



USAID | DELIVER PROJECT

Case Study

Ghana: Future Healthcare Workers Diversify Skillset to Reduce Stockouts



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Dr. Joseph Adusei Sarkodie, a participant in a training-of-trainers workshop in Elmina, practices teaching a supply chain management lesson.

This training has equipped the lecturers [and] added tremendous value by the way of understanding students, and how to help students in learning about supply chain management. — Prof. Alexander K. Nyarko, Dean at the University of Ghana, School of Pharmacy

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To be effective, a nation's public health supply chain must have enough competent staff to perform essential supply chain functions. Without appropriately trained, motivated personnel, the supply chain cannot function; inevitably, poor system performance and ongoing product stockouts will result.

In Ghana, as in many developing countries, health workers—pharmacists, nurses, and others—are responsible for the supply chain management (SCM) activities in the health sector, including reporting usage data, taking inventory, and managing restock orders. Their school coursework, however, rarely includes training on logistics systems because SCM is not considered part of a health worker's core functions. However, without this knowledge and training, health workers cannot ensure a reliable supply of health commodities for their patients.

As part of the broader supply chain improvement activities currently underway in Ghana, the reforms and health system strengthening efforts intend to increase the number of health workers with the skills to adequately incorporate SCM functions as part of their job.

Past attempts to address this gap have focused on training workshops and on-the-job training for health workers employed at the local level. In addition to the high costs of these activities, continuous staff redistribution and attrition greatly hinder the success of this capacity-building approach.

Case Presentation

SCM instruction for students in health training institutions can ensure that health workers are able to perform the supply chain tasks expected of them after they graduate. This approach can reach a large number of future health workers and, ultimately, it can save time and money.

In Ghana, the USAID | DELIVER PROJECT (the project), Ministry of Health (MOH), and Ghana Health Services (GHS) conducted a needs assessment that revealed that although current nursing and midwifery courses at the country's training institutions included some information related to SCM, it was haphazardly and incompletely incorporated. Within single universities and pharmacy schools, topics were primarily theoretical; they did not include formal, in-depth SCM modules; nor did they include hands-on practice to reinforce classroom training.

These findings were presented to various stakeholders to discuss and validate. Based on their assessment, stakeholders approved including SCM in the academic curricula of all health institutions as a sustainable approach to SCM capacity building.

Execution

The project collaborated with the MOH, GHS, and professional health councils to update the SCM course content for nursing and midwifery training institutions and to incorporate the updates into existing curricula. The project also developed a model curriculum for pharmacy schools. A complete SCM curriculum was developed as a stand-alone two-credit course; it has defined modules for each lesson available to lecturers and requires a hands-on visit to a regional medical store, local clinic, or other health facility as part of the successful completion of the course.

In 2013, 23 pharmacy lecturers were initially given an orientation in SCM and adult learning theory; another 13 lecturers were given a similar orientation in 2015. Additional training-of-trainers workshops for 14 master trainers in 2014 introduced coursework adapted for nurses; the master trainers used the acquired knowledge to train 208 nursing and midwifery tutors. In the 2013–2014 academic year, 325 final-year pharmacy students at the Kwame Nkrumah University of Science and Technology and the Central University College were the first to have the standardized SCM coursework included in their undergraduate training. As part of their course, students visited a regional medical store to observe in practice what they had been taught in school.

Lecturers, tutors, and students who successfully completed the program unanimously agreed with the relevance and timeliness of SCM training as part of student education; they noted its impact on practical issues when working with patients, sensitization to the logistical component of healthcare, and enhanced career opportunities.

After training in Elmina, Senior Lecturer and Head of the Clinical Pharmacy Department, Dr. Barima A. Afrane, said, "The experience has been fantastic! For the first time in my life, I have been exposed to the real act of teaching even though I have been a 'teacher' for some years now. The entire course has been presented in such a fluid manner that [the] majority of us are just awed at different approaches used to accomplish this task. And that can only come from an organized, knowledgeable team of professionals."

SCM is now established as part of the national exit exam for nurses. With the future implementation of two-semester courses in pharmacy programs, pharmacy students will also be required to take an exam on the content.



A pharmacy student (right) at the Kwame Nkrumah University of Science and Technology (KNUST) receives a practical orientation on the use of inventory control cards from a pharmacist (left) at a service delivery point during an SCM course field trip.

Accreditation of the SCM courses demonstrates the commitment of the Government of Ghana, health training institutions, and professional councils—they now consider SCM an essential part of any well-trained health workers' education and are willing to incorporate those skills into appropriate health training programs.

Looking Forward

By October 2015, an estimated 15,600 nurses and midwifery students—in 104 health training institutions currently included in the SCM training improvements—are expected to have received formalized SCM training. This exceeds the number of nurses and midwives reached through the current in-service training workshops and on-the-job training.

Lecturers and tutors in health training institutions have been trained and given materials to ensure they are able to offer the SCM courses to future students independent of supervision from the project. However, several factors pose challenges to the continued impact of the initiative. Ensuring funding and resources remains a high priority as Ghana moves to assume full responsibility for sustaining the programs. One solution is to transfer a portion of financial cost for logistics, materials, and certification to the student fees. Fully incorporating learning modules into curricula across universities is also critical if the initiative is to continue. Based on a 2014 survey, students and instructors generally prefer doing so through a two-semester, two-credit option and additional field exercises, both at the beginning of and throughout the course.

Current pharmacy students in the bachelor of pharmacy phase-out program in all three pharmacy schools in Ghana receive training in SCM through a two-credit hour course; beginning in the fall of 2016, the course will be incorporated into the fourth year of the new doctor of pharmacy program. At the University of Ghana, School of Pharmacy, instructors completed their training with the intention of requiring the course for all final year students; when the two-credit course is fully integrated, a final exam in SCM will be added to the graduation requirements. To further sustain the gains, discussions continue on how to include SCM as part of the licensure exams for the various health professionals.

Conclusion

Health workers have a critical role in the health supply chain; ensuring that pharmacy, nursing, and midwifery students have SCM knowledge means they can oversee the inventory of commodities. This will have a direct influence on reducing stockouts and improving access to quality healthcare in the country.

The MOH recognizes the value of providing student training to ensure the country's health workers have the knowledge and skills to support and advance supply chain reforms, as detailed in the country's supply chain master plan. National-level support for student training was evident at the recent inauguration of the Oversight Committee for Implementation of the Supply Chain Management Program; the director of procurement and supply highlighted student training as one of the interventions the MOH is currently implementing to ensure the positive future of the country's health supply chains.

Making SCM training available throughout the country, and making it an expectation for high-quality healthcare workers, is becoming increasingly standard. SCM is considered a pillar of a robust and adaptable supply chain. Training in school reduces the time that graduating students need to fully assume responsibilities as they enter the workforce; it also improves their ability to directly impact clients by establishing reliable inventory practices, reducing stockouts, and ensuring the availability of medications and equipment required to provide quality services to their clients.

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