SBAs in Bangladesh and one-third in Malawi were trained. ▪ Master trainers for all regions in Colombia have initiated training.	Impact evaluations in Bangladesh and Malawi found that the introduction of the innovation had no effect on clinical practices.
UUIFB (3.3)	A uterotonic is routinely provided for PPH prevention in almost all government facilities in India and Mozambique.	▪ About half of all births in Mozambique and India are in government public health facilities; utilization of uterotonic drugs in these settings was already high at the beginning of the period and did not change. ▪ Quality of service provision was a focus of effort in Mozambique, but no definitive data yet exist on improvement. ▪ Service delivery not started for misoprostol in India and Mozambique.
iCCM (3.4)	▪ CHWs were recruited, trained, and established in eligible communities in Rwanda and Mali. ▪ The program has been expanded from 10 to 20 percent of districts in DRC and is now a part of services in 11 percent of all facilities.	▪ iCCM programs are available to 100 percent of people in Rwanda, 19 percent in Mali, and three percent in DRC. ▪ CHWs are estimated to be treating 20–40 percent of targeted illnesses in the communities where iCCM has been introduced in Mali.
MiP/IPTp (3.6)	Training in MiP reached 13,000 health workers in Ghana and most	Recent household survey data not available, but there is evidence of

INTERVENTION (MEAN 2013 INSTITUTIONALIZATION SCORE)	EXPANSION OF THE INNOVATION TO FACILITIES, AREAS, AND HEALTH WORKERS	COVERAGE OF INNOVATION AMONG INTENDED BENEFICIARIES
	health workers in malaria-affected areas in Kenya, but only one or two participants per facility in Burkina Faso.	increased coverage of at least two doses of IPTp during pregnancy in all three countries from comparably collected Demographic and Health Surveys, Multiple Indicator Cluster Surveys, or Malaria Indicator Surveys done in last four years, compared with data from before 2008.
NUVI/PCV (3.8)	PCV introduced through the national programs to all parts of each country.	In the first full calendar year following introduction, HMIS data reported to WHO and the United Nations Children's Fund (UNICEF) showed the three countries achieved a coverage of 80 to 99 percent of eligible children fully vaccinated with PCV through routine immunization system.

* Definition: PPIUCD acceptance among women counseled of all women giving births at facilities with trained service providers.

PPFP and HBB, which had the lowest mean institutionalization scores, also failed to make a national impact by the end of 2013. In the case of PPFP, this was because the intervention was being strategically introduced in India and Philippines to focus on selected facilities that had high delivery loads and were distributed throughout each country. In the case of HBB, the program reached its training targets, but impact evaluations in Bangladesh and Malawi indicated that trained providers did not apply the new skills. These studies did not measure impact on the numbers of stillbirths or neonatal deaths and no comparable study was conducted for Colombia. There was no change in service provision for UUIFB because advanced distribution of misoprostol has not yet been implemented in the two selected countries, and both had already expanded uterotonic use for PPH prevention through government facilities. The introduction of PCV in the three countries and iCCM in two of the three countries met the high targets set for reaching universal coverage and expanding sites, respectively, while MiP/IPTp scale-ups made incremental improvements but did not achieve high coverage rates. To understand what drives a successful scale-up effort, closer examination is needed of the specific scale-up elements as described by ExpandNet: the environment, the innovation itself, the engagement of government and other resource team members, and the strategies employed.

SCALE-UP ELEMENTS AND STRATEGIES

Characteristics of Innovations

Table 5 summarizes some of the characteristics of the six interventions. Every intervention except iCCM used existing service delivery platforms, but each required frontline workers to adopt new tasks. The degree of change required, as captured in Table 5, does not correlate with progress on institutionalization.

An argument could be made that HBB was the simplest intervention because it involved modifying a task already done by existing, qualified health care providers working in their familiar setting. Guidelines and teaching modules had been refined to a few steps to follow to identify babies who were not breathing and undertake stimulation and resuscitation if required (Helping Babies Breathe, 2011). However, to date, although national policy documents incorporate HBB, newborn resuscitation practice has not improved in Bangladesh and Malawi.

NUVI/PCV also involved no new service-delivery platforms or substantially new tasks. However, in each country, introducing the innovation involved detailed planning at every level of the health system to ensure that all eligible children received the vaccine throughout the country soon after the launch date.

Table 5: Characteristics of the six maternal, newborn, and child health interventions as introduced in the 18 case studies

INTERVENTION	HEALTH CARE PROVIDERS	NATURE OF THE NEW SERVICE OR TASK	USES NEW OR EXISTING SERVICE PLATFORM?
PPFP	CHWs, ANC providers, vaccinators, and SBAs	**Adding** component to an existing system, **new** task	Uses **existing** service delivery platforms
HBB	SBAs	**Modifying** one task, existing system	Uses **existing** service delivery platforms
UUIFB	SBAs, CHWs, and ANC providers	**Adding** a component to an existing system, **new tasks** for existing workers	Misoprostol will use **existing** service delivery platforms
iCCM	CHWs and health care providers	Completely **new service** requiring **new workers** and **new tasks** for existing workers	Creates a **new** service delivery platform
MiP/IPTp	ANC providers	**Adding** component to an existing system, **new** task	Uses **existing** service delivery platforms
NUVI/PCV	Vaccinators and supporting personnel	**Adding** component to an existing system, **similar** to what is already being done	Uses **existing** service delivery platforms

Within countries, the capacity to adopt an intervention is influenced by many more factors than the nature of that intervention. The intervention needs to be regarded as a solution to a pressing problem which is aligned with the explicit and implicit policies and norms of the government and its health system. Furthermore, scaling up interventions raises issues of resourcing and organizational processes such as workload, knowledge and skills acquisition, supplies and equipment, motivation, and accountability. The context and strategies employed to address these challenges may be more important than the inherent nature of the intervention itself. These issues will be discussed in the following sections.

The Resource Teams and Implementers

Many parties were involved in scaling up the six interventions. Table 6 describes the main players and their roles.

Table 6: Resource teams driving the scale-up and the organizations responsible for implementation of the six maternal, newborn, and child health interventions as introduced in the 18 case studies

INTERVENTION	RESOURCE TEAM COMPOSITION AND FUNCTION			IMPLEMENTER(S)
	Global	National	Subnational	
PPFP	A consortium of FP advocates including MCHIP, WHO's Human Reproduction Program, USAID, and the International Federation of Gynecology and Obstetrics.	▪ Dedicated technical advisors based in MOH and MCHIP country offices supported the MOH to drive scale-up in Tanzania. ▪ MCHIP technical advisors kept MOH and development partners informed in India.	▪ State and district health managers supported by state teams of technical advisors in high-priority states in India. ▪ Subnational MOH leadership in scale-up was variable in Tanzania.	Delivered at facilities and in antenatal and immunization clinics.
HBB	▪ A USAID-led Global Development Alliance (GDA) that includes the American Academy of Pediatrics, Laerdal (makers of resuscitation mannequins), the National Institutes of Health's Eunice Kennedy Shriver National Institute of Child Health and Human Development, LDS Charities, Save the Children's Saving Newborn Lives program, Johnson & Johnson, Earth Institute, Catholic Medical Mission Board, the International Pediatric Association, and others.	Senior clinicians, professional associations, and MOH provided leadership with support of MCHIP global and in-country technical advisors.	Subnational training teams conducted the training, but no one responsible for driving scale at this level.	▪ Delivered by doctors, midwives, and other SBAs in government facilities. ▪ Bangladesh included community-based SBAs.

INTERVENTION	RESOURCE TEAM COMPOSITION AND FUNCTION			IMPLEMENTER(S)
	Global	National	Subnational	
	▪ USAID's MCHIP, the Pan American Health Organization, and University Research Co.'s Health Care Improvement Project supported the MOH as implementing partners in Colombia.			
UUIFB	The consortium to prevent PPH includes high-profile organizations such as WHO, the Bill and Melinda Gates Foundation, the United Nations Population Fund, UNICEF, the UN Commission on Life-Saving Commodities, bilateral donors including USAID and its funded technical and implementing agencies (e.g., PATH, MCHIP), representatives of national governments, and British and American researchers and drug manufacturers.	International and national NGOs and technical agencies were involved in advocating for misoprostol scale-up.	None.	▪ Health facilities. ▪ Mozambique and India will use CHWs for advance distribution of misoprostol.
iCCM	UNICEF, USAID, and WHO drive the global iCCM agenda.	Each country had a different configuration, with substantial support from development partners.	▪ The national push in Mali and Rwanda resulted in variable involvement of MOH at subnational level in scale-up. ▪ Involvement of regional health departments was stronger in DRC, where local initiative was needed to implement the program. ▪	Delivered by volunteer and paid CHWs supported by the nearest government clinic.

INTERVENTION	RESOURCE TEAM COMPOSITION AND FUNCTION			IMPLEMENTER(S)
	Global	National	Subnational	
MiP/IPTp	Strong donor leadership from US government's President's Malaria Initiative (PMI) and the Global Fund to Fight AIDS, Tuberculosis and Malaria; technical leadership from WHO.	Working groups formed of malaria and maternal health units of MOH, but did not meet regularly in each country. Donor funds used for contracting MCHIP to support training and supervision.	The unintegrated hierarchies of MCH and national malaria control programs were in place at lower geographic levels. Mixed involvement of MOH at subnational levels.	ANC providers for IPTp.
NUVI/PCV	Supported by the GAVI Alliance, a consortium of UN agencies, bilateral donors, and private enterprise.	Led by the national immunization program's technical working groups with support from local WHO and other development partners. Meetings were chaired by a senior MOH official.	District- and facility-level microplanning.	MOH is responsible for the national immunization program; immunization services are the responsibilities of districts.

These high-impact RMNCH interventions had substantial involvement from global health organizations. Globally, respected international agencies such as WHO and UNICEF were important players and advocates, usually forming consortiums composed of technical experts, private and bilateral donors, and—in some cases—industry. For example, the HBB consortium was formalized under a USAID-led GDA. Such strong links to a global leadership are a feature of many of the RMNCH interventions scaled up through support of MCHIP.

At country level, resource teams should have the skills outlined by ExpandNet (Simmons & Shiffman, 2007):

- effective and motivated **leaders** who command authority and have credibility with the user organization
- a unifying **vision**
- an **appreciation of the user organization's** capacities and limitations
- an **understanding** of the political, social, and cultural environments within which scale-up takes place
- the ability to generate financial and technical **resources**
- relevant technical skills
- training capacity
- management skills

National MOH officers from the relevant units were the drivers of the scale-up efforts in most of the case studies. For some interventions, the people involved in scale-up efforts used a technical working group as a platform to collaborate, but this was not always a successful strategy. In

Burkina Faso and Kenya, the MiP technical working groups did not meet regularly. Subnational levels of the MOH always had some role to play in scale-up, but in many instances were passive recipients of inputs such as training programs and new health workers rather than the drivers of the initiatives.

Ambitious targets to rapidly expand an intervention require additional human resources to manage the scale-up effort. A common strategy was to contract individuals or organizations to support scale-up efforts by providing input into the development of policies, guidelines, and plans; oversee training material development, training plans, and training of trainers; and, in some cases, provide direct supportive supervision and monitoring and evaluation. Technical advisors, particularly through MCHIP, played a major role in driving the scale-up of PPFP, HBB, and some of the MiP/IPTp and iCCM case studies.

There are constituencies missing from the resource teams, most notably elected officials and representatives of civil society—with the exception of professional associations that were more aligned with technical advisors than the general population of intended beneficiaries.

None of the resource team configurations described in Table 6 clearly stands out as the most successful. Effective leadership can occur as it did for PCV—through a strong, resourced national program with support from technical advisors—or through the leadership of an external agency such as MCHIP supporting government officers.

Strategies for Advocacy and Dissemination

The goals for advocacy and dissemination change over the course of the scale-up effort. Initially, the objective is to generate government commitment to scale-up the intervention. This requires dialogue that balances global and local evidence and priorities, often identifying a middle way appropriate to the environment. The second stage is to drive implementation through the prioritization of the intervention at every level. Table 7 describes some key characteristics of the approaches to advocacy and dissemination across the 18 case studies. The "Genesis" column describes the **origins of the impetus** to support scale-up of the intervention. In the 18 case studies, there were three models of the genesis of the idea to adopt and scale up an intervention: driven by an external donor, advocated by global health leaders supported by WHO guidelines, and a government-initiated policy direction. The "Evidence" column addresses whether the **evidence that the innovation would be beneficial comes from local or international sources**. The "Policy" column shows the priority given the intervention as seen in the policies of the national and subnational government agencies.

Table 7: Indicators of government ownership of the scale-up of six maternal, newborn, and child health interventions across 18 case studies

INTERVENTION	GENESIS OF THE DECISION TO SCALE UP	EVIDENCE FROM LOCAL TESTING OR RELIANCE ON INTERNATIONAL EXPERIENCE?	POLICY PRIORITIZATION
PPFP	Promoted as a global health standard by WHO and technical advisors.	Phased scale-up starting with demonstration sites.	Mixed: high in India by the end of the period, low to medium in other two countries.
HBB	Externally driven—proposed and strongly promoted by a donor organization.	Limited international experience on implementation; no local experience.	Mixed: policies prioritized at the national level but not at subnational and facility levels.
UUIFB	Oxytocin promoted as a global health standard by WHO and technical advisors. Misoprostol promoted by global public health researchers and advocates.	International experience and in-country pilots.	Government support for policy change came at the end of the period.
iCCM	Promoted by USAID and UNICEF.	Previous experience of small projects used as a model.	Mixed: high priority by the central government, but less of a priority at district and below.
MiP/IPTp	Promoted as a global health standard by WHO and technical advisors.	Local testing in Burkina Faso; local experience in Ghana; international experience in Kenya.	Mixed: high priority given in Ghana, but more limited in other countries.
NUVI/PCV	Externally driven—proposed and strongly promoted by a donor organization.	International experience (except for disease burden research in Kenya).	High priority politically and at all levels of health system.

Table 7 challenges some accepted views about gaining government commitment. In these case studies, the source of the advocacy to scale up an intervention was largely external, but this did not necessarily threaten government ownership or success in institutionalizing the intervention. Two interventions driven by global health donors, HBB and PCV, had different levels of government ownership and success in institutionalization and service expansion. Most of the MCHIP technical teams invested in global advocacy that ultimately resulted in adoption by national governments. For example, the UUIFB and PPFP teams contributed to the development of WHO guidelines, created opportunities for sharing knowledge virtually and at regional forums, and assisted in creating an evidence base for both the need for implementation and successful implementation strategies.

Constraints to rapid translation from evidence to policy to implementation include concerns about appropriateness of the innovation for the country. Although international evidence is highly regarded, if there are specific concerns, often based on historical experience, there will be resistance which can only be overcome with evidence generated within the country. Many of the scale-ups reviewed started more slowly than expected as a result of resistance from the scientific or medical community unconvinced of the safety or efficacy of an innovation. PPFP programs frequently have to start by overcoming provider resistance to PPIUDs, and the adoption of advanced distribution of misoprostol can be opposed out of concerns about misuse of the drug and about, in effect, encouraging unattended home births. Proposals for CHWs to treat sick children with antibiotics or antimalarials can raise concerns about the rise of drug resistance through indiscriminate use. A misoprostol community pilot in Mozambique, a study of village-level health resources in Mali, and the sharing of early experiences with PPIUD insertions in India helped to allay concerns.

In all of the case studies, national policies, guidelines, or strategies were developed or updated; these described the standards for implementation building on previous experiences. In all but two cases (Philippines and Tanzania for PPFP), countries had some relevant policies or guidelines established prior to 2008. However, the existence of policies and guidelines did not guarantee governments would prioritize scale-up. Furthermore, since most countries decentralize aspects of health service delivery, expanding and institutionalizing innovations requires national and subnational levels of the government health system also prioritize scale-up.

Prioritization is triggered by a mixture of (1) sound national and international public health evidence and (2) the opening of policy windows which makes scaling up the innovation advantageous within the national context. For example, the Government of India's (GOI's) increased prioritization of PPFP and UUIFB coincided with its broader "call to action" for improved maternal and child health. The introduction of PCV coincided with the offer of substantial external support to address pneumonia: a disease that is widely known and feared as a childhood killer. The governments of DRC, Mali, and Rwanda have positioned iCCM within a broader national commitment to bring decentralized services closer to the people as well as a strategy to achieve Millennium Development Goals Four and Five.

There were other cases where the government did not prioritize the need for change and consequently did not become an active agent of the change. For example, a key informant suggested that HBB was unlikely to receive a higher priority, despite prominent local champions, until the procedure was integrated into essential newborn care policies and practices, which happened in Colombia. Another key informant said that advanced misoprostol distribution was more readily adopted by governments of countries emerging from prolonged conflict. This adoption may be because of the lack of infrastructure for institutionalized births and the importance of demonstrating legitimacy by taking action to reduce maternal and newborn deaths. Some countries committed to increasing institutional births were reluctant to prioritize investment in making home births safer.

Mobilizing Resources

Identifying the resources for scaling up an intervention requires considering two separate goals. The first is to meet the costs involved in institutionalizing and expanding the innovation. This includes advocacy, the conduct of small-scale pilots or demonstration projects, development of standardized guidelines, training, strategies to support implementation at facilities or communities, and monitoring and evaluation activities to inform the scale-up process. The second goal is to identify and secure the resources required to maintain the innovation once it has become a part of the national health system. Table 8 summarizes the strategies used during the scale-up efforts.

Table 8: Strategies to finance scale-up activities and ongoing implementation of six maternal, newborn, and child health interventions, 18 case studies

INTERVENTION	ADDITIONAL COSTS FOR SCALING UP	SOURCE OF EXTERNAL FUNDS FOR SCALING UP	FINANCIAL IMPLICATIONS OF INSTITUTIONALIZING THE INNTERVENTION	
			Human resource requirements	Financing strategy
PPFP	Training, materials, guidelines, job aids, supervision, behavior change communication. Support process developed for post-training in India. Tanzania included pre-service training for postpartum care service providers.	In India and Tanzania, financial support came from multiple development partners. In Philippines, support came from USAID bilateral programs.	GOI has contracted RMNCH counselors in high-delivery-load hospitals in focus states. Tanzania is creating a new MCH care cadre which will take up PPFP as one task.	Included in GOI budget for National Health Mission. Incorporated into existing hospital services in the Philippines.
HBB	Adaptation of materials, training, equipment, external process and impact evaluations	The Pan American Health Organization, USAID, GDA partners	None; existing staff	None of the countries appear to have plans for the ongoing purchase of equipment.
UUIFB	Advocacy, standardized pre-service and in-service curricula, quality assurance guidelines	MCHIP	None; existing staff	Both countries purchase and distribute uterotonics (oxytocin and misoprostol).
iCCM	Development of implementation guides, training, salaries, supervision, monitoring tools, evaluations, essential drugs, and supply chain	UNICEF; international NGOs; bilaterals including USAID and PMI; Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund)	New cadres of CHWs, with a salary in Mali and forms of incentives in Rwanda and DRC	▪ Externally funded, yet country accounts for program in national and subnational budget. ▪ No funds identified for meeting salaries in Mali.
MiP/IPTp	Coordination and policy development, training, materials, guidelines, job aids, behavior change communication	PMI and Global Fund	No addition	Governments are responsible for the procurement of antimalarial drugs with financial support from development partners.
NUVI/PCV	Training with materials, guidelines, job aids; costs associated	GAVI, UNICEF, the Bill and Melinda Gates Foundation	No addition	Governments fund enhancements to their current immunization

INTERVENTION	ADDITIONAL COSTS FOR SCALING UP	SOURCE OF EXTERNAL FUNDS FOR SCALING UP	FINANCIAL IMPLICATIONS OF INSTITUTIONALIZING THE INNTERVENTION	
			Human resource requirements	Financing strategy
	with information, education, and communication			programs—such as increased cold chain capacity and sharps waste management—and will be expected to meet costs of vaccines after GAVI support ends.

All of the scale-up efforts involved external funding from development partners—unsurprisingly, as they all involved MCHIP, funded by USAID. The additional funds were usually directed toward the development of guidelines and training curricula, the training of master trainers, and a launch and dissemination of results. In some cases, externally funded technical advisors performed important coordination and facilitation roles to support the MOH. External funds were also often used to pay for impact and process evaluations. In only a few cases (PPFP in Tanzania, iCCM in Mali and Rwanda) did development partners pay the salaries of frontline workers. Payment for vaccines, medications, and equipment was frequently supported by development partners, although this may have been through multilateral channels outside the control of the scale-up resource team. Half of the scale-up case studies anticipated little or no extra resources would be needed to maintain the intervention once it had been scaled up. However, in most of the cases where additional costs were anticipated, there were no clear plans for meeting those costs.

Strategies to Improve Organizational Processes

This section examines the role of training and other strategies to reinforce and embed the quality delivery of new health care practices in facilities and communities. For each intervention, Table 9 lists challenges encountered and addressed by the scale-up efforts for each intervention. Specifically, the table describes the logistics and supply chain, training, post-training support, and integration with other services delivered by the same providers.

Table 9: Strategies to change service delivery processes during scale-up of six maternal, newborn, and child health interventions, 18 case studies

INTERVENTION	LOGISTICS AND SUPPLY CHAIN	TRAINING	POST-TRAINING SUPPORT	INTEGRATION WITHIN EXISTING HEALTH SYSTEM
PPFP	No problems with supply chain reported.	Training provided to some or all relevant health workers in a facility or setting, with materials, guidelines, and job aids.	Extensive support processes developed during the scale-up efforts in India, limited in Tanzania where emphasis was on training only, and may be present in sites in Philippines.	Efforts taken to avoid being a one-method program, but even more difficult for non-FP workers to address all methods as well as conduct their other tasks.
HBB	Supplies not available following training in one of three sites.	Training provided to some or all relevant health workers, with materials, guidelines, and job aids.	Refresher visit provided to some sites in Bangladesh, not in other countries.	▪ HBB approach integrated with other newborn policies and practices in Malawi and Colombia. ▪ To date, training and monitoring activities not integrated in Bangladesh.
UUIFB	Problems with quality of oxytocin reported in one site; misoprostol not in wide-scale distribution.	Training, guidelines, and job aids prepared by global consortium not yet implemented in the two countries.	▪ Not available yet for misoprostol. ▪ No supervision mechanisms in place for oxytocin.	Oxytocin is well integrated in facilities in the two countries; misoprostol has yet to be introduced. international evidence is developing concerning the most effective community-based distribution processes.
iCCM	Supply chains to the CHWs have been inadequate.	Training provided to all relevant health workers in a facility or setting, with materials, guidelines, and job aids.	▪ Government supervision supported by external funds but did not occur regularly. ▪ Trials of peer support in Rwanda.	Mixed success in building linkages with other parts of the health system.

INTERVENTION	LOGISTICS AND SUPPLY CHAIN	TRAINING	POST-TRAINING SUPPORT	INTEGRATION WITHIN EXISTING HEALTH SYSTEM
MiP/IPTp	Supplies of preventive antimalarials to ANC providers have been inadequate.	Training provided to some or all relevant health workers in a facility or setting, with materials, guidelines, and job aids.	Supportive supervision conducted as part of government supervision procedures, but quality varies between sites.	Integration is the goal but malaria control and MCH still disjointed in at least one site.
NUVI/PCV	Short-term stock-outs experienced in one case due to high demand.	Training provided to some or all relevant health workers in a facility or setting, with materials, guidelines, and job aids.	No specific support post-training.	Integrated into the immunization program: every level prepares microplans about how it will introduce PCV.

Logistics and Supply Chain

The reliable provision of equipment and supplies to the frontline worker is essential for a successful scale-up effort. Long-term or frequent intermittent stock-outs of essential medicines and equipment, training materials, job aids, registration books, and forms can compromise the delivery of services. Various countries experienced challenges in all parts of the supply chain. The most common were due to either (1) failure to procure centrally in a timely matter due to financial constraints or administrative error or (2) lack of capacity to get supplies from the district or facility to the service sites. The reasons for the latter involved poor procedures for community-based workers to order and pick up supplies or reluctance of staff at the higher level to part with supplies in high demand in other parts of the service. In about half of the scale-up cases, technical advisors were involved in identifying ways to make the supply chain more responsive.

Training

Training was a nearly universal strategy among the scale-up efforts studied and scored high on institutionalization at the end of the review period. Technical advisors were usually involved in developing training guidelines and training materials and, frequently, in conducting the training of trainers. However, the scale-up cases demonstrate that training alone cannot guarantee institutionalization of new practices at the service level or an increase in numbers of people receiving the service.

Rapid national scale-up means that many health workers have to be trained in a very short time. As a consequence, there is a risk that training quality will suffer. Most trainings use a cascade design where master trainers train other trainers who do the bulk of the training. Training sessions were rarely held at the workplace, and in some cases involved little or no practical application in a work setting like the participants' own. Sometimes training schedules meant that sessions had to be held before training material or equipment was available.

Training enough workers or the right workers can also be a challenge. Malawi's HBB program brought a small number of clinicians out of their facilities for training, relying on them to find the time and support to pass on their knowledge to others (Gupta et al., in press). Burkina Faso's MiP program tried a similar approach, training only one or two people from each facility about MiP, a strategy which did not result in ANC providers becoming confident and skilled in case management or IPTp (Brieger, Badolo, Yansaneh, Waxman, & Roman, 2013).

These examples show that relying on peers to train at the workplace is not an effective strategy for introducing a new practice. However, it may be effective for orienting new workers once the practice has been institutionalized. For example, the PCV scale-ups were not able to train all vaccinators in Kenya or Malawi, but other strategies such as job aids, guidelines, and reporting requirements supplemented vaccinators' general knowledge, ensuring that most had the information they needed to manage and administer the new vaccine. See Box 1 for other effective training strategies.

Box 1: Some effective training strategies

The case studies provide some lessons about what can be done to make training more effective. One lesson appears to be to engage the district and subdistrict as much as possible before the training occurs. In Ghana, the national malaria control program found that in-service training of providers and supervisors was better attended if districts could plan for these activities well in advance. Kenya's scale-up of MiP/IPTp benefited from using training materials in an attractive and familiar format to convey new information. Problems with supply of materials and equipment can be solved by shifting the responsibility to other organizations. One state in India found that its own processes were not responsive enough to procure training materials in a timely manner; state officials together with the technical advisor solved the supply bottleneck by devolving printing responsibilities to the PPIUCD training sites, which could easily arrange to have materials reproduced for their small batches of trainees.

Quality training that reaches most or all of the intended service providers is a standard feature of scale-up efforts, as Table 9 shows. However, training well does not mean the scale-up effort was more successful in institutionalizing and expanding the innovation. Training is insufficient to change the practice of established workers, and will not be sufficient to ensure new workers are able to perform their new skills at their workplaces. Additional strategies are needed to improve organizational processes.

Quality Improvement, Supportive Supervision, and Post-Training Support

If an intervention is delivered unsafely or inappropriately or not delivered at all, it will not have the intended health benefits. Some of the reasons for poor service delivery by providers include lack of confidence or skill, resistance from co-workers, lack of support by management, failure to provide essential equipment and medicines, and no requirement to report on activities. As seen in Figures 3 and 4, quality improvement and supervision had relatively low mean institutionalization scores and some of the lowest minimum scores. Strategies employed during the scale-up efforts to ensure that the intervention was practiced safely and appropriately included work site orientations, supportive supervision visits in addition to the standard supervision cycle, and close review and feedback of performance data. These are time-intensive, potentially costly strategies. As Table 9 shows that in many of the cases studies, there was reliance on the government's existing quality improvement and supervision systems, sometimes supplementing them with training or travel subsidies for supervisors. However, if the intervention is not fully institutionalized, the existing systems are usually unable to absorb the additional effort required to assist frontline workers in overcoming obstacles to implementation. HBB scale-up efforts in Malawi and Bangladesh demonstrate the importance of supporting change at the facility level. The process reviews and training effectiveness evaluations concluded that the lack of additional follow up post-training was a major factor in the failure of providers to adopt the new practices (Centre for Child and Adolescent Health & icddr,b, in press; Gupta et al., in press).

The scale-up case studies illustrate several promising strategies for institutionalizing high-quality service. In Ghana, the scale-up effort used existing supervisors, training them to support maternal care providers to incorporate malaria prevention into their regular practice.

As an incentive to change, health districts could apply for small grants to try out innovative approaches to reinforce MiP activities.

The scale-up of PPIUD services in India had more intensive activities to ensure quality. An early lesson learned from the introduction of PPIUD in India was that it was necessary to visit facilities within a fortnight of training providers. The visit included orientation of all staff, from the chief medical officer to cleaners, to explain the advantages of the method and address any concerns. During the first visit and subsequent visits every one to three months, providers and counselors were mentored and given encouragement to overcome obstacles, and procedures related to counseling and infection control were reviewed. When requested, on-site training was delivered. This intensive support also had the practical advantage of overcoming the lack of opportunity to have supervised practice in PPIUD insertions on patients during the training—a critical element of building clinical confidence (Prager et al., 2012). Program officers estimated it took 12–18 months for a work site to fully institutionalize a quality PPIUD service.

A different but potentially complementary strategy to make sure an intervention is fully implemented is ensuring that managers and health care providers view the intervention as an essential component of their regular work and not as an optional addition. Strategies to do this include revising existing policies, guidelines, and reporting forms to include the new tasks. Such revisions are especially effective when building on an existing strong system. The PCV intervention was the only one that did not have a specific post-training support strategy. This is because national immunization programs have systems such as microplanning and monitoring tools to hold health teams and health workers accountable for vaccine introduction and coverage. Extending these tools to include the new PCV was straightforward.

Strategies for Monitoring, Evaluation, and Learning

The needs for monitoring and evaluation information change over the course of scaling up an intervention. In the early stage, monitoring, evaluation, and small studies are used to generate support for scaling up the intervention. As the intervention is being scaled up, monitoring data and process evaluations assist in tracking progress and making incremental improvements. As the intervention becomes institutionalized in many districts or facilities, monitoring and evaluation aid in maintaining the quality of the service. This section discusses two broad strategies: the **monitoring** of scale-up and service implementation, and the **evaluation** of coverage and impact of the innovation in improving health.

Monitoring and Data Review

Monitoring and evaluation are important for tracking and improving the scale-up process, increasing accountability of frontline workers and their managers and sustaining quality delivery after scaling up the intervention. This section describes data collected, how the data were used, and what mechanisms were in place to institutionalize monitoring. The section also explores how data were used to monitor the quality of service provision.

In every case studied, there was an effort to measure basic outputs. Information on the numbers of health workers trained and the number of districts or facilities involved was readily available and generally told an impressive story. More useful for describing implementation were data recorded by the frontline workers using the intervention. For almost all of the interventions, health workers recorded their activities (Table 10). Activity reports—numbers of clients seen, numbers of treatments provided, and so forth—are an established practice in FP, iCCM, IPTp, and immunization programs, but not in all HBB and UUIFB cases studied.

Table 10: Monitoring, evaluation, and learning of the scale-up of six maternal, newborn, and child health interventions, 18 case studies

INTERVENTION	REGULAR RECORDING OF ACTIVITIES	DATA USE BY MANAGERS	DATA USE BY RESOURCE TEAM	INTEGRATION WITH NATIONAL HMIS	MONITORING FOR QUALITY
PPFP	Varies by case. India monitors from facilities' data on PPIUD insertions and follow-up. The Philippines records numbers of women counseled at demonstration sites.	Not used in facility settings, but may be used to supervise community workers.	Used to describe implementation, and in India to prioritize supportive visits.	No	Data on follow-up visits and provider activity reported in India; results used to prioritize supervision visits.
HBB	Recording resuscitations in some cases.	No	No	No	No
UUIFB	Oxytocin use for prevention not recorded in all cases; plans to record distribution of misoprostol.	No	Not used in-country but extensive data collection and sharing by global consortium.	No	Coverage rates and adverse effects reporting will be available for misoprostol. Demonstration projects scrutinize safety issues.
iCCM	CHWs maintain records of visits and treatments. These are reported but then merged with other data on numbers of patients treated in all settings.	Used by supervisors and in monthly reviews.	Used to describe the program and to monitor implementation.	In some cases.	Routine reporting includes quality-of-care checks such as diagnosis and treatment.

INTERVENTION	REGULAR RECORDING OF ACTIVITIES	DATA USE BY MANAGERS	DATA USE BY RESOURCE TEAM	INTEGRATION WITH NATIONAL HMIS	MONITORING FOR QUALITY
MiP/IPTp	Varies by case; IPTp should be noted on ANC card and register.	Used in Ghana at district level by supervisors.	No	In some cases.	Varies by case and may be limited.
NUVI/PCV	Immunization registers maintained.	Reported and reviewed at all levels.	Used as part of routine data review.	Yes, through national immunization reporting.	Adverse effects reporting not always followed.

The most common use of activity data was for accountability. Health workers are motivated to perform activities which are recorded and reviewed by managers who hold them accountable. Table 10 indicates whether the data were used by line managers and supervisors. Despite the strong tradition of recording activities in public health initiatives, poorly functioning supervision systems mean that, in many circumstances, the reports are not reviewed and health workers do not participate in discussions with their managers or peers about their performance.

If the intervention is a national priority, district managers are usually expected to aggregate some indicators and report to the next level, where the information will be raised at subnational review meetings. Those indicators will also be discussed at district and facility meetings where health workers may be expected to explain unusually high or low levels of activities. However, health administrators have many public health programs to manage; some interventions may not be of sufficiently high profile to receive attention at review meetings.

Where activity reports are available, they are not necessarily used by the resource team to track implementation (Table 10). Some of the proximate reasons include mistrust of the quality of the data, practical difficulties in aggregating and analyzing the data, and lack of information-sharing between stakeholders. More broadly, not using activity reports reflects a more general practice of some scale-up efforts being managed at arm's length from the sites where the intervention is being delivered. In other words, the resource team does not take on the responsibility of monitoring the implementation of the scale-up effort because the team does not have the capacity or authority to provide direct support to providers and managers at the work site if the data indicate action is needed. As discussed in the previous section, managing a scale-up effort at arm's length disregards the challenges of establishing a new, quality service.

An indicator in the MCHIP institutionalization matrices was the inclusion of an innovation-specific indicator in the national HMIS. This inclusion was achieved in only some of the scale-up efforts studied (Table 10). While inclusion in the national HMIS is a good goal for institutionalization, it is neither necessary nor practical at the early and middle stages of a scale-up effort. If an indicator is to be included in the HMIS, it will almost always be done after an intervention becomes a standard practice across a country. HMISs usually include only one indicator, whereas during scale-up there is a need to monitor many aspects of implementation, especially those sensitive to service quality. MOHs are reluctant to make frequent changes to their HMIS for a number of well-informed reasons. Data collection and reporting is very resource intensive, requiring staff at the lowest levels of the health system to spend hours or days manually compiling reports from separate registers. Just modifying the paper and electronic forms and ensuring they are available and used correctly can be a major challenge. Mali and Bangladesh, for example, have a policy of revising their HMISs only once every three or four years. Indicators of programs that have not been scaled up are unlikely to be included.

Monitoring quality is an emerging practice that is not yet a part of even the strongest scale-up efforts studied. Data quality could be used in conjunction with post-training support to track improved practices, provide earlier warnings of sites with poor practice, and to acknowledge good performance. Box 2 describes strategies used in India to measure the quality of the PPIUD program.

Box 2: Monitoring for quality: PPIUD in India

Quality is important for all health care, but the sensitivities surrounding FP in India made it even more essential that PPIUDs were scaled up in a manner that ensured voluntary, informed choice. Since PPIUD insertion was a relatively new procedure, providers, policy makers, and the general public also needed to be assured that it was safe and effective. Monitoring was the main strategy used to address quality concerns during scale-up. Every month, facilities reported on the number of deliveries, the number and type of PPIUD insertions, and where women were counseled. The reports also included the number of women with a PPIUD who had been followed up afterward and any relevant outcomes such as expulsion, infection, or removal. These reports went up through the districts to the state health departments. Copies also went to the technical advisors, who used them as talking points with state and national officials. Supportive visits were scheduled to facilities with unusually high or low acceptance rates to determine the cause. The data on follow-up helped to assure stakeholders that the method was safe. However, in the absence of clear policies on how follow-up visits were to be achieved, the monitoring data on follow-up were not used proactively as an indicator of quality.

Measuring Coverage and Impact

Information on the health outcomes of scale-up is a crucial part of learning about how to reduce mortality and improve health in low- and middle-income countries. A focus on outcomes also provides clarity and direction during the course of the scale-up effort, assisting in the identification of effective strategies. Table 11 reviews the availability of coverage measures for each intervention. Coverage is defined as the persons who receive the new service as a proportion of all people who need the service. For example, for PPFP the people in need are women within two years of the birth of a surviving infant. Table 11 shows that only half of the program areas have recent coverage data in the case study settings. However, less intensive methods can be used to measure coverage in absence of other data. The MCHIP Maternal Health Team devised an innovative approach to estimating the population coverage of UUIFB. This methodology provided defensible coverage indicators that could be used for advocacy and to direct program activity. Trends in coverage alone will not provide information on the impact of the scale-up effort. Table 11 shows that outcome evaluations of the scale-up efforts were only done for one intervention. Structured observational studies were undertaken in Bangladesh and Malawi to measure changes in clinical practice as a result of the HBB training program.

Table 11: Coverage and impact evaluations of scaled-up maternal, newborn, and child health innovations, 18 case studies

INTERVENTION	INDICATORS	SOURCE OF COVERAGE DATA	AVAILABILITY OF COVERAGE DATA	EVIDENCE OF IMPACT
PPFP	Ideal measurement would be proportion of women two years postpartum using a contraceptive method.	Direct estimates only available from household surveys. Standard reports do not include contraceptive use by birth interval.	Recent information not available.	No impact evaluations undertaken in the three cases. Small numbers of acceptors make population-level impact unlikely.
HBB	The HBB-recommended indicators include condition at birth, resuscitation of those having difficulty breathing, and neonatal outcomes.	Usually measured by direct observation, but other methods such as self-recording by practitioners have been tried.	Available for two cases.	Comprehensive process and impact evaluations, including observational data from labor wards, conducted for two cases. These showed that the HBB training had no impact on clinical practices.
UUIFB	Combined indicator: % home births with misoprostol + % facility births with oxytocin	For facility-based services, activity records sufficient because the number of births known. Misoprostol distribution coverage could also be measured from activity records if total number of home births is known.	Estimates available, derived from key informants.	International evaluation results of advanced distribution of misoprostol being shared.
iCCM	Proportion of children under five who receive appropriate treatment by source of care and illness.	Expected number of sick children can be estimated. Household survey data over time can track changes in accessing effective treatment by source.	Mixed: timely national survey data not available, small-scale studies conducted in Rwanda to inform strategies to support CHWs.	Reviews and formal evaluations, which have informed the innovation, have taken place in at least two cases.

INTERVENTION	INDICATORS	SOURCE OF COVERAGE DATA	AVAILABILITY OF COVERAGE DATA	EVIDENCE OF IMPACT
MiP/IPTp	Proportion of all pregnant women who take antimalarial medication during their pregnancy.	Where the proportion of pregnant women receiving ANC is high, the proportion receiving the target number of doses of antimalarial medication can be measured from activity reports. Usual practice is to rely on household surveys.	Recent survey data not available; activity data not used to estimate coverage.	No evaluations undertaken in the three cases.
NUVI/PCV	Proportion of infants under one year old who have had three doses of PCV.	National immunization reporting should be sufficient. Household surveys also used but results are often different from vaccine registers.	Coverage data available by the end of the year. Data for the first full year following introduction available for two cases.	Post-introduction evaluations, focusing on processes, routinely conducted 6–12 months after introduction. Measuring health impacts of PCV technically difficult.

An Additional Strategy: Demand Creation and Community Involvement

Scale-up efforts tend to be focused on improving the supply of services and do not often involve the community or clients in their design. The accepted view is that clients will recognize and embrace the intervention as beneficial once sufficient supply is in place. Table 12 summarizes how scale-up efforts involved the intended beneficiaries and communities.

Table 12: Scale-up efforts to create demand and involve the community across six maternal, newborn, and child health interventions, 18 case studies

INTERVENTION	INFORMATION AND EDUCATION COMMUNICATION	COMMUNITY INVOLVEMENT
PPFP	Materials available to support counseling.	Limited focus on the community, and that which occurred started either at the end of the period or through other partners.
HBB	None at present.	None at present.
UUIFB	None at present.	Used community representatives and frontline workers to speak of their experiences at events advocating for misoprostol.
iCCM	Not included in all settings.	In some settings, communities select CHWs and provide support such as housing.
MiP/IPTp	Included in all settings.	Community leaders used to promote importance of preventing MiP.

INTERVENTION	INFORMATION AND EDUCATION COMMUNICATION	COMMUNITY INVOLVEMENT
NUVI/PCV	Included in all settings.	Community leaders and CHWs used to promote PCV and mobilize women.

Half the case studies incorporated some element of demand creation for the intervention through information and education materials such as posters, counseling aids for health workers, public launches, media coverage, television, and radio advertisements. In some cases, such as PPFP in India and Tanzania, demand creation efforts (other than counseling) started near the end of the review period. Opportunities appear to have been missed in the design phase of the scale-up to have potential clients give input into how they would like to receive services.

It can be seen from a few of the cases studied that, when harnessed as part of a scale-up effort, community involvement can have a major impact on service delivery. In Kenya, demand for PCV by mothers wanting to protect their children from pneumonia overwhelmed the system, leading to short-term stock-outs (Ministry of Health, 2012). The new vaccine also resulted in greater demand for children to receive other vaccines. On the other hand, failure to involve the community or beneficiaries can stall or undermine a scale-up effort. Most PPIUD providers interviewed in India reported that sustainability depended on increasing community demand by involving community mobilizers. They said that as the method became more widely known, women were more prepared to accept it. In Mali, community health associations are responsible for health care at the local level but they were not involved in the design of the new primary health care program that included iCCM activities. Yet informants identified a supportive community as the most important factor affecting health worker performance.

Summary of Findings: Lessons Learned about Scaling Up

The ExpandNet framework built on Rogers' (2003) Diffusion of Innovations theory (Simmons & Shiffman, 2007). This theory stresses the importance of actors' experience-informed perceptions of the advantages and disadvantages of adopting an innovation (i.e., intervention). Simmons and Shiffman's summary lists seven characteristics of innovations which are most likely to be successfully scaled up. Four characteristics relate to the innovation itself:

- based on sound evidence or espoused by respected persons or institutions in order to be **credible**
- **relevant** for addressing persistent or sharply felt problems
- have a **relative advantage** over existing practices
- **easy to install** and understand

As global health interventions, all of the six reviewed here had these characteristics, the result of significant investment in research and the amassing of practical experience in many low- and middle-income countries.

The other three characteristics described by Simmons and Shiffman are influenced by the environment and the specific nature of the innovation:

- **compatible** with the potential users' established values, norms, and facilities
- **testable** without committing the potential user to complete adoption
- **observable** to ensure that potential users can see the results

Challenges for the case studies were to negotiate a path in which the intervention remained true to the international evidence and adapted to national systems and needs. Furthermore, some strategies to manage resources, change organizational processes, and monitor progress and outcomes were more successful than others in giving users (organizations and individuals) the opportunity to be convinced that the innovation was effective—to own the innovation. The 18 cases of scaling up of six RMNCH interventions represent a range of experiences from which lessons of good practice can be identified. Just as usefully, they offer examples of obstacles and shortcomings which limit the potential for interventions to be expanded and institutionalized. This section uses the ExpandNet framework to discuss lessons.

THE INTERVENTION

Diffusion of Innovations theory says that the simpler the intervention, the more easy it will be to scale up. Unfortunately, all public health interventions are complex. Even a seemingly simple intervention like "misoprostol distribution" involves multiple components and systems. All the interventions studied involved some combination of new equipment, supplies, or medications; new clinical practices; and, often, new service delivery platforms and categories of workers. Many individuals and processes had to change to accommodate the intervention, even if they were not directly involved in delivering the intervention. Furthermore, public health interventions operate within large health systems serving populations with many health care needs. Implementing a "simple" intervention in these contexts is never simple. All of the cases studied in this review benefited from scaling up interventions that had a significant body of international evidence. Unworkable interventions generally have been weeded out. As a result,

for these case studies, it was the scale-up processes often determined the outcomes and as much as the characteristics of the intervention.

THE ENVIRONMENT

The scale-up efforts took place in global and national contexts, each exerting specific influences. These contexts did not inform each other, but they co-existed. That is, each party had their own reasons for wanting to scale up the intervention. The most conducive environment for a scale-up effort was one in which the effort conformed to both the global consensus of how the innovation should be implemented and the national priorities for health care reform.

Lesson learned about the environment: The congruence of current global opportunities and long-standing national priorities and experiences is a window to advocate for and launch a scale-up.

From the global side, it is no coincidence that the scale-up efforts were of programs that were currently supported by development partners. The six interventions were among the suite of activities for which financial and technical support was available during the MCHIP program and MCHIP technical teams were instrumental in building and disseminating the global evidence for the interventions. Guidelines published by the WHO on advanced distribution of misoprostol for prevention of PPH (WHO, 2012b), programming for PPFP (WHO, 2013), and newborn resuscitation (WHO, 2012a) were produced in the last five years with the involvement of MCHIP technical teams. These guidelines informed the technical advice provided to the MOHs and gave them confidence that the innovations would be beneficial. Opportunities for senior health officials—in Kenya for PCV, in India for PPFP, and in Colombia for HBB—to participate in regional or global forums helped to consolidate support for the interventions.

National governments were motivated by opportunities to be seen as offering a new and better service that would deliver tangible health outcomes through platforms that were familiar and trusted. For example, the introduction of PCV in Tanzania was facilitated by the fact that politicians were familiar with pneumonia as a childhood killer and were confident that the national immunization programs could successfully deliver the vaccine. Taking action to address the Millennium Development Goal on child mortality was a factor in the high-level support for PPIUCD scale-up in India and for iCCM scale-up through a broader community-based primary health care program in Mali (Bennett et al., 2014). Governments also looked for congruence between previous and proposed policies and experiences. Negative experiences such as a history of coercion in FP programs in India influenced the design of the scale-up effort.

THE IMPLEMENTER

All 18 scale-up efforts were implemented through the government health system despite large private and not-for-profit health sectors in some countries. This was probably a wise strategy. MOHs are the stewards of their nation's health and need to develop their own standards for innovative health services before being seen to support the implementation of such services in other sectors. However, this strategy can have its limitations as well. For instance, in Bangladesh only 29% of deliveries are in institutional settings and the majority of these, in the private sector. That means that even if HBB were to reach full coverage within the public facility sector it has targeted, it would only reach a small percentage of deliveries.

Furthermore, strategies for scaling up within the private sector appear to be different than in the public sector (Chandy, Hosono, Kharas, & Linn, 2013). One of the main differences is that private sector parties can potentially increase their income by offering new services. Private practitioners will base their decision to adopt and maintain an intervention based on its capacity to generate funds. Incentives for health care providers to adopt new practices in the

government system are rarely as direct, and the success of a scale-up effort is dependent on modifying organizational processes so that workers are rewarded or held accountable.

Even working with not-for-profit organizations to scale up an intervention may require different strategies. NGOs often have more flexible contracting mechanisms and management structures. There are many examples of programs that were successful when run by NGOs but failed to replicate that success when taken up by government, because it was not possible to replicate the NGO systems (Bold, Kimenyi, Mwabu, Ng'ang'a, & Sandefur, 2013).

RESOURCE TEAMS

The scale-up resource teams took many forms, and there was no single model associated with success. A shared goal, technical expertise, understanding of the environment, and commitment and capacity to adapt based on new information were important characteristics of effective resource teams. Working groups are useful when they function, but disengaged working groups could stall the scale-up effort. Having dedicated people or a team contracted to support the scale-up effort is effective, especially if they are recognized for their expertise and integrity and have extensive networks in the public health service.

Lessons learned about the resource team: Scale-up efforts are most likely to be effective when resource teams have dedicated people who are viewed with respect and have extensive networks within government.

Donors and other development partners influence the implementation of scale-up efforts. A broad coalition of development partners may bring in more resources, but also poses the risk of fragmenting and diluting the purpose of the scale-up through an uncoordinated patchwork of different objectives and approaches. The PPFP activities in Tanzania and the Philippines, which were implemented through projects with other objectives, are examples of the challenges of involving many stakeholders.

Several of the scale-up efforts studied that had the most rapid progress in expanding service delivery had a single external agency supporting the process (for example, HBB in Bangladesh for the training component and PPIUCD in India). Mozambique's technical working group for UUIFB, which represented 60 organizations, probably did not speed up the decision making process. The biggest challenge for the MiP scale-up efforts was to increase the collaboration between malaria control and reproductive health units who had no experience in working together. Achieving mutual trust and cooperation took longer than expected in some settings.

Lesson learned about the resource team: Management and coordination of many stakeholders is difficult, as they can introduce different agendas, even while potentially bringing in more resources.

GENERAL STRATEGIES FOR SERVICE EXPANSION

Once a government has decided to adopt an intervention, there is very little political advantage to expanding slowly or to only a subgroup of the population. In several of the scale-up efforts studied, it was the government that wanted to expand quickly throughout the country. DRC's iCCM program and Colombia's HBB program were selective in where they introduced the intervention, but Rwanda's decision to make iCCM available to everyone, even those in urban communities, is more typical. As a key informant from another country said, the government "gets impatient."

India's PPFP-PPIUD program was a rare example of a government supporting a controlled expansion: starting with a handful of demonstration sites, establishing two training sites in

most states, and then systematically building capacity in the other high-delivery-load hospitals in high-priority states. The result was a steady increase in numbers of PPIUD acceptors throughout the country, even in states that received no other assistance.

Pressures for rapid scale-up also come from donors, whose time frames are not always as flexible as those of MOHs. The timing of donor funds dictated so rapid a pace of scale-up in Mali that there was no opportunity to pilot the implementation guide. Scheduled post-training support visits for HBB in Bangladesh were canceled when donor funds for training needed to be expended quickly. The program to scale up IPTp in Burkina Faso was compromised because training and supervision activities were rolled out across the country before the MCH unit within the MOH had been fully engaged. Regardless of where the pressure for rapid scale-up came from, it involves a considerable risk:

> Rapid expansion can often result in a loss of essential components of the innovation. Those lost are often the components most different from prevailing practices and most difficult to implement, for example interventions to promote quality of care or values such as equity and gender perspectives. A more gradual, phased process allows learning about how sustainable expansion of all aspects of the innovation can be attained. It is therefore advisable to resist bureaucratic or political pressures for overly rapid expansion (ExpandNet, 2010, p. 27).

Lesson learned about service expansion: Rapid national scale-up of interventions should not be attempted before (1) the necessary training materials, supplies, and equipment are available; and (2) there has been practical in-country experience of successfully institutionalizing the intervention in facilities or communities with the same level of support as will be available to the new sites.

Another issue related to donor influence is that the project approach to funding and managing a scale-up effort is not conducive to achieving impact. A project mentality puts limits on how and when resources are used. Pressures for strong donor identification can compromise government leadership, which in turn limits the commitment of frontline staff in government facilities, who may be inclined to view the intervention as a passing fad and not part of the core duties.

Long-term engagement of donors and technical agencies within a country is very beneficial. The US government has supported FP programs in India since independence. WHO in-country advisors have 40 years of experience in supporting national immunization programs (Levine, 2004). The iCCM programs were often built on the collective experience of small community-based child health programs managed by NGOs. Long timeframes enable a more thoughtful approach to scale-up than the pressure to deliver a new package within a project cycle. The Brookings Institution and others have worked with donors to modify their own practices to be more supportive of realistic scale-up goals, including continuing to support the continuous development and expansion of the same interventions over many project cycles, prioritizing impact at scale rather than innovative pilots that are not sustained, greater collaboration with national governments and other development partners, and investing in the support of existing systems (Chandy, 2013).

Lesson learned about service expansion: Donors and other development partners can support scale-up efforts by working with governments to achieve long-term objectives rather than short, project-style objectives.

All of the scale-up efforts used a form of scale-up known as replication. The intention was to introduce the same intervention in every setting, usually through cascade training. However, this approach does not take into account the unique contexts of villages and districts and the variability in implementation. Local initiatives that are responsive to social, cultural, and

epidemiological context can result in better coverage (LaFond et al., 2014). The MiP scale-up in Ghana encouraged local initiative through small grants for districts to test improved supervision practices. Such an approach makes use of diffusion theory by explicitly encouraging innovators to adopt a new practice and then to promote the practice's adoption in other sites through opportunities for providers to share their experiences in implementing the new practice.

Lesson learned about service expansion: Scale-up efforts do not need to insist that all sites implement an intervention the same way. As long as the essential elements regarding safety and quality are retained, encouraging districts and facilities to adopt their own strategies and to provide opportunities for sharing their lessons could increase ownership of the intervention and hasten the process of institutionalizing it.

SCALE-UP STRATEGIES

Advocacy and Dissemination

The strategies which were employed by the case studies to advocate for adopting the intervention and disseminate information included gaining and maintaining government ownership and participation, conducting local research for advocacy, involving clinical champions, developing policies and guidelines, and sharing information.

Government ownership of the intervention is critical to the success of a scale-up effort. Without the leadership of government, there is no potential to institutionalize the practice in the national health system.

Lesson learned about advocacy and dissemination: Without government ownership and leadership, the scale-up of an intervention will not be successful. Although pilots and advocacy can help to create an environment for government ownership, without high-level commitment effectively communicated to every level of the health system, other scale-up strategies should not be attempted.

The case studies included several examples of using small research projects, targeting specific issues relevant for the country to build support for a scale-up effort. Although this can increase local knowledge, if the research has not been designed to inform implementation, it can give an unrealistic expectations about that the scale-up effort will be problem-free (Bold et al., 2013; Ghiron et al., 2014).

Lesson learned about advocacy and dissemination: Pilots and targeted research projects should be designed to inform implementation instead of as a tool to demonstrate proof of concept for the sake of advocacy.

Involving clinical champions—respected clinical leaders who promote the intervention among their peers—is a common advocacy strategy. This strategy can be effective if the clinical champion also occupies a powerful position within government and therefore carries both authority and a public health mandate. Several scale-up efforts worked with professional associations, an effective way of raising the profile of the intervention and countering provider resistance due to out-of-date information. However, in general, clinical champions have limited authority and their motivations for being involved may not align with the public health objective of getting the new practice to everyone in need. In India, prestigious medical colleges were invited to the first service and training sites for PPFP-PPIUD, but their role in training junior doctors and as referral centers for emergencies made them an inappropriate environment for modeling counseling and involvement of nurses.

Lesson learned about advocacy and dissemination: Unless they occupy senior decision-making roles, clinical champions have a useful but relatively small part to play in institutionalizing an intervention that needs to reach a large population.

Because guidelines are so important, governments are often quite deliberate in the approval process and they can be delayed. This may also indicate that there is resistance to adopting the intervention. Updating of policies on MiP was challenging because it required input from two or more units within the MOH. In Mozambique, the policy to support advanced distribution of misoprostol took much longer to be adopted than advocates had expected. Some of the challenges faced by the HBB programs may have been related to the difficulties in merging the training material with national newborn care policies and practices. The implementation guide for iCCM in Mali was credited with providing a clear direction to the numerous parties supporting scale-up so that, despite the uncertainties in the political and security environment, the intervention was scaled up in a similar way across the country. However, it had taken two years to gain consensus about the guide prior to implementation.

Lesson learned about advocacy and dissemination: Clarity about what constitutes the intervention is best articulated in policies and guidelines that describe what is expected of frontline workers, their managers, and other parts of the system. Failure to gain buy-in at this stage will result in slow or uncoordinated adoption that will resemble a project rather than something to be institutionalized into the national health system.

Truth in dissemination is important. Several informants stressed that they achieved greater buy-in when they gave people who had tried the intervention an opportunity to talk frankly with those who had not yet adopted it. The most honest discussions probably happen closest to service points. As results are disseminated nationally and to the global community, there is a tendency to turn learning experiences into uncritical performance stories. Glossing over challenges in implementation, such as low utilization rates or lack of opportunities to practice clinical skills during training because of low case loads, impedes learning and puts the work done to introduce the intervention at risk when the intervention is "exposed" as not having had an impact.

Lesson learned about advocacy and dissemination: Creating spaces that allow for frank appraisal of progress and development of a shared view of how to address obstacles and shortcomings will increase ownership of the intervention and encourage stakeholders to support continuous improvement.

Resource Mobilization

The financing of scale-up efforts varied considerably, from reliance on small donor grants to large-scale financing by national governments aided by external resources from donors for technical support. The availability of funding was a driver in the decision to scale up an intervention in some cases. One example is GAVI's support for the introduction of PCV, and another is UNICEF's support for the salaries of over 2,000 new CHWs in Mali. In both cases, the funds were intended to be short lived, and there was little discussion in the design phase of how these costs would be sustained.

Lesson learned about resource mobilization: Resources from development partners are valuable in meeting the additional costs of scaling up an intervention; however, there needs to be discussion in the design phase of how the intervention will be financed in the long term.

Funding from development partners is most valuable when it targets the additional activities required by scale-up efforts. These are the strategies such as advocacy and sharing of results; development of implementation tools; and testing, improvement, and institutionalization of new

processes. These funds are most effective if they represent a long-term commitment by development partners and the MOH to strengthen the health system.

The most important input in many resource-constrained systems is human resources. Several of the scale-up efforts, like Mali's and Rwanda's scale-up efforts of iCCM, involved the employment of new groups of workers. Although not specifically employed for PPFP, new HIV workers were used in the Tanzania scale-up effort to increase delivery of messages about the importance of birth spacing in the community. New workers, if introduced into the system with clear roles, can be of great benefit to the entire health system. The risk of new positions is that they may not be sustainable if donor money was used to pay salaries or other incentives. Mali is currently seeking ways for community health associations—which own the community health clinics—to pay the salaries of new CHWs.

Lesson learned about resource mobilization: Adding new, trained workers will make the adoption of interventions easier, but if the salary support is short lived, this can be a problematic strategy.

Shifting tasks to another cadre with more workers who have less specialist training is the alternative workforce strategy to be able to reach more people with lifesaving services. There can be three sources of opposition to task shifting. One is more specialized health workers, such as doctors, concerned about the ability of less-trained people to diagnose and safely treat or to administer the new practice. A second source of resistance are health workers expected to take on the new task who may be concerned about their workload. The pressure to add new tasks is a common problem for ANC providers, and sometimes CHWs. The third source of resistance can be managers of the programs expected to absorb the new tasks. In addition to workload concerns, they may view the new tasks as working against their primary objectives. Task shifting and task augmentation are important scale-up strategies, but they should be tested in a number of real workplaces to identify and address constraints.

Lesson learned about resource mobilization: Adding new tasks to existing health workers is effective in expanding a service to more beneficiaries, but the service's successful adoption requires either careful piloting in real work settings or intensive support during implementation.

Organizational Processes

As one informant said, "A scale-up is only as strong as its weakest component." Introducing a new practice requires some modification of processes throughout the health system. The most common way to intervene was through training. Strategies to institutionalize high-quality service delivery were frequently lacking. Many scale-up efforts expected that the existing processes for monitoring quality would be sufficient. The HBB findings that SBAs in Malawi and Bangladesh who were trained had the same practices as untrained attendants shows that initial training is unlikely to be sufficient to sustainable change clinical practice.

Lessons learned: Scaling up with a "quality end in mind" is needed. Seeing scale-up efforts through a quality lens requires looking beyond training to how the new practice is performed in the workplace and incorporating strategies to reinforce high-quality performance within the scale-up plan.

Scaling up quickly and hoping that quality will follow is a risky strategy. While training is undeniably important, training on its own is never a sufficient scale-up strategy to introduce a new health care practice.

Lesson learned about organizational processes: Providers who have been trained are often unwilling or unable to train other providers at their work site about a new skill unless it is already an institutionalized practice.

There were a variety of context-specific organizational challenges. In many cases there were serious workforce shortages. In other cases, trained workers may not have felt confident in applying their skills or were not in a position of authority to do so. In other cases they lacked equipment and supplies. Often there was more than one obstacle. Simple, low-cost strategies such as workplace orientations or expecting trained providers to pass on their knowledge are rarely sufficient to create and maintain change. This is why scale-up efforts must enter individual work sites to gain an understanding of what fosters adoption and find ways to replicate those mechanisms on a larger scale.

The health care setting and tasks will dictate which strategies to use to increase workers' incentives and accountability to perform the intervention with quality. Data review between workers and supervisors or managers can be a powerful tool to motivate and hold health workers and the health system accountable. Review meetings are an opportunity to reinforce the importance of the practice and identify and solve obstacles. This approach is common among public health outreach services such as immunization and iCCM, but it is relatively rare in the around-the-clock environment of labor wards. It is in clinical settings that a combination of mentoring and reinforcement of the importance of the program from higher levels is needed.

Lesson learned about organizational processes: Strategies are needed to aid newly trained workers to apply their skills in the workplace. In clinical settings, this may require repeated activities for up to 18 months in some workplaces where there is a lack of other systems to hold workers accountable.

Monitoring and Evaluation

Despite the emphasis on good monitoring and evaluation in the scale-up literature (Chandy et al., 2013; Cooley & Kohl, 2006; ExpandNet, 2010; Fixen, Lundgren, Igras, Jennings, & Sinai, 2013; Yamey, 2011), the scale-up efforts studied made relatively little use of data for action.

Lessons learned about monitoring and evaluation: Resource teams need to identify the quality and coverage indicators and targets they expect to achieve, collect data to monitor performance, and have mechanisms to respond to findings and share widely what they have learned.

In addition to the need to inform the scale-up process, monitoring and evaluation data should be collected to show if the intervention resulted in the anticipated benefits. With the exception of PCV introduction, none of the case studies had explicit coverage targets, much less estimates of the expected impact. Nonexistent or infeasible targets can breed complacency or even cynicism among service providers, managers, technical officers, policy makers, and development partners, negatively affecting scale-up of the intervention as well as future efforts to improve the health system (McPherson, Balisanga, & Mbabazi, 2014; Pritchett & de Weijer, 2010).

Demand Creation and Community Involvement

Scale-up analysts from the Brookings Institution argue that one of the reasons development aid programs rarely go to scale successfully is that they are not customer oriented (Chandy et al., 2013). In settings where responsiveness to public opinion is important to those in power, community ownership, as opposed to government ownership, is a sustainability strategy. Having the community value, expect, and demand a service increases the pressure on the health system and health workers to provide it (Linn, 2013).

In countries struggling with high levels of maternal and child morbidity and mortality, lifesaving interventions are intrinsically an easy sell to the public. In some case studies, there were concerns about raising expectations prematurely, but scale-up efforts are intended to reach everyone and therefore should utilize the power of people demanding services.

Lesson learned about demand creation and community involvement: Clients are potential allies in scaling up health interventions. Their role in demanding the service should be harnessed by involving community members' perspectives in the design and implementation of scale-up efforts.

SCALING UP IN THE FUTURE: SOME CONCLUDING ISSUES

One of the limitations of this review is that it focused on activities in a relatively narrow window of five years. A wide-ranging retrospective review of large-scale public health successes over the last 40 years came to the conclusion that achieving sustainable impact at large scale required long-term, sustained efforts, including external funding, over a period of 10–20 years (Levine, 2004). However, even in the relatively small five-year window of this review, some activities were identified that seem to be promising practices. For instance, the interventions drew on robust global evidence of effectiveness, but were implemented in ways which were congruent with national health systems and structures. Almost all scale-up efforts employed a comprehensive systems approach, seeking to address how the new practices would be supported across the health system building blocks.

The following are five critical points to consider in future support for the scale-up process.

Beyond Government Ownership and Political Commitment

Many reviews of scale-up efforts emphasize that leadership and national ownership are essential (Frieden, 2014; Levine, 2004; Yamey, 2011). The case studies clearly showed that achieving ownership can take time, especially for new or potentially controversial interventions or when previously autonomous units within government need to work together. Many of the scale-up efforts reviewed here appropriately put heavy emphasis on advocacy, policy formation, structures for coordinating government and development partners, and standardizing guidelines and curricula. These strategies could be accommodated within short project-funding cycles. However, while necessary, they were clearly not sufficient to achieve impact at scale without concomitant strategies that address organizational processes and mobilization of resources.

Building Capacity for Quality Service Delivery

Too often, scale-up efforts are driven by output targets—such as numbers of persons trained or numbers of facilities engaged—that do not capture the quality of the service. It is not until mortality rates do not decline or an outcome evaluation comes up with negative findings that it becomes irrefutable that the intervention is not delivering impact at scale. This review has highlighted that greater attention is needed to putting in place the conditions for sustained quality performance at the center of scale-up plans by incorporating greater attention to building capacity where the service is provided.

There are many proximal causes for low-quality service, such as poorly functioning supply chains or health providers that lack confidence. Each scale-up effort should be based on an understanding of which elements pose a threat to quality and incorporate a plan to address them. Strategies that build organizational capacity include but are not limited to coaching trained providers as they develop experience and confidence, employing dedicated workers, and conducting regular meetings to review performance, solve problems, and recognize and reward good results.

However, addressing root causes of poor service delivery, such as demotivating workplace cultures and inadequate infrastructure, may be beyond the scope of a scale-up effort. The systems in which these interventions are rolling out have a variety of weaknesses, from

insufficient human resources to weak management systems. It is important to be realistic about what is achievable in a scale-up effort: improving the existing system rather than creating a new and unsustainable one.

Using Feasibly-collected Outcome Data

In order to track progress and make course adjustments, one needed component is reliable information on service expansion: that is, actionable data "good enough" for making management decisions in real time. Review of routinely collected data is needed to manage performance at the facility or district level. Regional and national managers and development partners need different data to answer their questions: Is the scale-up effort achieving increases in coverage or declines in mortality and morbidity?

In the future, scale-up resource teams should be more inventive in measuring and responding to changes in outcomes. National immunization programs keep a close eye on coverage by tracking the number of infants receiving a third dose of a three-dose of DPT vaccine, divided by the annual number of infant survivors. UNICEF has recently made a similar estimate of iCCM coverage with a ratio of numbers of cases of under-five-year-olds treated by CHWs for pneumonia, diarrhea, or malaria divided by the expected number of cases in the populations covered, based on annual incidence rates for each disease derived from other sources. The estimates of oxytocin coverage tested out by MCHIP using key informants are another example of an outcome indicator that can be tracked and used to modify scale-up strategies—and to celebrate successes—as the coverage for the intervention is expanded.

Engaging Clients: Incorporating the Demand Side

Clients are the main beneficiaries of scaling up high impact interventions and, potentially, a powerful force in demanding them. Scale-up efforts need to build demand while addressing the capacity of the health system to supply the services by using participatory methods to involve clients and their trusted representatives in designing interventions and mass communication for advocacy and behavior change.

Facilitating Integration: After Scale-Up, What?

Scale-up efforts start with an intervention, but the intention is for the intervention to be institutionalized into routine practice. Scale-up plans need to balance the intensive efforts needed to stimulate change with the less visible actions of planning for the next phase. As more interventions are successfully scaled up, more attention is needed on how to prepare for the future, when what was once a new practice is fully integrated into the national health system. For example, the HBB brand made the intervention recognizable and got attention, aiding scale-up efforts, but the branding also carried the risk of making HBB perceived as a "project" that would end when funding ceased. At what stage, if at all, should the branding be dropped and the approach be viewed as one of a number of components of essential newborn care? Another practical example is training. Sometime after the end of the training that takes place during scale-up and before the cohorts of newly trained health workers are qualified to practice the new skill, new workers may transfer in from other units or facilities. Strategies are needed for incorporating the no-longer-new practice into professional development and workplace peer learning in ways that do not sacrifice quality.

Annex: Example of Institutionalization Matrix for iCCM Mali

Health system component	Question	No Competency (0)	Preparation Phase (1)	Introduction (Pilot) Phase (2)	Early Expansion Phase (3)	Mature Expansion Phase (4)
		No health system competency for the intervention	**Key national strategic choices** and actions are being made by MOH to establish the needed competencies for the intervention	**Piloting/testing for the competency** related to the intervention. External agencies assume the majority of the responsibility for competency.	**MOH is beginning to manage the competency** for the intervention before full integration into national and subnational systems.	**The MOH has fully integrated the competency** for the intervention into national and subnational systems.
		0	1	2	3	4
Policy	**Has the MOH implemented the necessary policy elements and practice guidelines to support the intervention?**	No steps have been taken to make necessary changes in policy for the intervention.	Policies and guidelines that include the intervention are under discussion.	Policies and guidelines have been developed, and are being tested or being implemented mainly with support of outside agencies.	Policy changes have been adopted; guidelines are being finalized; training is rolling out on new guidelines.	A majority or all of the relevant managers and providers are trained on national policy and guidelines that include the intervention.
Planning	**Has the MOH included the intervention in national and sub-national plans?**	No steps have been taken to make necessary changes to the planning process for the intervention.	Discussions have occurred about piloting the intervention.	Pilot activity is included in subnational health plan.	Intervention is included in subnational health plan where being implemented OR it is in national health plan, but only for part of the country.	Intervention is included in national health planning processes.
Coordination	**Is the intervention included as a regular topic of discussion with appropriate national and subnational coordination bodies?**	No steps have been taken to make necessary changes to the coordination process for the intervention.	Intervention has been discussed at least once in coordination meeting(s) between MOH and donors/technical agencies	Pilot activity is occurring in collaboration with national stakeholders and discussed in coordination meetings.	Intervention is included on agenda of key coordination bodies.	Intervention is fully integrated in national and subnational coordination bodies.

Health system component	Question	No Competency (0)	Preparation Phase (1)	Introduction (Pilot) Phase (2)	Early Expansion Phase (3)	Mature Expansion Phase (4)
		No health system competency for the intervention	**Key national strategic choices** and actions are being made by MOH to establish the needed competencies for the intervention	**Piloting/testing for the competency** related to the intervention. External agencies assume the majority of the responsibility for competency.	**MOH is beginning to manage the competency** for the intervention before full integration into national and subnational systems.	**The MOH has fully integrated the competency** for the intervention into national and subnational systems.
		0	1	2	3	4
Leadership	**Are there ongoing leadership efforts for the intervention (at first by champions, and later by an institutionalized group in the MOH)?**	Only partner(s) are advocating for the intervention.	There is at least one champion/focal person for the intervention in the MOH. Discussions are preliminary	Advocacy for skills building, quality improvement, and continued program expansion; advocating for integration into existing health programs; Interventions in partners' agenda.	Advocacy for additional funds to support national intervention.	The MOH has assigned personnel to support the management/governance within the appropriate section of the MOH which takes responsibility for its implementation.
Finance	**Is the government including the intervention in its budgeting process?**	Only discussions are occurring for funding the intervention externally.	External partner(s) fund costs associated with pilot activities covering a small geographical area	Donors fund expansion of intervention; government is considering costs and preparing cost analysis/projections to include intervention in existing budget.	MOH funds much of the costs of the intervention, but has ongoing outside support.	Government includes intervention as a line item in budget
Training	**Do appropriate MOH in-service and pre-service curricula include the intervention?**	Only discussions have occurred, but no training for the intervention	Only in-service training being done; by outside agencies; and in pilot areas and/or on an ad hoc basis	In-service training conducted only with external TA	In-service training conducted by MOH (may be with external TA). Intervention still not included in pre-service curricula.	MOH leads in-service trainings and has integrated intervention pre-service training

In Consultation with MOH and Others, Please Give Scale Up Scores by Health System Competency		Briefly Describe Activities Done to Support the Competency	What Partners Conducted/Supported the Activities Listed in the Last Column (MCHIP and/or Other[S])?
2008	2013		
0	4	A national implementation guide for **Community Essential Care (CEC)** was developed and adopted in 2010. Training, reporting and supervision tools were then developed and adopted one year later. Actual implementation started in March 2011 with TOT in cascade, training of supervisors from the MOH Central level, then to the Regional offices of both MOH and Ministry of Social Development. At the local level, the health district teams and care providers at health facilities were trained on the package along with representatives of community associations. In 2011 and 2012, national and regional pools of trainers were constituted in the 5 regions in southern Mali. Conforming to the initial plan, an internal evaluation and an external evaluation of the CEC were conducted respectively in February and September 2013. The Reproductive Health policy, standards and procedures were revised in February 2013 to integrate the CEC approach.	MOH, DNDS, NFCHAM (FENASCOM), WHO, UNICEF, USAID, Save the Children, MCHIP, ATN Plus, PKCII, Plan Mali, Groupe Pivot Sante population, ACF, ASDAP, CRM, HKI, Borne Fonden, MSFF, Centre OMD, Agro Action Allemande (AAA).
0	4	All CEC interventions are integrated in ongoing annual action plans at all levels of the health system. In addition, The CEC approach was integrated into the 10-year Social and Health Development Plan (SHDP 2014-2024), in the process of validation as of November 2013.	MOH, DNDS, NFCHAM (FENASCOM), WHO, UNICEF, USAID, Save the Children, MCHIP, ATN Plus, PKCII, Plan Mali, CRM, HKI.
0	4	At the central level, the coordination of the SHDP is ensured by inter-ministerial committees involving the MOH, the Ministry of Social Development and the Ministry of Promotion of Women. The second plan ended in 2010 but the CEC approach was immediately included in the agenda of the committees since its adoption. There are two national committees: a technical committee led by the secretary generals of the three ministers and a technical committee led by the three ministers. At the regional level, the SEC takes an important part of the agenda of the official coordination bodies: the Regional committees in charge of organization, coordination and evaluation of health programs (CROCEPS) and the Management Boards of the Reference Health Centers at the district level. At all levels of the system, the coordination bodies cited above are accompanied by specific structures to ensure regular and effective monitoring of SEC implementation (national level *"groupe ad'hoc"* -- since 2010, regional steering committees -- since 2011, district coordinating committees and coordination committees of the health area -- gradually established.	MOH, DNDS, NFCHAM (FENASCOM), WHO, UNICEF, USAID, Save the Children, MCHIP, ATN Plus, PKCII, Plan Mali, Groupe Pivot Sante population, ACF, ASDAP, CRM, HKI, Borne Fonden, MSFF, Centre OMD, Agro Action Allemande (AAA).

In Consultation with MOH and Others, Please Give Scale Up Scores by Health System Competency		Briefly Describe Activities Done to Support the Competency	What Partners Conducted/Supported the Activities Listed in the Last Column (MCHIP and/or Other[S])?
2008	2013		
0	3	The focal point person at the National Directorate of Health has been officially appointed since the adoption of the CEC approach in 2009. A decree of the MOH established the "*groupe ad'hoc*" chaired by the secretary general. This group embraces all the relevant government structures involved in community health, all financial and technical partners and civil society representatives, including the National Federation of Association Community Health (FENASCOM). The "*groupe ad'hoc*" provides leadership to the implementation and financing of the CEC approach, validates the technical documents and tools and approves all initiatives linked to the CEC.	MOH, DNDS, NFCHAM (FENASCOM), WHO, UNICEF, USAID, Save the Children, MCHIP, ATN Plus, PKCII, Plan Mali, Groupe Pivot Sante population, ACF, ASDAP, CRM, HKI, Borne Fonden, MSFF, Centre OMD, Agro Action Allemande (AAA).
0	2	Although the overall SEC approach is currently supported by the external funding, all costs linked to program monitoring, CHWs training, supervision, equipment and supplies are included in annual workplanning and budgeting exercises at the MOH regional and district levels. CHWs salaries are not included in these plans. The national level does not have any budgeting process to include the CEC. UNICEF supports SEC implementation in Koulikoro, Ségou, Mopti and Kayes regions. USAID through MCHIP provides financial support to 5 health districts in the Region of Sikasso and 2 health districts in the region of Kayes. Save the Children through the Muskoka funding supports 4 other districts in the region of Sikasso. Save the Children also collaborates with the Malian Red Cross in a health district of Sikasso. The Malian Red Cross and Plan Mali support respectively 2 districts and 1 district in the region of Koulikoro. PSI through the Global Fund is planning to provide financial support from 2014, including portion of the salaries of CHWs.	UNICEF, USAID/MCHIP, ICH/ Muskoka/Save the Children, Muskoka /CRM, Plan Mali, PSI.
0	3	In-service training: there are national training curricula for trainers, supervisors and CHWs that were developed by MOH with technical and financial assistance from its partners. To date, there is no medical or nursing school providing pre-service training for the CEC	UNICEF, USAID/MCHIP, ICH/ Muskoka/Save the Children, Muskoka /CRM, Plan Mali, PSI.

References

Bennett, S., George, A., Rodriguez, D., Shearer, J., Diallo, B., Konate, M., . . . Cliff, J. (2014). Policy challenges facing integrated community case management in sub-Saharan Africa. *Tropical Medicine & International Health, 19*(7), 872–882.

Bold, T., Kimenyi, M., Mwabu, G., Ng'ang'a, A., & Sandefur, J. (2013). Institutional challenges to scaling up learning in Kenya. In L. Chandy, A. Hosono, H. Kharas, & J. Linn (Eds.), *Getting to scale: How to bring development solutions to millions of poor people* (pp. 262–276). Washington, DC: Brookings Institution Press.

Brieger, B., Badolo, O., Yansaneh, A., Waxman, R., & Roman, E. (2013). *A documentation of malaria program implementation in Burkina Faso.* Baltimore, MD: Jhpiego for MCHIP/USAID & National Malaria Control Program.

Centre for Child and Adolescent Health, & icddr,b. (in press). *Report on system evaluation of scaling-up of Helping Babies Breathe (HBB) intervention in facility and community settings in Bangladesh*. Dhaka, Bangladesh.

Chandy, L. (2013). From scaled-up budgets to scaled-up impact: A decade of rising foreign aid in review. In L. Chandy, A. Hosono, H. Kharas, & J. Linn (Eds.), *Getting to scale: How to bring development solutions to millions of poor people* (pp. 69–102). Washington, DC: Brookings Institution Press.

Chandy, L., Hosono, A., Kharas, H., & Linn, J. (Eds.). (2013). *Getting to scale: How to bring development solutions to millions of poor people.* Washington, DC: Brookings Institution Press.

Cooley, L., & Kohl, R. (2006). *Scaling up: From vision to large-scale change; A management framework for practitioners.* Washington, DC: Management Systems International.

ExpandNet. (2009). *Practical guidance for scaling up health service innovations.* World Health Organization.

ExpandNet. (2010). *Nine steps for developing a scaling-up strategy.* Geneva, Switzerland: World Health Organization.

Fixen, A., Lundgren, R., Igras, S., Jennings, V., & Sinai, I. (2013). *Monitoring and evaluating scale-up of health system innovations.* Washington, DC: Institute for Reproductive Health, Georgetown University.

Frieden, T. R. (2014). Six components necessary for effective public health program implementation. *American Journal of Public Health, 104*(1), 17–22.

Ghiron, L., Shillingi, L., Kabiswa, C., Ogonda, G., Omimo, A., Ntabona, A., . . . Fajans, P. (2014). Beginning with sustainable scale up in mind: Initial results from a population, health and environment project in East Africa. *Reproductive Health Matters, 22*(43), 84–92.

Gomez, P., Dickerson, A., & Roman, E. (2012). *Review of national-level malaria in pregnancy documents in five PMI focus countries.* Baltimore, MD: Jhpiego for MCHIP, USAID, & President's Malaria Initiative.

Gupta, S., Kazembe, A., Mupfudze, T., Mtimuni, A., Sethi, R., Kozuki, N., . . . Kachale, F. (in press). *Evaluation of the Helping Babies Breathe (HBB) Initiative in Malawi: Results from the two rounds of data collection, March 2014.* Washington, DC: MCHIP.

Helping Babies Breathe. (2011). *Guide for implementation of Helping Babies Breathe: Strengthening neonatal resuscitation in sustainable programs of essential newborn care*. Elk Grove Village, IL: American Academy of Pediatrics.

LaFond, A., Kanagat, N., Steinglass, R., Fields, R., Sequeira, J., & Mookherji, S. (2014). Drivers of routine immunization coverage improvement in Africa: Findings from district-level case studies. *Health Policy and Planning.* doi:10.1093/heapol/czu011

Levine, R. (2004). *Millions Saved: Proven Successes in Public Health.* Washington, DC: Center for Global Development.

Linn, J. F. (2013). Incentives and accountability for scaling up. In L. Chandy, A. Hosono, H. Kharas, & J. Linn (Eds.), *Getting to scale: How to bring development solutions to millions of poor people* (pp. 138–188). Washington, DC: Brookings Institution Press.

MCHIP. (n.d.). *Program learning for postpartum intrauterine contraceptive device (PPIUCD) integration with maternal health services: Programmatic experiences from multiple countries.*

MCHIP. (2013). *Indicator guide: Monitoring and evaluating integrated community case management.* Washington, DC.

McPherson, D. B., Balisanga, H. N., & Mbabazi, J. K. (2014). Bridging the accountability divide: Male circumcision planning in Rwanda as a case study in how to merge divergent operational planning approaches. *Health Policy and Planning, 29*(7), 883–892. doi:10.1093/heapol/czt069

Ministry of Health. (2012). *Technical report on post introduction evaluation of pneumococcal vaccine (Pcv 10) in Kenya 2012.* Nairobi, Republic of Kenya.

Prager, S., Gupta, P., Chilambwe, J., Vwalika, B., Neukom, J., Siamwanza, N., . . . Blumenthal, P. D. (2012). Feasibility of training Zambian nurse–midwives to perform postplacental and postpartum insertions of intrauterine devices. *International Journal of Gynecology & Obstetrics, 117*(3), 243–247.

Pritchett, L., & de Weijer, F. (2010). *Fragile States: Stuck in a Capability Trap?* (World Development Report 2011 Background Paper). Washington, DC: World Bank.

Rogers, E. M. (2003). *Diffusion of Innovations* (5th ed.). New York, NY: Free Press.

Simmons, R., & Shiffman, J. (2007). Scaling up health service innovations: a framework for action. In R. Simmons, P. Fajans, & L. Ghiron, *Scaling up health service delivery: From pilot innovations to policies and programmes* (pp. 4–30). Geneva, Switzerland: WHO & ExpandNet.

Smith, J., Currie, S., Perri, J., Bluestone, J., & Cannon, T. (2012). *National programs for the prevention and management of postpartum hemorrhage and pre-eclampsia/eclampsia: A global survey, 2012.* Washington, DC: MCHIP/USAID.

Starbuck, E., Raharison, S., Ross, K., & Kasungami, D. (2013). *Integrated community case management: Findings from Senegal, the Democratic Republic of the Congo, and Malawi; A synthesis report.* Washington, DC: MCHIP & USAID.

World Health Organization. (2007). Everybody's business: Strengthening health systems to improve health outcomes; WHO's framework for action. Geneva, Switzerland: Author.

World Health Organization. (2012a). *Guidelines on basic newborn resuscitation*. Geneva, Switzerland.

World Health Organization. (2012b). *WHO recommendations for the prevention and treatment of postpartum haemorrhage.* Geneva, Switzerland.

World Health Organization. (2013). *Programming strategies for postpartum family planning.* Geneva, Switzerland.

Yamey, G. (2011). Scaling up global health interventions: A proposed framework for success. *PLoS Med, 8*(6), e1001049.