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Maternal and Child Survival Program

Maternal and Child Survival Program Ghana

End-of-Project Report

October 2014–June 2019

Submitted on: July 25, 2019

Submitted to:
United States Agency for International Development
Cooperative Agreement #AID-OAA-A-14-00028

Submitted by: Jhpiego

www.mcsprogram.org

The Maternal and Child Survival Program (MCSP) is a global, $560 million, 5-year cooperative agreement funded by the United States Agency for International Development (USAID) to introduce and support scale-up of high-impact health interventions among USAID's 25 maternal and child health priority countries,* as well as other countries. MCSP is focused on ensuring that all women, newborns and children most in need have equitable access to quality health care services to save lives. MCSP supports programming in maternal, newborn and child health, immunization, family planning and reproductive health, nutrition, health systems strengthening, water/sanitation/hygiene, malaria, prevention of mother-to-child transmission of HIV, and pediatric HIV care and treatment.

* USAID's 25 high-priority countries are Afghanistan, Bangladesh, Burma, Democratic Republic of Congo, Ethiopia, Ghana, Haiti, India, Indonesia, Kenya, Liberia, Madagascar, Malawi, Mali, Mozambique, Nepal, Nigeria, Pakistan, Rwanda, Senegal, South Sudan, Tanzania, Uganda, Yemen and Zambia.

This study is made possible by the generous support of the American people through USAID under the terms of the Cooperative Agreement AID-OAA-A-14-00028. The contents are the responsibility of MCSP and do not necessarily reflect the views of USAID or the United States Government.

Cover photos by Karen Kasmauski (photo 1 and 2) and Kate Holt (photo 3).

September 2019

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Acknowledgments

MCSP would like to acknowledge the close collaboration and partnership with the Ghana Ministry of Health (MOH) Human Resource for Health Development Division, the national programs of the Ghana Health Service (GHS), and the Policy, Planning, Monitoring, and Evaluation Division throughout the course of this project.

MCSP has benefited from the support and guidance of Akua Kwateng Addo (former USAID Ghana director, Office of Population, Health, and Nutrition), Janean Davis (USAID Ghana director, Office of Population, Health, and Nutrition), Juliana Pwamang (USAID nutrition specialist and MCSP activity manager), Rebecca Fertziger (deputy director, Office of Population, Health, and Nutrition), Kwame Ankobea (USAID malaria advisor), Nabil Alsoufi (USAID HIV/AIDS team leader), Nadia Tagoe (USAID program management specialist, HIV), Rubama Ahmed, and Michelle Schaan (USAID health systems strengthening team lead). We would also like to thank our USAID Washington AOR team for its guidance and support throughout the program.

MCSP would also like to thank the Korea International Cooperation Agency for its financial support and its collaboration in establishing skills labs and supporting eLearning in health training institutions (this) in Volta Region.

MCSP would like to recognize the following offices' and organizations' staff, who were central to the realization of this project:

- National Malaria Control Programme, GHS
- Family Health Division, GHS
- Nursing and Midwifery Council
- Ghana College of Nurses and Midwives
- The principals and tutors of the HTIs in Ghana
- MOH
- Regional and district health directorates of Ashanti, Eastern, Brong Ahafo, Upper East, and Upper West
- Subdistricts of Ashanti, Eastern, Brong Ahafo, Upper East, and Upper West
- Community-Based Health Planning and Services zones of Ashanti, Eastern, Brong Ahafo, Upper East, and Upper West
- National Health Insurance Authority
- Systems for Health
- Evaluate for Health
- Communicate for Health
- Japan International Cooperation Agency

Abbreviations

CHMC	Community Health Management Committee
CHN	community health nurse
CHO	community health officer
CHPS	Community-Based Health Planning and Services
FAA	fixed amount award
FP	family planning
GCNM	Ghana College of Nurses and Midwives
GHS	Ghana Health Service
GoG	Government of Ghana
HTIU	Health Training Institution Unit
ICT	information communication technology
LMS	logistic management system
MCHIP	Maternal and Child Health Integrated Program
MCSP	Maternal and Child Survival Program
MNCH	maternal, newborn, and child health
MOH	Ministry of Health
NHIA	National Health Insurance Authority
NMC	Nursing and Midwifery Council
PHC	primary health care
PPMED	Policy, Planning, Monitoring, and Evaluation Division
PSE	pre-service education
PY	program year
TWG	technical working group
UHC	universal health coverage
USAID	US Agency for International Development

Country Summary

Left: Map of Ghana

Right: A preceptor and midwifery student use a humanistic newborn model to practice safe labor and delivery skills in their new skills laboratory.

Photo by Karen Kasmauski, MCSP

Selected Health and Demographic Data for Ghana	
Live births/year[1]	776,532
MMR (per 100,000 live birth) [2]	310
NMR (per 1,000 live birth)[2]	25
U5MR (per 1,000 live birth)[2]	52
IMR (per 1,000 live birth)[2]	37
CPR (Modern methods)[2]	25%
ANC4+[2]	89%
TFR (births per woman)[2]	3.9
Births assisted by a skilled provider (%)[2]	80%
Source: (1) UNICEF and WHO 2014; (2) Ghana Maternal Survey 2017	

Program Objectives and Major Accomplishments

- Better prepare the midwifery and nursing workforce so that it is equipped with the knowledge and skills to effectively provide HIV, malaria, nutrition, family planning (FP), and maternal, newborn, and child health (MNCH) services.
  - Improved service delivery capacity by setting up comprehensive clinical skills labs and trainings for over 45,000 students in health training institutions to reinforce knowledge and strengthen practical skills for quality care before they enter the workforce.
  - Implemented a robust learning agenda that included a task analysis of in-service providers, an assessment of student skills before and after intervention, formative research on Community-Based Health Planning and Services (CHPS) implementation in urban settings, and several case studies to inform future midwifery skills building in Ghana.
- Improve the national and regional capacity to implement a harmonized CHPS model that provides high-quality HIV, malaria, FP, nutrition, and MNCH services in five regions in Ghana.
  - Strengthened the capacity of regional health management teams to design projects addressing their community health priorities (through a grant funding strategy) and building the institutional capacity of the awardees for sustainability beyond the life of the project, contributing to self-reliance.

Program Dates	October 2014 to June 2019		
Funding	$18,815,891		
Geographic Scope	National, regional, and district level		
Geographic Presence	**No. of Regions (%)**	**No. of districts (%)**	**No. of facilities/communities (%)**
	Pre-service education (PSE): 10 of 10 regions (100%) CHPS: Ashanti, Brong Ahafo, Eastern, Upper East, and Upper West (50%) Population: 28 million	PSE: 62 of 254 (24%) CHPS: 107 of 254 (42%)	PSE: 70 nursing and midwifery training schools (100%) CHPS zones: 3,259 of 5,918 (55%)
Technical Interventions	 PRIMARY: child health, immunization, malaria, maternal health, newborn health, nutrition, reproductive health, HIV, and water, sanitation, and hygiene CROSS-CUTTING: community health, gender, digital health, PSE		

Executive Summary

The Maternal and Child Survival Program (MCSP) is a global, $560 million, 5-year cooperative agreement funded by the US Agency for International Development (USAID) to introduce and support scale-up of high-impact health interventions among USAID's 25 maternal and child health priority countries, as well as other countries. MCSP's pre-service education (PSE) (including eLearning) and Community-Based Health Planning and Services (CHPS) program started in Ghana in October 2014 and ended in June 2019.

From 2010 to 2014, MCSP's predecessor, the Maternal and Child Health Integrated Program (MCHIP), worked with all 61 of Ghana's midwifery and nursing schools. When MCHIP ended, USAID Ghana requested that MCSP develop a 5-year work plan to expand MCHIP's PSE support to all midwifery, community health nursing, public health nursing, general nursing, and medical assistant training schools in Ghana's 10 regions. USAID also requested that MCSP support the CHPS program at the national level and in five MCSP target regions: Ashanti, Brong Ahafo, Eastern, Upper East, and Upper West.

MCSP made great strides toward achieving its objective to contribute to improving health outcomes for HIV, malaria, nutrition, family planning (FP), and maternal, newborn, and child health (MNCH) services. Major achievements over the life of the project include:

- Establishing clinical skills labs in 70 nursing, midwifery, and physician assistant schools used by 40,000 students: MCSP trained over 800 principals, tutors, and student representatives to use and maintain the skills labs so that graduates provide higher-quality care as they enter the workforce. MCSP set up clinical skills labs in an additional three institutions, including the Ghana College of Nurses and Midwives, the Health Training Institution Unit of the Ministry of Health (MOH), and Nursing and Midwifery Council of Ghana, for a total of 73 skills labs across the country.
- Developing a robust learning agenda to assess changes in students' knowledge and skills following the development or improvement of institutional skills labs: Community health nursing students' competencies in the overall observed structured clinical examinations assessment improved from a baseline of 34% to 70% at endline.
- Updating the Ghana Health Service (GHS)'s *Reference Manual for Preceptorship in Nursing and Midwifery Education* and developing an accompanying curriculum to prepare preceptors to provide practical experience to students and health facility residents
- Developing and deploying eLearning modules and platform in 29 schools in Ghana's 10 regions
- Supporting the establishment of an eLearning Secretariat inaugurated in 2016: Four national service personnel served in the secretariat in program year 4 and are now employed by the MOH to ensure sustained capacity-building efforts, maintenance, and scale-up of the eLearning.
- Providing funding to regional health teams in the five focus regions through fixed amount awards (FAAs) for management and service provision capacity-building: Regional CHPS staff used FAA funding to train 598 community health officers (CHOs) and 5,323 community health management committee members.
- Standardizing the strategy and guidelines for CHPS to deliver primary health care (PHC) services at the community level using evidence-based strategies through the GHS CHPS implementation guidelines
- Harmonizing CHO training materials in support of the Policy, Planning, Monitoring, and Evaluation Division (PPMED) to ensure that CHOs who manage CHPSs can undertake community outreach, deliver the standardized package of CHPS services, and manage the facility
- Supporting establishment of the CHPS implementation working group to coordinate partners working in CHPSs, and ensuring that CHPS activities are leveraged and not duplicated
- Contributing to improvement of some health indicators in five regions through CHPS FAA implementation, such as increased number of home visits and FP (see FAA brief)
- Addressing the need to better understand urban health needs by conducting a learning activity to gather countrywide data to inform an urban CHPS model for densely populated districts in Ghana

- Partnering with the PPMED to develop a CHPS planning and resource mobilization tool to estimate the costs required to establish, maintain, and operate CHPS zones
- Supporting the Government of Ghana's development and implementation of an actuarial model to assess the feasibility of a PHC-focused National Health Insurance Scheme

Introduction

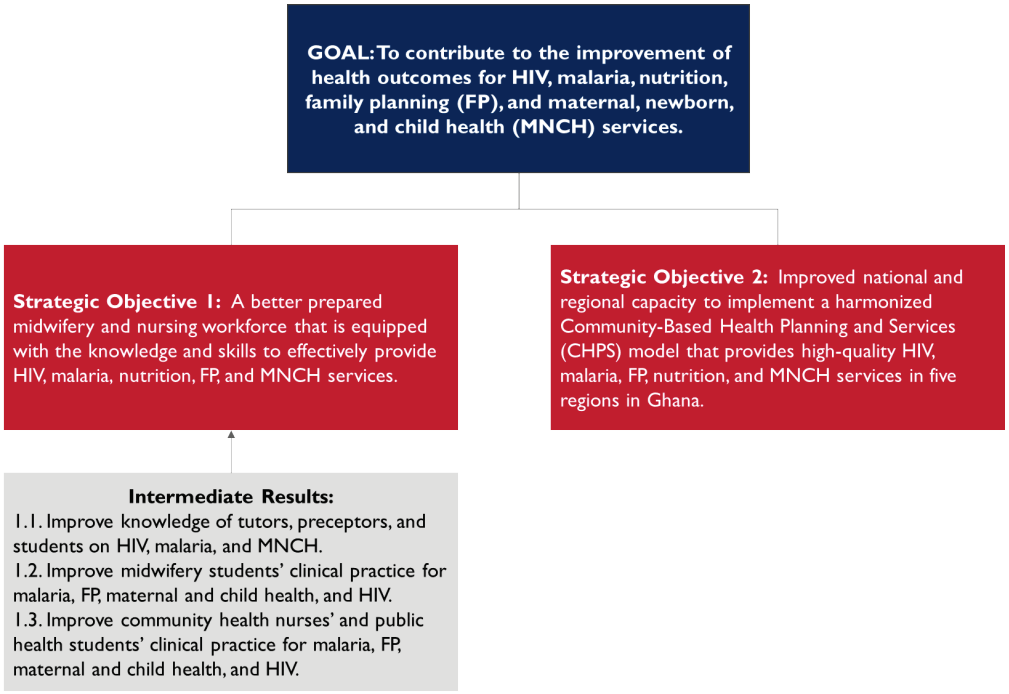
In Ghana, geographic access is a major barrier to health care, including access to maternal, newborn, and child health (MNCH) services. Seventy percent of the population resides in communities that are over 5 kilometers from the nearest health facility. Childhood mortality in such communities is 40% higher than in communities located within 5 kilometers of health facilities. Nationally, Ghana suffers from other poor health indicators, including unmet need for family planning (FP; 29.9%) and a maternal mortality ratio of 310 per 100,000 live births.

To address the health care needs of rural communities, Ghana started implementing the Community-Based Health Planning and Services (CHPS) program nationally 10 years ago. An essential part of CHPS implementation was improving pre-service midwifery and nursing education. From 2010 to 2014, the Maternal and Child Survival Program (MCSP)'s predecessor, the Maternal and Child Health Integrated Program (MCHIP), worked with all 61 of Ghana's midwifery and nursing schools. When MCHIP ended, the US Agency for International Development (USAID) in Ghana requested that MCSP develop a 5-year work plan to expand MCHIP's pre-service education (PSE) support to all midwifery, community health nursing, public health nursing, general nursing, and medical assistant training schools across all 10 regions in Ghana, which included 72 schools. Key components of the work plan included using eLearning to access educational materials and improving clinical skills labs. When the program started, about 55% of schools lacked Internet connectivity, and none of the skills labs had enough models, simulators, or trained personnel.

Since its inception, the CHPS program implementation has been fraught with policy- and systems-level challenges related to leadership, technical direction, supervisory support, planning, and budgeting. The CHPS program was therefore revised and relaunched in March 2016 to address the historical challenges, and MCSP began working with the Ghana Health Service (GHS) Policy, Planning, Monitoring, and Evaluation Division (PPMED) to support a standardized CHPS at the national level and in the five MCSP target regions: Ashanti, Brong Ahafo, Eastern, Upper East, and Upper West.

MCSP is a global, $560 million, 5-year cooperative agreement funded by USAID to introduce and support scale-up of high-impact health interventions among USAID's 25 maternal and child health priority countries, as well as other countries. Figure 1 outlines MCSP Ghana's Results Framework for the CHPS/PSE program. MCSP Ghana implemented two other programs—Infection Prevention and Control and Early Childhood Development (please see separate EOP reports).

Figure 1. MCSP Ghana Results Framework



Major Accomplishments

Objective 1: A better prepared midwifery and nursing workforce that is equipped with the knowledge and skills to effectively provide HIV, malaria, nutrition, FP, and MNCH services.

Activities under Objective 1 addressed eLearning, skills labs, training curricula, the midwifery services framework, the preceptor reference manual, graduating student assessments, preceptor training, clinical practice for midwifery students, and upgrading of CHPS compounds.

Two midwifery students test their knowledge of malaria using Hello Nurse, an interactive gamification app, that allows them to simulate scenarios in the health facility or community. Photo by Karen Kasmauski, MCSP.

Scaled Up eLearning

MCSP developed a holistic approach to strengthening the midwifery and nursing workforce by integrating technology into learning at training schools. eLearning provides supplementary materials, in the form of eLearning modules, to reinforce classroom training, knowledge transfer, and skills practice. The approach involved building capacity in schools and at the Ministry of Health (MOH), establishing processes to develop content, supporting technology and digital learning, and deploying appropriate technology.

eLearning technology evolved during the project period. The project tested five learning management system (LMS) platforms but chose Moodle in program year (PY) 3 because it is used widely in Ghana, is open-source, and has the required functionalities, including online/offline accessibility for mobile devices and laptops/desktops.

IT tutor instructing students on the use of eLearning at Hohoe Midwifery Training School. Photo by Karen Kasmauski, MCSP.

eLearning content development was two-pronged: content for national dissemination and school-based content created by tutors at their schools. Content development is complex, time-consuming, and expensive. It was a challenging aspect of the project given limited resources. The project created eLearning modules on several clinical topics and an interactive story game application called Hello Nurse. The courses are available on the MOH website, and the app is available on Google Play. MCSP developed an eLearning implementation manual to guide the MOH in deploying eLearning to health training schools across the country. The list of eLearning modules now available on the MOH eLearning site can be found in Appendix F. This will thus afford the nursing students the opportunity to access content and improve on their skills as these will reinforce messaging.

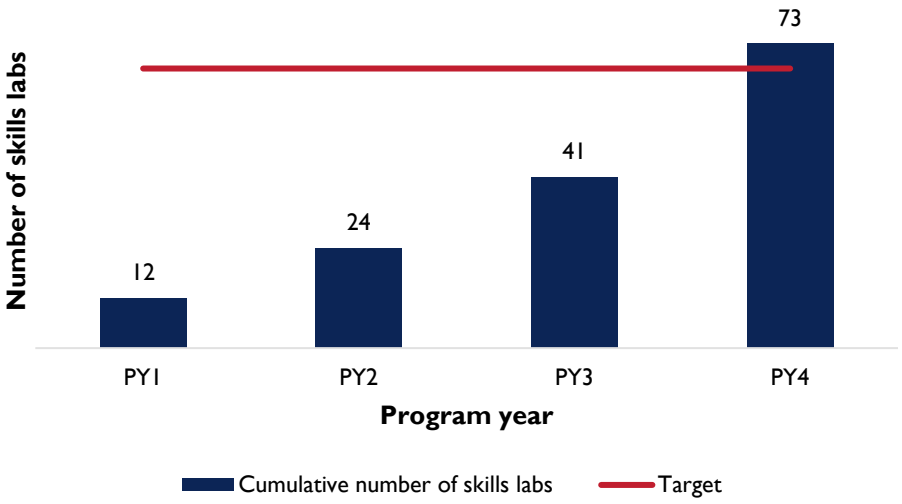
Upgraded Skills Labs

Nursing and midwifery students need to practice what they learn on anatomic models using real medical equipment before they practice on patients. Many schools did not have skills labs, and those that did lacked sufficient models, equipment, and reference materials. To ensure that all nursing and midwifery schools had high-functioning skills labs to enable students to practice and learn on models, MCSP:

- Procured and distributed learning resources, including digital resources and DVDs, on the management of complications in pregnancy and childbirth and on active management of third stage of labor.
- Procured and distributed models and equipment to all 70 schools.

All supplies, furnishings, linens, and medical equipment for improving clinical skills were delivered to and installed in 71 nursing and midwifery schools, as well as the Nursing and Midwifery Council (NMC) of Ghana. Skills lab materials were purchased for the Ghana College of Nurses and Midwives (GCNM) and the Health Training Institution Unit (HTIU) of the MOH. However, both organizations were in the process of relocating at the time of the planned installation, so the project was not able to install the equipment. Installation will be done by the institutions themselves once they have relocated their premises. MCSP surpassed its goal of equipping 70 skills labs by PY4 (see Figure 2). Over 800 principals, tutors, and student representatives were trained in the effective use and maintenance of the skills labs to ensure sustainability and upkeep. Effective use of these labs trains students in skills that will help them provide high-quality health care after graduation. Over 40,000 students benefited from skills labs over the course of the project and will continue to do so in the years to come. There will be no need for tutors to teach only in the abstract; they will teach skills in the right environment with the right equipment. The refurbished skills labs have brought significant changes in the schools. Students have indicated that they were being taught a lot of theory without showing them the instruments to be used for a procedure. In addition, some said they were teaching in the abstract before, since there were no skills labs specifically for midwifery students. Now when they teach, they demonstrate with the dummies and instruments for students to see. Utilization of the skills lab will better prepare the students with the necessary skills to join the workforce.

Figure 2. Surpassed life-of-project target for number of skills labs equipped



Improved Tutors' Capacity to Train Students in Infection Prevention and Control, with Specific Focus on Ebola Virus Disease

Fifty-one tutors from 34 midwifery schools and 12 community health nurse (CHN) schools were trained in infection prevention and control, with a focus on Ebola virus disease, to improve their capacity to train students. The training emphasized handwashing as the single most important intervention for preventing and controlling Ebola virus disease in the health care facility and community. Participants also practiced putting on and removing personal protective clothing without contaminating themselves. At the end of the training, participants appreciated the need to follow correct practices to prevent the spread of diseases.

Reviewed Curriculum and Logbooks

MCSP provided technical and financial support to the Ghana NMC, the statutory body for standardizing nursing and midwifery education and practice, to review and update the various curricula that guide the

training of nurses and midwives in Ghana. The curricula were launched and disseminated to all nursing and midwifery training institutions. With similar support, the logbooks were also reviewed, revised, and disseminated to schools to guide student clinical practice. This provided a platform for students to update their knowledge and skills, and practice current trends. As part of this process, the NMC strengthened its regulatory role to protect the health and well-being of the public by ensuring that nurses and midwives uphold professional standards and keep their skills and knowledge up to date.

Established Midwifery Services Framework

MCSP partnered with the GCNM and the International Confederation of Midwives to hold a multistakeholder workshop called the "Midwifery Services Framework, Ghana Country Assessment Workshop." The theme for the workshop was to develop recommendations for expanding high-quality midwifery services for the benefit of sexual and reproductive, maternal, newborn, and adolescent health services. The MOH adopted the recommendations in the midwifery services framework report and used them to develop the Nursing and Midwifery Strategic Plan for 2018–2022, with technical input and review from MCSP and financial support from the United Nations Population Fund. This framework for the next 5 years will guide the operation of nursing and midwifery in Ghana.

Updated the Reference Manual for Preceptorship

In support of the MOH, MCSP engaged with the GCNM in 2016 to review the MOH/GHS *Reference Manual for Preceptorship in Nursing and Midwifery Education* and developed an accompanying curriculum. The aim was to provide preceptors with in-depth preparation and skills for enhancing the knowledge and practical experience of students and health workers at the various health facilities. It became necessary to develop a facilitator's guide to enhance the use of the manual. The availability of a standardized facilitator guide will increase the accessibility, acceptability, and applicability of the reference manual. MCSP granted a fixed amount award (FAA) to the GCNM to develop the facilitator guide, which was distributed to nursing and midwifery schools in June 2019.

Conducted Assessments of CHNs Graduating from Four Schools

A learning activity was conducted to understand changes in student knowledge and skills after the development or strengthening of existing skills labs in four MCSP-supported community health nursing schools. Qualitative data documented provider and tutor perspectives on the effective use of skills labs and what inhibits effective learning and development in skills labs. Data were collected at baseline, midline, and endline (one per year) from graduating students at Winneba, Fomena, Tamale, and Navrongo. The objective structured clinical examinations used for student skill assessment included a rapid diagnostic test for malaria, clean cord care for newborns, counseling on the implant FP method, and home visit counseling on the correct latch during breastfeeding. The study identified some weaknesses, and the project held learning events with each school to share the study results and provide rich learning opportunities to further improve skills labs use. The study concludes that students have learned how to conduct normal delivery and are successful in active management of third stage of labor and care for the newborn. Findings from the qualitative interviews show that students are utilizing the skills lab and are better prepared with the necessary skills to join the workforce. For more information, please see the skills labs learning brief.

Trained Preceptors

With funding from the Korea International Cooperation Agency as part of the support provided for Keta Nursing and Midwifery Training College, the project conducted training for 10 preceptors selected from five preceptor facilities. Using the revised preceptor manual, participants reviewed managing clinical practice, preceptor teaching approaches, and leading skills practice sessions. Training emphasized demonstration, coaching, and feedback, as these are essential for preceptors to effectively teach, assist, and assess students.

Improved Clinical Practice for Midwifery Students

Through FAAs, the six MCHIP midwifery schools at Hohoe, Twifo Praso, Pramso, Mampong, Goaso, and Jirapa improved preceptorship by providing training in precepting skills and basic emergency

obstetric care to their own preceptors. MCSP provided the materials and equipment to help upgrade 18 student preceptor sites. With this upgrade, schools could also train preceptors to better assist during clinical practice and to acquire better skills in high-quality care. They could also partner with training institutions to train preceptors as a continuous professional development program.

Upgraded CHPS Compounds

To improve community health nursing students' field practice opportunities, the community health and public health nursing schools, in collaboration with the regional and district health directorates, selected 22 CHPS compounds to upgrade by providing missing equipment and supplies. A group of tutors was also assigned to an established CHPS compound to learn best practices for teaching CHPS, thereby ensuring that graduating CHNs will be fully prepared to work as community health officers (CHOs) in the future. CHNs will become CHOs once they complete the CHO training program, which MCSP worked with the PPMED to develop. Follow-up visits to some of the CHPS compounds upgraded by MCSP revealed that the CHPS compounds were doing well using and maintaining the donated items.

Objective 2: Improved national and regional capacity to implement a harmonized CHPS model that provides high-quality HIV, malaria, FP, nutrition, and MNCH services in five regions in Ghana.

Developed a Standardized CHPS Strategy and Guidelines

MCSP supported the PPMED with the development, launch, and dissemination of the national CHPS implementation guidelines. The guidelines were launched as part of the national CHPS forum in 2016 to translate existing policy into guidance for delivering evidence-based primary health care (PHC) services at the community level. MCSP printed and delivered 200 copies of the national CHPS implementation guidelines to the PPMED. The guidelines identify the elements that must be in place between the household and CHPS compound to guarantee quality care. The Government of Ghana (GoG) and supporting donor organizations will use the new implementation guidelines to standardize CHPS implementation and scale-up nationwide.

Harmonized CHPS Strategy and Guidelines

MCSP, in collaboration with the GHS, developed harmonized CHPS/CHO training materials that incorporated the results of a task analysis learning activity,[1] also implemented by MCSP (see more details in Appendix E). Findings from the task analysis study showed that there were some areas that CHPS staff had difficulty with or were unable to perform, such as intrauterine device insertion and referral, training support to community health volunteers, newborn resuscitation, and emergency delivery; the harmonized training materials emphasized these areas. This study prompted discussion among stakeholders regarding the need to revise the PSE curriculum and amend the CHO standard operating practice. The harmonized CHO training materials are expected to standardize training materials for CHOs nationwide to ensure improvement in their knowledge and skills and in the delivery of CHPS. This will improve CHPS zones' functionality overall. MCSP trained 49 regional trainers to facilitate trainings using the harmonized CHO training materials so they can roll out the new materials to CHNs and midwives in their regions. Three hundred copies of the harmonized CHPS/CHO training materials were printed and distributed to the PPMED and the five regional health directorates.

Supported National-Level CHPS Coordination

At the national level, MCSP coordinated with the director general and the director of the PPMED to establish a technical working group (TWG) on CHPS implementation and two task forces to develop the CHPS implementation guidelines to harmonize the CHO training manual. The CHPS implementation TWG plays an advisory role in ensuring high-quality CHPS scale-up in Ghana. The implementing TWG also identifies and resolves activity duplication, and coordinates and leverages activities for partners

[1] MCSP. 2018. *Assessing Ghanaian Health Care Workers' Practice through Task Analysis.* Washington, DC: MCSP.

implementing CHPS. MCSP also worked with the GHS to create a CHPS webpage as part of the GHS website.

MCSP and the PPMED conducted an urban CHPS study to inform the adaptation of the current CHPS implementation model to urban settings. Additionally, the study sought to identify the care-seeking behaviors of beneficiaries in urban settings for health issues covered under CHPS, the types of services currently being provided at urban CHPS compounds, how urban CHPS is prioritized among high-level stakeholders at national and regional levels, and how the 15 implementation guidelines can be modified to better fit the urban setting.[2]

MCSP also supported the GHS to develop a CHPS planning and resource mobilization tool. The Excel-based tool is simple to use, does not include macros, and does not require Internet connectivity. It was designed to identify the costs to establish, maintain, and operate a CHPS zone and compare the costed plan to the CHPS national implementation guidelines costs. The CHPS costing tool is being used by policymakers; national, regional, and district health management teams; providers; and partners to assist in developing CHPS cost estimates and advocate for financing for CHPS from communities, district assemblies, partners, and other sources. Training was conducted for national and regional representatives, and the GHS developed a rollout plan and supporting budget to train district representatives on the use of the costing tool. The GHS will incorporate and integrate the CHPS costing tool into its planning, budgeting, and management information system, and include it in the multiyear program budgeting and planning.

Fostered Self-Reliance and Sustainability through Domestic Resource Mobilization

At the regional level, MCSP used FAAs to build the capacity of CHPS staff within the five focus regions (Upper East, Upper West, Brong Ahafo, Ashanti, and Eastern) to manage and provide CHPS services. These FAAs supported efforts to improve CHPS service delivery, management, and community mobilization. The training built the knowledge and skills of the CHPS staff to effectively implement the CHPS strategy. Service delivery improved in the various CHPS zones that benefited from FAA support. Furthermore, CHOs increased the number of CHPS community emergency transport systems to save lives and refer emergency deliveries. In turn, service data and health-seeking behavior of community members improved, and regional teams are better equipped to support CHPS implementation and oversight at lower levels. National teams can now carry out CHPS implementation monitoring at the regional, district, subdistrict, and CHPS zone levels because they developed monitoring tools with FAA support. The tools assess the degree to which the 15 steps and six milestones as per the national CHPS implementation guidelines are met. FAA funding trained 598 CHOs and 5,323 community health management committee (CHMC) members. The project undertook a regional CHPS FAA case study[3] to assess the implementation of FAA activities within the five MCSP focus regions. The information collected by the team provided insight into FAA implementation challenges and benefits that recipients derived from the FAA mechanism and associated activities.

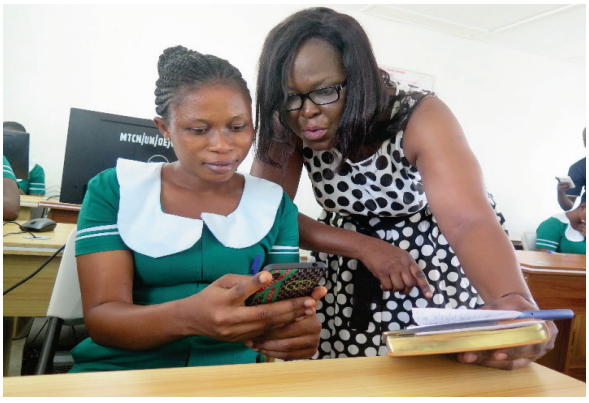
Frank Osei, a CHO, at the Adukrom CHPS compound attending to a patient. "Thanks to USAID and the GHS, I now understand the purpose of CHPS, which is community mobilization to prevent diseases and save lives." Following the CHO training conducted through a regional FAA, Osei is mobilizing his community to build an additional four-bedroom staff living quarters for the CHPS compound. Photo by Emmanuel Attramah, MCSP.

[2] MCSP. 2018. *Community-based Health Planning and Services (CHPS) in Ghana: Formative Research to Adapt the CHPS Model to Urban Settings*. Washington, DC: MCSP.
[3] MCSP. 2019. *Strengthening Community-Based Health Planning and Services in Ghana: Fixed Amount Awards Implementation and Outcomes*. Washington, DC: MCSP.

Strengthened PHC Systems for Universal Health Coverage

MCSP supported the National Health Insurance Authority (NHIA) to conduct an actuarial modeling exercise and develop a model to assess the feasibility of adding on PHC-focused services, inclusive of CHPS, maternal and child care, and FP services, into the National Health Insurance Scheme benefits package and model future sustainability scenarios for the package for the next 15 years, until 2034. The model will provide information on current and future impact of additional services on health utilization and expenditure and on revenue sources for various scenarios. The scenarios will provide information on long-term sustainability options that the GoG can utilize to plan for reforms in strengthening the health system. The model is accompanied by a comprehensive user guide and installed in the Actuarial Directorate at the NHIA. Actuarial staff were trained on the use and modification of the model and are able to modify the model to generate evidence to inform decisions on the benefits package.

MCSP also supported the GoG to develop a series of policy papers that examined the areas that could be strengthened in Ghana's current PHC system and provided evidence-based recommendations on how to address these weaknesses to build a stronger PHC foundation for universal health coverage (UHC) in Ghana. The recommendations for strengthening PHC will form part of broader strategies for achieving UHC and were integrated into the MOH's UHC road map, a policy document that outlines the goals, strategies, and targets for achieving UHC by 2030.



The principal of Nandom Midwifery Training College, Mercy Kporku, interacts with a trainee at the Moodle eLearning orientation. Photo by Emmanuel Attramah, MCSP.

"As a principal, I travel a lot, so even in my absence, I can still teach. I would have saved a lot of time because I was away, but I am teaching. You know it motivates some of us to get the best of information communication technology so that you can also enjoy the process with eLearning interaction. The students themselves, apart from learning, have fun, they enjoy being online, and while they are doing that, they now get to learn something."

Emmanuel Gyamfi, CHO, at the Dotiem CHPS facility delivered a baby boy through an emergency delivery service now offered at the CHPS compound. Photo by Emmanuel Attramah, MCSP.

"There were several services we were not giving here, like emergency delivery, which we now do after the training. We learned how to even resuscitate babies who are just born and can't breathe."

Cross-Cutting and Global Learning Themes

Scale-up: MCSP supported the GHS to further scale up CHPS in five regions where it implemented FAAs and at the national level by supporting national guidelines and tools. The scale-up package was part of the implementation guidelines, as were the training materials, which will support a standardized package of care and quality across the country. Additionally, the program supported the PPMED in leadership, management, and coordination of scale-up by facilitating the establishment of the CHPS implementing TWG. The TWG brought together all partners supporting the CHPS scale-up and quality improvement to coordinate efforts and leverage resources. Additionally, the CHPS costing tool supports the GHS at various levels to plan for the cost of scale-up. This tool can be used at district, regional, and national levels to estimate the cost of CHPS scale-up or upkeep and can be used for mobilizing resources for additional scale-up. Furthermore, through the MCSP FAA, the PPMED strengthened the monitoring and evaluation of scale-up by strengthening the subdistrict oversight of CHPS through a tool that monitors the degree to which the standardized CHPS package is implemented.

Equity: Promoting equity is at the heart of MCSP's work on CHPS. Expanding the CHPS model and strengthening the quality of services at the community level are part of Ghana's approach to providing UHC. Working on the actuarial model and the PHC benefits package are also pro-equity initiatives designed to remove financial barriers to care.

Gender: Historically, nursing is a predominantly female profession. Supporting the advancement of nursing makes sense not only to fill crucial gaps in the health workforce but also as a means to promote women's economic empowerment. Ensuring that high-quality nursing education is available in Ghana means that women and girls have greater access to high-quality education.

Measurement and data use: MCSP supported the national CHPS TWG performance monitoring subcommittee that developed a CHPS national tracking and performance monitoring tool and a quarterly scorecard based on the DHIS2. The scorecard is housed on the CHPS webpage to provide a high-level overview of CHPS performance and service delivery. The MCSP team, in partnership with the GHS Family Health Division, monitored the reproductive, maternal, newborn, child, and adolescent health scorecard in Ashanti and Brong Ahafo regions, and interacted with the regional health directorate. MCSP introduced the district health management teams to the new reproductive, maternal, newborn, child, and adolescent health scorecard updates. User accounts were created for health management team members, and, after discussions, the monitoring team supported the creation of action plans to address low-performing activities. Addressing these challenges will help improve the quality of care for clients.

Community health: Community engagement, ownership, and stewardship of CHPS are, in MCSP's experience, the keys to having a successful community strategy and fully optimized CHPS where communities are protecting and building health. This is why community engagement figures so prominently in the CHO standardized training materials; it is also in response to the task analysis learning activity in which CHOs identified community engagement as a challenging area. In addition, through the MCSP regional CHPS FAAs, MCSP trained or oriented 5,323 CHMC members about their roles in the five MCSP focus regions. These activities prioritized community participation and ownership in decision-making, resource mobilization and allocation, service demand and utilization, monitoring, and accountability.

Human capacity development: MCSP's approach to human capacity development focuses on building individual health worker knowledge and skills through experience and practice. In the Ghana PSE work, this was expressed in the skills labs installation, eLearning scale-up, and support for strengthened preceptorship. Within human resources for health, one of the USAID priorities is to "conceive and adapt effective models for transformative education and maintenance of skills/competence."[4] One such transformative model is working in partnership with the MOH HTIU to establish the eLearning Secretariat to scale up eLearning and provide technical support to schools that are implementing

[4] USAID. *USAID's Vision for Health Systems Strengthening, 2015–2019*. Washington, DC: USAID.

eLearning. Staffing in eLearning has scaled up from one to seven staff members, eLearning has been rolled out to 29 schools, and schools have started requesting and self-financing eLearning support from the secretariat, all under the leadership of the HTIU with MCSP support.

Innovations: MCSP supported eLearning, skills labs scale-up, and collaborative FAA mechanisms that prioritize end users by engaging them from the very start of the process to incorporate their priorities and support sustainable scalability by integrating activities into existing MOH and GHS procedures. Skills labs are fully managed and overseen by the nursing and midwifery schools, which have become the experts who train students on the use of the models and equipment in the labs. The majority of nursing and midwifery students can now access eLearning content through their own smartphones, tablets, or laptops. This means that with the installation of an intranet in the school, the majority of students are able to access these high-quality materials at any time—even without Internet connectivity. Given the challenge of Internet connectivity in Ghana, it was important to find an LMS that had online and offline capability. The Moodle LMS can do both as long as it is installed on the school's server. Additionally, the MOH is in advanced negotiations with Vodafone Ghana to provide Internet connectivity to schools at a reduced rate. Investing in the priorities of FAA recipients generated greater ownership. For example, the Upper West Region regional team was able to exceed several of its targets by looking at ways to use its funds more efficiently within its context.

Recommendations and Sustainability

During the last year of the project, MCSP focused particularly on sustainability. The first version of the sustainability plan was created more than a year ago and has been regularly updated. The most recent version was updated during a series of final project meetings with MCSP counterparts at the HTIU, NMC, GCNM, and PPMED. For most of MCSP's activities, sustainability was built into program design. MCSP actively worked with partners at the MOH, GHS, training institutions, and other partners to purposefully plan for sustainability beyond the close of MCSP. There is strong consensus regarding the recommendations below from the project and its partners.

The following recommendations are made in light of the overall experience gained in implementing MCSP in Ghana:

- Incorporate elements of human-centered design activities to ensure beneficiary ownership, sustainability of project goals, and involvement with beneficiaries through the steps of project planning and implementation to better galvanize participation and buy-in. In particular, the team recommends that USAID engage key stakeholders during the design phase of the request for proposal and project design. Once award has been made, a human-centered design workshop at the start of the program will be important for implementing partners, government counterparts, local organizations, USAID, and, if possible, beneficiaries to inform the first-year work plan, overall targets and goals, roles and responsibilities, and modalities of working together (i.e., communication).
- Deploy and support eLearning in health training schools.
    - Schools should fund the secretariat's visits to deploy and support eLearning through their internally generated funds.
    - The NMC should include the eLearning modules in its continuing professional development eLearning program.
    - Strengthen partnerships among the HTIU, NMC, and GCNM to expand and roll out eLearning.
- Create eLearning content for health training schools.
    - Tutors should continue to be supported to create and upload content to the LMS.
    - The MOH eLearning Secretariat should continue to train tutors and update IT tutors on a regular basis. It would benefit from additional capacity development to be able to do this.
    - The NMC should validate the content to ensure standardization among schools.
- Host and manage the MOH website for eLearning.
    - The HTIU should regularly budget for hosting the website.
    - The website should link to professional associations, such as the NMC and GCNM.
- Set up skills labs in schools across all regions of Ghana.
    - The HTIU should advocate to equip schools and include these measures in their budgets.
    - The GCNM should partner with other donors to expand upon skills labs.
    - The National Accreditation Board and the NMC should ensure standards are met for new and existing schools.
- Train staff on use and maintenance of skills labs.
    - Principals should ensure that all new tutors are oriented on the use and maintenance of the skills labs using the provided lab manuals.
    - Skills lab coordinators should report on skills lab usage to the principal.

- The principal should ensure there is a functional skills lab management team.
- The principal should explore the use of internally generated funds to support capacity-building for skills lab setup and maintenance.

- Continually update staff and tutors on essential competencies.
  - Schools should update all staff on essential competencies upon orientation and on an annual basis.
  - The HTIU, with the NMC and GCNM, should develop a performance management system for tutors to regularly assess their competencies.

- Monitor skills labs.
  - The HTIU and NMC should strengthen the monitoring of skills labs in their monitoring tools and activities.
  - The GCNM should integrate skills lab observation in regular monitoring activities.

- Review curriculum, learning guide, and checklists for training.
  - The NMC should ensure periodic update of the curriculum, learning guide, and checklist. Addendums should be adopted in between curricula review.
  - Collaboration should be strengthened between in-service and pre-service institutions to ensure critical changes are adopted.

- Train preceptors using preceptor manual.
  - Training institutions should use the manual to train and monitor preceptors.
  - The GCNM, with the NMC, should train preceptors through a continuing professional development program.
  - The HTIU and NMC should collaborate to establish a mechanism for regular engagement and training for preceptors.
  - The HTIU should take the lead in ensuring collaboration with the GCNM and NMC.

- Ensure availability of preceptor reference manual, curriculum, and facilitator manual.
  - The HTIU should develop a plan for the regular training of preceptors.
  - The HTIU should use the manual to train and monitor preceptors in collaboration with training institutions.

- Upgrade clinical sites for students' practicum.
  - Training institutions should collaborate with the GHS to monitor and ensure the effective use of the upgraded CHPS compound for practicum sites for community health nursing students.

- Roll out the Nursing and Midwifery Strategic Plan throughout the country.
  - The MOH and GHS should use the strategic plan to guide activities related to nursing and midwifery, and to coordinate donor support and funding to further roll out the strategy.
  - Work with all stakeholders to disseminate the strategic plan at regional and facility levels.
  - The HTIU should strengthen coordination across nursing and midwifery bodies to ensure the implementation of the strategic plan.

- Utilize and update the CHPS webpage.

- The GHS should establish a clearinghouse to determine content and ensure regular posting of CHPS information/materials.
- The PPMED should work with the GHS information communication technology department to finalize the CHPS supportive supervision tool on the GHS website.
- The PPMED director should work with the information communication technology department to ensure materials are uploaded and regularly posted.

- Harmonize CHO training materials.
  - The GHS should conduct a regular review of the manual to update relevant content every 2 to 5 years.
  - The GHS should leverage support from partners to print more copies of the training materials for district usage.
  - The PPMED should invite pre-service tutors and preceptors to be trained in these updated CHO materials to strengthen CHPS training during PSE.
  - The PPMED should source funds to continue CHO trainings in non-MCSP-supported regions.
  - The PPMED should supervise to ensure quality assurance standards are maintained during trainings.
- Build capacity of facilitators, tutors, and CHOs using harmonized training materials.
  - The PPMED should encourage adherence to training standard at implementing TWG meetings.
  - Regional health directorates should decentralize the training of CHOs and carry out modular trainings to reduce cost.
  - Supervision of GHS regional- and district-level trainings should be decentralized to ensure quality assurance.
  - PSE tutors should be trained by the GHS on the harmonized CHO materials.
- Disseminate CHPS implementation guidelines.
  - The GHS should disseminate the guidelines to all districts, subdistricts, and CHPS zones.
  - All GHS districts, subdistricts, and CHPS zones should be oriented on the guidelines by the GHS regional health directorates.
- Use the CHPS planning tool.
  - Regional health management teams should use the CHPS planning tool to address planning and implementation challenges.
  - The GHS should upload the costing tool and training resources on the CHPS website and mobile resources to support the rollout of costing tool trainings at the district level.
  - The PPMED should incorporate the costing tool as part of the annual GHS planning tools and activities.
- Revise and execute the PHC benefits package.
  - Stakeholders should institutionalize the participatory process to develop the package that will prepare them to continue and finalize the benefit package, as necessary.
  - The restructured core benefits package of the National Health Insurance Scheme should focus on PHC services.

- The actuarial model should be used for projections of financial risks. The NHIA team should continue to improve the actuarial model and update underlying assumptions while new information is generated and gathered.
- The MOH, GHS, and NHIA should work with stakeholders to develop the benefits package to ensure the success of communications and/or trainings.
- The MOH, GHS, and NHIA should be engaged to support, adopt, and implement strategic reforms that will complement and support the GoG's universal health care agenda. This will ensure the acceptance and implementation of a road map by the GoG.

Appendix A. Performance Monitoring Plan

Indicator		PY1		PY2		PY3		PY4		Cumulative to End of Project	Life of Project Target	Comments/Notes
		Target	Actual	Target	Actual	Target	Actual	Target	Actual			
OBJECTIVE 1: A better prepared midwifery and nursing workforce that is equipped with the knowledge and skills to effectively provide HIV, malaria, nutrition, family planning, and maternal, newborn, and child health services.												
1.1.1	Number of new health workers graduating from schools supported by MCSP	960	988	1,928	2,675	7,512	7,616	8,049	8,404	19,683 (109%)	18,010	Target was exceeded within the period of implementation.
1.1.2	Number of eLearning modules, learning objects, or mobile platforms developed	8	8	8	6	4	6	5	5	25 (100%)	25	All modules have been completed.
1.2.1	Number of schools with adequately equipped simulation labs	12	12	23	12	13	17	19	29	70 (104%)	67	Goal was exceeded because additional higher education funding was received to set up skills labs.
1.2.2	Percentage of equipped schools having at least one tutor trained on use of novel anatomic models	20%	20%	25%	22%	21%	24%	18%	34%	100%	100%	Targets have been met.

Indicator		PY1		PY2		PY3		PY4		Cumulative to End of Project	Life of Project Target	Comments/Notes
		Target	Actual	Target	Actual	Target	Actual	Target	Actual			
1.2.3	Percentage of schools receiving Nursing and Midwifery Council (NMC) supportive supervision visit within the year	100%	0%	100%	0%	100%	0%	100%	0%	0%	NA	This activity did not happen despite several attempts to engage the NMC, they did not use tablets. MCSP discovered in August 2018 that the NMC was no longer conducting supervisory visits due to budget constraints. However, MCSP did develop the supervisory tool, installed the tool on the tablets, conducted training for NMC staff, and gave tablets to the NMC.
1.3.1	National community health nurse (CHN) school curriculum revised by NMC to include community health officer (CHO) training package and ensure adherence to national policy and guidelines	1	1	NA	NA	NA	NA	N/A	N/A	NA	1	Achieved in PY1.
1.3.2	Percentage of CHN schools implementing revised national curriculum, which includes the CHO training package	NA	NA	100%	100%	100%	100%	100%	100%	100%	100%	CHN schools are implementing revised curriculum.

Indicator		PY1		PY2		PY3		PY4		Cumulative to End of Project	Life of Project Target	Comments/Notes
		Target	Actual	Target	Actual	Target	Actual	Target	Actual			
1.3.3	Percentage of CHN schools offering clinical practice experiences in model Community-Based Health Planning and Services (CHPS) compounds upgraded by MCSP	9%	9%	36%	36%	72%	72%	82%	91%	100%	100%	All schools are offering clinical practice.
OBJECTIVE 2: The national CHPS strategy, guidelines, training materials, tools, and monitoring systems are standardized and approved.												
2.2.1	Performance management system developed and performance table template published on DHMIS2 dashboard by Policy, Planning, Monitoring, and Evaluation Division (PPMED) with support from MCSP	NA	NA	1	1	NA	NA	N/A	N/A	1 (100%)	1	
2.4.1	Unit cost data for CHPS basic package and additional innovative solutions collected	NA	NA	1	1	NA	NA	N/A	N/A	1 (100%)	1	
2.4.2	CHPS costing tool developed	NA	NA	NA	NA	1	1	N/A	N/A	1 (100%)	1	The tool was finalized in February 2018.
2.4.3	Number of people trained using CHPS costing tool	NA	NA	NA	NA	6	0	16	35	35 (159%)	22	Exceeded target, since MCSP had participants from the Japan International Cooperation

Indicator		PY1		PY2		PY3		PY4		Cumulative to End of Project	Life of Project Target	Comments/Notes
		Target	Actual	Target	Actual	Target	Actual	Target	Actual			
												Agency, Systems for Health, etc. This was achieved in PY4Q3.
2.4.4	Number of regional 5-year CHPS implementation plans developed and guided by costing tool	NA	NA	3	0	2	0	0	0	5 (100%)	5	The training of regional teams on the use of the costing tool happened in PY4.
2.6.1	Number of regional trainers trained	10	0	10	0	10	0	20	51	51 (102%)	50	Training completed and had extra participant from the PPMED. This was achieved in PY4Q3.
2.6.2	Number of technically up-to-date tools and job aids harmonized and disseminated	NA	NA	0	2	NA	NA	1	0	5 (100%)	5	The project developed the following job aids and/or tools: costing and planning tool (1), CHO training materials (3), and implementation guidelines (1).
2.1.2	Number of districts with improved annual CHPS performance in at least one key service delivery area	NA	NA	3	3	13	13	7	7	23 (100%)	23	

Appendix B. Success Stories

Students in the eLearning lab showcase the learning modules to the vice principal. Photo by Emmanuel Attramah, MCSP.

NAME

Charles Agyeman Prempeh

ROLE

Vice Principal of Agogu Nursing and Midwifery Training College

LOCATION

Agogo, Ashanti Region

SUMMARY

MCSP, as part of its efforts to improve pre-service education, is working the eLearning Secretariat of the Ministry of Health to introduced Moodle, an eLearning tool to various nursing and midwifery colleges across the country to improve their teaching and learning experience.

Supporting Tutors and Trainees to Embrace eLearning in Nursing and Midwifery training Schools

The beginning of a school year is always an exciting time for David Kankuubata. "I simply love to teach, to impart knowledge that makes a difference in the lives of my students," says David, an information communication technology (ICT) tutor at Nandom Midwifery Training School. However, along with this excitement comes the widely shared frustration of many tutors: student phone use during teaching hours. Take a walk through higher educational institutions in Ghana and you are sure to notice students whose heads are turned to glowing smartphone screens and who are wearing earbuds or headphones. Although Nandom Midwifery Training School has guidelines for smartphone use, like many schools, it is still a constant struggle to keep some trainees disengaged from their phones, even during school hours. Given his training in ICT, David is acutely aware of the limitless potential of ICT to create an enabling environment for teaching and learning.

Often, he wonders why health training institutions are not leveraging technology to excite students' interest in academics. Like some tutors, David often entertained the thought that smartphones can be a useful academic resource, not just a distraction. "You know, most of these phones are like small computers that can be used to research on the Internet, so I try to teach students about how to study with their phones."

Thankfully, in March 2017, the eLearning Secretariat of the Ministry of Health, with the support of the US Agency for International Development-funded Maternal and Child Survival Program (MCSP), introduced the Moodle eLearning tool to Nandom Midwifery Training School. With grit and gratitude, David embraced the tool, and today, tutors and trainees from Nandom Midwifery Training School are savoring the benefits.

"As a principal, I travel a lot, but with the eLearning, even in my absence, I can still teach or give assignments. It motivates some of us to get the best of ICT so that you can also enjoy the process with eLearning interaction."

–Mercy Kporku, Principal, Nandom Midwifery Training School

With the support of the principal, Mercy Kporku, David encouraged tutors to develop and deploy their course content on Moodle. He also provided support so students could access content, including quizzes, at the ICT laboratory and on their smartphones.

"As a principal, I travel a lot, but with the eLearning, even in my absence, I can still teach or give assignments. It motivates some of us to get the best of ICT so that you can also enjoy the process with eLearning interaction," Kporku explains, expressing her excitement about eLearning. "The students themselves, apart from learning, have fun. They enjoy being online, and while they are doing that, they now get to learn something."

Before the commencement of every semester, David organizes refresher training for tutors and supports them to develop new content for the platform. David notes: "The principal has been very supportive, even participating in the training. For the part of students, when they encounter any challenge, I help them out, like lost passwords and problem uploading a text." Trainees, especially fresh trainees, are quickly trained and registered at the beginning of the semester. A few months after installation of the eLearning infrastructure, David noticed that most trainees switched their attention to using their smartphones as a learning tool rather than as an entertainment device. This trend, he believes, "is very encouraging, and the more tutors use Moodle, the more students will use it too."

The Moodle eLearning platform has not always run smoothly. In April 2018, the server broke down, and numerous attempts to repair it yielded no results. This was a concern for the school, given the way eLearning has been built into its curriculum. "I took it all the way to Accra for them to work on it because we need it, and they [the students] continued asking about it." David traveled from Nandom to the eLearning Secretariat in Accra to seek assistance, close to 800 kilometers away, to repair the server. For David, eLearning promises to be a great equalizer, in terms of "giving trainees from all sorts of socioeconomic backgrounds access to the same course content to read" and thus, to some extent, bridges the academic gap between schools in rural and urban areas in Ghana.

David is one of several ICT tutors that the eLearning Secretariat and MCSP trained to provide technical support and maintenance in their respective schools as part of eLearning deployment to schools. So far, MCSP has deployed the eLearning infrastructure and Hello Nurse, a mobile interactive story app, to over 26 nursing and midwifery schools. It deployed the eLearning infrastructure to 16 additional schools in 2016 and hoped to deploy it in at least eight more schools before the close of that year. In May 2016, Hello Nurse was one of the top 20 games downloaded in Ghana from the Google Play. So far over 7,000 nursing and midwifery students have downloaded the app.

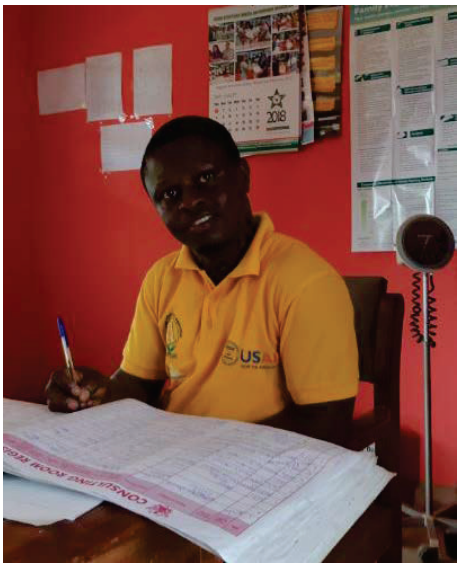


Photo: USAID MCSP/ Emmanuel Attramah

NAME

Frank Osei Owusu

ROLE

Community health officer/community health nurse

LOCATION

Adukrom CHPS facility, Ahafo Ano South District, Ashanti Region

SUMMARY

In Ghana, geographic access remains a major barrier to high-quality basic health care. The Ghana Health Service (GHS) is working with MCSP to improve access to basic health care, especially in rural and remote communities, through continuous training of community health workers enrolled at Community-Based Health Planning and Services (CHPS) facilities. Over 1,212 trained community health officers (CHOs), like Frank Osei Owusu, are working with opinion leaders and influencers in their respective communities to assume responsibility for preventive health and to provide high-quality basic health care.

Mobilizing Communities to Save Lives

In the late eighties, growing up in Subreso, a distant and deprived community in Ahafot Ano South District in Ashanti Region, Frank Osei Owusu strived to look beyond the hardships and harnessed big dreams. In those days, there were "no health facilities and even no road. When I got sick, my father carried me on his back for miles before we met a physician." Although Frank was 7 when this event took place, this experience gave his life purpose. "I wanted to build a hospital and become a doctor when I grew up," says Frank. Today, at 28, Frank is a trained community health nurse.

In Ghana, geographic access remains a major barrier to quality health care. According to the GHS, infant mortality rates in rural and remote areas, where seven in 10 Ghanaians live, are twice the prevailing rate than in urban areas. To address this inequity, the GHS deployed the CHPS initiative to increase access to high-quality basic health care. While this initiative has gone a long way to provide health care access to rural communities, for many others, Frank's childhood dream is still as relevant today as it was over two decades ago.

Thanks to the USAID-funded MCSP, Frank is mobilizing communities to improve high-quality basic health care and save lives. Frank is one of over 1,200 community health workers trained by the GHS with support from MCSP. His training includes community profiling and organization, resource mobilization, community health outreach, and emergency delivery services. After the training, Frank followed through on his newfound insights with excitement and drive. He engaged the chiefs and elders of the subcommunities to create and orient a community health management committee (CHMC). Frank supported the CHMC to develop a community health action plan, which detailed the preventive and basic health needs and suggested interventions to address these needs. In 2 years,

Frank has facilitated four communitywide health *durbars* and numerous cleanup exercises to prevent diseases like malaria and cholera. Frank added, "After I did a community profile, I now go on outreach to visit people like the pregnant women and the aged."

"Thanks to USAID and the GHS, I now understand the purpose of CHPS, which is community mobilization to prevent diseases and save lives."

–Frank Osei Owusu, CHO at the Adukrom CHPS facility

Early this year, Frank, with the support of the health committee, embarked on an ambitious initiative to mobilize resources for the construction of four additional rooms for the Adukrom CHPS facility. Frank reckoned that this would provide two rooms for patients and also house key CHPS staff, such as the midwife, so that they can respond promptly to emergencies after working hours.

The community members in Adukrom and all eight subcommunities readily agreed to pay a token for the initiative. "The men paid GHS 8, the women paid GHS 3, and the community organized communal labor from time to time to construct the additional rooms themselves," Frank says with a smile of satisfaction. Twenewaa Monica, a member of the community health committee, says: "We now know that CHPS is for us, so we are working with the CHO to take care of our people. We want to build a four-bedroom [dormitory] with a washroom and a lavatory so that anytime you come, there will be a health officer here."

"Thanks to USAID and the GHS, I now understand the purpose of CHPS, which is community mobilization to prevent diseases and save lives," Frank says.

Frank Osei Owusu and Twenewaa Monica proudly share images of the community-initiated four-bedroom facilities at various stages of construction and request for financial support to complete the project. Photos by Zacchi Sabogu, MCSP.

Photo: USAID MCSP/ Emmanuel Attramah

NAME

Mary Animah Obeng

ROLE

Farmer and petty trader

LOCATION

Sarkrom, a community in the Atwima Mponua District in Ashanti Region

SUMMARY

In Ghana, geographic access remains a barrier to high-quality health care, especially maternal and child health. MCSP is supporting the GHS to improve access to basic health care through the training of CHOs enrolled at CHPS facilities. So far, over 1,212 CHOs, like Emmanuel Gyamfi, are conducting emergency delivery services to save the lives of women and newborns in rural and remote communities in Ghana.

Saving Lives, One Emergency Delivery at a Time

Despite 9 months of preparation, Mary Animah Obeng, a farmer and trader, knew she could not prepare enough for the moment she went into labor. Thankfully, Mary's water broke while she was taking a long afternoon rest at home. For the past few months, Mary and her husband, Steven Obeng, had visited the midwife at a health center close to their settlement for antenatal care and made arrangement for her safe delivery. "I gave birth to all my four children at home, but I had complications when giving birth to my fourth child and nearly lost my life, so as for this time, my husband and I decided that I will deliver at the health center," says Mary.

The people of Sarkrom, a community in Atwima Mponua District in Ashanti Region, have a health center that provides basic health care and makes referrals to the nearest, most resourceful hospital in the district capital, Nyinahin, a town 12 kilometers away. Mary was rushed to the health center, only to find that the two midwives were not at the post. This was the beginning of her ordeal that would last for over 24-hours.

Mary and her family had no other option than to take the risk of giving birth at home without the assistance of a skilled midwife. After hours in labor, Steven, obviously stricken, learned that the CHPS compound at Dotitem, a small community located about 4 kilometers from Sarkrom in Ahafo Ano South District in Ashanti Region, started providing emergency delivery services. For close to half an hour, Mary endured the pain of being rushed to the Dotiem CHPS compound on a poor road by motor bike. Emmanuel Gyamfi, a CHO who had additional training in various areas, including emergency delivery, assisted her to deliver a baby boy. On reflection, Mary says, "He [Emmanuel] saved my life and my baby's life." Three weeks later, both Mary and her baby were doing well.

Emmanuel Gyamfi is one of over 1,200 CHOs trained by the GHS with the support of USAID through MCSP to increase access to high-quality basic health care, especially maternal and child health.

"There were several services we were not giving here, like emergency delivery, which we now do after the training. We learned how to even resuscitate babies who are just born and can't breathe."

–Emmanuel Gyamfi, CHO at the Dotiem CHPS facility

Like many other CHOs, after the training, Emmanuel undertook an additional 2-week internship to gather practical delivery experience at Ahafo Ano South Hospital. Before the training, Emmanuel referred emergency cases to the district hospital. He recalls an occasion where a teenage mother even lost her child. "There were several services we were not giving here, like emergency delivery, which we now do after the training. We learned how to even resuscitate babies—those who are just born and can't breathe."

Before the GHS posted a midwife at the Dotiem CHPS compound, Emmanuel conducted 11 emergency deliveries to save the lives of women and children. Even though Emmanuel's duties as a CHO are numerous, he gets huge satisfaction from emergency deliveries. "I feel very good when I help a mother deliver her baby safely, and the baby, very little, comes crying," says Emmanuel.

Appendix C. List of Presentations at International Conferences and Publications

Title	Conference	Dates	Number Presented	Location
eLearning: It Takes a Village	mHealth Summit 2015	November 10, 2015	1	Washington, DC
Assessing Ghanaian Health Workers' Practice with Task Analysis; Assessing the effect of Fixed Amount Awards (FAAs) on CHPS Implementation in Ghana (Case Study); Formative Research to Adapt the CHPS model to Urban Settings	CHPS Technical Working Group Meetings/FAA Review Meeting	October 4–5, 2018	4	Accra, Ghana
Assessing Ghanaian Health Workers' Practice with Task Analysis	Second GCNM Annual Conference 2017	October 12–15, 2017	2	Gomoa Feteh, Ghana
Assessing Ghanaian Health Workers' Practice with Task Analysis	Fourth Global Forum on Human Resource for Health	November 6–11, 2017	1	Ireland, UK
A Journey into eLearning in Ethiopia, Ghana, and Zambia	Global Digital Health Forum	December 14, 2016	1	Washington, DC
Innovating Across the Continuum of Care: Digital Health in the Maternal and Child Survival Program	Global Digital Health Forum	December 4, 2017	1	Washington, DC
Community Health Nurse Skills and Knowledge Pre- and Post-Introduction to e/mLearning Materials and Improved Skills Labs in Four Community Health Nursing Schools	Four Community Health Nursing Schools in Ghana, meeting	May 2018	4	Navrongo, Fomena, Winneba, and Tamale, Ghana
eLearning Implementation: A Holistic Approach in Ghana; Refurbishing Skills Labs in Nursing and Midwifery Training Colleges; Assessing Ghanaian Health Workers' Practice with Task Analysis	Health Training Schools' IT Tutors Conference	June 4–6, 2018	3	Obuasi, Ghana
eLearning Implementation: A Holistic Approach in Ghana; Refurbishing Skills Labs in Nursing and Midwifery Training Colleges; Assessing Ghanaian Health Workers' Practice with Task Analysis	College of Health Training Institutions Annual Meeting	June 27, 2018	3	Winneba, Ghana
Integration of Early Childhood Stimulation Messages into CHPS Staff Ongoing Nutrition Activities in Ghana	National Maternal Child Health and Nutrition Conference	July 2–4, 2018	1	Accra, Ghana

Title	Conference	Dates	Number Presented	Location
CHPS Staff Integration of Early Childhood Stimulation Messages Into Ongoing Nutrition Activities in Ghana	Seventh Annual Newborn Health Conference	July 24, 2018	1	Accra, Ghana
Assessing Ghanaian Health Workers' Practice with Task Analysis; Assessing Community Health Nursing Student's Knowledge and Skills after Equipping Skills Labs	FIGO 2018 XXII Rio World Congress of Gynecology and Obstetrics	October 14–19, 2018	2	Rio de Janeiro, Brazil
Deployment of eLearning Platform to Improve Nursing and Midwifery Training Colleges' Students' Knowledge	Annual Global Digital Health Forum	October 20, 2018	1	Washington, DC
Refurbishing Skills Labs in Nursing and Midwifery Training Colleges to Improve Teaching and Learning of Skills in Ghana	Third ECOWAS forum on good practices in health	October 23–25, 2018	5	Accra, Ghana
Designing Digital Learning for a Continuum of Learning from Pre-Service Education, Transitioning into Continuous Professional Development	Global Digital Health Forum	December 11, 2018	1	Washington, DC
Integration of Early Childhood Stimulation Messages into CHPS Staff Ongoing Nutrition Activities in Ghana; Assessing Ghanaian Health Workers' Practice with Task Analysis; Community Health Nurse Skills and Knowledge Pre- and Post-Introduction to Improved Skills Labs in Four Community Health Nursing Schools	National Health Research Dissemination Symposium, 2019	June 2019	3	Accra, Ghana
Integration of Early Childhood Stimulation Messages into CHPS Staff Ongoing Nutrition Activities in Ghana	National Maternal Child Health and Nutrition Conference	June 2019	1	Accra, Ghana

Appendix D. List of Materials and Tools Developed or Adapted by the Program

Materials and Tools	Thematic Area
Skills Laboratories in Midwifery and Nursing Training Colleges – Improving Pre-Service Education in Ghana	Pre-Service Education
Logbook for Registered Midwifery on Internship	Pre-Service Education
Logbook for Registered Community Nursing on Internship	Pre-Service Education
Logbook for Registered Mental Nursing on Internship	Pre-Service Education
Training Institution and Clinical/Field Practice Schedule for Registered General Nursing Students	Pre-Service Education
Training Institution and Clinical/Field Practice Schedule for Post NAC/NAP Midwifery Students	Pre-Service Education
Training Institution and Clinical/Field Practice Schedule for Registered Nurse Assistant (Clinical RNAC) Students	Pre-Service Education
Training Institution and Clinical/Field Practice Schedule for Registered Nurse Assistant (Preventive RNAC) Students	Pre-Service Education
Training Institution and Clinical/Field Practice Schedule for Registered Community Nursing Students	Pre-Service Education
Training Institution and Clinical/Field Practice Schedule for Registered Midwifery Students	Pre-Service Education
Curriculum for the Registered Nurse Assistant (Clinical) – (RNAC) Program	Pre-Service Education
Curriculum for the Registered Nurse Assistant (Preventive) – (RNAP) Program	Pre-Service Education
Curriculum for the Registered Mental Nursing Program	Pre-Service Education
Curriculum for the Registered Midwifery Program	Pre-Service Education
Curriculum for the Registered General Nursing Program	Pre-Service Education
Facilitator Guide for the Reference Manual for the Preceptorship in Nursing and Midwifery for Pre-Service and Postgraduate Residency Education (second Edition)	Pre-Service Education
Curriculum Outlines for a Modular Course on Clinical Preceptorship in Nursing and Midwifery for Pre-Service and Postgraduate Residency Education	Pre-Service Education
Reference Manual for Preceptorship in Nursing and Midwifery for Pre-Service and Postgraduate Residency Education (second edition)	Pre-Service Education
Objective Structured Clinical Examinations Learning Activity	Pre-Service Education
Skills Labs Implementation Case Study	Pre-Service Education
eLearning Technical Manual Guide	Digital Health
eLearning Case Study	Digital Health
Community Mobilization and Home Visits: Key Pillars of the Community-Based Health Planning and Services (CHPS) Program in Ghana	Community Health
CHPS costing tool brief	Community Health

Materials and Tools	Thematic Area
CHPS Fixed Amount Awards Brief	Community Health
CHPS Task Analysis Brief	Community Health
Urban CHPS Brief	Community Health
Community Health Officer (CHO) Training Materials	Community Health
National CHPS Implementing Guidelines	Community Health
Leveraging the Global Fund New Funding Model for Integrated Community Case Management: A synthesis of Lessons from Five Countries	Community Health
USAID MCSP Catalyzing Change Briefer	Community Health
CHO Training Manual Facilitators Guide –Volume 1	Community Health
CHO Training Manual Facilitators Guide – Volume 2	Community Health
CHO Training Manual Facilitators Guide – Volume 3	Community Health
CHO Training Field Work Guide for Participants and Facilitators	Community Health
CHO Training Manual Participants Guide – Volume 1	Community Health
CHO Training Manual Participants Guide – Volume 2	Community Health
CHO Training Manual Participants Guide – Volume 3	Community Health
CHPS Fixed Amount Awards Regional Impact Case Study	Community Health
Task Analysis Learning Activity Report	Community Health
CHPS Costing and Planning Briefer	Community Health

Appendix E. Learning Matrix

Learning question	Funding source	Key results or findings	Key learning	Final products and dissemination
How does the current job description of CHOs compare to CHO training and actual delivery of services by CHOs? Does this vary between regions or rural versus urban areas?	Field funding	• Only 37% of the CHPS staff in the study had received CHO training. • The majority of the tasks (68 of 87) were learned during pre-service education. • One-third of participants reported feeling unable to perform at least several tasks, including newborn resuscitation. • Some tasks were reported by the majority of staff as highly critical but were not taught in pre-service. • Some tasks were reported by the majority of staff as highly critical, but staff were unable to perform.	• Develop a supportive supervision system that will focus on the processes of performing all critical tasks. • Assign peer mentors at the CHPS zones who will guide and reinforce practice to help ensure that all tasks, especially the ones reported to be most critical, can be performed with quality and confidence. • Review tasks for relevance to the CHO curriculum. • The key findings from the study were used during the development of the harmonized CHO training materials with emphasis on highly critical tasks that CHPS staff were incapable of performing. • Prompted discussion among stakeholders about the revision of the pre-service education curriculum and amendment of the CHO standard operating practice.	• Report shared with GHS and MOH (PPMED, Human Resource for Health Development), NMC, GCNM, principals and preceptors, USAID • Presentation to CHPS technical working group, PY3Q4 • Presentation at Fourth Annual Global Human Resources for Health Conference, PY4Q1 (pending acceptance) • Presentation at final MCSP dissemination meeting • Manuscript to be completed after completion of the project MCSP hopes that the GHS will use the revised CHPS manual to train CHPS staff to better equip them on their roles and responsibilities.
CHPS best practices case study	Field funding	Best practices for community mobilization (within CHPS implementation) include: rapport and trust have been established between the community and the CHPS health workers, with the help of the CHMC; there are platforms for feedback and communication between the CHO and the community; the CHPS team works with the local traditional birth attendant; the communities are notified of *durbars* in advance; adequate supplies are available for the *durbar*, including chairs for community members.	• Before CHPS implementation begins, plans should be made to establish and set the stage for the use of best practices for CHPS implementation. • Planning should be careful and take into account the specific context of the communities included in a CHPS zone, including relationships between chiefs and community members' willingness to participant in *durbars*. • Chairs should be available to communities for use during *durbars*.	• Final case studies posted to the GHS and MCSP external website. • MCSP hopes that the GHS/PPMED will use the results of the study to inform the national implementation guidelines for CHPS.

Learning question	Funding source	Key results or findings	Key learning	Final products and dissemination
What is an appropriate model for urban CHPS?	Field funding	• CHPS implementation in urban areas is prioritized by stakeholders in urban areas, specifically at the director level, though support is needed in areas of logistics, equipment, and human resources. • The CHPS model designed for rural areas can be modified for an urban setting. • As with implementation in rural settings, several aspects of the model need increased support to function well, including support to providers to maintain their skills, adequate physical structures in which providers can operate, and sufficient commodities and products to implement quality services.	• Urban communities must be continuously sensitized about the concept of CHPS and encouraged to use the available prevention and treatment services. • District or community health management teams must be proactive and find innovative ways of mobilizing private entities (e.g., companies looking for corporate social responsibility opportunities) and individuals to support compounds with basic medical commodities to operate urban CHPS zones. • Specifically in areas of urban poverty (e.g., slums), home visits, and school health, a service where CHOs visit schools and provide health care services to students, are core modes of service delivery in the CHPS model, and therefore must be intensified in urban settings with community sensitization through various communication channels.	• Study report shared with GHS, MOH in PY4Q2 • Executive summary/policy brief shared with GHS, MOH, and CHPS implementers in PY4Q2 • Presentation at MOH TWG, CHPS implementation TWG • Manuscript to be completed after completion of project • Presentation at final MCSP dissemination meeting MCSP hopes that the GHS/PPMED will use the results of the study to inform a CHPS model for urban settings.

Appendix F. eLearning Modules

	Technical Area	Subtopics	Type of Module
Originally Created by MCSP			
1	*Malaria*	Malaria diagnosis and case management	Story App
2		Prevention of malaria in pregnancy	Full
3	*Nutrition*	Exclusive breastfeeding	Full
4		Complementary feeding	Learning Object
5		Comprehensive community management of acute malnutrition	Learning Object
6	*Maternal*	Managing maternal sepsis and essential newborn care	Full
7		Maternal nutrition, including anemia prevention, detection, and management, targeting pregnant women	Full
8	*Newborn*	Helping Babies Breathe	Learning Object
9		Kangaroo mother care	Learning Object
10		Cord care	Full
11		Maternal, newborn, and child health vaccination	Full
12	*Child Health*	Diarrhea prevention and treatment with oral rehydration solution with zinc	Full
13		Integrated management of newborn and childhood illness, and integrated community case management, which incorporate pneumonia diagnosis and treatment (focused on the former)	Full
14	*HIV*	90-90-90	Story App
15		Stigma	Full
16		Prevention of mother-to-child transmission	Full
17		Gender-based violence	Full
18	*CHPS*	CHO Training	Full

	Technical Area	Subtopics	Type of Module
MCSP identified available videos, resources, and materials created by other health organizations and organized them into a module.			
1	***FP***	Long-acting reversible contraceptives	Videos from American College of Nurse-Midwives Ghana DVD
2	***IPC***	Infection prevention and control (IPC) – handwashing and safe surgery	Medical aid videos and World Health Organization resources
Jhpiego worked with UNFPA to develop basic emergency obstetric and neonatal care modules.			
3 4 5 6	***Maternal***	Basic emergency obstetric and neonatal care skills: Four modules: postpartum hemorrhage, pre-eclampsia/eclampsia, prolong and obstructed labor, and postabortion care, including use of partograph and active management of third stage of labor	Full
7	***Newborn***	Essential newborn care	