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SUPPLEMENT ARTICLE

Scaling up high-impact interventions: How is it done?

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ABSTRACT

Building upon the World Health Organization's ExpandNet framework, 12 key principles of scale-up have emerged from the implementation of maternal and newborn health interventions. These principles are illustrated by three case studies of scale up of high-impact interventions: the Helping Babies Breathe initiative; preservice midwifery education in Afghanistan; and advanced distribution of misoprostol for self-administration at home births to prevent postpartum hemorrhage. Program planners who seek to scale a maternal and/or newborn health intervention must ensure that: the necessary evidence and mechanisms for local ownership for the intervention are well-established; the intervention is as simple and cost-effective as possible; and the implementers and beneficiaries of the intervention are working in tandem to build institutional capacity at all levels and in consideration of all perspectives.

1. Introduction

As countries push to achieve Millennium Development Goals (MDGs) 4 and 5, increasing attention is being paid to the equitable scale-up of proven high-impact interventions for reproductive, maternal, newborn, and child health [1]. Experience has demonstrated that technical interventions that are known to be effective at a small scale under tightly controlled conditions cannot naturally be assumed to be widely adopted and scaled up to cover large segments of the population, despite scale being essential for population-level impact. Scale-up is challenging, and it is not always successful.

Over the past 40 years, Jhpiego and its partners have assisted various countries, through local efforts and global alliances, to achieve some level of scale-up of maternal and newborn health (MNH) interventions across the global development spectrum. Substantial scale-up activity has occurred over the last decade, particularly with support from USAID via its flagship Maternal and Child Health Integrated Program (MCHIP), which supported programmatic efforts in MNH in more than 40 countries from 2008 to 2014 [2] and which was led by Jhpiego in partnership with Save the Children, John Snow, Inc., Program for Appropriate Technology in Health, ICF International, Population Services International, Broad Branch Associates, and the Johns Hopkins University's Institute for International Programs. While the specifics of Jhpiego's scale-up approach have differed depending on the local context, experience has allowed it to distill common, practice-based principles. As a result, Jhpiego now has a more refined and articulable approach to scale-up that we, as authors representing Jhpiego and partners who have worked closely with Jhpiego, aim to share for the benefit of other public health practitioners.

For the purposes of the present article, we derive our definition of scale-up from ExpandNet, a community of practice for global public health practitioners that is focused on developing and promoting best practices at scale [3]. ExpandNet's definition encompasses both the process and the objective of increasing coverage of an intervention: "deliberate efforts to increase the impact of health service innovations successfully tested in pilot or experimental projects so as to benefit more people and to foster policy and programme development on a lasting basis" [3]. Progress toward expanding levels of coverage for an intervention is sometimes termed "horizontal scale-up." The process of institutionalizing an intervention at all levels of a local implementing organization (usually the ministry of health), so that it can manage and sustain an intervention at a high level of horizontal scale-up, is sometimes termed "vertical scale-up." After stating the principles of scale-up that have emerged from our work, we will describe three illustrative cases in which Jhpiego's and its partners' deliberate efforts to assist vertical scale-up using these principles have led to successful horizontal scale-up.

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Box 1
The 12 principles of scale-up used by Jhpiego and partners.

A. **Actions related to the STRATEGY for scale-up**
   1. Build evidence and engage in **evidence-based advocacy** (globally and nationally)
   2. **Coordinate/partner** with other donors and technical agencies
   3. Mobilize **resources**
   4. **Promote country ownership** by integrating and harmonizing intervention with current systems

B. **Actions related to the INTERVENTION to be scaled up**
   5. **Simplify and standardize** intervention
   6. Make intervention **cheaper** (i.e. more cost-effective)

C. **Actions related to the IMPLEMENTING ORGANIZATION AND BENEFICIARIES of the scaled intervention**
   7. Identify and work with **champions**
   8. Advocate for and develop needed **policy/guideline** changes
   9. Build **capacity** of implementing organization(s) for training, management, and logistics
   10. **Use data** for management, including strengthening monitoring and evaluation
   11. Support institutions, such as pre-service education sites and professional organizations, that are agents of scale-up
   12. Engage and empower **clients and communities**

1.1. The principles of scale-up

There is a large body of literature discussing the variety of frameworks that have been developed to guide the effort to scale-up health interventions [4–6]. The scale-up principles that Jhpiego and partners have crystalized for the purposes of their collective implementation efforts in global MNH are presented in Box 1. These principles are based on the logic of the ExpandNet framework shown in Fig. 1 [7] but contain modifications that have been adapted from insights in other frameworks [8–10].

The ExpandNet framework links five interacting pieces: the "resource team" (in this case, a group of technical assistance organizations led by Jhpiego or a partner), works in concert with the "user organization(s)" (i.e. the ultimate implementer, usually a ministry of health) to help scale-up an "innovation," or intervention, through a "scaling-up strategy" within the relevant "environment," or context.

Scale-up tends to happen in phases similar to that of product introduction [11], as shown in Fig. 2, beginning with the *introduction* of an intervention, during which the intervention is piloted by the resource team and health system managers learn the factors necessary for its successful local application and contextualization. As ministries of health increase geographic coverage of the intervention, scale-up moves to an *early expansion* phase. In this phase, the resource team works with the ministry of health to identify needs for capacity-building, and to continue to refine the intervention based on evidence from pilot experiences. As the ministry of health attains coverage of national scope, or enters the *mature expansion* phase, issues of institutionalizing the intervention and maintaining quality and fidelity become the most crucial considerations.

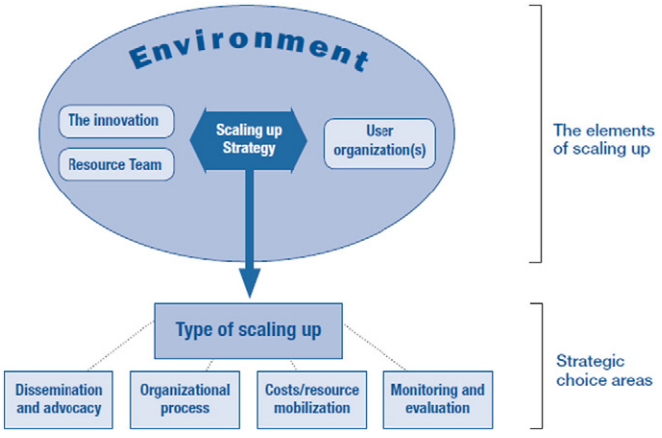

Fig. 1. ExpandNet framework for scale-up. Reproduced with permission from WHO, ExpandNet [7].

A common understanding in the process of scale-up, which is implied in the 12 scale-up principles, is that no organization or agency works independently or in isolation. In fact, Jhpiego has always worked in an environment characterized by the leadership of relevant ministries, alliances with partners, and multilateral networks that address the specific actions required for expansion of coverage within complex health systems.

The three recent illustrative case examples of the scale-up principles are outlined in Table 1 and described in further detail below. Each case involves a key MNH problem, and each is in a different phase of scale-up.

2. Managing newborn asphyxia: Ensuring newborn resuscitation through the *Helping Babies Breathe* approach

Almost three million newborns die each year, and the majority of these deaths occur within 24 hours of birth. Globally, 23% of newborn deaths, or 700 000 annually, are due to birth asphyxia [12]. Thus, birth asphyxia has been targeted by the global public health community as a priority issue. As described in Box 2, *Helping Babies Breathe* (HBB), a methodology developed by the American Academy of Pediatrics (AAP) in 2009 to address birth asphyxia [13], expands upon time-tested clinical guidelines using simple, focused learning tools and approaches for newborn resuscitation. This new methodology and training package has proven instrumental in moving toward effective implementation because of its emphasis on mastery and consistent application of the initial steps of resuscitation, which are respiratory support through stimulation and use of a self-inflating bag and mask when necessary. HBB focuses on prompt resuscitation during the Golden Minute (APP, Elk Grove Village, IL, USA) after childbirth as an integral component of essential newborn care (ENC). The HBB approach adheres to a simple assessment and intervention pathway, and development and maintenance of skills through simulation, using a low-cost, lifelike anatomic model, both in the learning venue and at the workplace. The HBB training package can be used alone or integrated into existing national training materials for ENC, emergency obstetric and newborn care, or integrated management of newborn and childhood illness. The desired output is to have at least one person who is skilled in newborn resuscitation at every birth [14].

MCHIP embraced the HBB approach for the management of asphyxiated newborns and included it in all of its neonatal programs. Both directly and as a member of the HBB Global Development Alliance (GDA), which was established in June 2010, MCHIP worked with USAID missions, other technical agencies (most significantly AAP and Laerdal Global Health), host country governments, professional associations, and nongovernmental organizations to facilitate the scale-up of HBB in 54 countries as of April 2013 [15].

The MCHIP strategy for scaling up proven interventions was to galvanize action at both the global and the country level. MCHIP's direct support for implementation included: regional training of trainers in Asia and Africa; partnership with AAP for development of an HBB training video and implementation guide; in-country mentorship through a variety of GDA members; and HBB website maintenance. MCHIP's breadth allowed cost efficiencies, such as the waiver of copyright fees and access to training models at cost.

Facilitating collaboration among partners, the GDA achieved progress to scale more rapidly than any partner alone because each partner could take on specific roles. For example, AAP developed the technical evidence base, Laerdal provided initial training materials for national