



Center For
Health Market Innovations

HEALTH MARKET INNOVATIONS:

INVESTING IN NURSING AND MIDWIFERY ENTERPRISE: EMPOWERING WOMEN AND STRENGTHENING HEALTH SYSTEMS

A Landscaping Study of Innovations
in Low and Middle Income Countries



Carleigh B. Krubiner, Marla Salmon, Christina Synowiec, Gina Lagomarsino



RESULTS FOR
DEVELOPMENT

UNIVERSITY of
WASHINGTON

This report made possible through collaboration of the UW and R4D.

PREFACE

The purpose of this project is to identify and describe innovative health programs in low- and middle-income countries (LMICs) that provide empowerment opportunities for nurses and midwives, particularly to women in these roles, while improving health service delivery. In this review of programs profiled in the Center for Health Market Innovations (CHMI) Database, we explore nurses' and midwives' roles and functions, the factors that support empowerment and growth, as well as relevant financing and organizational features of the programs. By identifying the range of ways in which health innovations can create empowerment opportunities for women, and using select case examples to highlight exemplary models, we aim to stimulate greater uptake of health innovations coupled with gender-empowerment opportunities both in the United States and around the world.

This report was made possible through collaboration between R4D and the University of Washington. It is part of a larger initiative at the University of Washington sponsored by the Robert Wood Johnson Foundation focusing on investment in nursing and midwifery enterprises as means for improving the lives of women and strengthening health system. The Robert Wood Johnson Foundation provided funding focused on informing approaches in the United States through its support of the *"Studying global lessons in nursing and midwifery to inform US innovations to empower women and strengthen community health services"* project grant.

University of Washington

As a world-class public research university with a focus on improving lives around the globe, the University of Washington (UW) has afforded a uniquely rich context for development of the overall initiative, of which this report is a part. The significant engagement and support of faculty, staff, and students of the Daniel J. Evans School of Public Affairs, as well as colleagues in other schools, including the Schools of Nursing and Public Health, have been critical to the success of this work.

Results for Development (R4D)

Results for Development Institute (R4D) is a nonprofit organization whose mission is to unlock solutions to tough development challenges that prevent people in LMICs from realizing their full potential. Using multiple approaches in multiple sectors including global education, global health, governance, and market dynamics, R4D supports the discovery and implementation of new ideas for reducing poverty and improving lives around the world.

Center for Health Market Innovations (CHMI)

The Center for Health Market Innovations (CHMI) promotes programs, policies, and practices that make quality health care delivered by private organizations affordable and accessible to the world's poor. Managed by Results for Development, CHMI works through regional partners around the world. Details on more than 1,400 innovative health enterprises, nonprofits, public-private partnerships, and policies can be found online at www.HealthMarketInnovations.org.

On the cover: A nurse preps her station at Jacaranda Health, a nonprofit organization providing maternal healthcare in Nairobi, Kenya.

TABLE OF CONTENTS

Acronyms	2
Tables and Figures	3
Executive Summary	4
Introduction	7
Background	9
Women's Empowerment and Economic Development	9
Nurses and Midwives	9
Innovations in Health Service Delivery and the Health Marketplace	10
Methodology	12
Findings	14
Program Attributes	14
Program Approaches Associated with Empowerment	16
Provider Training	17
Information and Communications Technology	30
Social Enterprise, Cooperatives, and Clinical Franchising	35
Cooperatives, Networks, Professional Associations & Unions in the Landscape	35
Additional Models and Programs	44
Discussion	45
References	47
Appendix 1: Commonly Used Dimensions of Women's Empowerment	50
Appendix 2: Analytic Framework for Nurse/Midwife Empowerment	52
Appendix 3: Programs Included in the Analysis	53

ACRONYMS

ANM	Auxiliary Nurse Midwife	MOH	Ministry of Health
ART	Antiretroviral Therapy	MMU	Mobile Medical Unit (mobile clinic)
CHMI	Center for Health Market Innovations	NGO	Non-Government Organization
CHW	Community Health Worker	PAC	Post Abortion Care
CN/ME	Continued Nursing/Midwifery Education	PDA	Personal Digital Assistant
CO	Clinical Officer	PMTCT	Prevention of Mother-to-Child Transmission for HIV
DoH	Department of Health	QA	Quality Assurance
EMOC	Emergency Obstetric Care	QI	Quality Improvement
FP	Family Planning	RH	Reproductive Health
FP&RH	Family Planning and Reproductive Health	SMS	Short Message Service (text message)
HIS	Health Information Systems	UNFPA	United Nations Population Fund
HSS	Health Systems Strengthening	UNICEF	United Nations Children's Fund
ICT	Information and Communications Technology	USAID	U.S. Agency for International Development
IUD/IUCD	Intrauterine Contraceptive Device	VCT	Voluntary Counseling and Testing for HIV
LMICs	Low and Middle Income Countries	VHW	Village Health Worker
MCH	Maternal and Child Health	WHO	World Health Organization
MDG	Millennium Development Goals		

TABLES & FIGURES

Tables

TABLE 1: CHMI CATEGORIZATION OF INNOVATIONS	12
TABLE 2: HEALTH AREAS ADDRESSED BY PROGRAMS	15
TABLE 3: EMPOWERMENT INPUTS ASSOCIATED WITH INNOVATIVE APPROACHES	16
TABLE 4: TRAINING PROGRAMS, BY TYPE	18
TABLE 5: TRAINING PROGRAMS IN THE LANDSCAPE	21
TABLE 6: ICT PROGRAMS IN THE LANDSCAPE	32
TABLE 7: CO-OPS, NETWORKS, ASSOCIATIONS, & UNIONS IN THE LANDSCAPE	37
TABLE 8: CLINICAL FRANCHISES IN THE LANDSCAPE	41

Figures

FIGURE 1: ICN DEFINITION OF NURSING	10
FIGURE 2: ICM DEFINITION OF THE MIDWIFE	10
FIGURE 3: DIAGRAM OF PROGRAMS INCLUDED IN THE REVIEW	13
FIGURE 4: GEOGRAPHIC DISTRIBUTION OF PROGRAMS, EASTERN HEMISPHERE	14
FIGURE 5: GEOGRAPHIC DISTRIBUTION OF PROGRAMS, WESTERN HEMISPHERE	14
FIGURE 6: PROGRAM PROFIT STATUS AND PRIMARY SOURCES OF FUNDING	15
FIGURE 7: CATEGORIES OF PROVIDER TRAINING	17
FIGURE 8: ACTION RESEARCH AND TRAINING FOR HEALTH INDIA	20
FIGURE 9: FROM MHEALTH APP TO EMPOWERMENT SUCCESS STORY, TANZANIA	31
FIGURE 10: FRANCHISING FOR FAMILY PLANNING – TUNZA FAMILY HEALTH NETWORK	40

EXECUTIVE SUMMARY

Women's empowerment has become a central objective across development and public health agendas. It has long been recognized that there are positive associations between empowerment and health, both at the individual and community levels. At the same time, efforts to improve health coverage and to achieve health promotion goals have led to the increasing utilization of women as health providers, and not merely as consumers. New roles for health workers have emerged, utilizing nurses, clinical officers, and midwives in expanded capacities to task-shift and task-share with physicians. This development, combined with the increasing exploration of innovative financing and novel approaches to service delivery, has created new opportunities to empower women as health workers.

Recognizing the potential of innovative approaches in the health marketplace to contribute to the dual goals of improved health and women's empowerment, this landscaping report explores the ways in which health programs in low and middle income countries (LMICs) provide empowerment opportunities for a specific cadre of health workers – nurses and midwives – given their critical role in the health workforce and the significant representation of women in these roles.



Nurses from Jacaranda Health engage in neighborhood outreach to educate local women on maternity services available at their clinics.

OPPORTUNITIES FOR EMPOWERMENT — NURSES AND MIDWIVES

Using the Center for Health Market Innovations (CHMI) Database, one of the most comprehensive resources on global innovation in the health marketplace, we identified programs utilizing nurses and midwives that provide inputs most commonly associated with empowerment, including:

- Higher education and professional training
- Employment and income generation
- Participation and representation in social, professional, and political institutions
- Promotion of autonomy and enhanced self-esteem and self-efficacy
- Increased mobility and freedom of movement
- Access to credit
- Ownership of properties, assets, and businesses

Our search yielded 94 programs with empowerment inputs for nurses and midwives: 46 of these programs targeted nurses, 25 were aimed at midwives, and 23 programs had empowerment opportunities for both nurses and midwives. These programs operate across 56 different countries and cover a range of health services, including those focusing on family planning & reproductive health; maternal, newborn and child health; HIV/AIDS; tuberculosis; malaria; eye health; and non-communicable diseases. The vast majority of the programs captured were nonprofit ventures, with the primary funding source coming from international donors.

Among programs reviewed, four approaches emerged as particularly promising for harmonizing health service delivery with empowerment: **training programs, information and communications technology (ICT), networks and cooperatives, and franchises.**

EDUCATION AND TRAINING

Professional education and training for nurses and midwives provides clear empowerment inputs. Initial preparation and credentialing create lifelong employment opportunities for women to become nurses and midwives, enabling them to generate incomes and play important roles in their communities. Continued professional training and skills development reinforce self-confidence among nurses and midwives, which can contribute to greater autonomy in clinical case management and improved quality of care. In many low-resource settings, where formal job options for women are limited, nursing represents a key opportunity to engage in the workforce. We examined four categories of training opportunities: pre-service, specialty, continuing nursing/midwifery education (CN/ME), and bridging, which creates new entry points for more formal training. Forty-seven reviewed programs included provider training as a core component of the approach.

Among the programs reviewed, most focused on creating and strengthening basic skills among entry-level nurses and midwives. Programs used a variety of approaches and materials to convey new information and reinforce learning, including audio and video recordings, checklists, pamphlets, e-learning resources. A number of programs adopted a “Training of Trainers” strategy, creating leadership opportunities for trainers while investing in a sustainable approach supporting ongoing training. A subset of programs also provided supplemental training in business, management, and leadership skills.

INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT)

The increase in mobile phone and internet use in developing countries over the past several years has generated increasing interest in the use of information and communications technologies (ICT) for novel approaches to expand and improve health services. mHealth and eHealth present unique opportunities to empower their users, both providers and patients alike. For nurses and midwives, mobile phones and web-based platforms can increase access to capital, provide lines of communication for mentorship and peer support, support self-confidence and autonomy through diagnostic tools, provide web-based learning, and create opportunities for social networking and advocacy through sites like Facebook and Twitter.

We identified nine programs in which ICT was the cornerstone of the approach, though many other programs included ICT as a smaller, complementary component. Three programs focused on telehealth, connecting providers remotely with supervisors,

experts, or specialists for clinical consultations. Diagnostic and decision-making tools are a common feature and can strengthen the capacity and confidence of nurses and midwives as they make clinical judgments in the field. Four programs used ICT for e-learning platforms, providing access to up-to-date information on clinical practice guidelines, medical journals, and reference materials. In addition to supporting clinical practice, familiarity with phones and computers can raise the profile of the nurses and midwives as experts in use of technologies in their workplace and create opportunities for them to learn and become leaders.

COOPERATIVES, NETWORKS, PROFESSIONAL ASSOCIATIONS & UNIONS

A number of cooperatives, unions, and associations for nurses and midwives have emerged in LMICs to promote social enterprise. These collectives bring together health workers under one network, through which they can benefit from the power of collective voice and bargaining, savings and microfinance schemes, increased purchasing power, peer-support and mentorship, and group training, among other benefits. These organizations have also engaged in multiple strategic partnerships to align their members with other maternal health programs, provide access to goods and services, facilitate training, and link midwives with international institutions.

There are a diversity of organizational models that incorporate functions associated with co-ops, unions, and professional associations. Given the blurring of these models and the fact that they all share the characteristic features of supporting their members’ interests and professional needs through collective action and representation, we have grouped them together for the purpose of this analysis. We included six such organizations in our review.

SOCIAL FRANCHISING FOR NURSES AND MIDWIVES

Clinical social franchising has become an increasingly common approach to expand services in resource-constrained settings while creating business opportunities for local providers, including nurses and midwives. Our search yielded 23 franchise brands leveraging nurses and midwives as the primary providers of services, five of which were different models introduced by a single organization, DKT International.

Clinical franchises provide several opportunities and inputs that can empower nurses and midwives in the regions where

they operate. Aside from creating successful models for nurses and midwives to own and operate their own practices, many franchisors provide training in both clinical and business skills. Franchise opportunities contribute to their ability to generate income, exercise autonomy over their businesses and lives more broadly, and develop confidence in their abilities through training and peer mentoring. In addition, the brand recognition associated with the franchise may confer a status of respect to nurses and midwives within the community, elevating their social standing while helping them to attract more clients.

Nearly all franchises profiled focused on family planning and reproductive health services. Some integrated other services for malaria, primary health services, TB, and HIV, including prevention of mother-to-child transmission for HIV (PMTCT) and male circumcision. Thirteen franchise programs were “fractional franchises,” meaning that the franchised services or products were only a subset of the offerings available from franchisees, and that the nurses and midwives could provide care beyond what was supported by the franchisor. Franchises not only enable nurses and midwives to own and operate their own businesses, but in some cases also provide additional opportunities to serve as managers of other clinical workers, serve in upper-level management roles for the franchise

organization, and earn special recognition for outstanding performance within their franchise networks. Franchises often include opportunities for further clinical training as well as business training (e.g., management skills, computing, budgeting and accounting, supply chain management, and marketing strategies).

TOWARD HARMONIZATION OF EMPOWERMENT & HEALTH GOALS

This review demonstrates the range of ways in which health innovations can create empowerment opportunities for female nurses and midwives, using select case examples to highlight exemplary models. The hope is to: (1) stimulate and inform greater uptake of health innovations coupled with gender-empowerment activities in and beyond the lower income country context; (2) increase global recognition of the potential for empowerment of women associated with fields in which significant numbers of women are already engaged; and (3) initiate a larger dialogue regarding the importance of incorporating women’s empowerment goals and activities in the work of strengthening health systems worldwide.



A clinical coordinator welcomes clients at Penda Health, a chain of primary care clinics in Kenya

INTRODUCTION

Over the past several decades, significant progress has been made in the realization of several global health and human development goals. Consistent among these has been two complementary, and sometimes overlapping, agendas: improving global health and empowering women. These commitments have been enshrined in global initiatives including the Millennium Development Goals (MDGs), in which two explicit goals address women: MDG-3 to Promote Gender Equality and Empower Women and MDG-5 to Improve Maternal Health. Women's empowerment has become a central objective across development and public health agendas. It has long been recognized that there are positive associations between empowerment and health, both at the individual and community levels (Wallerstein, 1992; Varkey et al., 2010; Duflo, 2012). The World Bank characterizes gender equality and women's empowerment "both as a development objective in itself, and as a means to promote growth, reduce poverty, and promote better governance" (2001).

At the same time, efforts to improve health coverage and to achieve health promotion goals have led to increased utilization of women as health providers, and not merely consumers. New roles for health workers have emerged for nurses, clinical officers, and midwives in expanded roles, sometimes providing services traditionally offered by doctors (Hongoro & McPake, 2004). Nurses and midwives, along with auxiliary care providers and community health workers, are among those most often called upon to augment services and expand access to essential health care as countries seek to strengthen their health systems. Simultaneously, commitments to universal health coverage in resource-limited settings have stimulated development of innovative forms of financing and novel service delivery approaches, attracting entrepreneurs and investors from private, philanthropic, and government institutions.

Drawing upon the work of our co-author, Dr. Marla Salmon at the University of Washington, this project further explores the convergence between the global health and women's empowerment agendas, as well as the increasing participation of women in the health workforce, as a potential opportunity to produce significant gains in both women's empowerment and health systems and service strengthening (Salmon, 2013;

Salmon, 2014). In line with Dr. Salmon's earlier work, this analysis focuses on a key cadre of providers, nurses and midwives, with attention to the wellbeing of the providers themselves and those they engage through their practices. In this landscaping exercise, we identify and describe innovative health programs in low and middle-income countries (LMICs) that help to inform our understanding of these empowerment opportunities for nurses and midwives and their contributions to health service delivery.

At the same time, efforts to improve health coverage and to achieve health promotion goals have led to increased utilization of women as health providers, and not merely consumers.

Prior to undertaking this landscaping effort, Dr. Salmon conducted an extensive review of the literature to identify work focusing on the intersection between the health marketplace and the intentional empowerment of women through their involvement as service providers (Salmon, 2013). While the results revealed some activity associated with women working as community health workers – or in their roles as service beneficiaries – there were no studies focusing on the topic of this landscaping study. As such, we believe that the work reported here represents the only global review to date examining the intersection between innovation in the health marketplace and women's empowerment.



In Kenya, a Child and Family Wellness shop franchisee tends to a row of seated waiting patients in her clinic.

Our study utilizes the CHMI Database, one of the most extensive collections of private sector health programs in developing countries. Relying on programs captured in this database, we explore nurses' and midwives' roles and functions, the factors that support their empowerment and growth, as well as relevant financing and organizational features of the programs. While this review is neither exhaustive nor representative of the full range of health-related empowerment opportunities, it reflects the most salient trends and captures models that simultaneously promote health and women's empowerment for the nurses and midwives practicing in these contexts. By demonstrating the range of

ways in which health innovations can create empowerment opportunities for women who are nurses and midwives, using select case examples to highlight exemplary models, we hope to (1) stimulate and inform greater uptake of health innovations coupled with gender-empowerment activities, (2) increase recognition of the potential for empowerment of women associated with fields in which significant numbers of women are already engaged, and (3) initiate a larger dialogue regarding the importance of incorporating women's empowerment goals and activities in the work of strengthening health systems worldwide.

BACKGROUND

WOMEN'S EMPOWERMENT AND ECONOMIC DEVELOPMENT

Over the last few decades, there has been an increasing understanding of women's rights and their pivotal role in the economic growth of developing countries. This period has been marked by intensifying international commitments to the welfare and empowerment of women, including those put forth in the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in 1979; the Beijing Declaration and Platform for Action in 1995; and, more recently, the

Investment in the advancement of women has increased significantly in the development sector, reflecting the growing recognition of the intrinsic importance of this work and the reality that the advancement of women is instrumental for societies to attain progress on key development objectives.

formation of a dedicated agency within the United Nations, UN Women, in 2010 to focus and accelerate efforts promoting gender equality and the empowerment of women. Investment in the advancement of women has increased significantly in the development sector, reflecting the growing recognition of the intrinsic importance of this work and the reality that the advancement of women is instrumental for societies to attain progress on key development objectives.

While the international commitment to women's empowerment has been clearly affirmed, articulating a comprehensive and universal definition of empowerment has proven to be a difficult task. The term "empowerment" has been adopted to describe a range of concepts, commitments, and activities. Descriptions often refer to increased autonomy and freedoms, greater participation in social and political institutions affecting one's interests, increased economic opportunity and control over one's resources, greater access to education, and increased sense of self-worth (UN 1995; Kabeer, 2005; Malhotra et al., 2002; Mahmud et al., 2012). (See Appendix 1 for additional descriptions and elements of empowerment.)

In this paper, rather than working to develop an all-encompassing definition for the complex concept of empowerment, we instead focus on the hallmarks of empowerment and the kinds of pathways and inputs that contribute to women's empowerment. These hallmarks were selected from major areas of convergence in the empowerment literature and include:

- Opportunities for higher education and professional training
- Opportunities for employment and income generation
- Participation/representation in social, professional, and political institutions
- Promotion of autonomy
- Increased mobility
- Access to credit
- Ownership of properties, assets, and businesses
- Enhancements to self-esteem and self-efficacy

See Table 3 below, which demonstrates how these align with the core components associated with models for health innovation discussed.

This "hallmark" approach helps to identify "domains" of empowerment, which are important to framing our examination

FIGURE 1: ICN DEFINITION OF NURSING

Nursing encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings. Nursing includes the promotion of health, prevention of illness, and the care of ill, disabled and dying people. Advocacy, promotion of a safe environment, research, participation in shaping health policy and in-patient and health systems management, and education are also key nursing roles.

A nurse is a person who has completed a program of basic education and is qualified and authorized in her/his country to practice nursing. Basic nursing education is a formally recognized program of study that provides a broad and sound foundation for the practice of nursing, and for post-basic education, which develops specific competency. At the first level, the educational program prepares the nurse, through study of behavior, life, and nursing sciences and clinical experience, for effective practice and direction of nursing care and for a leadership role. The first level nurse is responsible for planning, providing, and evaluating nursing care in all settings for the promotion of health, prevention of illness, care of the sick, and rehabilitation, and functions as a member of the health team.

<http://www.icn.ch/about-icn/icn-definition-of-nursing/>

<http://medical-dictionary.thefreedictionary.com/International+Council+of+Nurses>

of models, as well as creating a conceptual foundation for future work. The framework that we have utilized in examining the CHMI Database reflects these hallmarks.

NURSES AND MIDWIVES

In this landscaping exercise, we focus on the empowerment of female nurses and midwives. There are several reasons for narrowing the scope to these two types of providers:

1. Nurses and midwives represent the largest group of health services providers globally and the majority of their members are women.
2. Nurses and midwives have traditionally been the “backbone” of health care delivery and are now are playing increasingly important roles in expanding access to health care, particularly for the most vulnerable populations.
3. Credentialing and regulation of nurses and midwives is relatively consistent across country settings, and there are universal standards for training and certification of these roles promulgated by the International Council of Nurses (ICN) and the International Confederation of Midwives (ICM), making it possible to readily identify these professionals and define their work (see Figures 1 and 2).
4. Midwives, and particularly nurses, are the “utility” players in healthcare – they can expand and contract their roles depending on market forces, and provide training and supervision for others in outreach and delivery of health services, such as community health workers. This has been

crucial to both task-shifting, relieving physicians of some of their responsibilities (White & Lewin, 2006), as well as task sharing, in which nurses and midwives perform work that physicians also perform, expanding overall services (IOM, 2011).

5. Nurses and midwives have been key to the delivery of health services that empower women, such as family planning and reproductive services (Duflo, 2012), and often serve as informal resources to women about their health and other matters.

While this report focuses on nurses and midwives, we see significant potential for health sector investments to serve as a vehicle to empower a much broader group of women. In addition to capturing empowerment inputs for nurses and midwives, we report on some programs offering empowerment opportunities for other women in the community.

FIGURE 2: ICM DEFINITION OF THE MIDWIFE

A midwife is a person who has successfully completed a midwifery education program that is duly recognized in the country where it is located and that is based on the ICM Essential Competencies for Basic Midwifery Practice and the framework of the ICM Global Standards for Midwifery Education; who has acquired the requisite qualifications to be registered and/or legally licensed to practice midwifery and uses the title ‘midwife’; and who demonstrates competency in the practice of midwifery.

www.internationalmidwives.org

INNOVATIONS IN HEALTH SERVICE DELIVERY AND THE HEALTH MARKETPLACE

Investment in strengthening health systems and expanding health services has long been a focus of concern for governments and multilateral organizations, such as the World Health Organization. As countries and multinational agencies work to improve access, quality, efficiency, and equity under their commitment to health systems strengthening (WHO, 2000), there has been increasing recognition of the potential of non-governmental actors to complement public provision of services in a mixed health system (Lagomarsino et al., 2009). Over the past decade, a broader range of investors, both private and philanthropic partners, have entered the “health marketplace,” stimulating innovation, mobilizing resources, and expanding coverage. The entrance of these new players and health entrepreneurs has heralded a period of novel strategies for expanding health care provision, introducing technology and business solutions for health, and adopting organizational approaches more traditional to the business sector. Although it can be difficult to assess the net impacts these approaches have had in strengthening the overall health system, it is clear that most programmatic innovations align with the core aims of systems strengthening to promote quality, access, and equity through the expansion and improvement of services.

Many of these programs rely on the work of nurses and midwives – and some engage them in roles that include owning and/or operating practices. While nurses and midwives have played a significant role in the rapidly transforming health marketplace, impact evaluations for programs have largely focused on the consumer side (i.e., increased utilization and health outcomes). This is particularly true when considering women’s empowerment and gender equity. Attention to women’s empowerment in this context has largely been restricted to delivering health services that are empowering to consumers, such as family planning methods and access to skilled birth attendants. There has been little examination of the opportunity to empower women through their engagement in the health workforce (Salmon, 2014). Therefore, while many programs explicitly include indicators for service uptake, quality, and health outcomes in their mission statements and evaluations, most fail to articulate important empowerment objectives and capture progress as it relates to female providers, such as nurses and midwives.

When public and private health market innovations have adequate stewardship and appropriate harmonization and integration with efforts across the mixed health system, they

hold tremendous potential for systems strengthening while also creating empowerment opportunities for women as health providers, employees, and consumers. Our objective in this paper is to document the ways in which health market innovations can serve these dual aims. In order to examine the range of novel approaches with such potential, we utilized the CHMI database, one of the most comprehensive resources on global innovation in the health marketplace.¹ This platform captures standardized datasets on over 1,240 programs across 129 countries and is constantly growing to capture new programs. This expansive public database was therefore an ideal source for us to identify programs contributing to nurse and midwife empowerment.



Mrs. Bratatin represents the local chapter of Bidan Delima, a program that provides accreditation to private midwives to ensure quality. She is one of more than 9000 Bidan Delima midwives in the country—the franchise is active in 21 of 33 provinces.

¹ As of 2015, the CHMI database documents over 1,430 health mark

METHODOLOGY

This project aimed to survey the landscape of innovative health programs in LMICs contributing to the empowerment of female nurses and midwives, women's empowerment more broadly, and the potential strengthening of health systems and service delivery. To this end, we conducted a targeted search of the CHMI Database, supplemented by additional web searches and reviews of program websites. CHMI relies on in-country institutions and partners across 20 nations to populate the database and uses standard profiles to systematically capture information on health focus, scale, financials, programmatic goals and approaches, and other variables. The database also tags programs across five categories for improving quality, affordability, and accessibility of healthcare for the poor (Table 1).

The schematic below (Figure 3) reflects this study's screening process, which began with an initial filter for involvement of either a nurse or midwife. This yielded 213 unique profiles from the CHMI database. We then applied the inclusion criteria derived through an analytic framework for empowerment, informed by the literature and developed by UVV in collaboration with R4D, to identify programs that provided empowerment opportu-

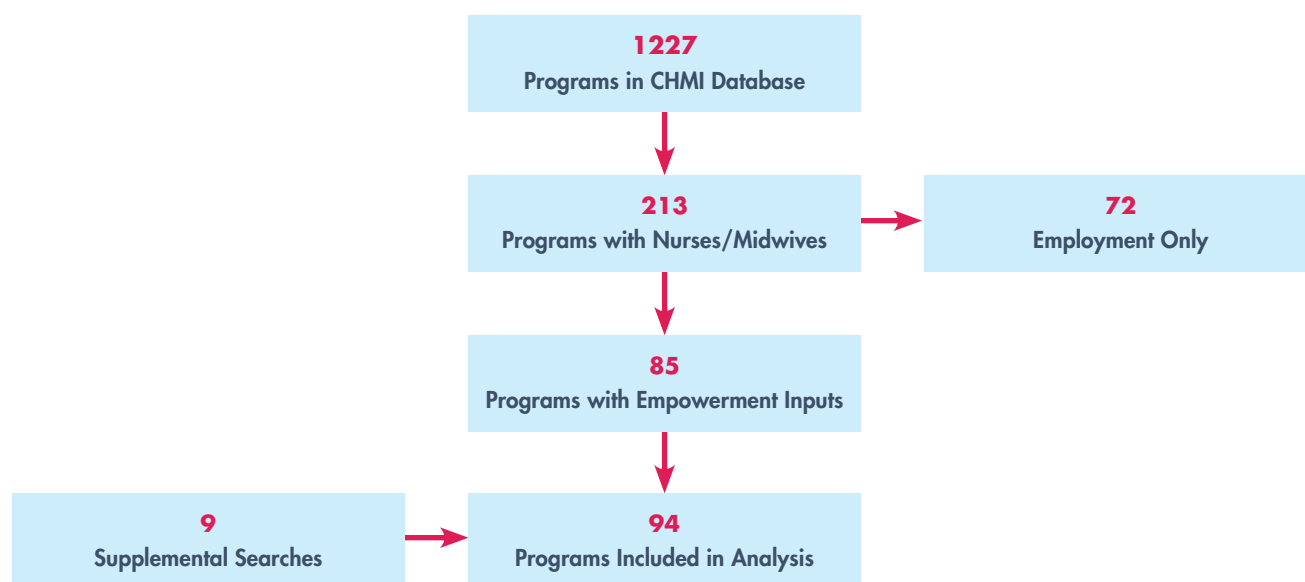
nities to nurses and midwives. (See Appendix 2 for framework.)

Through the lens of the inclusion criteria, we identified 85 programs involving nurses and/or midwives in the approach with explicit inputs associated with empowerment. These empowerment inputs ranged from skills training to business support to ownership opportunities (e.g., nurse-owned franchises). Another 72 programs offered implicit economic opportunities to nurses or midwives by virtue of their employment on the care team. While these are not included in our subsequent analysis, it is worth noting the value of newly created employment opportunities resulting from innovation in the health marketplace. For instance, 28 mobile clinic programs employed nurses and/or midwives as a member of the care delivery team, creating new work opportunities for these professionals. Through additional searches of literature (conventional and gray), as well as direct communication with colleagues working in the health and development sectors, we identified an additional nine programs that met our inclusion criteria, as defined by our analytic framework. All searches were conducted March–June 2014.

TABLE 1: CHMI CATEGORIZATION OF INNOVATIONS

Category	Definition	Approaches
Organizing Delivery	Programs that reduce fragmentation and informality of health care delivery and that may enable financing, regulation, training, and new business models.	Franchises, cooperatives, health service networks, health service chains, and professional associations
Financing Care	Programs that mobilize funds for health care and align provider incentives to increase access for targeted groups of patients or to support select health interventions.	Contracting, vouchers, cross-subsidization, government health insurance, health savings, micro-insurance
Regulating Performance	Programs that set standards and enforce or incentivize higher quality care or increased access for target populations.	Monitoring standards, expansion incentives, licensing/accreditation, pay-for-performance, policy legislation
Changing Behaviors	Programs designed to change the behavior of individuals involved in health care transactions by educating patients about what kind of care to seek or providers about how to deliver higher quality services.	Provider training, consumer education, social marketing, consumer association, conditional cash transfers
Enhancing Processes	Processes, technologies, or products that facilitate increased efficiency, lower costs, higher quality, and/or improved access.	Information communications technology, lab testing/diagnostics, products/equipment, mobile clinic, supply chain enhancements, innovative operational processes

*Additional information at <http://healthmarketinnovations.org/approach-type-definitions>

FIGURE 3: DIAGRAM OF PROGRAMS INCLUDED IN THE REVIEW

Once we completed this screening process, having identified 94 health market innovations with nurse and midwife empowerment inputs, we systematically reviewed available programmatic materials to comprehensively capture the nature of empowerment activities, inputs, and opportunities associated with each program. This included a review of the associated CHMI profiles, program websites, relevant peer-reviewed literature, and gray literature, such as case studies and evaluations published on funder websites.

LIMITATIONS

This review is the most expansive analysis to-date of innovations that provide empowerment opportunities to nurses and midwives. It captures a wide range of programs from a diverse geographic sample. However, it is not exhaustive, and there may be additional models empowering the female health workforce in LMICs. By relying on the CHMI Database, a central clearinghouse for health, we were able to streamline the identification of relevant programs with empowerment inputs for nurses and midwives. However, our predominant use of this database may have introduced some biases into the findings.

Due to the model used to populate the database, which relies on in-country institutions and partners across 20 nations, there may be some selection biases regarding the types of programs profiled and their geographic location. For instance, there may be a higher representation of programs from countries in which there are partner organizations, particularly those which have been aligned with CHMI since the inception of the database. Additional information can be found at: <http://healthmarketinnovations.org/about/our-network>.

It should also be noted that much of the data collected through the database relies on self-reporting. However, for all programs included in the final analysis, this study consulted additional documentation from a variety of sources, including independent evaluations where available, to corroborate and supplement data. Lastly, the CHMI database largely reports on programs in the private health sector. While limited to private sector models, the innovative approaches and empowerment inputs identified in this landscaping study have relevance for public sector approaches, and some have been undertaken in partnership with and/or have funding support from the public sector. Despite of these limitations, we believe this report captures the most significant types of approaches with empowerment inputs that have been gaining traction in developing countries.

FINDINGS

PROGRAM ATTRIBUTES

Based on the methodology described above, we identified 94 programs that contributed to the empowerment of nurses or midwives: 46 of these programs targeted nurses, 25 were aimed at midwives, and 23 programs had empowerment opportunities for both nurses and midwives. The programs included in the analysis operate across 56 different countries. Figures 4 and 5 indicate the geographic distribution of programs, based on where programs are headquartered, with additional countries of operation not pictured.

FIGURE 4: GEOGRAPHIC DISTRIBUTION OF PROGRAMS, EASTERN HEMISPHERE



FIGURE 5: GEOGRAPHIC DISTRIBUTION OF PROGRAMS, WESTERN HEMISPHERE



These 94 programs cover a range of health services, including family planning and reproductive health; maternal, newborn, and child health; tuberculosis; HIV/AIDS; malaria; eye health; and non-communicable diseases (Table 2).

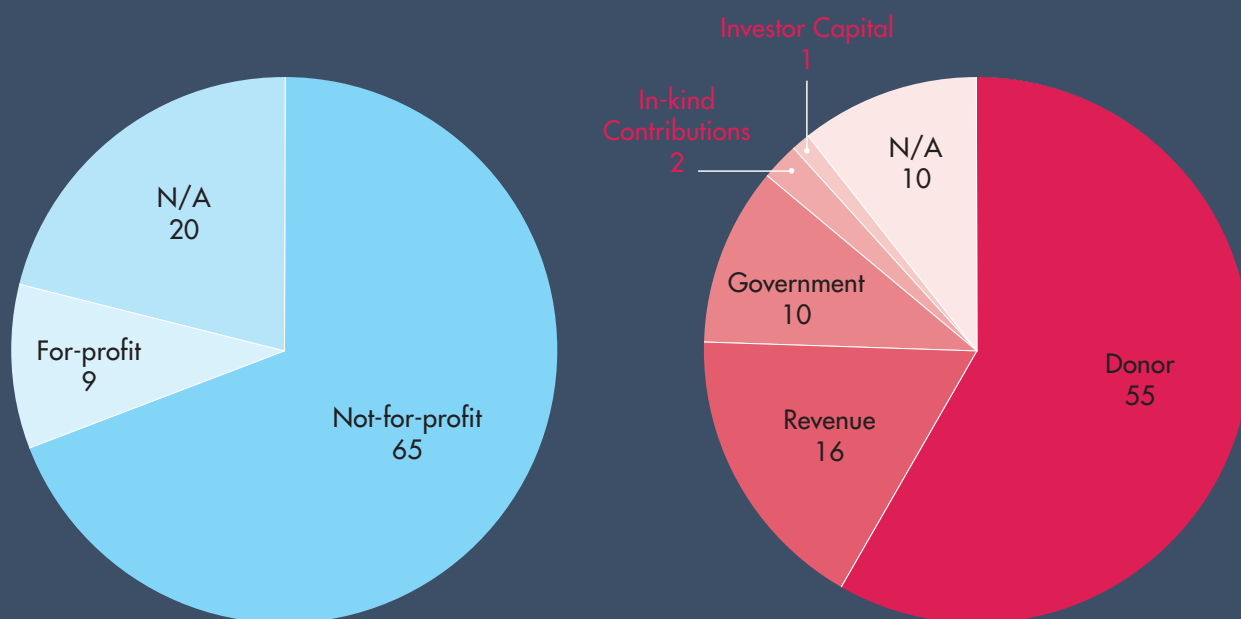
The vast majority of the programs captured were non-profit ventures, with the primary funding source coming from international donors (Figure 6). This is likely due to the fact that many of these programs involving innovative approaches are still in the pilot and proof-of-concept stage.

TABLE 2: HEALTH AREAS ADDRESSED BY PROGRAMS

Health Focus	#
Maternal, newborn, and child health	46
Primary care	38
Family planning and reproductive health	37
HIV/AIDS	22
Tuberculosis (TB)	9
Non-communicable diseases	6
Malaria/vector-borne diseases	6
Eye care	5
Secondary/tertiary care	5
Nutrition	4
Dentistry	2
Mental health	1

*Note: The total will be greater than 94, given that many programs focus on multiple health areas

FIGURE 6: PROGRAM PROFIT STATUS AND PRIMARY SOURCES OF FUNDING



PROGRAM APPROACHES ASSOCIATED WITH EMPOWERMENT

Through our analysis, focusing on specific models and approaches that best align with empowerment inputs in the nursing and midwifery sphere, four salient types of models and inputs emerged: **(1) training programs**, **(2) information and communications technology**, **(3) networks and cooperatives**, and **(4) franchises**. Table 3 provides details about these approaches and their potential for empowerment, with additional background and justification for their inclusion in the following sections.

It is important to note that a number of programs employ a combination of approaches. For instance, clinical franchises

often include components of provider training, supply chain enhancements, ICT, and monitoring standards. Additionally, many of the mHealth technologies are used to support other approaches, such as supply chain management or training efforts. Approaches are not mutually exclusive and often complement one another. We present our categories of programs in order of increasing complexity and comprehensiveness, beginning with programs that solely offer training opportunities, and then move to models that successively add approaches linked to further opportunities for service improvements and empowerment.

We discuss each of these approaches in depth, providing background, outlining the ways in which each provide empowerment opportunities, and detailing the programs that have adopted these approaches.

TABLE 3: EMPOWERMENT INPUTS ASSOCIATED WITH INNOVATIVE APPROACHES

Approach	Description & Activities	Empowerment Inputs
Provider Training	Primary training & certification, clinical skills training for QI and task-shifting, CME and training for specialized services, business training	• Access to professional training & higher education • Self-esteem & self-efficacy • Employment opportunities
Information & Communications Technology	Use of technology to enable remotely delivered care, communication, and organization of medical information. Includes telemedicine, call centers, cell phone technologies (e.g., call and SMS), tablets, and EMR. ICT has been used to facilitate greater geographic access, support provider-patient communication, improve diagnosis and treatment, enhance data management, enable financial transactions, and protect against fraud.	• Participation in social networks (social media) • Access to knowledge (Internet) • Access to credit • Social capital and peer support • Web-based advocacy • Increased autonomy and self-confidence through decision support tools
Cooperatives, Networks, Associations & Unions	Autonomous, member-led associations of professionals who voluntarily come together to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically controlled enterprise. Membership in a professional network, cooperative, or association enables health workers to collectively bargain for supplies; advocate for improved working conditions, wages, and policies; access training opportunities and peer support; and participate in a democratic process for the governance of their cooperative organization. Co-ops can also provide a mechanism to administer savings and microfinance schemes.	• Employment and income generating opportunities • Democratic participation • Social capital & peer support; participation in extra-familial groups and social networks • Self-esteem & self-efficacy • Involvement and/or representation in local trade associations • Representation in regional and national bodies of government • Access to credit
Franchises	Business arrangement in which the franchisor establishes a common brand and business model that franchisees use to deliver standard products and services across independently owned business outlets.	• Ownership of assets • Access to credit • Autonomy • Employment opportunities • Access to professional training & higher education

PROVIDER TRAINING

Professional training for nurses and midwives provides clear empowerment inputs. It is well documented that higher levels of education are associated with women's empowerment, enabling them to take a more active role in governing their lives, negotiate power relationships, generate income, and more actively participate in democratic governance structures (Sen, 1999; Kabeer, 2005; etc.).

More specifically, clinical training and licensure creates lifelong employment opportunities for women who become nurses and midwives, enabling them to generate incomes to support their livelihood and occupy an important role in their community. Continued professional training and skills development reinforce self-confidence among nurses and midwives, which can contribute to greater autonomy in clinical case management and improved quality of care. In many low-resources settings, where formal job options for women are limited, nursing represents a key opportunity to engage in the workforce.

While educational pathways and forms do vary, there are four general categories of education and training for nurses and/or midwives: pre-service education (also known as pre-registration, pre-licensure, entry level, or generalist preparation); specialty training; and in higher income countries, formalized advanced practice and continuing training/education (see Figure 7 below). Another category of training and education relates to formal and informal experiences that enable an individual to more readily move into an initial nursing or midwifery training program. We call these "bridging opportunities." In some countries, there are formal ways in which training in assistive, outreach, or other lower level nursing or midwifery roles is part of an articulated pathway into pre-service nursing or midwifery education. In other instances, an employer may offer ways to help individuals in developing their own trajectories into nursing or midwifery.

Our study focused on capturing all of the four categories of education/training, except that of advanced practice education. We found that roles and functions often associated with advanced practice nurses in the US (such as doing procedures, diagnosing, and prescribing medication) are increasingly being incorporated into pre-service, specialty training, and continuing education/training in many (often lower income) countries. This has made it possible to increase access to services, as nurses and midwives have expanded their scopes, reach, and models of service.

We also looked at ways in which pathways for others in the caring enterprise were being facilitated through training or education in the projects that we reviewed. We believed that

FIGURE 7: CATEGORIES OF PROVIDER TRAINING

Pre-service education: This initial preparation of professional nurses and midwives most often takes place at the post-secondary level in some sort of school/program of nursing or midwifery. The graduate of either program is a generalist whose curriculum is intended to prepare to practice at an entry level. In some countries, nurses also receive midwifery training either at this level or later in advanced training programs.

Specialty training: Nurses and midwives can focus their practices on specific populations or areas of practice. For example, midwives may specialize in women's health or be trained to do cesarean sections or other surgical procedures. Nurses have similar opportunities for specializing through additional training and skills. Specialty training can take place through a variety of means, ranging from certificate programs associated with academic settings to those offered more informally in the larger community setting. Credentialing and regulation vary widely with respect to specialty training, with the most formalization taking place in higher income countries.

Advanced practice education: Advanced practice preparation is most often associated with education that prepares nurses to acquire advanced knowledge and skills that enable the practitioner to provide a range of service that include some of those provided by physicians. Nursing has a number of advanced practice specialties, again focusing on populations or particular areas of practice. Nurse-midwifery is an area of advanced practice for nursing, in which entry level nurses engage in further study to become nurse-midwives. The concept of advanced practice nursing is not generally mirrored in midwifery.

Continuing training/education: This type of experience is generally aimed at maintaining competencies and ongoing professional development in either general and/or specialized practice. This type of preparation can take place through formal programs in both educational and practice settings, as well as in the workplace itself and through remote learning technologies. Continuing education and training is often reinforced by professional, regulatory, and workplace recognition.

these approaches might lower barriers for women to enter into health related occupations that may offer ongoing career development opportunities, which could benefit them, as well as the larger community and health system.

Training Programs in the Landscape

Of the programs our study reviewed, 47 included provider training as a core component of the approach (note that this excludes franchises with training, as those will be covered below). Some of the programs are solely dedicated to creating training opportunities for nurses and midwives, whereas others include training as one component of a more comprehensive program. For instance, the Akhand Jyoti Eye Hospital is primarily a clinical facility, but they run a parallel program that educates and trains local girls in optometry. Other programs, such as Action Research and Training for Health (ARTH), focus directly on training, improving pre-service curricula and materials, and creating training hospitals. As noted above, we examined four categories of training opportunities: pre-service, specialty, continued medical education (CME), and bridging, which provides individuals with opportunities to more readily move into an initial nursing or midwifery training program. Table 4 shows the types of training offered by the 47 programs reviewed, with some offering more than one type of training. A detailed list of these programs can be found in Table 5.

TABLE 4: TRAINING PROGRAMS, BY TYPE

Pre-Service	15
Specialty	22
CME	20
Bridging	12

*Note: The total will be greater than 47, given that 20 programs offered multiple types of training

Pre-Service Training

Fifteen programs included inputs for pre-service training. In some instances, projects focused on improving the quality of training curricula and materials, such as with ARTH in India. Other programs focused on creating new opportunities for individuals to enter nursing and midwifery schools, often through scholarships or direct funding of training. In some cases, hospitals and clinics expanded their remit to not only deliver care but to also run parallel training programs to build the health workforce, particularly in rural settings. For instance, the Akhand Jyoti Eye

Hospital runs a program for local girls, providing secondary education, coaching in football to build self-esteem and leadership skills, and training in ophthalmology, with a guaranteed job at the hospital if they wish to continue on after graduation.

Five of the pre-service training programs explicitly focused on recruiting women from rural areas and ethnic minorities, including the Community Midwifery Education Program in Afghanistan, the Ethnic Minority Midwives Project in Vietnam, and the Garhwal Community Development and Welfare Society in India. In some cases, the women must commit to serve in their communities for a specified period of time after training in exchange for their free schooling.

Six of the programs with pre-service training also included bridging opportunities for other types of health providers such as traditional birth attendants, community health workers, and paramedics. Training of informal providers allowed greater capacity for task-sharing and an entry into nursing and midwifery for those who wished to explore more formal training options. Bridging opportunities will be covered in greater detail below.

Specialty Training

Twenty-two programs offered specialty training. In some cases, specialty training aimed to teach nurses and/or midwives to deliver care independently of a physician, whereas other programs trained nurses alongside other clinical personnel as a critical part of the care team. Six of the specialty training programs focus on maternal, reproductive, and sexual health services. Training on these issues covered the provision of long-acting or permanent methods of contraception (e.g., IUD insertion), breast and pelvic examination, safe abortion practice and post-abortion care, identification and management of complicated deliveries (e.g., assisting in caesarean sections, using a partograph), fistula repair, prevention of post-partum hemorrhage, and STI prevention. Additionally, six programs offered training in HIV-related services, such as PMTCT, nurse-initiated ART, prevention and treatment of opportunistic infections, and palliative care for AIDS patients. Some of these were integrated with other types of training on related health issues, including family planning & reproductive health, TB, substance abuse, and nutrition.

Eye care was another health focus for specialty training of nurses. One interesting model is the ORBIS Flying Eye Hospital. This program uses a refurbished airplane as a mobile eye hospital that travels from country to country, providing advanced training on ophthalmic surgical procedures to doctors and nurses. The surgical theater onboard the plane is equipped with several cameras to provide live broadcasts of procedures to students in the classroom portion of the jet. The two-way

audiovisual system allows trainees to ask questions throughout the procedure and the session is recorded so that trainees can refer back to the course after the training is complete.

Other specialized training included one program located in Vietnam dedicated to improving mental health services. Another program, Cure2Children in Pakistan, trained nurses to be part of a dedicated bone marrow transplant team, primarily as a treatment for patients with Thalassemia, a common blood disorder in the region. Additionally, one program called Pediatric Rehabilitation in Tanzania provided training focusing on physical and occupational therapy and another in Kenya trained nurses and other clinical staff in diabetes care.

Continued Nursing/Midwifery Education (CN/ME) Training

Many programs recognized the importance of maintaining skills and updating knowledge after the initial training. Twenty of the programs reviewed offered some form of continued medical education or training refreshers. Because this type of training is meant as a complement to primary or specialized training, most of the programs offering CME inputs did so in combination with other types of training. Of the 20 programs that provided refresher or CME training, only six did not additionally offer pre-service, specialty, and/or bridging training.

Topics covered in this type of training typically focused on core elements of reproductive and sexual health and maternal and child care, including family planning methods, basic antenatal care and pregnancy tracking, management of labor and delivery, post-partum care, and essential newborn health. Other primary care topics such as nutrition and infection control were also mentioned by a few programs, such as ARTH and COMPRI-A. Programs offered CME opportunities through a variety of formats, including on-the-job mentorship, regularly scheduled case reviews, and periodic lectures on specific health topics. Some of the facility-based programs offered regularly scheduled CME sessions with their staff, covering different topics at each session. For instance, the Village Health and Community Development program for school-based nurses hires trained medical specialists to rotate through the schools and provide information on a range of health topics. The program also holds monthly meetings during which the nurses review cases and various health topics of relevance to their communities. In many instances, programs provided additional tools to support ongoing learning and reinforcement of best practices, such as videos, pamphlets, checklists, and pre-packaged kits for safe delivery and infection control.



A LifeNet International Nurse Trainer working with clinicians at a rural clinic in Burundi.

Bridging

The last category of training focuses on opportunities that may help lower-level or informal providers enter and advance in formal nursing and midwifery professions. Providers such as community health workers, traditional birth attendants, and nursing aides represent important cadres of the overall health workforce, particularly because there is often an inadequate supply of formally trained providers to meet overwhelming health needs in the developing world. As such, many training programs seek to include these stakeholders in training opportunities, serving the short-term objective of improving quality of care across all providers and the long-term strategy of building the capacity of the health workforce. Of the programs reviewed, 13 offered “bridging” training opportunities.

The training offered through the Garhwal Community Development and Welfare Society (GCDWS) in India, in collaboration with the Masiha Hospital, represents a prime example of bridging opportunities. The hospital has a very lean staff, with only one physician and four nurses. In order to stretch their capacity, the hospital recruits local girls from the community to serve as paramedics. The girls receive training through the GCDWS, including weekly classes and hands-on training in first aid, lab tests, injections, and basic health topics. The paramedics are provided with the opportunity to attend an accredited nursing school, fully financed by the resident physician, provided that they work at the hospital for at least two years following their certification. In the Fast Track Initiative for Reducing Maternal and Newborn Mortality in Cambodia, beyond bridging opportunities for lower-level providers, they also focused on creating training opportunities for primary midwives to advance as secondary midwives.

Cross-cutting Themes and Trends for Training

There were a few inputs and approaches that were noteworthy across training categories. Five programs explicitly included “Training-of-Trainers” in their approach (ARTH, Project HEART, Mayer Hashi, PATH Cervical Cancer Prevention Program, Saving Newborn Lives). By adopting this model, these programs provide leadership opportunities to these trainers and support more sustainable inputs for ongoing training of other providers. This could be especially important for training programs that previously relied on external experts from urban centers or international partners to provide training.

Another notable feature of various training programs was the use of teaching tools and materials to complement training and provide resources for trainees to refer back to over time. In some instances, the training sessions were taped, using both audio and video, with recordings distributed to serve as a reference to refresh learning. These recordings could also be used to train additional providers unable to attend the initial session. Other programs developed pamphlets, checklists, and entire e-learning platforms to enhance the training and reinforce topics covered. Providing reference materials and complementary teaching tools may strengthen initial learning and translate to more durable impacts on practice. Beyond clinical training, a few programs also provided training in business, management, and leadership skills, such as Jacaranda and SNL2.

Furthermore, a number of the training programs provided additional opportunities for empowerment of other women. Four of the programs supported the creation of women’s groups or “self-help groups”, creating platforms for women within the community to seek social support, discuss common issues, including those related to health, and in some cases, provide a mechanism for lending and borrowing. Three programs mentioned inputs to support advocacy and activism surrounding women’s issues, including gender-based violence and reproductive rights. There were a number of training opportunities for other cadres of health workers, such as village health workers and traditional birthing attendants, who were often trained alongside nurses and midwives as members of the care delivery team.

Other programs offered vocational training to community members, such as the Barefoot College, which trains women to become solar engineers or artisans, and the Hope Foundation, which provided business training to fistula survivors following their repair surgery. Eight of the training programs paired their efforts with community education sessions on women’s health issues, including workshops on pregnancy and family planning. Three programs also invested in supporting primary and secondary schooling for girls in the community, such as the AOET Rural Health Initiative, which assists orphans and vulnerable children with scholarships to cover school supplies and expenses.

FIGURE 8: ACTION RESEARCH AND TRAINING FOR HEALTH INDIA

ARTH has invested in training programs ranging from enhanced pre-service training of nurses and midwives to continued medical education for multiple cadres of health workers. They have run dedicated training sessions focused on reproductive and child health with doctors, nurse midwives, village health workers (VHWs), VHW trainers, and senior NGO managers, engaging the full spectrum of stakeholders involved in improving maternal and child health. In 2009–2010 they conducted trainings for nurses on issues of contraception, STI treatment and prevention, breast & pelvic examination, safe abortion, and infection prevention. They have also partnered with the UNFPA and the Department of Medical, Health and Family Welfare of the Government of Rajasthan to strengthen pre-service education for nursing and midwifery students in five districts of Udaipur zone in the state. They actively partner with NGOs to train providers and program supervisors, ensuring that the field managers are well informed on primary health care and issues related to reproductive rights and safe abortion.

Beginning in 2003, ARTH has also supported the formation of women’s self-help groups (SHGs), with the aim of organizing communities for improving their access to health care. Since that time, they have formed 105 SHGs. These groups create a platform for women to discuss their health concerns and strategies to address them. Members of the SHGs, called “swasthya sakhis” or “health friend,” are trained extensively and given pictorial communication materials so that they can deliver health education, provide access to medicines, and offer assistance to local women in accessing health services. They receive payment for these services. The SHG members also help organize and promote monthly field clinics within their remote villages, during which a nurse-midwife and male social worker come to provide primary care services, antenatal care, family planning support, immunization, and treatment for common illnesses. The SHGs also manage an Emergency Health Fund, providing assistance in covering costs for community members with major health shocks, as well as monetary support for the education of adolescent girls in the community.

ARTH has strategically engaged a wide range of stakeholders to improve the quality and accessibility of health services, while simultaneously investing in initiatives that empower women in remote regions with social support, leadership roles, increased health literacy, and income-generating opportunities.

TABLE 5: TRAINING PROGRAMS IN THE LANDSCAPE

Program	Countries	Providers	Type(s) of Training	Health Focus	Details of Training	Other Inputs	Empowering Other Women
ACQUIRE Tanzania Project	Tanzania	Nurses, MWs, COs, MCH aides, doctors	Specialty training	RH&FP, HIV/AIDS	14,676 health care professionals were trained to provide long-acting contraception, post-abortion care, and PMTCT services; baseline reports showed that 73% of providers were women, 37% nurses.	QI; facility upgrades	
Action Research and Training for Health (ARTH)	India	Nurses, MWs, VHWs, health trainers	Pre-service training, specialty training, CN/ME, bridging	MCH, RH&FP	Project to improve pre-service training for nursing and midwifery across seven training centers in Udaipur; "Training of Trainers" for skilled birth attendance to have broader reach through 217 NGO partners; nurses trained in STIs, breast & pelvic examination, contraception, safe abortion, infection prevention; developed training pamphlets.	QI; facility upgrades	Train ASHAs; formed 105 SHGs to create platforms for women to discuss their health concerns and solutions – members paid to provide assistance and education; have access to emergency health fund; SHGs support education of adolescent girls.
Afghan Institute of Learning – Holistic Health for Mother and Baby	Afghanistan	Nurses, MWs, CHWs, TBAs	CN/ME, bridging	MCH, RH&FP	Intensive training courses for nurses and TBAs to increase the number of female health providers and improve women's access to care.	Mobile clinics; safe delivery kits	CHW teams consisting of 1 male and 1 female are trained to deliver first aid and health education; pregnant women can participate in the Expectant Mother Program, a health workshop covering pregnancy topics, and bring their birth attendants
Akhand Jyoti Eye Hospital (AJEH)	India	Nurses, optometrists	Pre-service training, bridging	Eye care	Hospital runs a parallel program for local girls to receive education, housing, and training in optometry, with a guaranteed job opportunity at completion through the AJ Football Academy.		AJ Football Academy: 150 local girls provided with education, football coaching, and training in optometry; with potential advancement to pro football career or optometrist in a context where otherwise likely married by age 15.
AOET Rural Health Initiative	Uganda	CHW	Bridging	HIV/AIDS, pharmacy services	This mobile clinic program, which employs nurses, recruits and trains community-based representatives to continue the follow-up with counseling, to carry out home visits, and provide medical care to those living with AIDS.		Sponsorship for primary and secondary education and vocational training. AOET sponsors children (OVC) to have their school fees and supplies paid for, allowing for more consistent attendance.

TABLE 5: TRAINING PROGRAMS IN THE LANDSCAPE *(continued)*

Program	Countries	Providers	Type(s) of Training	Health Focus	Details of Training	Other Inputs	Empowering Other Women
Ayod Community Health Teams	Philippines	MWs, CHVs, TBAs, volunteers	CN/ME, bridging	MCH, RH&FP, tuberculosis	These teams, made up of community midwives, health workers, TBAs, and volunteers help reach rural pregnant women and transport them in AYODs (hammocks) to deliver in health facilities; team members are trained to fulfill their specific roles, with midwives receiving training for delivery of prenatal care, birth plans, post-delivery check-ups, and diagnostic and referral protocols for emergency obstetrics.	Referral incentives for in-facility deliveries	Provision of ANC and FP services; inclusion of 2+ female volunteers in care team; also include male volunteers – emphasizing the importance of including men in women's issues and combating maternal mortality.
Aysuhmathi scheme	India	Nurses, MWs	CN/ME	MCH	This scheme, which empanels private health facilities to be covered by the national health scheme for institutional deliveries, conducts a needs assessment for staff training and provides hands-on skills training for nurses; auxiliary midwives are also trained to administer tetanus toxoid vaccine and conduct antenatal visits.		This scheme works in tandem with JSY, which gives cash transfers to the women who deliver in a facility
Barefoot College	India	MWs, CHVs	Bridging, pre-service training	MCH, primary	Since 1973, more than 1,442 rural men and women have been trained as Barefoot health professionals who have serviced over 150 villages. Training focuses on midwifery, sanitation, nutrition, vaccinations, and primary care.		37,000 men and women trained as Barefoot "Professionals": teachers, doctors, midwives, dentists, health workers, solar and water engineers, architects, artisans, etc. Many also taught how to manage banks accounts. Supports grassroots activism on women's issues, such as campaigns against rape.
Bloomberg Philanthropies Maternal Health Initiative	Tanzania	MWs, AMOs	Specialty training	MCH, RH&FP	The program trains non-physician clinicians – called Assistant Medical Officers (AMO) – to manage complicated deliveries, including caesarian sections, and nurse midwives to administer anesthesia.	Facility upgrades	In the next phase, the program is expanding to offer family planning options and post-abortion care
Boma la Mama	Tanzania	MWs	Pre-service training, CN/ME	MCH, RH&FP	The maternal center also runs a midwifery school with two-year midwifery education program to become registered practitioners.		Educate women on topics such as family planning, infant nutrition, warning signs in pregnancy.
Chittagong Eye Infirmary & Training Complex	Bangladesh	Nurses	Specialty training	Eye care	Runs training programs for ophthalmic nursing.		

TABLE 5: TRAINING PROGRAMS IN THE LANDSCAPE *(continued)*

Program	Countries	Providers	Type(s) of Training	Health Focus	Details of Training	Other Inputs	Empowering Other Women
Clinics4All	Multi-national	Nurses, CHWs	CN/ME, bridging	Primary	Training for clinic doctors and nurses; train CHWs in disease management and lab & pharmacy services through an intensive, abridged training course.	Supply chain improvement; pre-packaged clinic in a shipping container	
Communication for Behavior Change: Expanding Access to Private Sector Health Products and Services in Afghanistan (COMPRI-A)	Afghanistan	MWs	Pre-service training, CN/ME	RH&FP	Efforts to strengthen midwifery education and provide grants to community and hospital midwifery schools; CN/ME for midwives and doctors on clinical procedures, infection control, and client counseling; provide audiocassettes as refresher resources with basic health information and info on products.	Packages for different client needs: safe delivery kits, bride packages with tetanus shots, iron, and nutrition guidelines	Services and education about birth spacing and family planning.
Community Midwifery Education Program	Afghanistan	MWs, CHWs	Pre-service training, bridging	MCH, RH&FP	Local women in rural areas trained as midwives; students taught for 2 years on basic knowledge of obstetrics, neonatology, public health, family planning, prenatal care, delivery care and more. School provides access to medical and non-medical equipment and is linked with clinics for residencies. Free training and housing, provided the midwives serve their communities for 6+ years. Two volunteer community health workers – one male and one female – in the family health house assist the midwife, and also receive training.	Facility upgrades	Access to safe delivery with skilled birthing attendants.
Comprehensive Cataract Care (CCC)	Vietnam	Nurses, CHWs	Specialty training	Eye care	Training of healthcare personnel to properly identify and refer patients in need of eye health services and deliver quality eye care.	Equipment	
Cure2Children	Pakistan	Nurses	Specialty training	Thalassemia (blood disorder)	Focused, hands-on training of nurses & doctors on bone marrow transplant, with expert supervision for 2 months and remote online consultations.	Online tools to monitor patients	
Dhaka Community Hospital Rural Health Program	Bangladesh	Nurses, MWs, MDs, CHWs, TBAs, paramedics	CN/ME	Primary	The hospital regularly provides training to doctors, nurses, paramedics, community health & development workers, TBAs, and village doctors. Trainings have covered Essential Services Packages with rotating topics across different disciplines.		As part of its mission, the hospital is committed to empowering women by encouraging greater participation in decision-making, respecting women's rights, and also employing a number of women on their staff, with > 50% representation.

TABLE 5: TRAINING PROGRAMS IN THE LANDSCAPE *(continued)*

Program	Countries	Providers	Type(s) of Training	Health Focus	Details of Training	Other Inputs	Empowering Other Women
Diabetes Care in Nairobi slums	Kenya	Nurses, MDs, CHWs	Specialty training	Diabetes care	Clinics run on a fortnightly basis, manned voluntarily by 4 clinicians, 2 nurses, a counselor, and an assistant. Health care personnel are trained in the principles of diabetes care and management based on current guidelines and existing training materials developed by Kenya Diabetes Management and Information Centre. So far 27 clinicians, 54 nursing staff, 17 community health workers, 19 lay educators, and 33 med students have been trained.	Facility upgrades	
Ethnic Minority Midwives Project	Vietnam	MWs	Pre-service training; bridging	MCH, RH&FP	Recruit and train local women (some with prior health-related training) as birth attendants/village health workers. 18-month training on safe motherhood, newborn care, and primary health care. Course completion certifies them as VHWs and village-based skilled birth attendants, recognized by the government. Receive monthly stipend from the Ministry of Health (MOH).		
Fast Track Initiative for Reducing Maternal and Newborn Mortality	Cambodia	MWs	Pre-service training, CN/ME, bridging	MCH, RH&FP	Investment in training centers for emergency obstetrics and caesarian sections; training of primary and secondary midwives; development of standardized in-service training modules, covering antenatal care, safe delivery and essential newborn care, emergency obstetrics, safe abortion and post-abortion care, and family planning; bridging training for primary midwives to become secondary midwives; improved pre-service training for MWs, recruiting more midwives into the 3-year associate degree midwifery program and improving capacity of tutor and regional training centers.	Facility upgrades; QI	Access to family planning services and safe abortion care.
Fistula Hotline/ Aberdeen Women's Centre (AWC)	Sierra Leone	Nurses, MWs	Specialty training	MCH, RH&FP	AWC provides on-the-job training in fistula and obstetric related topics to all nurses on an ongoing basis; a core group of 27 nurses have received several trainings on fistula and obstetric related topics; and 3 midwives have been sent to international midwifery conferences.	Facility upgrades	Access to comprehensive fistula repair service and phone consult through the fistula hotline.

TABLE 5: TRAINING PROGRAMS IN THE LANDSCAPE *(continued)*

Program	Countries	Providers	Type(s) of Training	Health Focus	Details of Training	Other Inputs	Empowering Other Women
Garhwal Community Development and Welfare Society	India	Nurses, paramedics, VHWs, TBAs	Pre-service training, bridging	Primary, MCH	The Masiha Hospital staff is comprised of 1 MD, 4 staff nurses, and 18 paramedics; paramedics are local girls, selected by the community, who receive training through the GCDWS. Training includes weekly classes and hands-on training on first aid, lab tests, injections, and basic health education. The doctor also personally funds further training for paramedics in nursing with commitment to work at the hospital for 2+ years after certification; Nurses are also trained to run community health activities.	Facility upgrades	Additional training of VHWs in health awareness, primary medical services, first aid, antenatal care (ANC), and referral diagnoses. Community campaigns on reproductive health, elimination of female feticide, and women's issues.
HDI Medical and Technical Support Program	Rwanda	Nurses	Specialty training	Primary, secondary, tertiary care, cardiology, ob/gyn, orthopedics, plastic surgery	Provides advanced training to nurses, doctors, and other health professionals at local health centers, district hospitals, and private institutions. Qualified local, regional, and international medical professionals assist in training on medical techniques and protocols.		Run advocacy campaigns promoting women's issues. Promote access to safe abortion services and revision of Rwanda's abortion laws; address sexual and reproductive rights; advocate with Parliament to protect the health and human rights of sex workers, removing punitive laws that restrict access to HIV services; run campaign against gender-based violence.
Healthy Start (Mercy Corps)	Indonesia	MWs	CN/ME	MCH	Breastfeeding management and counseling trainings for midwives.		Facilitate creation of community-sustained mother support groups where clusters of pregnant and nursing women discuss topics like breastfeeding and offer mutual support.
HEART Project	South Africa	Nurses	Specialty training	HIV/AIDS	To support an effective ART program, nurses and other health personnel at Vukuphile Clinic are trained in all aspects related to HIV/AIDS, including VCT, behavior change, HIV treatment, long-term care, opportunistic infection (OI) treatment and prevention, nutrition, and follow-up. Nurses at the hospital are also trained in mentoring and training for new staff.	Facility upgrades; infrastructure updates	Patients on ART are encouraged to start support groups and establish vegetable gardens to provide healthy food for themselves and for the clinic. This also helps to reduce stigma around HIV.

TABLE 5: TRAINING PROGRAMS IN THE LANDSCAPE *(continued)*

Program	Countries	Providers	Type(s) of Training	Health Focus	Details of Training	Other Inputs	Empowering Other Women
Hope Foundation for Women and Children of Bangladesh Inc.	Bangladesh	Nurses, MWs	Pre-service training	MCH, RH&FP, primary	Community based Midwifery Diploma Program (CMDP) trains local women to be midwives through a 3-year program; Village Nurse Training for nurses in rural villages to execute critical care services for the community.	Mobile phone patient records system	Training center at Cox's Bazaar Hospital offers health workshops for community; also offers fistula repair services and provides fistula survivors with vocational training to help them start businesses.
Jacaranda Health	Kenya	Nurses, MWs, CHWs	Bridging, CN/ME	MCH	Training staff nurses to be strong leaders and managers, from handling obstetric emergencies to running clinical case reviews and quality initiatives. Develop clear career ladder to keep nurses moving up and growing their capacity. Work with expert clinical educators and faculty to design dynamic continuing training for staff nurses that include hard and soft skills.	EMR, QI	Task sharing to have patient care assistants (nurse aides) provide non-clinical care and CHWs manage home visits and client education. Clients have access to a 24-hour hotline.
Mayer Hashi Project	Bangladesh	Nurses, MDs, CHWs	CN/ME, specialty training	MCH, RH&FP	2,731 providers trained in active management of labor and delivery (88% were women). Nurses trained and authorized in IUD insertion; training to prevent post-partum hemorrhage during facility deliveries; trained doctors and nurses in fistula care; training of trainers for facility-based maternity service providers.	Training curricula and materials developed	22,500 individuals trained in the use of long-acting contraception methods (54% women); CHWs trained to distribute misoprostol tablets to pregnant women to prevent post-partum hemorrhage.
Medical Education for Ethnic Minorities (ME EM)	Vietnam	Nurses, MWs	Pre-service training, CN/ME	Primary	Advocate for greater enrollment of high school students in medical training to increase the number of well-trained and qualified doctors, nurses, and midwives in communities. Also focus on improving quality of teaching by updating the primary health curricula and tailoring curricula to address cultural barriers and challenges to healthy behavior and care-seeking in minority communities.		
Medical Education in HIV/AIDS Using E-Learning Approach	Vietnam	Nurses, MDs, pharmacists	Specialty training	HIV/AIDS, pharmacy services, substance abuse	Three courses on general HIV/AIDS (ART), palliative Care (PC) and methadone maintenance therapy (MMT) were delivered by faculty of Hai Phong Medical University during the academic year 2009–2010. A total of 87 general doctors, bachelor nurses, and pharmacists had been trained in ART, PC and MMT.	Upgrade information technology systems; e-learning platform	

TABLE 5: TRAINING PROGRAMS IN THE LANDSCAPE *(continued)*

Program	Countries	Providers	Type(s) of Training	Health Focus	Details of Training	Other Inputs	Empowering Other Women
Medecins Sans Frontiers (MSF) - Khayelitsha Mentorship Programme	South Africa	Nurses	Specialty training	HIV/AIDS	MSF partnership with City of Capetown and provincial government of Western Cape on mentorship program for nurse-initiated and managed antiretroviral therapy (NIMART). Assigns participating nurses to 40 hours of mentorship with an MSF nurse mentor in high volume HIV clinics. Includes side-by-side case management, reviewing medical charts, case reviews of common HIV complications, and short in-service trainings. MSF clinical mentor managers participate in portion of mentorship to assess mentees' competency to initiate ART, with continued mentorship up to 3 months until authorized for ART.		
Nurse Initiation Management of ART Training & Mentoring	South Africa	Nurses	Specialty Training	HIV/AIDS, TB	NIMART through partnership between HEAIDS, Department of Health, and Foundation for Professional Development (FPD). FPD provides ongoing support through their Roving Mentor Teams, comprised of an MD, RN, and HIS mentor to support expansion of HIV treatment and TB diagnostics. 74 trainees from 21 institutions were selected for the five-day program in July 2012.	All costs, food, accommodation covered.	
ORBIS Flying Eye Hospital	Multi-national	Nurses, MDs, health technicians	Specialty training	Eye care	Mobile teaching hospital in a refurbished DC-10 jet aircraft – local doctors, nurses and technicians work alongside ORBIS's international medical team to exchange knowledge and improve skills.	e-learning platform	
Partograph Blended Learning of Udayana University	Indonesia	Nurses, MWs	CN/ME, Specialty Training	MCH	Train midwives to use partograph to track progression of labor and detect when interventions may be needed. Course includes (1) introductory session at the local learning center; (2) self-guided learning using "WHO Partograph e-Learning Tool"; (3) workshop at local learning center connecting all sites and WHO via videoconference.		
PATH Cervical Cancer Prevention Program	Vietnam	Nurses, MWs, MDs	Specialty Training	RH&FP	Training of nurses and midwives on visual inspection with acetic acid (VIA) and cryotherapy, and training of doctors on LEEP and colposcopy. Additional training on HPV vaccination. Training of trainers.	Cold chain, vaccine storage, & waste management	> 38,000 women 30-49 years old received cervical screening services; education and community outreach to promote HPV vaccination of girls.

TABLE 5: TRAINING PROGRAMS IN THE LANDSCAPE *(continued)*

Program	Countries	Providers	Type(s) of Training	Health Focus	Details of Training	Other Inputs	Empowering Other Women
Pediatric Rehabilitation in Tanzania	Tanzania	Nurses	Specialty training, CN/ME	Rehabilitative care (physical therapy)	Nurse-led physical therapy in remote areas; Arusha Lutheran Medical Centre offers weekly training sessions for nurses and doctors, and regular in-house continuing medical & nursing education.		
Primary Healthcare Nursing Promotion Program	Guatemala	Nurses	Pre-service training	Primary	Program run by the National School for Nurses in Coban to increase nurses in rural areas. Virtual nursing course taught via phone and 2-way data communications. Subset of the first virtual nursing course cohort (2004) became "community tele-facilitators" with mobile phones to link up with health specialists in urban areas.		
Public Private Partnership for Nursing Training in Punjab	Pakistan	Nurses	Pre-service training, specialty training	Primary, secondary, tertiary care	Partnership between Government of Punjab and Saida Waheed Fatima Memorial Hospital College of Nursing to provide basic nursing diplomas to 1,820 nurses, post-basic specialization to 1,300 nurses and nursing degrees to 650 students over 10 years. College has worked with local conservative communities to encourage and allow more young women to study at the nursing college and work.		
Rachel House Pediatric Palliative Care	Indonesia	Nurses	Specialty training, CN/ME	HIV/AIDS, oncology, palliative care	Classroom and bedside training on palliative care for children dying of AIDS and cancer. Continuous training opportunities in oncology and HIV. Also launched a 2-year palliative training program, partnering with the Singapore International Foundation and Ministry of Foreign Affairs to provide 6 sessions for staff.		
Saving Newborn Lives 2 Program (SNL2)	Indonesia	MWs, TBAs	CN/ME, bridging	MCH	On-the-job training of midwives on critical newborn care skills; training-of-trainers to ensure ongoing mentorship, supervision, and refresher courses for village midwives. Midwives also trained in leadership and facility management.	Improved HIS and patient monitoring	Formal partnerships with TBAs that allow shared compensation; midwives provide ongoing training for TBAs in basic newborn care and feeding.
Scaling Up Home-Based Maternal and Postnatal Care – Population Council FRONTIERS program	Kenya	MWs	CN/ME	MCH, RH&FP, primary, HIV/AIDS	60 community midwives (CMs) trained in essential obstetric and newborn care & family planning, as well as infection prevention, communication skills, and recordkeeping. CMs complete 2-3 week residencies in busy maternity units; FRONTIERS engaged a microfinance NGO to offer training on basic business skills and financial literacy, encouraging CMs to form informal associations to get training.	Provide MWs with basic delivery kits.	

TABLE 5: TRAINING PROGRAMS IN THE LANDSCAPE *(continued)*

Program	Countries	Providers	Type(s) of Training	Health Focus	Details of Training	Other Inputs	Empowering Other Women
Strengthening Community-Based Mental Health Project	Vietnam	Nurses, MDs, CHWs	Specialty training	Mental health	Mobile team of psychiatrists provides training to doctors, nurses, and village health workers in psychological screening, basic treatment, basic psycho-education, and an approach to mental health drawing on social support and culturally appropriate models of healing.		
Swavalamban Yojana	India	Nurses	Pre-service training	Primary	The Government of India signed an agreement with 28 private nursing colleges to train 500 government-sponsored nursing students each year. Course is open to residents in the rural area of Madhya Pradesh between the ages of 17-25 who in turn commit to serve in the region for 7 years after completing the program.		
The Initiative to End Child Malnutrition (IECM)	Uganda	Nurses, MDs, CHWs	Specialty training	Nutrition	Trained physicians and nurses at Nyakibale Hospital to diagnose and treat children presenting with severe or moderate malnutrition with complications. Nursing students receive hands-on and classroom education in the neighboring Karoli Lwanga nursing and midwifery school.		Train village health workers and volunteers to identify and refer under-nourished children for treatment; nutrition education in community; and weekly nutrition and health education for mothers.
Tiyatien Health	Liberia	Nurses, MDs, CHWs	Bridging, CN/ME	Primary	Train front line workers (FLWs) from community and offer weekly supervision from nurse mentors. Provide research, policy planning, health delivery support.		Provide comprehensive home-based care to women and children.
Village Health and Community Development	Cambodia	Nurses	CN/ME	Primary	Training for school-based nurses. Medical specialists rotate through schools covering various health topics and learn how to conduct a physical exam. Also offers e-learning and diagnostic tools, monthly meetings to discuss topics and cases, and quarterly textbook courses. A dedicated nurse mentor travels to remote clinics to provide additional support and education to staff nurses.	Cloud-based patient record system with feedback.	Occasionally conduct community education sessions, including one dedicated to women's health.
Vivekananda Girijana Kalyana Kendra (VGKK)	India	MW	Pre-service training	RH&FP, primary	Train local tribal girls in reproductive and child health to serve as auxiliary nurse midwives in their community. The course is 18 months long. They are then posted in tribal sub-centers and report into the District Primary Health Center.		The program also provides opportunities for vocational training and support for community organizing.

INFORMATION AND COMMUNICATIONS TECHNOLOGY

The increase in mobile phone and Internet use in developing countries over the past several years has generated increasing interest in the use of ICT for novel approaches to expand and improve health services. Enthusiasm around eHealth and mHealth platforms is evidenced by a number of global summits on ICT for health and the publication of a special thematic issue in *Health Affairs on mHealth* (NIH, 2010; GSM Assoc. & mHealth Alliance, 2010; Dentzer, 2010). These ICT solutions have been adopted for a variety of purposes, including (1) extending geographic reach of providers through telemedicine, (2) facilitating communication between patients and providers outside of clinic visits, (3) streamlining and improving diagnoses and treatment through decision support applications, (4) enhancing data collection and management for both demographic surveillance and patient records, and (5) facilitating financial transactions for patients and providers (Lewis et al., 2012).

These functions of mHealth and eHealth present unique opportunities to empower their users, both providers and patients alike. When considering the empowerment potential of ICT for nurses and midwives, mobile phones and web-based platforms can increase their access to capital, provide lines of communication for mentorship and peer support, support their self-confidence and autonomy through diagnostic tools, provide web-based learning opportunities, and provide opportunities for social networking and advocacy through sites like Facebook and Twitter (McNab 2009; UNDP, 2012; Källander et al., 2013). For some programs, the use of ICT is at the core of the approach, whereas others use mobile and web tools to support and complement their central objectives and functions. While eHealth is still a nascent area of innovation for health delivery and empowerment, it represents an area with tremendous potential for expanding service coverage, opening access to capital, creating new lines of communication, and improving quality of care, which can support stronger health systems and more empowered patients and providers.

ICT Programs in the Landscape

While many programs complemented their efforts with some form of ICT, we identified nine programs in which ICT was the cornerstone of the approach. ICTs were used for a number of purposes, including telehealth consultations with remote providers, diagnostic and decision-making tools, e-learning platforms, automated communication with providers and patients, and reporting and data management.

Three of the ICT programs included telehealth functions. The

Markle Ratanakiri Telemedicine Clinic and Tsilitwa Telehealth Project primarily focused on remote consultation with experts. The Markle program in Cambodia built the infrastructure to support high-speed Internet connections so that when they deployed a hospital-based nurse to the remote clinic in Ratanakiri, they would be able to share descriptions of patient symptoms, digital photos, ultrasound readings, and X-rays with the Sihanouk Hospital Center of Hope in Phnom Penh and the partnering Harvard specialists. This enabled real-time diagnostic guidance and treatment recommendations. The Tsilitwa Telehealth Project in South Africa employed a similar approach to link rural nurses with doctors and specialists. The Maternova Obstetric Kit, a pre-packaged set of tools for midwives to use in remote settings, was outfitted with a wind-up mobile charger to enable midwives to consult with other providers while in isolated locations. These kinds of telehealth programs enable nurses to operate independently and assume greater autonomy in the delivery of care, while still assuring appropriate oversight and safety.

In addition to consultation platforms, a number of the ICT programs used the technology to streamline diagnoses and assist in treatment decisions. CliniPak, Community Health Project (CHP), Enhancing Nurses Access for Care Quality and Knowledge through Technology (ENACQKT), and Health eVillages all distributed devices such as PDAs, tablets, and smart phones equipped with diagnosis and treatment support applications. Access to these decision support tools can strengthen the capacity and confidence of nurses and midwives as they make clinical judgments in the field. Beyond running diagnostic algorithm programs, the tech devices were also used to provide a range of e-learning opportunities. CHP, ENACQKT, Health eVillages, and SAHEL all used mobile technologies as a key pathway for providers to gain up-to-date knowledge on clinical practices. Phones, tablets, and PDAs were pre-loaded with information on clinical guidelines, and Health eVillages linked phones to Skyscape, which delivers up to 600 medical resources to mobile devices, including drug guides, medical alerts, journal summaries, and references from over 50 medical publishers. Such mobile learning platforms present an opportunity for continued medical education and best practice updates to nurses and midwives who may otherwise have limited access to such knowledge. These e-learning approaches also enable providers to bring their peers up to speed, as was the case with the ENACQKT cadre of “Clinical Resources Nurses,” and to explain ideas and procedures to patients with the help of visual aids and videos from the web.

Two of the programs reviewed used the mobile technologies to send automated messages for providers and patients. CliniPak software enables providers to set up timely patient reminders for scheduling ante- and post-natal care visits. Mobile Technology for Community Health (MoTeCH) had two types of automated

messaging features, one for providers and one for patients. The provider messages included reminders for when patients were due for their next visit. They also received messages commending high levels of reporting through the tool, positively reinforcing uptake of the technology. For the patient application, called the “Mobile Midwife,” pregnant women not only received reminders for clinic appointments and antenatal health practices, but many of the messages addressed common myths, concerns, and challenges associated with pregnancy and even encouraged greater involvement of male partners in supporting the mother of their developing child. An excerpt of the primary message sent at 31 weeks reads:

“Men!...Your wife is like mother earth..., so nurture and nourish mother earth and care for her to enable the seed to grow strong... This includes financial support... You can also help with household chores – it is dangerous for your wife to be overworked at this stage in pregnancy. Most importantly, show your wife that you care...”

In this way, the application went beyond contributing solely to improved health behavior, but leveraged the technology to empower their patients through increased knowledge and social support. ICT has tremendous potential to support empowerment objectives for providers and patients alike. Figure 9 shows how a pilot for CHP’s mobile application in Tanzania led to the creation of a women’s association that supports a range of empowerment activities in the community. At the close of ENACQKT, the project leader reflected on how the program raised the profile of the nurses as experts in use of technologies in their workplace and created opportunities for them to learn and become leaders.

“We saw nurses take the technology and not only learn about it, but use it in ways not imagined... There were nurses working together over a PDA looking at an article or discussing a new procedure; others were seen sharing a device to read about a new medication or treatment. The applications were endless, but the impacts were priceless. Nurses became more vocal about their practice and their needs; thereby, growing personally and professionally. The growing self-confidence yielded nurses returning to school, undertaking programs of study and even assuming leadership roles.” - Dr. Pammla Petrucka, ENACQKT Project Leader

FIGURE 9: FROM MHEALTH APP TO EMPOWERMENT SUCCESS STORY, TANZANIA

The Invention and Technological Ideas Development Organization (ITIDO) launched their Community Health Project in 2010 to improve health services and demographic surveillance through a mobile app used by Community Health Workers (CHWs). The initiative recruited women in Dodoma, Tanzania, to serve as CHWs, with local nurses providing training and oversight.

Recognizing their shared desire to address poverty and poor health services, the CHWs formed a women’s association: Miyuji Ipagala Chamwino (MIC). MIC began holding weekly meetings to discuss pressing issues in the community. They opened a bank account, with CHWs contributing 20% of their weekly stipend. They used their pooled resources to create small local businesses: a medical dispensary to provide affordable access to medicines in the community; an emergency taxi service to transport patients; and an HIV support group that provides income-generating activities for people living with HIV (PLHIV), free transport to ARV dispensaries, and HIV education and counseling in the community. Profits go to replenishing the MIC account, making it self-sustaining after the initial Community Health Project ended.

The motto of the MIC is “Wamama Tunaweza Tukiwezeshwa” – “Women can do it if we are lifted.” A MIC member said, “The small business we are doing now has helped us all make money and be noted in society.” Another CHW said that, “Now, she has her own phone that she uses to do important work. People in her community know and respect her, and her husband sees she has value. She sees she has value.”

Sources: CHMI Database, Google Groups – Local Solutions Forum, Dimagi Blog

TABLE 6: ICT PROGRAMS IN THE LANDSCAPE

Program	Countries	Providers	Type(s) of Training	Health Focus	Details of Training	Other Inputs	Empowering Other Women
CliniPAK (Clinical Patient Administration Kit)	Kenya, Nigeria, Tanzania	Primary care, MCH	Touchscreen tablets, cell phones, solar panels, biometric devices	CliniPak hardware and software solutions automate & standardize health care workflows, data collection, health assessment, and management of patient records. Contains a built-in electronic health record system, automated patient registration and vitals capture, clinical triage, and diagnosis and treatment support. Device is Wi-Fi and 3G-enabled to connect to the server remotely, and solar-powered.	Solar-powered touchscreen laptops allow nurses, midwives, and CHWs to do a high quality assessment of patients in rural settings and manage patient records. The software also supports automated text message reminders for patients receiving ongoing treatment and for mothers requiring post-natal care.		
Community Health Project (CHP) – Miyuji Ipagala Chamwino (MIC)	Tanzania	Primary care, MCH	Mobile phones with apps	Community Health Workers (CHWs) receive mobile phones with the CommCare software pre-loaded. CommCare module focuses on neonatal health. CHWs learn key steps for identifying and responding to emergency signs, and provided guidelines and educational aids to promote effective hygiene and infection prevention.	CHWs are supervised by nurses and deployed into the community to provide essential newborn health, with the assistance of the CommCare application, which provides checklists, screening algorithms, and educational materials.	New mothers are provided with a small gift package of essentials like soap and diapers, both to incentivize new mothers to report births and to encourage good health practices.	CHWs formed an association and contribute portion of weekly earnings – issued to members – as small business loans
Enhancing Nurses Access for Care Quality and Knowledge through Technology (ENACQKT)	Antigua and Barbuda, Dominica, Dominican Republic, St. Kitts & Nevis, St. Lucia	HIV, diabetes, hypertension	Personal digital assistants (PDAs), smart phones, tablets with apps	Nurses given PDAs pre-loaded with programs and materials, including policy and procedure manuals, a medication handbook, laboratory diagnostics, symptom-interpretation program, critical thinking tools, and a medical calculator. Program provides wireless access to the internet, international health-care databases, and nursing discussion forums. Nurses started using smart phones and tablets over the course of the project.	254 nurses and 23 nursing students (95% female) at public hospitals in the partner countries trained to use devices and programs. In St. Lucia, a subset of nurses were trained to be “Clinical Resource Nurses,” tasked with ongoing education and training of staff nurses as well as protocol development in their respective units	All sites provided with desktop computers in addition to hand-held devices; ENACQKT team worked closely with the CNO - Caribbean Nurses Organization; individual nurses became involved in roles and committees for technology use in their respective government agencies and professional bodies.	

TABLE 6: ICT PROGRAMS IN THE LANDSCAPE *(continued)*

Program	Countries	Providers	Type(s) of Training	Health Focus	Details of Training	Other Inputs	Empowering Other Women
Health eVillages	Afghanistan, Haiti, Kenya, Uganda	Primary care, MCH	Mobile phones	Mobile reference materials and decision support tools for healthcare professionals. Information is sourced from Skyscape – delivers up to 600 medical resources to mobile devices, including drug guides, medical alerts, journal summaries and refs from more than 50 medical publishers. Skyscape also provides time-saving tools such as flow charts and medical calculators.	Health eVillages provides mobile phones to physicians, nurses, medical students, and residents in underserved areas where access to updated medical resources is in short supply or nonexistent.	Building a dedicated maternity clinic in Migori, Kenya, in partnership with Lwala Community Alliance to improve maternal and infant health.	
Markle Ratanakiri Telemedicine Clinic	Cambodia	Primary care	Computers	Connects Cambodian doctors and nurses to international partners using a dedicated high-speed Internet satellite link for telehealth consultations.	Nurses at Sihanouk Hospital Center of Hope travel to Ratanakiri clinic monthly for patient consults. They tele-share patient symptoms, digital photos, ultrasound readings, and X-rays with the hospital and Harvard specialists through Partners Telemedicine for diagnostic and treatment guidance.	Markle Foundation funding also contributes to the cost of staff time, purchase of drugs, and transportation fees to the Sihanouk Hospital Center of Hope in Phnom Penh for patients who require additional care.	
Maternova Obstetric Kit	Belize, Haiti, Honduras, Liberia, Mali, Tanzania, Uganda, Zambia	MCH	Mobile phones, DVDs	Pre-packaged, portable kit with supplies and ICT inputs, including (1) wind-up mobile phone charger to call for help or referral, (2) solar powered headlamp to see births, (3) calibrated drape to measure blood loss, (4) pictorial reminder cards on management of the third stage of labor, (5) DVD on how to manage postpartum hemorrhage.	These next generation kits pair essential supplies with ICTs to help trained midwives reduce maternal deaths, primarily from post-partum hemorrhage.		

TABLE 6: ICT PROGRAMS IN THE LANDSCAPE *(continued)*

Program	Countries	Providers	Type(s) of Training	Health Focus	Details of Training	Other Inputs	Empowering Other Women
Mobile Technology for Community Health (MoTeCH)	Ghana	MCH	Mobile phones with apps, decision-making tools in development	"Mobile Midwife" app enables pregnant women and their families to receive SMS or pre-recorded voice messages providing time-specific information about their pregnancy; "Nurse App" enables Community Health Nurses to record patient care, identify women and newborns due for care, and generate monthly facility reports.	Nurses are provided with pre-programmed phones and a detailed training manual on how to use the technology. Positive encouragement messages are used to reinforce high utilization of the app.		The "Mobile Midwife" provides tips for saving money and messages for male partners to provide support to the pregnant women.
SAHEL (Satellite African e-Health validation)	Kenya, Senegal	Primary care	Phones, computers, satellite broadband	Medical e-Learning for continuous training of healthcare professionals in rural settings. Clinical e-Services link dispensaries and treatment centers to central medical centers for diagnostic and treatment assistance. Computerized HIS manage patient files, collect medical data and monitor epidemics such as AIDS in Kenya or malaria in Senegal.	Doctors, nurses, midwives, COs, & CHWs at hospitals, medical centers, and remote healthcare facilities can use the eLearning and eHealth services. Currently piloting in Kajiado District Hospital in Kenya with 4 doctors and 62 nurses and at 2 hospitals in eastern Senegal.		
Tsilitwa Telehealth Project	South Africa	Primary care	Phones, computers, remote diagnostic tools	Built wireless infrastructure to allow clinic staff nurses in remote areas to tele-consult with doctors.	Nurses with limited training consult doctors in the telehealth network on complicated cases for advice on treatment or possible referral of the patient to a specialist.		

SOCIAL ENTERPRISE, COOPERATIVES, AND CLINICAL FRANCHISING

In recent years, global institutions have increasingly recognized the important role of the private sector and the potential for social enterprise to help improve health outcomes and combat poverty. Social enterprises employ models common in the business world to address social objectives, such as health improvement. They can take many forms, including employee-owned businesses, cooperatives, and franchises. Social franchising is one of the fastest growing market-based approaches to expand access to health services (Beyeler et al., 2013). Clinical franchises seek to improve health by increasing the number of outlets for service provision, generating consumer demand for health services, and setting standards for quality and affordability. Providers can also benefit through the franchise arrangement, through clinical and business training, support for marketing and advertising, and access to capital to improve their facilities and operations.

In addition to franchises, there are some interesting examples of health worker cooperatives and networks that support nurses and midwives in their practices. Cooperatives have long been popular for supporting informal workers, emerging in Europe during the mid-20th century with later initiatives focused on women's cooperatives, particularly in India in the 1970s, with the India Self-Employed Women's Association (SEWA) as an early success story (Dhatta & Gailey, 2012). Recognizing the advantages of this model, there is a burgeoning presence of social cooperatives among health workers. Nurse and midwife cooperatives provide a network through which these health workers can collectively bargain for supplies; advocate for improved working conditions, wages, and policies; access training opportunities and peer support; and participate in a democratic process for the governance of their cooperative organization. Co-ops can also provide a mechanism to administer savings and microfinance schemes (Jones et al., 2012). Membership in collective enterprises allows women to build social capital through the development of personal and professional relationships, and membership in collective organizations has also been associated with increased self-esteem and a sense of solidarity and support (Jones et al., 2012). The ILO has also called cooperatives "schools for democracy...[that] require the development of citizenship skills to maximize their potential" (ILO, 2011).

Cooperatives, Networks, Professional Associations & Unions in the Landscape

A number of cooperatives, unions, and associations for nurses and midwives have emerged in low and middle-income countries to promote social enterprise. There are a diversity of organizational models that incorporate functions associated with

co-ops, unions, and professional associations. Given the blurring of these models and the fact that they all share the characteristic features of supporting their members' interests and professional needs through collective action and representation, we have grouped them together for the purpose of this analysis.

We included six such organizations in our review:

EntrepreNurse, Ghana Registered Nurse Association (GRNA), Private Nurse Midwives Network in Kenya, Private Nurses and Midwives Association Tanzania (PRINMAT), Uganda Private Midwives Organization (UPMO), and the Zambia Union of Nurses Organisation (ZUNO). Additionally, while Village Health Works in Burundi does not use this model for its clinical providers, they do organize Women's Cooperatives that provide local women with employment, training, and social support as part of their comprehensive approach to care and addressing social determinants of health.

Key highlights for each of these programs are provided below (see Table 7 for additional information). The most common advantages to membership are collective bargaining, training opportunities, social support and peer-mentoring, access to capital, participatory governance, and a collective voice to advocate for fair wages, improved working conditions, and policies that facilitate employment opportunities. These organizations have also engaged in multiple strategic partnerships to align their members with other maternal health programs, provide access to goods and services, facilitate training, and link midwives with international institutions.

EntrepreNurse

EntrepreNurse was formed in response to high unemployment rates among Filipino nurses, particularly those just graduating. Recognizing the potential of these skilled workers and the gaps in access to health care in rural settings, EntrepreNurse sought to promote the formation of cooperatives, comprised of self-employed member nurses who would provide care in poor rural communities. The Philippine Department of Labor and Employment (DOLE) provides start-up capital for the formation of these cooperatives, which are self-governed by a General Assembly, Board of Directors, Officers, and Committee Members. All members have a vote in General Assembly meetings and the cooperative leadership is made up of both elected and appointed members. EntrepreNurse funds its activities through member fees as well as external sources, which are used for training and education, community development in areas where nurses provide services, and to support efforts of the cooperative.

A similar cooperative effort in the Philippines called the Nurses Vox Health Services Cooperative (NVox) was proposed around the same time as EntrepreNurse. Little information is

publically available on this initiative, so it was not included in the systematic review, but NVox was planned as part of Project HOPE – Hastening Options for Productivity and Employment of Filipino Nurses. The cooperative aimed to include a range of activities and benefits for members, including a savings account for NVox activities; mechanisms to facilitate increased purchasing power, cost-sharing, risk-pooling, and equitable redistribution of surplus; professional development and business ethics training; individual micro-finance loans and savings programs; and linkage to other programs that promote uptake of technology and information systems. (Source: ISIF Asia)

Ghana Registered Midwives Association (GRMA)

The GRMA began in the 1950s, initially focused on providing start-up capital to private midwives for establishing maternity homes in areas with unmet need. Over time, the association expanded its remit to provide training, development, and entrepreneurship opportunities for members, both public and private midwives, and serve as an advocacy institution. There are approximately 550 GRMA members (55% are private-sector and 45% public-sector midwives) distributed across all 10 regions of Ghana. GRMA's leadership is chosen by the General Assembly, in which all members have the opportunity to nominate and vote for candidates to hold executive positions at the regional and national levels. Association activities have focused on continued education of midwives to support quality of core services and expand their role to cover post-abortion care (PAC), STI management, and HIV testing and counseling. Many of the private sector midwives have allowed their facilities to be used for the training of midwifery students.

Private Nurse Midwives Networks in Kenya

The Private Nurse Midwives Networks arose to meet the needs of midwives newly trained in delivering post-abortion care. Recognizing the need for additional peer support as well as ongoing access to training and resources, the Private Nurse Midwives Networks were developed, formally organizing groups of private clinics and nursing homes operated by nurse midwives. In addition to supporting the sustainability of the PAC services, the networks' missions have expanded to include family planning services and PMTCT. Peer support and supervision has been a staple component of the program, in which the members consult one another in the management of complicated or challenging cases. Consultations are done either face-to-face or over the phone. Another major benefit of membership is access to financial resources to enhance facilities and purchase drugs through the networks' "merry-go-round" strategy. Members contribute monthly to a central fund, and at the end of each month, one member is given the total collection, rotating until all have received a monthly sum. The network

also invests in collective bank loans and provides collateral for members seeking loans, monitoring and assisting them with their repayment plan.

Private Nurses and Midwives Association Tanzania (PRINMAT)

PRINMAT is a membership organization that aims to improve maternal and child mortality through increased access to sexual and reproductive health services. Private nurses and midwives can join to benefit from educational workshops, peer review with fellow member midwives to facilitate mutual support and accountability, access to loans for purchasing supplies and equipment, and assistance registering new maternity and nursing homes with the district government and the Tanzania Nurses and Midwives council. PRINMAT engages in various advocacy efforts surrounding policies and practice of nursing and midwifery, such as modifications to regulations that make it easier to establish private maternity nursing homes.

The association also invests in the empowerment of the women their members serve. Members provide counseling to women on how to advocate for safe birthing practices and engage male partners in sensitization activities around family planning. PRINMAT provides microloans to their patients to support their ability to pay for services rendered. They have also partnered with the Tanzania Marketing and Communications for AIDS, Reproductive Health, Child Survival and Infectious Diseases (T-MARC) project, which provides PRINMAT providers with subsidized family planning and health products. Through this partnership, PRINMAT and T-MARC deployed local women as community-based distributors (CBDs), who deliver basic family planning information, dispel misconceptions, and sell health products. T-MARC provides CBDs with government training so that they can legally dispense oral contraceptives, which they can sell at a modest profit, and additional training on basic sales, accounting, and financial skills. They are given bicycles so that they can reach a greater number of clients. PRINMAT facilities oversee the CBDs, dispensing products and providing support, and in return, the distributors refer patients to PRINMAT clinics.

Uganda Private Midwives Organization (UPMO)

UPMO is a nonprofit professional association comprised of over 2,000 midwives throughout Uganda who provide reproductive health and primary health services, as well as a variety of community health activities. The association has orchestrated clinical courses for member midwives to earn continuing education units needed for re-licensure and organized group trainings in rudimentary business skills. They offer a regional supervisory program, in which trained members oversee and support novice midwives. The new midwives learn from their more experienced counterparts, while the seasoned midwives benefit from management and leadership training.

TABLE 7: CO-OPS, NETWORKS, ASSOCIATIONS, & UNIONS IN THE LANDSCAPE

Program	Country	Mission	Governance	Clinical Training	Business Training	Business Support	Association w/ Professional Orgs	Strategic Partnerships	Access to Capital
EntrepreNurse	Philippines	"To promote nurse entrepreneurship... to reduce the cost of health care for the country's indigent population... to maximize employment opportunities for the country's unemployed nurses and to utilize the country's unemployed human resources for health for... the achievement of the country's Millennium Development Goals on maternal and child health..."	General Assembly, Board of Directors, elected officers, and appointed committee members	Yes (unspecified)	Yes (unspecified)		Collaboration with DoH, Board of Nursing-Professional Regulation Commission (BON-PRC), University of Philippines College of Nursing, & Philippines Nurses Association		
Ghana Registered Midwives Association (GRMA)	Ghana	"To promote training, development, and entrepreneurship, and serve as an advocate to midwives; to improve the standards of midwifery practice through community participation and promote the provision of equitable high-quality services to women, children, and their families nationwide."	8 executive officers at national level;	CM/NE; task-shifting training for PAC, STIs, & childhood infections in rural areas			Member of the International Confederation of Midwives		
Private Nurse Midwives Networks in Kenya	Kenya	"To improve access to quality post-abortion care and other reproductive health services and provide support, training, and supervision for the new cadre of nurse midwives providing these services."	Elected Chairperson, Secretary, Treasurer; monthly member meetings	Refresher courses and CM/NE; focus on PAC, FP, PMTCT	Pricing strategy and business training	Financial management for loans	Private nurse midwives have a chapter in the National Nurses Association.	Partner with MOH, USAID-AQUIRE, & local NGOs in refresher courses and clinical updates.	Merry-go-round fund; financial management: invest in collective bank loans, provide collateral for a members' loan, & monitors repayment.
Private Nurses and Midwives Association Tanzania (PRINMAT)	Tanzania	"PRINMAT is committed to reducing morbidity and mortality of underserved community through provision of quality, general sexual/reproductive and child health services and mobilizing community... to compliment Government efforts. In achieving this mission, PRINMAT will adhere to Human rights and professionalism."	General Assembly meeting, board members and management team	Refresher; task-shifting (PMTCT)		QI; assist in accrediting PRINMAT facilities.	Help register members with Government of Tanzania Nurses and Midwives Council.	TMARC helps to purchase & distribute FP/contraceptive materials beyond district government supply (frequent stock-outs).	Access to loans for supplies and equipment.

TABLE 7: CO-OPS, NETWORKS, ASSOCIATIONS, & UNIONS IN THE LANDSCAPE *(continued)*

Program	Country	Mission	Governance	Clinical Training	Business Training	Business Support	Association w/ Professional Orgs	Strategic Partnerships	Access to Capital
Uganda Private Midwives Organization (UPMO)	Uganda	"UPMO is committed to supplement Governments efforts in provision of high quality, accessible, affordable, integrated Reproductive Health, HIV/AIDS/ PMTCT, primary health care through private midwives and promotion of women rights in Uganda."	Board of Directors, member committees, full-time admin	Refresher in RH&FP; CM/NE contraceptive methods and procedures; prevention of post-partum hemorrhage; PMTCT & VCT; regional supervisory program with trained midwives	Management skills; branch Chairpersons trained in proposal writing; branch Treasurers trained in financial management.	Access to computers; accounting & management support for SACCO admins.	Uganda Nurses and Midwives Council, Uganda National Association of Nurses & Midwives, International Confederation of Midwives	Government of Uganda, PSUganda PUR Water Purification program; Engender Health; FHI; Marie Stopes Uganda Cooperative Saving and Credit Union	Operates revolving fund, giving loans to midwives to buy drugs and equipment; promotion of savings and credit cooperative schemes.
Zambia Union of Nurses Organization (ZUNO)	Zambia	"To have an empowered nurse who is motivated and able to continuously uphold professional excellence."	10 officers on National Executive Committee, 9 Provincial Executive Committees, 110 Branch Executive Committees		Computer skills and ICT training		International Council of Nurses (ICN), Commonwealth Nurses Federation (CNF), Southern African Network for Nurses and Midwives (SANNAM), East, Central and Southern African College of Nursing (ECSACON)	Royal College of Nursing; Norwegian Nurses Organisation (NNO)	

Note: Not all programs had information available regarding each of these features. This table only documents the range of information that was publicly available on these programs.

UPMO also promotes a Saving and Credit Cooperative Scheme (SACCO), through which members can access capital necessary for purchasing equipment or hiring additional staff. To implement these schemes, UPMO has partnered with the Uganda Cooperative Saving and Credit Union, which will provide ongoing technical assistance and information on microfinance best-practice. UPMO has also partnered with Population Services International (PSI)-Uganda on the PUR® (Water Purifier) Project, in which UPMO midwives are taught how to purify water with the PUR filter and then are sent into the communities to conduct outreach and facilitate uptake of the filter for clean water.

Zambia Union of Nurses Organisation (ZUNO)

Formerly the Zambia Nurses Association, ZUNO was established in 2007 with the mission to empower nurses and uphold professional excellence. They engage in collective bargaining to attain fair wages and improved working conditions. They

organize leadership and business trainings for their members and have engaged in multiple international partnerships for capacity building, including a recent linkage with the Royal College of Nursing (RCN) in the UK and their long-standing partnership with the Norwegian Nurses Organization.

In just a few years, ZUNO has also dramatically increased political participation among Zambian nurses, and the organization has been invited to participate in a number of government appointed committees, including the Government Task Force on Health Sector Devolution, the National Human Resources for Health Strategic Plan Committee, the Ministry of Health Staff Establishment Committee, the General Nursing Council of Zambia, and a consultative meeting for the Ministry of Health's National Training Operational Plan.

ZUNO has also set up four "Information and Communications Technology Resource Centres," which provide member nurses with access to the internet, printing services, and an electronic

library with professional nursing study materials. They hope to make the e-library broadly available to all members, reaching rural nurses with up-to-date information on best practice. As part of this initiative, ZUNO has provided 87 members with basic ICT training. The organization also uses an online platform to manage nurse membership and has an active presence on Facebook.

ZUNO is also an implementing partner of the International Council of Nurses' (ICN) Girl-Child Education Fund, which aims to keep orphaned daughters of nurses enrolled in primary and secondary school. The program covers school fees, uniforms, shoes, and books, and pairs the girls with a nurse volunteer to monitor her progress at school and at home.

Nurses and Midwife-led Social Franchises in the Landscape

Clinical social franchising has become an increasingly common approach to expand services in resource-constrained settings while creating business opportunities for local providers, including nurses and midwives (Ruster et al., 2003; Schlein & Montagu, 2012). Our search yielded 23 franchise brands leveraging nurses and midwives as the primary providers of services, five of which were different models introduced by DKT International. See Table 8 below for details on franchise programs included in the analysis.

Clinical franchises provide several opportunities and inputs that can empower nurses and midwives in the regions where they operate. Aside from creating successful models for nurses and midwives to own and operate their own practices, many franchisors provide training in both clinical and business skills. Franchise opportunities contribute to their ability to generate income, exercise autonomy over their business and life more broadly, and develop confidence in their abilities through training and peer mentoring. In addition, the brand recognition associated with the franchise may confer a status of respect to nurses and midwives within the community, elevating their social standing while helping them to attract more clients.

Of the programs identified, nearly all of them focused on family planning and reproductive health services. Some of the franchises have integrated other services for malaria and other vector-borne diseases, primary health services, TB and HIV, including PMTCT and male circumcision. Thirteen of the 21 franchise programs identified themselves as "fractional franchises," meaning that the franchised services or products were only a subset of the offerings available from franchisees, and that the nurses and midwives could provide care beyond what is supported by the franchisor. A few of the programs, such as DKT Popshop and DKT Sahath Al-Om, in the Philippines and Sudan respectively, operate as smaller shops within government-run clinics.

The franchise model enables nurses and midwives to own and operate their own businesses. In some cases, franchisees employ additional clinical workers, nurses, midwives, and community health workers (CHWs) within their practice. For instance, many franchises, such as Access Afya, Merrygold, and Umeedsey, utilize CHWs and other women from the community to help generate demand for their services, paying these "community mobilizers" for referrals. Child and Family Wellness (CFW) Shops often hire additional nurses, working under the management of the nurse-owner. They are encouraged to hire local women to perform administrative or custodial tasks. There are also opportunities for nurses in higher-level management positions. AMUA has a small team of Franchisee Coordinators comprised of nurses who oversee approximately 35-40 franchisee locations with support from the Social Franchise Manager. These Coordinators are responsible for recruiting franchisees, organizing training courses, providing supervision and on-the-job training, collecting monthly reports, and conducting demand-creation activities. DKT Andalan in Indonesia has a class of "super-franchisees" who serve as sub-distributors of family planning products, earning extra income by supplying contraceptives to midwives in more rural areas not reached by the franchisor's main distribution channels.

The emergence of clinical franchises in developing countries has created a range of employment and income-generating opportunities for nurses and midwives, and women more broadly, spanning the hierarchy: from employee to owner and operator to supervisory and high-level management roles. Under the franchise model, nurses and midwives are able to exercise authority in decision-making over their practice. A recent article on Access Afya states that "Clinical team members have autonomy to problem solve. Each week, we have team meetings to discuss challenges – both operational and client cases. We are creating a culture of planning, implementing, reviewing and improving" (Menke, 2004). Furthermore, inputs such as training, mentorship, and access to other health professionals in the franchise network promote confidence and self-efficacy for nurses and midwives running their own practices. A midwife in the Bidan Delima (BD) program said, "I feel more confident in giving services to my patients because I now have more knowledge to share and can answer most of my patients' questions regarding their reproductive health" (Jakarta Post, 2006). Midwives accredited by BD have gained a reputation for high quality, boosting their position in their communities as well as their revenue streams. Six of the documented programs also offer special awards recognizing outstanding performers within their franchise networks.

Training inputs are an important part of the franchise model and provide further empowerment inputs for their franchisees. Sixteen of the franchises provide some form of clinical training to their

FIGURE 10: FRANCHISING FOR FAMILY PLANNING — TUNZA FAMILY HEALTH NETWORK, KENYA

Tunza, which means “nurture” in Kiswahili, is a franchise model in Kenya that aims to promote female empowerment by providing access to high-quality, affordable family planning services. To expand access to these services, Tunza invests in both the supply and demand sides, not only developing clinical and business skills among the providers, but also creating a cadre of Tunza mobilizers who actively recruit clients in franchise communities. Through the network, franchisees benefit from technical training, business support, quality control and supervision, and access to subsidized commodities. Mobilizers are given a monthly salary to conduct outreach activities.

There are 295 private practitioners in the Tunza Franchise network. Most Tunza providers are small owner-operated outlets staffed by nurses and clinical officers. Providers are recruited by the franchisor based on interest, capacity, licensing, reputation, and geographic location. After signing a memorandum of understanding, valid for one year, and paying the yearly membership fee of KES 1,000 (12.42 USD), providers receive comprehensive training consisting of a contraceptive technology update. Trainings are organized in consultation with the Kenya Division of Reproductive Health, with certification from the Ministry of Public Health and Sanitation. After completing training, providers are supervised for the first 10 IUD insertions before being certified. They are given start-up kits containing instruments for IUD insertions and removals as well as free antiseptic solution in accordance with their monthly volume of procedures. Providers can purchase IUDs for KES 30 per piece (0.37 USD), which come with pre-packaged sterile gloves and sanitary pads.

The Tunza Mobilizers also serve as a core component of the demand-creation strategy. These women from the community undergo a comprehensive training on basic FP and community education, with further supervision and on-the-job training before being awarded certificates. They then work with organized women’s groups and make door-to-door visits to reach women in the community and educate them about Tunza’s family planning services.

Women benefit at every level, from enhanced reproductive choice among patients, to new roles and income for mobilizers, enhanced opportunities for providers as franchisees, and management for nurses within the highest levels of the organization.

Sources: CHMI, PSI/K report (2010), Nderitu (2013)

nurses or midwives. This is particularly critical for franchises given their commitment to quality assurance and brand integrity. Clinical training often consists of refresher courses on basic knowledge and skills, CN/ME, and education on the franchise brand products such as the various contraceptive modalities. Training often covers infection control and quality improvement at franchise sites as well. Additionally, some franchises provide training associated with task-sharing certain procedures, such as male circumcision and cervical cancer screening in the case of NewStart Zimbabwe. Beyond clinical training, 12 franchises offered business training to member nurses and midwives. These offerings cover management skills, computing, budgeting and accounting, supply chain management, and marketing strategies. Enhancing knowledge across these core functions empowers nurses and midwives to successfully run their businesses and builds competencies that are transferable beyond their franchise work.

In addition to the training, franchisees often benefit from branding, promotional materials, advertising campaigns, and other demand-creating strategies developed by the franchisor. Many franchise models provide access to supplies and equipment for free or at highly discounted rates, and some invest in upgrading facilities when existing providers join the franchise.

Mobile technology and information systems have played an increasingly important role in the implementation and evolution of many franchise models. Programs are using mobile phones and tablets for a wide range of tasks: direct patient communication and outreach, clinical updates for providers, expert consultations, triage and diagnosis, managing inventory, paying dues, and web-based reporting. BD has created their own app, in partnership with Telkom to support midwives, and Umeedsey Micro Health Franchise System places telehealth at the core of their model, in which midwives upload information through their mobile phones to the clinical decision support system. This application enables them to quickly identify pregnancies that are complicated or require emergency medical attention. It helps them track pregnancies by gestational age, with auto-reminders for patient check-ups. The app also has modules that support supply chain management, electronic medical records, billing, financial management, and monitoring and evaluation systems. Programs employing mHealth strategies offer training to providers on how to use these tools, which has the added benefit of increasing the technological literacy of users.

A number of the franchises are engaged in strategic partnerships. These include public-private partnerships, often working in collaboration with Ministries of Health or operating micro-franchises out of government health facilities. Other partnerships engaged existing women’s groups within the community, a mutually beneficial arrangement in which local women’s groups promote family planning and reproductive

health services to the target population and gain critical access to capital through incentives, stipends, or loans from the franchise. For instance, Mahila Swahsta Sewa (MSS) in Nepal works with the local “Didis” (Nepali for “sisters”) to implement interactive group sessions and individual outreach in clinic communities, paying the women a monthly stipend for promoting the reproductive and maternal health services offered by MSS. There were also partnerships with professional medical associations. DKT Andalan relies on the Ikatan Bidan Indonesia Midwife Association to deliver training modules and Profam’s Ugandan program works collaboratively with the Association of Obstetrics and Gynecology of Uganda under the Merck for Ugandan Mothers (MUM) partnership to train and mentor

providers and clinic owners in Basic Emergency Obstetric Care. Other strategic alliances emerged between franchises and NGOs with similar goals, such as Tunza’s partnership with Family Health International’s M4H program, which offered an SMS platform and hotline on family planning with referrals to Tunza providers. Additional strategic partnerships exist with pharmaceutical companies, banks, and insurance companies to increase access to affordable commodities, facilitate lending to franchisees, and ensure clients are covered for franchise services. The franchise model lends itself to the creation of strategic alliances because it organizes providers under a single network, which partner organizations can leverage to maximize impact, reach, and utilization of products and services.

TABLE 8: CLINICAL FRANCHISES IN THE LANDSCAPE

Program	Countries	Providers	Health Focus	Fractional	Membership Fee	Membership Fee Amount	Branding Materials	Marketing Support	Facility Upgrades	Free/ Subsidized Supplies	Clinical Training	Business Training	ICT/ mHealth/ HIT	Strategic Partnerships	Access to Capital	Recognition
Access Afya	Kenya	N	FP & RH, MCH				X	X	X				Phones, computers, EMR	MoH; CHMI Primary Care Learning Collaborative		
AMUA	Kenya	N MW	FP & RH, TB Malaria, HIV	X	X	USD 35-70 to join, 1-time fee				X						
Bidan Delima (BD)	Indonesia	MW	FP & RH MCH		X	USD 44 to join; USD 28/ year	X	X			X	X	Mobile phones with BD app	Telkom for BD app; ACA insurance		X
BlueStar Philipinas	Philippines	MW	FP & RH	X	X	USD 25 to join; USD 7 weekly	X	X	X	X	X	X	SMS restock orders, reporting, pay dues		X	X
CFW Shops	Kenya; Rwanda	N	FP & RH, Malaria, TB, primary		X	USD 115 to join; 5% of gross sale monthly	X			X	X	X		MOH		X
DKT Int’l - Surya	India	N MD	FP & RH	X			X	X		X	X					
DKT Int’l - Andalan	Indonesia	MW	FP & RH	X	X	Min. USD 330 purchase every 6 months; monthly fee; 5% rebate if targets met	X	X		X	X		SMS client follow-up; online platform to track sales	Ikatan Bidan Indonesia Midwife Association runs training		
DKT Int’l – Intimo	Mozambique	N	FP & RH, Malaria				X	X					Social media (Facebook)			

Program	Countries	Providers	Health Focus	Fractional	Membership Fee	Membership Fee Amount	Branding Materials	Marketing Support	Facility Upgrades	Free/ Subsidized Supplies	Clinical Training	Business Training	ICT/ mHealth/ HIT	Strategic Partnerships	Access to Capital	Recognition
DKT Int'l - POPSHOP	Philippines	MW	FP & RH	X	X	USD 2,200 (875 for mini) for first 4 years; after USD 110 (USD 70 for mini) yearly renewal	X	X		X	X	X	Phone hotline; SMS client follow-up; web-based reporting	~60% franchises set up within public clinics		
DKT Int'l - Sahath Al-Om	Sudan	N MD	FP & RH				X	X						Gov't hospitals; religious/ community leaders		
K-MET Post Abortion Care Network (PACNET)	Kenya	N MW MD	FP & RH			USD 116 one-time fee			X	X	X		SMS client follow-up		X	
LifeNet International	Burundi	N	Primary, RH	X		No Fee	X		X	X	X	X	Piloting tablet for training modules	Faith-based clinics; JMS Ugandan Rx wholesaler; CHMI Primary Care Learning Collaborative	X	
Mahila Swahsta Sewa	Nepal	MW	FP & RH, Malaria, TB, MCH	X	X	USD 5 per year							Hotline; SMS and web-based reporting	Women's groups (DIDs) for outreach		
MerryGold Health Network	India	N MW MD	FP & RH, MCH	X	X	USD 6,000 with 3% royalty fees for full franchisees (USD 20 for fractional)	X	X	X	X	X	X	Hotline; SMS client follow-up; web-based reporting; e-learning platform	Guardian Pharmacy; WIPRO for HIS; United India health insurance; Metropolis Diagnostics; local banks	X	
Micro Health Franchise System (UmeedSey)	Pakistan	MW MD	MCH				X		X	X	X	X	Mobile app diagnoses and patient records; EMR		X	
MicroClinic International	Ghana Uganda	N	Primary, MCH, Malaria, TB		X	9% of gross sales	X	X	X			X	Web-based reporting; HIS			
Mother Bles Birthing Clinics	Philippines	MW	MCH					X	X		X			Partner with provincial government		

Program	Countries	Providers	Health Focus	Fractional	Membership Fee	Membership Fee Amount	Branding Materials	Marketing Support	Facility Upgrades	Free/ Subsidized Supplies	Clinical Training	Business Training	ICT/ mHealth/ HIT	Strategic Partnerships	Access to Capital	Recognition
New Start Zimbabwe	Zimbabwe	N	HIV, FP & RH, TB				X	X		X	X	X	Tablet for patient records and follow-up visits	Partnership with Ministry of Health & Child Welfare	X	
Penda Health (Member of Tunza Franchise)	Kenya	N MD	FP & RH, primary	X			X	X			X	X	IS for supply chain; EMR; SMS texts to patients; cloud-based system to monitor inventory and sales	Work with MicroEnsure to provide health care to factory workers; community partnerships for demand creation		
Pro-Fam	Benin, Cameroon, Mali, Uganda, Zimbabwe	N MW	FP & RH MCH Malaria HIV	X	X	USD 40 (Benin) USD 60 (Cameroon) USD 9 (Uganda)	X	X		X	X		SMS client follow-up; hotline counseling	Merck for Ugandan Mothers and Association of Ob/Gyn of Uganda		
Redplan Salud (RPS)	Peru	MW	FP & RH	X		No fee	X*	X		X	X	X				X
Tunza Family Health Network	Kenya	N	FP & RH MCH	X	X	USD 13 per year	X	X		X	X		SMS reporting platform	Phone & SMS hotline for family planning questions (LVCT & FHI's M4H)		X
Well-Family Midwife Clinic	Philippines	MW	FP & RH MCH	X	X	USD 18 Rural USD 34 Urban USD 46 Manila	X	X		X	X	X			X	X

Note: Not all programs had information available regarding each of these features. This table only documents the range of information publically available on these programs.

X's indicate features that programs are known to have based on published documentation.

*While RPS offers branded signs and promotional materials, few franchisees use the materials, and RPS tends to keep a low brand profile.

ADDITIONAL MODELS AND PROGRAMS

Although the vast majority of programs identified as having empowerment inputs fell under one of the four previous categories, there were a handful of other programs in the landscape review that provided empowerment opportunities through different models and approaches. For instance, the Integrated Rural Healthcare Pilot in India aimed to set up a hub-and-spoke model of nurse midwife-led health kiosks. General Nurse Midwives independently offer primary care and diagnostic services on-site and are responsible for managing frontend clinics (spokes). Clinics are supported and supervised by doctor-run hubs, which provide continuous assistance through telemedicine, videoconferencing, and regular site visits, and also serve as referral networks for secondary and tertiary care. Similar to some of the approaches above, the Integrated Rural Healthcare Pilot invests in a range of inputs, including training for clinical skills, advocacy for nurse entrepreneurship, and adoption of various ICT, such as telemedicine and EHR. Viva Afya in Kenya also employed a similar hub-and-spoke model to empower nurses and clinical officers to run independent clinics that link up electronically with medical hubs.

Other approaches included microcredit schemes targeting nurses and midwives. The Uganda Private Providers Loan Fund, designed by the Summa Foundation and implemented in partnership with USAID, the Uganda Microfinance Institution, and the Uganda Private Midwives Association, is an innovative

microfinance scheme targeting small-scale private providers, including midwives, nurses, and doctors. Recognizing the importance of these providers, particularly in serving as front-line providers for lower-income populations, the program aims to increase the viability of these private practices, expand services, and improve the quality of care. Providers can apply for loans between USD 30 and USD 5,000 for 6- to 12-month periods, which can be used to purchase drugs and equipment or upgrade facilities. The program also offers training in basic business skills, including business planning and management, recordkeeping, financial reporting, credit management, and marketing through a collaboration with the Commercial Market Strategies project.

The Arpana Trust (Swasthya Kendra) uses a combination of approaches to empower communities in slums and rural areas in India. Arpana has invested in women's empowerment, education, and improved health among the poor in rural Haryana, Himachal Pradesh, and in Delhi slums since the 1960s. They helped to create over 500 women's self-help groups, stimulated women's entrepreneurship, provided education to children, and invested in a range of activities to improve the quality of and access to health services. In 2003, Arpana Trust was contracted by the Municipal Corporation of Delhi to run community health outreach and provide medical services to over 50,000 people living in the slum resettlement colony of Molar Bund and Aaligaon, both at their standing facility and through mobile clinics. The Arpana Hospital regularly engages in continued medical, nursing, and midwifery education for their health personnel, including doctors, nurses, and the village health workers and offers health education to members of the women's self-help groups, who help organize the general and specialized health camps. Through the public-private partnership, Arpana has integrated government ASHAs into their women's groups for ongoing maternity coverage and linked their health workers with the government-run Auxiliary Nurse Midwife (ANM) Clinics. Arpana also offers quarterly training sessions to over 50 midwives in rural areas on pneumonia, TB, diarrhea, antenatal and newborn care, family planning, immunization, HIV/AIDS, and safe delivery. These midwives serve as the primary providers in rural communities outside the periodic health camps and are paid small incentives for their activities. One village midwife said:

"Earlier, there were many deaths of mothers and children. We are now taught to look after pregnant women and do safe deliveries. Before, people looked down on us. Today, people respect us and our work. They pay us better. There is a big difference."

Source: <http://www.arpanaservices.org/sustainable-village-health-care>



Access Afya trains nurse clinical officers to provide basic healthcare in low-income Kenyan neighborhoods and slums.

DISCUSSION

It is clear that the evolving health marketplace and innovative approaches to service delivery present opportunities to empower women, on both the supply and demand side. Engaging nurses and midwives — a key cadre of health providers largely comprised of female workers — can simultaneously contribute to economic development, women's empowerment, and improved health access and outcomes among the world's poorest. The models and programs discussed above highlight many of the successful inputs and approaches that support these overlapping aims.

One of the most common types of inputs associated with empowerment and the strengthening of health services is access to education and enhanced knowledge. Through formal training programs, nurses and midwives are able to acquire skills and licensure that not only provide them with steady means to generate income, but also build confidence in their abilities, enabling them to act with greater autonomy, and earning them respect from their peers and broader communities. These inputs are reinforced by ongoing access to knowledge products, through continued nursing and midwifery education, supplemental training materials, and the use of technology to connect them with global communities of practice and up-to-date clinical information. At the same time, these investments facilitate improved quality of care for patients.

A noteworthy feature common to a number of programs is the early engagement of young women in the health enterprise, creating ladders of opportunity for the future. Several programs recruit girls and young women at early ages from target communities, training them as paramedics, community health workers, and assistants. In some cases, they are also sponsored to complete formal education as nurses and midwives. Beyond these bridging opportunities, many programs support local primary and secondary education activities. Programs interested in contributing to women's empowerment should consider the importance of early investment in girls to prepare them for a range of opportunities and capabilities, contributing in turn to a future generation of empowered women.

Through the analysis, it also became clear that certain models and types of approaches lend themselves to multiple, simultaneous inputs for empowerment. Collective organization

of independent practitioners, under both the cooperative and franchise models, allows programs to offer training modules, management and ownership opportunities, and participation in advocacy and politics, among other benefits. Bringing health workers under a single network enables the formation of strategic alliances with the public sector, NGOs, pharmaceutical companies, international associations of nursing and midwifery,

Programs interested in contributing to women's empowerment should consider the importance of early investment in girls to prepare them for a range of opportunities and capabilities, contributing in turn to a future generation of empowered women.

and other organizations to support mutual goals, share knowledge, generate greater incomes, and enhance impacts on health and wellbeing. Various ICT platforms open new channels for access to information, financing, peer mentorship, and management and business tools. At the same time, mobile technologies also create new lines of communication between providers and patients. Programs seeking to maximize their impact on empowerment and health should consider investing in a combination of inputs, and favor approaches suited to multiple, simultaneous contributions associated with empowerment.

While this landscape report presents a crucial initial exploration into the potential for health programs to contribute to the women's empowerment agenda, there is still much work to be done in this space. In order to report on empowerment inputs, we needed to use a "hallmarks" approach, combing through program materials to document activities most commonly associated with empowerment. This was because very few programs explicitly reported on their investments in, or impacts on, empowerment. This was particularly true for empowerment as it relates to the health providers – in this case, nurses and midwives. This lack of systematic data on empowerment emphasizes the critical need to establish clearer objectives, indicators, and evaluation practices for empowerment across the range of actors affected by innovative health delivery models. The first step is to imbue greater intentionality for empowerment in health programs, encouraging more deliberate attention to empowerment in the approaches that have the most potential to yield impacts to this end. Second, there need to be clearer metrics and indicators for empowerment that are widely accepted and authentically capture when empowerment has taken place. This should also include an assessment of the degrees of empowerment (Alsop & Heinsohn, 2005). For instance, it seems apparent that different types of inputs, such as opportunities for nurses to own and operate their own business, are more empowering than other inputs, such as continued nursing education. Therefore, indicators should be able to detect empowerment inputs as well as their strength and magnitude. With a standardized framework for assessing empowerment, programs can build this analysis into their monitoring and evaluation plans. Furthermore, increased systematic reporting on empowerment will allow for improved analysis across programs to determine the most impactful investments and streamline progress toward greater empowerment.

It should also be noted that, due to the novelty of many of these approaches, it remains to be seen how sustainable these

approaches are. This will be of particular concern for models introduced with the support of donor financing that eventually seek to be self-sustaining. We urge greater attention to the long-term sustainability of the various models piloted. For instance, the Social Franchising Metrics Working Group (SFMWG) within the UCSF Social Franchising for Health initiative reports on health impact, equity, cost effectiveness, expansion of coverage, and quality. They release an annual compendium of clinical social franchises, and while certain profiled programs seem to drop off this list from year to year, there is no explicit documentation of franchises that failed as of yet. Understanding why certain approaches were not sustainable and learning from these failed endeavors will be critical to support the future development of successful franchises that actually empower those involved in these network enterprises.

This landscape review presents the first comprehensive exploration into the potential of health programs to empower women serving as nurses and midwives. It provides detailed information about various programs and the types of inputs that contribute to empowerment for a range of health practitioners and the people they serve. The insights drawn from this report hold important promise for informing innovation globally and within the United States. An overall project companion case analysis and report (Pittman & Salmon, 2015) provides an in-depth case analysis and discussion of potential application to future work in the United States. Moving forward, we plan to build upon this work through expanded analysis of the intersection of innovative health delivery and empowerment opportunities for the female health workforce. We hope that this landscaping exercise will stimulate greater uptake of health innovations coupled with empowerment opportunities, and encourage dialogue for enhanced harmonization and application of approaches that advance improved global health, development, and women's empowerment. ■

REFERENCES

- Alsop R, Heinsohn N. (2005). Measuring Empowerment in Practice: Structuring Analysis and Framing Indicators (Vol. 3510). World Bank Publications.
- Beijing Declaration and Platform for Action. The Fourth World Conference on Women. September 1995, Accessed 29 May 2014. Available from: <http://www.un.org/womenwatch/daw/beijing/pdf/BDPfA%20E.pdf>.
- Beyeler N, York De La Cruz A, Montagu D. (2013). The Impact of Clinical Social Franchising on Health Services in Low- and Middle-Income Countries: A Systematic Review. *PLoS ONE* 8(4): e60669. doi:10.1371/journal.pone.0060669.
- Bidan Delima: Boosting Midwives' Professionalism. The Jakarta Post. 27 June 2006. Accessed 9 June 2014. Available from: <http://www.thejakartapost.com/news/2006/06/27/bidan-delima-boosting-midwives039-professionalism.html>.
- Chen MA, Snodgrass D. (2001 September). Managing Resources, Activities and Risk in Urban India: The Impact of SEWA Bank. Assessing the Impact of Microenterprise Services (AIMS) – Management Systems International. Accessed 14 Jun 14. Available from: http://www.spanish.microfinancegateway.org/files/18550_Chen_and_Snodgrass_2001.pdf.
- CICOPA. (2011). World Standards of Social Cooperatives. http://www.cecop.coop/IMG/pdf/World_Standards_of_Social_Cooperatives_EN.pdf.
- Davidson R. (2008 September). Framing and Claiming Reproductive Rights: A Case Study of Civil Society Actors in Tanzania. [Graduate Thesis] Institute of Social Studies. Netherlands. Accessed 5 Jun 2014. Available from: <http://thesis.eur.nl/pub/7142/Rebecca%20Marie%20Davidson%20HDS.pdf>.
- Davao City Entrepreneurse Health Care Cooperative. Constitution and By-laws. Accessed 29 Apr 2014. Available from: http://www.dole11.net/entrepreneurse/downloads/davao_city_nurse_cbl.doc.
- Datta PB, Gailey, R. (2012). Empowering Women Through Social Entrepreneurship: Case Study of a Women's Cooperative in India. *Entrepreneurship Theory and Practice*. doi: 10.1111/j.1540-6520.2012.00505.x.
- Dentzer S. (2010). E-health promise for the developing world. *Health Affairs*, 29: 229. doi: 10.1377/hlthaff.2010.0006.
- Duflo E. (2012). Women Empowerment and Economic Development. *Journal of Economic Literature*, 50(4), 1051–1079.
- Escobar E, Schlein, K. (2011). Clinical Social Franchising Case. Study Series: RedPlan Salud I Instituto Peruano de Paternidad. Responsable (INPPARES). San Francisco: The Global Health Group, Global Health Sciences, University of California, San Francisco.
- Hongoro C, McPake B. (2004). How to bridge the gap in human resources for health. *The Lancet*, 364(9443), 1451–1456.
- ILO. Promoting Co-operatives: A guide to ILO Recommendation 193. July 2011. Accessed 18 Jun 2014. Available from: http://www.ilo.org/empent/Publications/WCMS_160221/lang-en/index.htm.
- Information Society Innovation Fund (ISIF) Asia. Project H.O.P.E – Hastening Options of Productivity and Employment of Filipino Nurses – Nurses Vox Healthcare Services Cooperative (Withdrawn). Accessed 16 Jun 2014. Available from: <http://isif.asia/projects/projects/view/134>.
- Institute of Medicine (US) Committee on Envisioning a Strategy for the Long-Term Burden of HIV/AIDS: African Needs and U.S. Interests. Preparing for the Future of HIV/AIDS in Africa: A Shared Responsibility. Washington (DC): National Academies Press (US); 2011. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK209740/>.

- Jones E, Smith S, Wills C. (2012). Women Producers and the Benefits of Collective Forms of Enterprise. *Gender and Development*, 20:1, 13-32.
- Kabeer N. (2005). Gender Equality and Women's Empowerment: A Critical Analysis of the Third Millennium Development Goal 1. *Gender and Development*, 13:1, 13-24.
- Källander K, Tibenderana JK, Akpogheneta OJ, et al. (2013). Mobile health (mHealth) Approaches and Lessons for Increased Performance and Retention of Community Health Workers in Low- and Middle-Income Countries: A Review. *Journal of Medical Internet Research*, 15(1).
- Lagomarsino G, Nachuk S, Singh Kundra S. (2009). Public Stewardship of Private Providers in Mixed Health Systems: Synthesis Report from the Rockefeller Foundation – Sponsored Initiative on the Role of the Private Sector in Health Systems. Washington, DC: Results for Development Institute. <http://www.rockefellerfoundation.org/uploads/files/f5563d85-c06b-4224-bbcd-b43d46854f83-public.pdf>.
- Lewis T, Synowiec C, Lagomarsino G, Schweitzer, J. (2012). E-health in Low-and Middle-Income Countries: Findings from the Center for Health Market Innovations. *Bulletin of the World Health Organization*, 90(5), 332-340.
- Maharani AC, Liesman T, Kusuma SH. (2011). Bidan Delima Accreditation: The Implementation of a Franchise Model in Regulating Performance of Private Midwives in Indonesia – A Case Study. CHMI, MercyCorps.
- Mahmud S, Shah NM, Becker S. (2012). Measurement of Women's Empowerment in Rural Bangladesh. *World Development*, 40(3), 610-619.
- Malhotra A, Schuler SR, Boender C. (2002). Measuring Women's Empowerment as a Variable in International Development. The World Bank Group. Washington, DC.
- McNab C. (2009). What Social Media Offers to Health Professionals and Citizens. *Bulletin of the World Health Organization*, 87(8), 566. Accessed 03 July 2014. Available from: http://www.scielo.org/scielo.php?script=sci_arttext&pid=S0042-96862009000800002&lng=en&lng=en.
- Menke M. Health Centers Paying Off in Kenyan Slums: Access Afya's Award-Winning Model is Based on Empowering Clients. NextBillion Blog. 25 March 2014. Accessed 26 April 2014. Available from: <http://www.nextbillion.net/blogpost.aspx?blogid=3792>.
- mHealth Summit [Internet]. Rockville: Foundation for the National Institutes of Health; c2008-2009. Accessed 22 February 2012. Available from: <http://www.mhealthsummit.org/2010>.
- Mobile Health Summit [Internet]. GSM Association & mHealth Alliance; c2010. Accessed 22 February 2012. Available from: <http://www.mobilehealthsummit.com>.
- Montagu D. (2002) Franchising of Health Services in Developing Countries. *Health Policy and Planning*, Vol. 17(2): pp.121–30.
- Nderitu E. (2013), Effects of social franchising on access to healthcare: A Case of Tunza Clinics. *International Journal of Social Sciences and Entrepreneurship*, Vol. 1(2): pp. 650-663.
- Peredo AM, Mclean M. (2006). Social Entrepreneurship: A Critical Review of the Concept. *Journal of World Business*, 41 pp. 55-66.
- Perrot J. (2006). Different Approaches to Contracting in Health Systems, *Bulletin of the World Health Organization*, 84(11) pp. 859–866.
- Pittman P, Salmon, M. (2015). Nursing and Midwifery Enterprise in Lower Income Countries: Lessons for the United States on Women's Empowerment and the Advancement of Health, Case Study Analysis and Report.
- Roelants B, Dovgan D, Eum H, & Terrasi E. (2012). The Resilience of the Cooperative Model. CECOP-CICOPA: Brussels, Belgium.
- Ruster J, Yamamoto C, Rogo K. (2003). Franchising in Health: Emerging Models, Experiences, and Challenges in Primary Care. Public Policy for the Private Sector Note No. 263. The World Bank Group Private Sector and Infrastructure Network; World Bank. Accessed 5 June 2014. Available from: <https://openknowledge.worldbank.org/handle/10986/11298>.
- Salmon, M. (2013) Distinguished Nurse Scholar Report Seminar, Institute of Medicine, July 10, 2013, Washington, DC.
- Salmon M. (2014) Meeting Discussion Paper, Institute of Medicine Workshop: Empowering Women and Strengthening Health Systems and Services Through Investing in Nursing and Midwifery Enterprise, The Rockefeller Center: Bellagio, Italy, 2014.

- Schlein K, Montagu D. (2012). *Clinical Social Franchising Compendium: An Annual Survey of Programs, 2012*. San Francisco: The Global Health Group, Global Health Sciences, University of California, San Francisco. Accessed 5 June 2014. Available from: <http://www.sf4health.org/research-evidence/reports-and-case-studies>.
- Sundari R, Fonn S. (2011). Are Social Franchises Contributing to Universal Access to Reproductive Health Services in Low-Income Countries? *Reproductive Health Matters*, 19(38) pp. 85-101. doi: 10.1016/S0968-8080(11)38581-3.]
- Tunza Health Network, PSI/Kenya. *Tunza Family Health Network: Clinical Social Franchising Case Study Series*. December 2010. Accessed 5 June 2014. Available from: <http://www.sf4health.org/sites/sf4health.org/files/reports/Tunza-report.pdf>.
- United Nations Development Programme (UNDP). (2012). *Mobile Technologies and Empowerment: Enhancing Human Development through Participation and Innovation*. Available from: <https://www.undpegov.org/mgov-primer.html>.
- United Nations Development Programme (UNDP); European Research Network (EMES). (2008). *Social Enterprise: A New Model for Poverty Reduction and Employment Generation* (Bratislava, UNDP Regional Centre for Europe and the CIS).
- United Nations (1995, September). *Inter-Agency Task Force on the Implementation of the ICPD Programme of Action. Guidelines on Women's Empowerment for the UN Coordinator System*. Accessed 18 June 2014. Available from: <http://www.un.org/popin/unfpa/taskforce/guide/iatfwemp.gdl.html>.
- Varkey P, Kureshi S, Lesnick T. (2010). Empowerment of women and its association with the health of the community. *Journal of Women's Health*, 19(1), 71-76.
- Viswanathan R, Schatzkin E. (2013). *Clinical Social Franchising Compendium: An Annual Survey of Programs: Findings from 2012*. San Francisco: The Global Health Group, Global Health Sciences, University of California, San Francisco. Accessed 5 June 2014. Available from <http://www.sf4health.org/research-evidence/reports-and-case-studies>.
- Wallerstein N. (1992) Powerlessness, Empowerment, and Health: Implications for Health Promotion Programs. *American Journal of Health Promotion*, 6(3) pp. 197-205.
- White P, Levin L. (2006, December) *The Potential of Private Sector Midwives in Reaching Millennium Development Goals*. December 2006. Bethesda, MD: Private Sector Partnerships-One project, Abt Associates Inc. Accessed 3 Jun 2014. Available from http://shopsproject.org/sites/default/files/resources/3389_file_Private_Sector_Midwives_Final.pdf.
- World Bank. (2001). *Engendering Development: Through Gender Equality in Rights, Resources, and Voice*. World Bank Policy Research Report. Oxford: Oxford University Press.
- World Health Organization – WHO. (2000) *World Health Report 2000. Health Systems: Improving performance*. Geneva

APPENDICES

APPENDIX 1: COMMONLY USED DIMENSIONS OF WOMEN'S EMPOWERMENT

Dimension	Household	Community	Broader Arenas
Economic	Women's control over income; relative contribution to family support; access to and control of family resources	Women's access to employment; ownership of assets and land; access to credit; involvement and/or representation in local trade associations; access to markets	Representation in high paying jobs; women CEOs; representation of women's economic interests in macroeconomic policies, state and federal budgets
Socio-Cultural	Women's freedom of movement; lack of discrimination against daughters; commitment to educating daughters	Visibility in and access to social spaces; access to modern transport; participation in extra-familial groups and social networks; shift in patriarchal norms; symbolic representation of the female in myth and ritual	Women's literacy and access to a broad range of educational options; positive media images of women, their roles and contributions
Familial/ Interpersonal	Participation in domestic decision-making; control over sexual relations; ability to make childbearing decisions, use contraception, access abortion; control over spouse selection and marriage timing; freedom from domestic violence	Shifts in marriage and kinship systems indicating greater value and autonomy for women (e.g., later marriages, self selection of spouses, reduction in the practice of dowry; acceptability of divorce); local campaigns against domestic violence	Regional/national trends in timing of marriage, options for divorce; political, legal, religious support for (or lack of active opposition to) such shifts; systems providing easy access to contraception, safe abortion, reproductive health services
Legal	Knowledge of legal rights; domestic support for exercising rights	Community mobilization for rights; campaigns for rights awareness; effective local enforcement of legal rights	Laws supporting women's rights, access to resources and options; Advocacy for rights and legislation; use of judicial system to redress rights violations
Political	Knowledge of political system and means of access to it; domestic support for political engagement; exercising the right to vote	Involvement or mobilization in the local political system/ campaigns; support for specific candidates or legislation; representation in local bodies of government	Representation in regional and national bodies of government; strength as a voting bloc; representation of women's interests in effective lobbies and interest groups
Psychological	Self-esteem; self-efficacy; psychological well-being	Collective awareness of injustice, potential of mobilization	Sense of inclusion and entitlement; systematic acceptance of women's inclusion and entitlement

Source: Malhotra, et al. (2002), p.13

Dimensions of Empowerment by Selected Authors

CIDA 1996	Legal empowerment Political empowerment Economic empowerment Social empowerment
Jejeebhoy 1995	Knowledge autonomy Decision-making autonomy Physical autonomy Emotional autonomy Economic and social autonomy and self-reliance
Kishor 2000a	Financial autonomy Participation in the modern sector Lifetime exposure to employment Sharing of roles and decision-making Family structure amenable to empowerment Equality in marriage (lack of) Devaluation of women Women's emancipation Marital advantage Traditional marriage
Schuler and Hashemi 1993	Mobility and visibility
Hashemi et al. 1996	Economic security
Schuler et al. 1996	Status and decision-making power within the household
Schuler et al. 1997	Ability to interact effectively in the public sphere Participation in nonfamily groups
Stromquist 1995	Cognitive Psychological Economic Political
Sen 1999	Absence of gender inequality in: Mortality rates Natality rates Access to basic facilities such as schooling Access to professional training and higher education Employment Property ownership Household work and decision-making

Source: Malhotra, et al. (2002), p.37

APPENDIX 2: ANALYTIC FRAMEWORK FOR NURSE/MIDWIFE EMPOWERMENT

Involvement of Nurses and Midwives

- Corporate Role
 - Owner (sole or partial)
 - Manager
 - Salaried employee
 - Contractor
 - Volunteer
 - Supervisory
- Responsibilities
 - Clinical
- Traditional
- Extender
- New roles
 - Administrative
 - Other

Organization and Financing Arrangements

- Franchise
 - Creating new
 - Existing practices
- Private practice
- Group practice
- Govt. contractor
- Cooperatives/Networks
- Other

Empowerment Inputs

- Training – Clinical
 - Initial certification as nurse or midwife (credentialing)
- Paid Training with curriculum innovations
- Scholarships/Free training
 - CME/Refresher Courses/QI
 - Task-shifting training
 - Expert consultation
- Training – Business
 - Computing skills
 - Management skills
 - Mentoring
 - Other

- Business Support
 - Marketing & communications tools
 - Discounted purchasing
 - Free provision of supplies/medicines
 - Facility upgrades
 - Quality improvement
- Creation of new employment/leadership roles
 - Policy changes – Regulatory or legal
- Association with professional organizations

Modes of Delivery

- Packaged technologies/supplies
- eHealth/Telemedicine/mHealth/HIS
- Training modules
- Mobile medical unit
- Strategic organizational partnerships
- Direct financial investment
- Other

Secondary Tags *(only if nurse/midwife opportunity)*

- Opportunities for empowerment of other women
 - Employment
- Community health workers
- Administrative or technical staff
- Outreach workers
 - Business opportunities
 - Education
 - Other

General Program Information

- Populations served
 - Women, men, children, general
 - Urban, peri-urban, rural
- Health focus
- Origins/history
- Organizational stage

APPENDIX 3: PROGRAMS INCLUDED IN THE ANALYSIS

*Note that additional information on all programs is available through the CHMI database: www.healthmarketinnovations.org and additional links to information are available from the authors.

Program	Countries	Year	Program Description	Inputs	Evaluations
Access Afya	Kenya	2012	Social franchise of nurse-led health kiosks; includes COs & CHWs; emphasis on clinical team members' autonomy, support for clinical & operational problem solving, and community outreach.	Provider training, Business support, ICT	
Aceh Besar Midwives With Mobile Phones	Indonesia	2006	Provided mobile phones to 223 midwives, 15 midwife coordinators, and OB/GYNs to facilitate communication between MWs and OB/GYNs, allow for remote updates of patient health data into central database, and have diagnostic support tools.	ICT	Chib A. Information and Communication Technologies for Healthcare: Midwife Mobile-Phone Project in Aceh Besar - Endline Report. World Vision. February 2008
ACQUIRE Tanzania Project	Tanzania	2007	14,676 health care professionals (MDs and MWs) were trained to provide long-acting/permanent contraception, comprehensive post-abortion care, and PMTCT services during 2008-2009.	Provider training	Jain A, Makawia A, et al. Tanzania Baseline Survey 2004-2005.
Action Research and Training for Health (ARTH)	India	1997	Project to improve pre-service training for nursing and midwifery across 7 training centers in Udaipur; Conduct "Training of Trainers" for skilled birth attendance to have broader reach through 217 NGO partners; nurses trained in contraception, STIs, breast & pelvic examination, safe abortion, infection prevention - developed accompanying training pamphlets; ASHAs trained and support formation of women's SHGs.	Provider training, Quality Improvement, Facility upgrades	http://arth.in/resources/annual-reports
Afghan Institute of Learning - Holistic Health for Mother and Baby	Afghanistan	1995	The Afghan Institute of Learning uses a multi-pronged approach of education and healthcare for pregnant Afghan women through health clinics, health education workshops, pre- and post-natal care, and training for nurses, midwives, community health workers, and rural traditional birth attendants.	Provider training, Consumer education	
Akhand Jyoti Eye Hospital (AJEH)	India	2004	Hospital runs a program for local girls to receive education, housing, and training in optometry, with a guaranteed job opportunity at completion through the AJ Football Academy.	Provider training	
AMUA	Kenya	2004	Franchises of small, stand-alone medical clinics that are owned and operated by a licensed nurse, and staffed by a few other health workers.	Provider Training, Business support, ICT	AMUA - MSI Clinical Social Franchising Case Study 2010
AOET Rural Health Initiative	Uganda		This mobile clinic program, which employs nurses, recruits and trains community-based representatives to conduct follow-up counseling, carry out home visits, and provide medical care to those living with AIDS.	Provider training	
Arpana Swasthya Kendra	India	2003	Public Private Partnership to deliver high quality medical and health education services in slum areas of Delhi, with a focus on maternal and newborn health; established a maternity health center and mobile health camps run by auxiliary nurse midwives. Arpana Trust also provides a wide range of medical services and invests in health and women's empowerment through Self Help Groups (SHGs).	Provider training, Contracting, Facility Improvements, Mobile clinic	

Program	Countries	Year	Program Description	Inputs	Evaluations
Ayod Community Health Teams	Philippines	2008	Initiative to improve maternal and child health through formation of community teams, encouraging facility-based births with transport (via hammock), offering training and incentives to team-members, and supporting shared responsibility for health among men and women. Teams are comprised of a Barangay Captain, Midwife, Community Health Workers, Nutritionists, TBAs and 2 male and 2 female volunteers.	Provider training, Consumer education	
Aysuhmathi scheme	India	2007	Empanels private health facilities to be covered by the national health scheme for institutional deliveries, conducts a needs assessment for staff training and provides hands-on skills training for nurses; auxiliary midwives are also trained to administer tetanus toxoid vaccine and conduct antenatal visits.	Provider training, Consumer education, Contracts	Annual Report 2010-11
Barefoot College	India	1973	Since 1973, more than 1,442 rural men and women have been trained as Barefoot health professionals who have serviced over 150 villages. Training focuses on midwifery, sanitation, nutrition, vaccinations, and primary care. Across all programs, 37,000 men and women have trained and worked as teachers, doctors, midwives, dentists, health workers, solar engineers, solar cooker engineers, water drillers and engineers, hand pump mechanics, architects, artisans, etc. In addition to the vocational training received and income generating opportunities, many of the professionals are also taught how to manage banks accounts. They support grassroots activism on women's issues, such as campaigns against rape.	Provider training	O'Brien C. The Barefoot College... Or Knowledge Demystified. The Social Work and Research Center: Tilonia, Rajasthan, India.
Bidan Delima	Indonesia	2003	Program to improve the quality of service delivery and family planning in the private sector, certifying high quality midwives as "Bidan Delima" and offering training and business support.	Franchise, Provider training, Business support, ICT	Maharani AC, Liesman T, Kusuma SH. Bidan Delima Accreditation: The Implementation of a Franchise Model in Regulating
Bloomberg Philanthropies Maternal Health Initiative	Tanzania	2006	Offers training and infrastructural investments to enable delivery of emergency obstetric care in remote areas. Upgraded 10 facilities, trained over 100 clinicians in emergency delivery, and contributed to increased facility-based deliveries.	Provider training, Facility upgrades	http://www.worldlungfoundation.org/ht/a/GetDocumentAction/i/27302 ; http://www.bloomberg.org/program/public-health/maternal-health/#progress
BlueStar Pilipinas	Philippines	2008	A social franchising strategy to improve access to quality sexual and reproductive health services through existing private midwife providers. Member facilities are refurbished and branded. Midwives pay membership fees to cover training and initial supplies and equipment.	Franchise, Provider training, Business support, ICT	The Global Health Group -Clinical Social Franchising Case Study Series: BlueStar Pilipinas
Boma la Mama	Tanzania	2011	The maternal center runs a midwifery school with two-year midwifery education program to become registered practitioners.	Provider training, Consumer education	
Child and Family Wellness (CFW) Shops (One Family Health)	Kenya, Rwanda	2000	A network of nurse-operated clinics and micro-pharmacies whose mission is to provide access to essential medicines to marginalized populations in the developing world. Main services include diagnosis, treatment, and prevention of prevalent outpatient conditions such as malaria, diarrheal diseases, family planning, newborn and pediatric care, safe motherhood, and sexually transmitted infections.	Franchise, Provider training, Business support, Supply chain enhancements	UCSF Clinical Social Franchising Compendium 2014

Program	Countries	Year	Program Description	Inputs	Evaluations
Chittagong Eye Infirmary & Training Complex	Bangladesh	1983	Offers training programs for ophthalmic nursing.	Provider training	
Clinics4All	Multiple (see profile)	2011	Training for clinic doctors and nurses; trains CHWs in disease management and lab and pharmacy services through an intensive, abridged training course.	Provider training, ICT, Supply chain enhancements	
CliniPAK (Clinical Patient Administration Kit)	Kenya, Nigeria, Tanzania, United States	2011	Laptops allow nurses, midwives, and CHWs to do a high quality assessment of patients in rural settings and manage patient records. The software also supports automated text message reminders for patients receiving ongoing treatment and for mothers requiring post-natal care.	ICT	
Communication for Behavior Change: Expanding Access to Private Sector Health Products and Services in Afghanistan (COMPRI-A)	Afghanistan	2006	Efforts to strengthen midwifery education and provide grants to community and hospital midwifery schools; CN/ME for midwives and doctors on clinical procedures, infection control, and client counseling; provide audiocassettes as refresher resources with basic health information and info on products.	Provider training, Consumer education, Supply chain enhancements	USAID. Evaluation of the COMPRI-A Social Marketing Program by USAID in the Islamic Republic of Afghanistan. December 2008.
Community Health Project (CHP) -Miyuji Ipagala Chamwino	Tanzania	2010	CHWs are supervised by nurses and deployed into the community to provide essential newborn health, with the assistance of the CommCare application which provides checklists, screening algorithms, and educational materials.	Provider training, ICT	
Community Midwifery Education (Health Sector Emergency Reconstruction and Development Project)	Afghanistan	2003	Local women in rural areas trained as midwives; students taught for 2 years on basic knowledge of obstetrics, neonatology, public health, family planning, prenatal care, delivery care and more. School provides access to medical and non-medical equipment and is linked with clinics for residencies. Free training and housing, provided the midwives serve their communities for 6+ years. Two volunteer community health workers – one male and one female – in the family health house assist the midwife, and also receive training.	Provider training	Speakman et al. Development of the Community Midwifery Education initiative and its influence on women's health and empowerment in Afghanistan. BMC Women's Health. 2014, 14:111.
Comprehensive Cataract Care (CCC)	Vietnam	1996	Training of healthcare personnel to properly identify and refer patients in need of eye health services and deliver quality eye care.	Provider training	
Contracting Health Teams and Hospitals in Jalisco, Mexico	Mexico	1997	The Government of Jalisco contracted health teams consisting of a physician, nurse, and health technician to provide basic health services in rural areas - 80% of the contracted personnel were female.	Contracting	Nigenda GH, Gonzalez IM. Contracting private sector providers for public sector health services in Jalisco, Mexico: perspectives of system actors. Human Resources for Health 2009, 7:79.
Cure2Children	Pakistan	2007	Focused, hands-on training of nurses & doctors on bone marrow transplant, with expert supervision for 2 months and remote online consultations.	Provider training, ICT	Siddique S, et al. Outcomes, Nurses' Experiences and Issues in the First Bone Marrow Transplant Unit in a Government Hospital in Pakistan. 39th Annual Meeting of the European Group for Blood and Marrow Transplantation, 29th Meeting of the Nurses Group, April 2013. London, UK, 2013.

Program	Countries	Year	Program Description	Inputs	Evaluations
D-tree International	India, Malawi, South Africa, Tanzania	2004	Uses clinical protocols to develop clinical decision support software that can be loaded onto mobile phones for use by Clinic staff and CHWs to help them accurately assess, diagnose, and treat patients.	ICT, Provider Training	http://www.d-tree.org/publications/
Dhaka Community Hospital Rural Health Program	Bangladesh	1988	The hospital regularly provides training to doctors, nurses, paramedics, community health and development workers, TBAs, and village doctors. Trainings have covered "Essential Services Packages" with rotating topics across different disciplines.	Provider training, Consumer education	
Diabetes Care in Nairobi slums	Kenya	2008	Clinics run on a fortnightly basis, manned voluntarily by 4 clinicians, 2 nurses, a counselor, and an assistant. Health care personnel are trained in the principles of diabetes care and management based on current guidelines and existing training materials developed by Kenya Diabetes Management and Information Centre. Has trained 27 clinicians, 54 nursing staff, 17 community health workers, 19 lay educators, and 33 medical students.	Provider training	
DKT International	Egypt, India, Indonesia, Philippines, Mozambique, Sudan	2004	A social marketing nonprofit working in Latin America, Africa, and Asia to improve access to reproductive health products and services. Midwives can join the franchise and receive training, discounted products, and business support.	Franchise, Provider training, Business support, Supply chain enhancements, ICT	http://www.dktinternational.org/publications-resources/contraceptive-social-marketing-statistics/
Enhancing Nurses Access for Care Quality and Knowledge through Technology (ENACQKT)	Antigua and Barbuda, Dominica, Dominican Republic, Saint Kitts & Nevis, Saint Lucia	2008	Empowers nurses by providing training and other services via ICT. A key component of ENACQKT is building nurses' capacities through technology instruction, giving them the means to access healthcare applications through the PDAs/tablets provided. This enhances professional development and improves quality of care for patients.	Provider training, ICT	Petrucka P, et al. "Enhancing Nurses' Care and Knowledge Through Access to Technology: An International m-Health Exemplar." <i>Canadian Journal of Nursing Research</i> 45.1 (2013): 74-91.
EntrepreNurse	Philippines	2010	EntrepreNurse promotes the formation of cooperatives of self-employed member nurses, stimulating entrepreneurship and increasing provision of care in poor rural communities.	Cooperative, Provider training	
Ethnic Minority Midwives Project	Vietnam	2006	Recruits and trains local women (some with prior health-related training) as birth attendants/ village health workers, with an 18-month training on safe motherhood, newborn care, and primary health care. Course completion certifies them as VHVs and village-based skilled birth attendants, recognized by the government. They receive monthly stipends from the Ministry of Health.	Provider training	
Fast Track Initiative for Reducing Maternal and Newborn Mortality	Cambodia	2010	Investment in training centers for emergency obstetrics and c-sections; training of primary and secondary midwives; development of standardized in-service training modules, covering antenatal care, safe delivery and essential newborn care, emergency obstetrics, safe abortion and post-abortion care, and family planning; bridging training for primary midwives to become secondary midwives; improved pre-service training for MVVs, recruiting more midwives into the 3-year associate degree midwifery program and improving capacity of tutor and regional training centers.	Provider training, Consumer education	

Program	Countries	Year	Program Description	Inputs	Evaluations
Fistula Hotline/ Aberdeen Women's Centre	Sierra Leone	2011	AWC provides on-the-job training in fistula and obstetric related topics to all nurses on an ongoing basis. A core group of 27 nurses have received several trainings on fistula and obstetric related topics. 3 midwives have been sent to international midwifery conferences.	Provider training, Consumer education, ICT	
Garhwal Community Development and Welfare Society	India	1991	The Masiha Hospital staff is comprised of 1 MD, 4 staff nurses, and 18 paramedics; paramedics are local girls, selected by the community, who receive training. Training includes weekly classes and hands-on training on first aid, lab tests, injections, and basic health education. The doctor also personally funds further training for paramedics in nursing with commitment to work at the hospital for 2+ years after certification; Nurses also trained to run community health activities.	Provider training, Consumer education, ICT, Facility upgrades	
Ghana Registered Midwives Association (GRMA)	Ghana	1950	Professional association aiming to: promote training, development, and entrepreneurship, and serve as an advocate to midwives; improve the standards of midwifery practice through community participation; and promote the provision of equitable high-quality services to women, children, and their families.	Provider training, Professional association	
Green Tara Trust	Nepal	1999	Program provided equipment to 2 government facilities to enable basic antenatal checkups. Health facility staff receive regular training from GTT to update their antenatal and communication skills. They also have a mobile vaccination clinic that also provides antenatal care. The midwife "Health Promoters" conduct visits and train the health facility staff.	Provider training, Facility upgrades, Consumer education, Mobile clinic	
HDI Medical and Technical Support Program	Rwanda	2005	Provides advanced training to nurses, doctors, and other health professionals at local health centers, district hospitals, and private institutions. Qualified local, regional, and international medical professionals assist in training on medical techniques and protocols.	Provider training	
Health eVillages	Afghanistan, Haiti, Kenya, Uganda, United States	2011	Health eVillages provides mobile phones to physicians, nurses, medical students, and residents in underserved areas where access to updated medical resources is in short supply or nonexistent.	ICT	
Healthy Start (Mercy Corps)	Indonesia	2006	Breastfeeding management and counseling trainings for midwives.	Provider training, Consumer education	
Hope Foundation for Women and Children of Bangladesh Inc.	Bangladesh	1999	Community based Midwifery Diploma Program (CMDP) trains local women to be midwives through a 3-year program; Village Nurse Training for nurses in rural villages to execute critical care services for the community.	Provider training, Consumer education, ICT, Facility upgrades	
Integrated Rural Healthcare Pilot	India	2009	A nurse practitioner-based comprehensive fixed-price health care system in Tamil Nadu. The venture will comprise a nurse-led primary healthcare facility offering diagnostics and outpatient care. A referral network will build a full healthcare continuum.	ICT, Supply chain enhancement	

Program	Countries	Year	Program Description	Inputs	Evaluations
Jacaranda Health	Kenya	2010	Training staff nurses to be strong leaders and managers, from handling obstetric emergencies to running clinical case reviews and quality initiatives. Develop clear career ladder to keep nurses moving up and growing their capacity. Work with expert clinical educators and faculty to design dynamic continuing training for staff nurses that include hard and soft skills.	Provider training, ICT	
K-MET Post Abortion Care Network	Kenya	1996	Franchise that actively recruits and trains providers, including physicians, clinical officers, and nurses, in 5 provinces in Kenya. Members in the network must meet facility standards for cleanliness and privacy, and must pay membership fee of USD 116. In exchange, they receive training, some clinical equipment, regular delivery of contraceptive supplies, and low-interest loans for facility improvements.	Franchise, Provider training, Business support, ICT	Montagu D, et al. Kenya: Reaching the Poor Through the Private Sector - A Network Model for Expanding Access to Reproductive Health Services. HNP Discussion Paper 11. World Bank. May 2005
LifeNet International	Burundi	2008	Clinical social franchise that focuses on core components of clinic operations: nurse training, business coaching, pharmaceutical supply, and growth financing.	Franchise, Provider training, Business support, Supply chain enhancements, ICT	UCSF Clinical Social Franchising Compendium 2014
LifeSpring Hospitals Private Limited (LHPL)	India	2005	LifeSpring hospitals primarily use midwives to provide maternity care, allowing one doctor to oversee more patients by focusing on cases that specifically require a doctor's attention.	Provider training, Business support, ICT	Johar G. Case Study: LifeSpring Hospitals. Columbia CaseWorks. Spring 2010.
Mahila Swahsta Sewa	Nepal	2009	Fractional franchise of 300 clinics staffed by Assistant Nurse Midwives who provide a variety of family planning, reproductive health, and maternal and child care services.	Franchise, ICT, Provider training, Consumer education	Schlein K, Drasser K, Montagu D. (2011) Clinical Social Franchising Compendium. San Francisco: The Global Health Group, UCSF.
Markle Ratanakiri Telemedicine Clinic	Cambodia	1993	Nurses at Sihanouk Hospital Center of Hope travel to Ratanakiri clinic monthly for patient consults. They tele-share patient symptoms, digital photos, ultrasound readings, and X-rays with the hospital and Harvard specialists through Partners Telemedicine for diagnostic and treatment guidance.	ICT	Ricciardi L. A Model for Remote Health Care in the Developing World: The Markle Foundation Telemedicine Clinic in Cambodia. March 2004.
Maternova Obstetric Kit	Belize, Haiti, Honduras, Liberia, Mali, Tanzania, Uganda, Zambia	2010	Provide pre-packaged, portable kit with supplies and ICT inputs, including (1) wind-up mobile phone charger to call for help or referral, (2) solar powered headlamp to see births, (3) calibrated drape to measure blood loss, (4) pictorial reminder cards on management of the third stage of labor, (5) DVD on how to manage postpartum hemorrhage.	Provider training, ICT	
Mayer Hashi Project	Bangladesh	2009	2,731 providers trained in active management of labor and delivery (88% were women). Nurses trained and authorized in IUD insertion; training to prevent post-partum hemorrhage during facility deliveries; trained doctors and nurses in fistula care; training of trainers for facility-based maternity service providers.	Provider training, Consumer education, Supply chain enhancements	Rahman M, Curtis SL, Haider MM. Impact Evaluation of the Mayer Hashi Program of Long-Acting and Permanent Methods of Contraception in Bangladesh. MEASURE Evaluation, USAID. July 2014
Medical Education for Ethnic Minorities (ME EM)	Vietnam	2009	Advocate for greater enrollment of high school students in medical training to increase the number of well-trained and qualified doctors, nurses, and midwives in communities. Also, focuses on improving quality of teaching by updating the primary health curricula and tailoring curricula to address cultural barriers and challenges to healthy behavior and care-seeking in minority communities.	Provider training	

Program	Countries	Year	Program Description	Inputs	Evaluations
Medical Education in HIV/AIDS Using E-Learning Approach	Vietnam	2009	Three courses on general HIV/AIDS (ART), palliative Care (PC) and methadone maintenance therapy (MMT) were delivered by faculty of Hai Phong Medical University during the academic year 2009–2010. A total of 87 general doctors, bachelor nurses, and pharmacists had been trained in ART, PC and MMT.	Provider training, ICT	
Merrygold Health Network	India	2007	Clinical franchise that targets the low-income population, migrants/refugees, women and children of Uttar Pradesh. Services include reproductive and sexual health services. The franchise uses a hub and spoke model to oversee Auxiliary Nurse Midwives and other providers.	Franchise, Provider training, Business support, ICT, Access to capital	UCSF Clinical Social Franchising Compendium 2014
Micro Health Franchise System (UmeedSey)	Pakistan	2011	Micro Health Franchise System empowers community midwives to provide high quality and cost effective healthcare services to mother and child in poor communities through the use of mobile phones and electronic medical records.	Franchise, Provider training, Business support, ICT, Access to capital, Supply chain enhancements, Facility upgrades	
MicroClinic International	Ghana, Uganda	2009	MCI outlets are 1,100-square-foot buildings with small labs and living quarters for franchisees, typically community health nurses. MCI provides business training, oversight, accounting services, a management information system, and brand management. Provides quality control and sources for supplies including drugs that meet intellectual property protection criteria. MCI clinics provide a variety of primary care services including maternal and child health services, tuberculosis, diarrhea, vitamins, and pneumonia.	Franchise, Provider training, Business support, Supply chain enhancements, ICT	
Mobile Technology for Community Health (MOTEC)	Ghana	2010	“Mobile Midwife” app enables pregnant women and their families to receive SMS or pre-recorded voice messages providing time-specific information about their pregnancy; “Nurse App” enables Community Health Nurses to record patient care, identify women and newborns due for care, and generate monthly facility reports.	Consumer education, ICT	MOTEC. Mobile Technology for Community Health in Ghana: What is it and what Grameen Foundation has learned so far. 2nd Edition. September 2012.
Mother Bles Birthing Clinics	Philippines	2010	A network of PhilHealth accredited birthing centers run by private midwives, in partnership with the Leyte Provincial Governments and the KaKaK Foundation. Participating midwives receive training, facility upgrades, and marketing support.	Franchise, Provider training, Business support, Facility upgrades	
MSF Khayelitsha mentorship programme	South Africa	2011	MSF partnership with City of Cape Town and provincial government of Western Cape on mentorship program for nurse-initiated and managed antiretroviral therapy (NIMART). Assigns participating nurses to 40 hours of mentorship with an MSF nurse mentor in high volume HIV clinics. Includes side-by-side case management, reviewing medical charts, case reviews of common HIV complications, and short in-service trainings. MSF clinical mentor managers participate in portion of mentorship to assess mentees’ competency to initiate ART, with continued mentorship up to 3 months until authorized for ART.	Provider training	

Program	Countries	Year	Program Description	Inputs	Evaluations
New Start Zimbabwe	Zimbabwe	1999	NewStart is an HIV testing and counseling franchise, managed by professional counselors who have another professional background such as nursing, teaching, or social sciences.	Franchise, Provider training, Business support, ICT, Access to capital	Richter K, Joseph D, Rosenstock S, England S. (2008) Multi-country evaluation of social marketing programs for promoting HIV voluntary counseling and testing. (Working Paper No. 78). Washington, DC. PSI
Nurse Initiation Management of ART Training & Mentoring	South Africa	2012	NIMART through partnership between HEAIDS, Department of Health, and Foundation for Professional Development (FPD). FPD provides ongoing support through Roving Mentor Teams, comprised of an MD, RN, and HIS mentor to support expansion of HIV treatment and TB diagnostics.	Provider training	
ORBIS Flying Eye Hospital	Botswana, Burkina Faso, Cameroon, Ethiopia, Global, Malawi, Mali, Tanzania, Uganda	1999	Mobile teaching hospital in a refurbished DC-10 jet aircraft – local doctors, nurses and technicians work alongside ORBIS's international medical team to exchange knowledge and improve skills.	Provider training, ICT	
Partograph Blended Learning of Udayana University	Indonesia	2010	Train midwives to use partograph to track progression of labor and detect when interventions may be needed. Course includes (1) introductory session at the local learning center; (2) self-guided learning using "WHO Partograph e-Learning Tool"; (3) workshop at local learning center connecting all sites and WHO via videoconference.	Provider training, ICT	
PATH Cervical Cancer Prevention Program	Vietnam	2009	Training of nurses and midwives on visual inspection with acetic acid (VIA) and cryotherapy, and training of doctors on LEEP and colposcopy; additional training on HPV vaccination; and training of trainers.	Provider training, Consumer education, Supply chain enhancements	
Pediatric Rehabilitation in Tanzania	Tanzania	2006	Nurse-led physical therapy in remote areas; Arusha Lutheran Medical Centre offers weekly training sessions for nurses and doctors, and regular in-house continuing medical & nursing education.	Provider training	
Penda Health	Kenya	2011	A group of member clinics in the Tunza Franchise established with the goal of bringing high quality, affordable, outpatient healthcare services to low- and middle-income women and their families throughout East Africa. Clinics are staffed by nurses and clinical officers with additional physician oversight.	Franchise, Provider training, Business support, ICT, Facility upgrades	Esper H, London T, Kanchwala Y. (2013). Improved Health Care and its Impact on Children: An Exploration of Penda Health. Child Impact Case Study No. 6. Ann Arbor: The William Davidson Institute
Primary Healthcare Nursing Promotion Program	Guatemala	2005	Program run by the National School for Nurses in Coban to increase nurses in rural areas. Virtual nursing course taught via phone and 2-way data communication. Subset of the first virtual nursing course cohort (2004) became "community tele-facilitators" with mobile phones to link up with health specialists in urban areas.	Provider training, ICT	
Private Nurse Midwives Networks in Kenya	Kenya	2001	Professional association aiming to improve access to quality post-abortion care and other reproductive health services and provide support, training, and supervision for new cadres of nurse midwives providing these services.	Professional association, Provider training, Access to capital	

Program	Countries	Year	Program Description	Inputs	Evaluations
Private Nurses and Midwives Association Tanzania (PRINMAT)	Tanzania	1999	A membership organization that aims to improve maternal and child mortality through increased access to sexual and reproductive health services. Private nurses and midwives can join to benefit from educational workshops, peer review with fellow member midwives to facilitate mutual support and accountability, access to loans for purchasing supplies and equipment, and assistance registering new maternity/nursing homes with the district government and the Tanzania Nurses and Midwives council.	Provider training, Professional association, Facility upgrades, Access to capital	esd, USAID. A Description of the Private Nurse Midwives Networks (Clusters) in Kenya: A Best Practice Model. Extended Service Delivery Project Best Practice Series Report No. 2. May 2007.
ProFam (PSI)	Benin, Cameroon, Mali, Uganda, Zimbabwe	1998	A clinical social franchise to increase access to and demand for affordable, high quality long-term family planning services through a network of private healthcare providers, often nurses and midwives.	Franchise, Provider training, Business support, ICT	
Project HEART (Help Expand Antiretroviral Therapy)	Cote d'Ivoire, Mozambique, South Africa, Tanzania, Zambia	2004	To support an effective ART program, nurses and other health personnel are trained in all aspects related to HIV/AIDS, including VCT, behavior change, HIV treatment, long-term care, opportunistic infection (OI) treatment and prevention, nutrition, and follow-up. Nurses at the hospital also trained in mentoring and training for new staff.	Provider training, Consumer education, ICT	Rodrigues J. Project HEART End-of-Project Report: From Emergency to Sustainability. Elizabeth Glaser Pediatric AIDS Foundation. January 2012.
Public Private Partnership for Nursing Training in Punjab	Pakistan	2007	Partnership between Government of Punjab and Saida Waheed Fatima Memorial Hospital College of Nursing to provide basic nursing diplomas to 1,820 nurses, post-basic specialization to 1,300 nurses and nursing degrees to 650 students over 10 years. College worked with local conservative communities to encourage and allow young women to study at the nursing college and work.	Provider training	
Rachel House Pediatric Palliative Care	Indonesia	2006	Classroom and bedside training on palliative care for children dying of AIDS and cancer. Continuous training opportunities in oncology and HIV. Also launched a 2-year palliative training program, partnering with the Singapore International Foundation and Ministry of Foreign Affairs to provide 6 sessions for staff.	Provider training	
Redplan Salud (RPS)	Peru	2002	A fractional franchise of professional midwives that targets lower-income clients, aiming to provide them with affordable, high-quality reproductive health services and family planning products.	Franchise, Provider training, Business support, Supply chain	Escobar E, Schlein K. (2011). Clinical Social Franchising Case Study Series: RedPlan Salud I Instituto Peruano de Paternidad Responsable (INPPARES). San Francisco: The Global Health Group, Global Health Sciences, UCSF.
Reproductive and Child Health Centers	India	1997	A program of ARTH (see above), this is a nurse-practitioner based model operating in a remote rural area of India to provide primary and emergency obstetric care services to pregnant women, new mothers, and infants. The RCH aims to provide maternal and neonatal health services to disadvantaged populations and train nurse-midwives to provide safe maternal and neonatal health services in the absence of a doctor.	Provider training	

Program	Countries	Year	Program Description	Inputs	Evaluations
SAHEL (Satellite African e-Health validation)	Kenya, Senegal	2011	Medical e-Learning platform for continuous training of healthcare professionals in rural settings. Clinical e-Services link dispensaries and treatment centers to central medical centers for diagnostic and treatment assistance. Computerized HIS manage patient files, collect medical data and monitor epidemics such as AIDS in Kenya or malaria in Senegal.	Provider training, ICT	
Saving Newborn Lives 2 Program (SNL2)	Indonesia	2006	On-the-job training of midwives on critical newborn care skills; training-of-trainers to ensure ongoing mentorship, supervision, and refresher courses for village midwives. Midwives also trained in leadership and facility management.	Provider training, Consumer education	Tinker A, Parker R, Lord D, Gear K. Advancing newborn health: The Saving Newborn Lives initiative. <i>Global Public Health</i> 2010;5(1):28-47.
Scaling Up Home-based Maternal and Postnatal Care	Kenya	2007	60 community midwives (CMs) trained in essential obstetric and newborn care & family planning, as well as infection prevention, communication skills, and recordkeeping. CMs complete 2-3 week residencies in busy maternity units; FRONTIERS engaged a microfinance NGO to offer training on basic business skills and financial literacy, encouraging CMs to form informal associations to get training.	Provider training	Mannah MT, Warren C, Kuria S, Adegoke AA. Opportunities and challenges in implementing community based skilled birth attendance strategy in Kenya. <i>BMC Pregnancy and Childbirth</i> 2014, 14:279.
Strengthening Community-based Mental Health project	Angola, Vietnam	2011	Mobile team of psychiatrists provides training to doctors, nurses, and VHWs in psychological screening, basic treatment, basic psycho-education, and an approach to mental health drawing on social support and culturally appropriate models of healing.	Provider training	
Swavalamban Yojana	India		The Government of India signed an agreement with 28 private nursing colleges to train 500 government-sponsored nursing students each year. Course is open to residents in the rural area of Madhya Pradesh between the ages of 17-25 who in turn commit to serve in the region for 7 years after completing the program.	Provider training	
The Family Clinic	Indonesia	1981	Midwife-run clinics provide maternal and child health services, such as family planning, immunizations, antenatal care, pap smears, traditional childbirth deliveries, general health care and dental health to low-income populations in Jakarta and West Java.	Consumer education	
The Initiative to End Child Malnutrition (IECM)	Uganda	2010	Trained physicians and nurses at Nyakibale Hospital to diagnose and treat children with severe or moderate malnutrition with complications. Nursing students receive hands-on and classroom education at the Karoli Lwanga nursing and midwifery school.	Provider training, Consumer education	
Tiyatien Health	Liberia	2007	Train front line workers (FLWs) from communities and offer weekly supervision from nurse mentors. Provide research, policy planning, and health delivery support.	Provider training	
Tsilitwa Telehealth Project	South Africa	2003	Nurses with limited training can consult doctors in the telehealth network on complicated cases for advice on treatment or possible referral to a specialist.	ICT	

Program	Countries	Year	Program Description	Inputs	Evaluations
Tunza Family Health Network	Kenya	2008	A fractional franchise of nurses and some clinical officers who provide family planning and reproductive health services.		Nderitu E. (2013) Effects of social franchising on access to healthcare: A case of Tunza Clinics. International Journal of Social Sciences and Entrepreneurship. Vol.1, Issue 2, 2013, 1 (2), 650-663; PSI/K. Clinical Social Franchising Case Study: Tunza Health Network. December, 2010
Uganda Private Midwives Organization (UPMO)	Uganda	1970 and Prior	Professional midwifery association comprised of over 2,000 midwives throughout Uganda. Orchestrates clinical courses for member midwives to earn continuing education units needed for re-licensure and organize group trainings in basic business skills.	Provider training, Professional Association, Facility upgrades, Access to capital	pdf.usaid.gov/pdf_docs/Pnach158.pdf
Uganda Private Providers Loan Fund – Summa/USAID	Uganda	2001	An innovative microfinance scheme targeting small-scale private providers, including midwives, nurses, and doctors. Recognizing the importance of these providers, particularly in serving as front-line providers for lower income populations, the program aims to increase the viability of these private practices, expand services, and improve the quality of care.	Access to capital, Business support	Seiber EE, Robinson-Miller A. (2004) The Impact of a Microfinance Program on Private Health Care Providers in Uganda. Washington, DC: USAID/Commercial Market Strategies Project.
Uganda Rural Fund (URF)	Uganda	2005	Through their health program, URF offers a prevention-focused health care outreach model, organizing health camps to address common diseases. Along with a team of doctors and village health workers, nurses staff the clinics, and lead workshops for communities. URF also has a variety of women's empowerment initiatives in addition to their health work.	Provider training, Consumer education, Mobile clinic	
Village Health and Community Development	Cambodia	2010	Training for school-based nurses. Medical specialists rotate through schools covering various health topics and physical examination. Also offers e-learning and diagnostic tools, monthly meetings to discuss topics and cases, and quarterly textbook courses. A dedicated nurse mentor travels to remote clinics to provide additional support and education to staff nurses.	Provider training, Consumer education, ICT	
Village Health Works (VHW)	Burundi	2006	A nonprofit organization that aims to provide quality, compassionate health care in a dignified environment while also treating the root causes and social determinants of illness, disease, violence, and neglect. VHW currently has one physician, four nurses, one lab technician and 60 community health workers. Nurses manage less complicated cases. VHW Women's Cooperatives provide employment, training and social support to local women.	Consumer education	
Viva Afya (formerly Carego Livewell)	Kenya	2008	Hub-and-spoke model to empower nurses and clinical officers to run independent clinics that link up electronically with medical hubs.	ICT, Consumer education	
Vivekananda Girijana Kalyana Kendra	India	1981	Train local tribal girls in reproductive and child health to serve as auxiliary nurse midwives in their community. The course is 18-months long. They are then posted in tribal sub-centers and report into the District Primary Health Center.	Provider training, ICT	

Program	Countries	Year	Program Description	Inputs	Evaluations
Well-Family Midwife Clinic	Philippines	1997	A network of franchised clinics providing family planning, maternal and child health service, midwifery services, and immunizations. The franchise offers technical assistance and business training to member midwives.	Franchise, Provider training, Business support, Access to capital	JSI, USAID. Social Franchising Health Services: A Philippines Case Study and Review of Experience. 2003
Zambia Union of Nurses Organization (ZUNO)	Zambia	2007	With the mission to empower nurses and uphold professional excellence, ZUNO engages in collective bargaining to attain fair wages and improved working conditions. They organize leadership and business trainings for their members and have engaged in multiple international partnerships for capacity building.	Provider training, Professional association, ICT	

PHOTO CREDITS

Cover	Allan Gichigi for CHMI
4	Allan Gichigi for CHMI
6	Photo courtesy of Penda Health
8	Riccardo Gangale for HealthStore Foundation
11	Oscar Siagian for CHMI
19	Chad Bartlett for LifeNet International
44	Alex Kamweru for CHMI

HealthMarketInnovations.org



Center For
Health Market Innovations