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Maternal and Child
Survival Program

Improving Teaching Practices for Pre-Service Education in Liberia

MCSP/HRH Liberia Case Study

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Background

The United States Agency for International Development's flagship Maternal and Child Survival Program's Human Resources for Health Project in Liberia (MCSP Liberia/HRH) worked with the Ministry of Health (MOH) to accomplish two key objectives: build the capacity of pre-service education (PSE) faculty and educators, and strengthen the PSE learning environment. In July 2016, the project conducted a rapid needs assessment (RNA) in the country's five midwifery and three medical laboratory technician (MLT) programs and their related clinical settings (selected results in Figure 1). One of the key gaps that emerged was teaching skills among faculty in the schools and preceptors who observe and teach students in clinical settings; the needs assessment showed that 90% of staff had never received any training on how to be effective teachers.



MCSP staff working with faculty and students in a skills lab at Phebe School in Liberia. Photo by Erica Chin, MCSP.

The gap was largely due to the Ebola crisis that peaked in 2015–2016, during which the schools were closed and faculty found positions leading in-service trainings largely focused on infection prevention and control practices for health workers fighting the epidemic. When the schools reopened, they hired new staff from among practicing midwives and MLTs, many of whom were competent health workers but unqualified teachers. They lacked key teaching skills, including effectively communicating content to students, using appropriate teaching methods, providing students with useful feedback, designing practice sessions to develop skills, developing testing materials, and assessing student performance. The needs assessment indicated a similar gap among preceptors, who were unsure of their roles and responsibilities and lacked coaching and mentoring skills, including in demonstrating clinical skills, providing on-the-job training for students, supervising students in clinical settings, and assessing student performance.

To address gaps in teaching and clinical skills, MCSP organized and delivered a series of trainings intended to improve faculty and preceptor capacity and the quality of PSE education for midwives and MLTs in the country. MCSP also created Faculty Development Program (FDP) to certify faculty without formalized teacher training. These interventions were designed to institutionalize sustainable practices for building teacher skills in the PSE schools.

Methodology

Designing the Trainings

MCSP determined which trainings were needed based on the RNA, the results of which were consistent across all five midwifery and three MLT programs, and on the program accreditation standards set by the midwifery and MLT regulatory boards. All trainings required participants to practice and demonstrate skills and receive feedback from facilitators and their peers. Trainings were attended by a member of both the midwifery and MLT regulatory bodies and by MCSP's PSE mentors placed in the schools, who helped support and mentor faculty and preceptors to apply their newly acquired skills in classroom and clinical settings after the trainings.

Delivering Essential Workshops

MCSP, together with the heads of the schools, co-facilitated the first workshop, called Effective Teaching Skills, to build faculty and preceptor skills, including developing and understanding measurable objectives, writing content, designing activities to meet content needs and foster learning, delivering effective presentations, developing lesson plans, understanding teaching methodologies, assessing student understanding while teaching, teaching practical skills, providing feedback to students, and coaching and mentoring students. After the workshop, MCSP provided the training package with all relevant materials to participants, who made a schedule to deliver in-service trainings to their peers. MCSP's PSE mentor in each school observed each faculty member and preceptor once a month and used a presentation checklist covered during the training to evaluate their performance and mentor them on how to improve.

MCSP delivered the second essential workshop, called Student Performance Assessment, to help faculty and preceptors develop skills such as determining the appropriate levels and types of assessments, validating test questions, distributing points, communicating instructions effectively, and analyzing testing results. Again, participants delivered the training to their peers with MCSP's support.

MCSP also delivered the Student Performance Assessment training for the regulatory bodies to help them design and deliver standardized tests. Following the training, the regulatory bodies required all schools to develop and maintain item banks, where a copy of every student assessment is now stored for future use so that teachers can review, analyze, and improve on old testing materials.

Conducting Additional Key Workshops

Following the successful delivery of the first two essential workshops, MCSP developed and conducted five additional workshops to develop teacher skills:

- **Clinical Teaching Skills:** This training helped preceptors understand how to teach skills and how to coach and mentor students in clinical settings. Participants later delivered key workshop components to their peers during monthly sessions.
- **Quality Improvement/Standards-Based Management and Recognition (SBM-R®):** This training helped school leadership and faculty meet management standards, maintain quality, motivate teachers, and manage resources. Later, MCSP developed a substantial leadership and management program for school directors that covered these topics in much greater depth.
- **Preceptor Orientation:** This training focused on the criteria for becoming a preceptor and their roles and responsibilities. Following the training, the clinical instructors (who manage the simulation centers in the schools) and PSE mentors worked with the school directors to develop clearly stated roles and responsibilities for preceptors in clinical settings attached to each school.

- **Simulation Center Management:** This workshop focused on the layout of the simulation centers, how to manage and maintain them and their equipment and supplies, and how to conduct the observed structural clinical examination (OSCE) to test student skills. Following the training, MCSP and the clinical instructors set up the simulation centers using equipment procured through MCSP.
- **Computer Technology:** This training oriented school faculty and staff on the use of the new computer labs that MCSP set up in each school.

Creating the Faculty Development Program

To create a sustainable mechanism for quickly preparing faculty who do not have formal education or teaching preparation, MCSP created the FDP using content from most of the workshops listed above to train faculty in the core competencies required for medical educators as indicated in international standards. The FDP is a four-month, blended learning course that combines a series of three short, instructor-led trainings with 15 interactive e-learning self-study modules. The Liberia Board of Nursing and Midwifery (LBNM) approved the FDP as a certificate course for continuing education credits, and it can be used by the schools to meet institutional accreditation requirements for faculty preparation.

The Preceptor Orientation and Simulation Center Management workshops are not part of the FDP but were also approved for continuing education units by the LBNM and will be delivered by schools in the future.

“I thought I [created] good test[s], but [now after] the FDP and follow-up with the mentors on best practice[s] in student assessment, I cannot believe I [previously created] such poor questions. When you [compare] my test questions now [with] the one[s] before, it is like day and night.”—Midwifery faculty member, United Methodist University of Liberia

Delivering Workshops and Training to Update Clinical Skills

MCSP’s RNA also indicated gaps in clinical knowledge among faculty and preceptors. MCSP delivered trainings on topics including clinical laboratory practice; biosafety; quality laboratory management; malaria, HIV, and TB diagnosis; OSCE assessment; maternal mental health; integrated management of newborn and childhood illnesses; the Expanded Program on Immunization; and adolescent sexual and reproductive health. MCSP also conducted the MOH-approved infection prevention training, Safe and Quality Services, for faculty, senior students, and graduates who did not benefit from the revised curriculum highlighting prevention and management of Ebola and other updated content.

In addition to more traditional technical update workshops, the project used a low-dose, high-frequency (LDHF) approach to provide perinatal and emergency obstetric and newborn care trainings for midwifery faculty and preceptors and key skills trainings for MLT faculty and preceptors. The LDHF trainings involved brief workshops, facility-based practice sessions, and mMentoring through regular text message reminders.

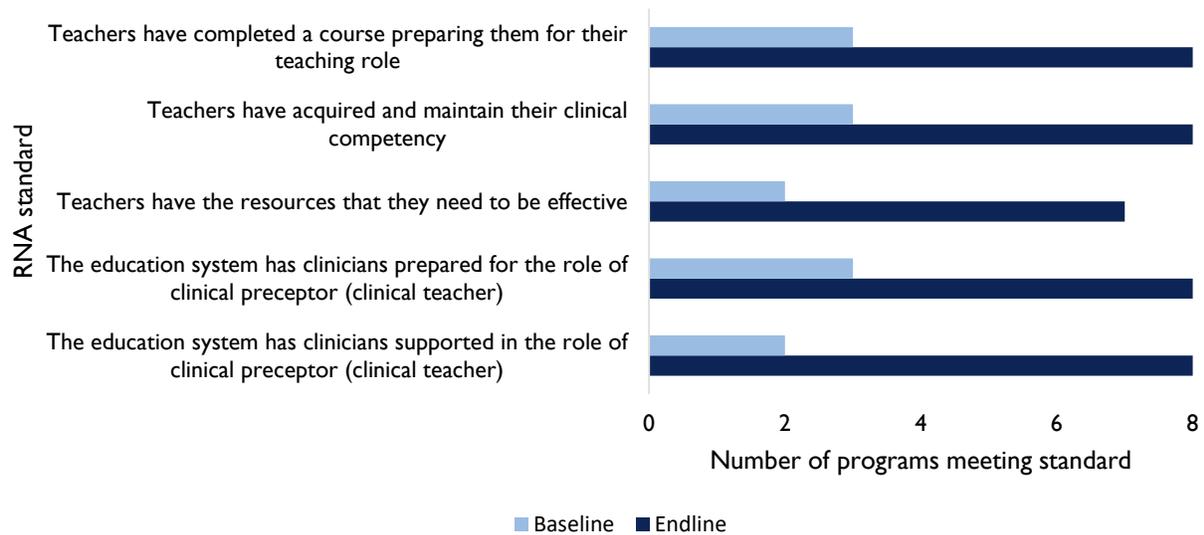
Planning for Transition

MCSP transitioned FDP management to a local university, which will continue to offer it after MCSP’s close. In addition, MCSP worked with the schools to develop a plan for ensuring that faculty hired in the future receive teaching and technical skills training. New faculty will receive a short orientation with a subset of materials from the FDP focused on effective teaching, student performance assessment, computer technology, and clinical teaching. New faculty will also be paired with veteran faculty for on-the-job training and mentorship. Following the pairing period, new teachers will be closely supervised by the school’s director for continued mentorship and skills building.

Key Results

MCSP's evaluations of faculty and preceptors showed steady improvements in the quality of their performance. At baseline (conducted June 2016), midwifery and MLT programs met an average of 33% of standards during RNA to evaluate faculty and preceptor performance, while they met an average of 98% of standards at endline (conducted July 2018) (see Figure 1).

Figure 1. Number of Programs Meeting Standards on a Rapid Needs Assessment (RNA) to Evaluate Faculty and Preceptor Performance in Five Midwifery and Three Medical Laboratory Technician Programs



At baseline (conducted in April 2017), midwifery programs met an average of 63% of standards on presentation checklists to evaluate the quality of faculty teaching, while they met an average of 93% of the standards at endline (conducted in March 2018) (see Figure 2). In addition, at baseline, midwifery programs met an average of 77% of evaluation criteria on an MCSP-conducted preceptor performance checklist, while they met an average of 95% of criteria at endline.

Figure 2. Number of Programs Meeting Standards on Presentation Checklists to Evaluate Faculty Performance in Five Midwifery Programs

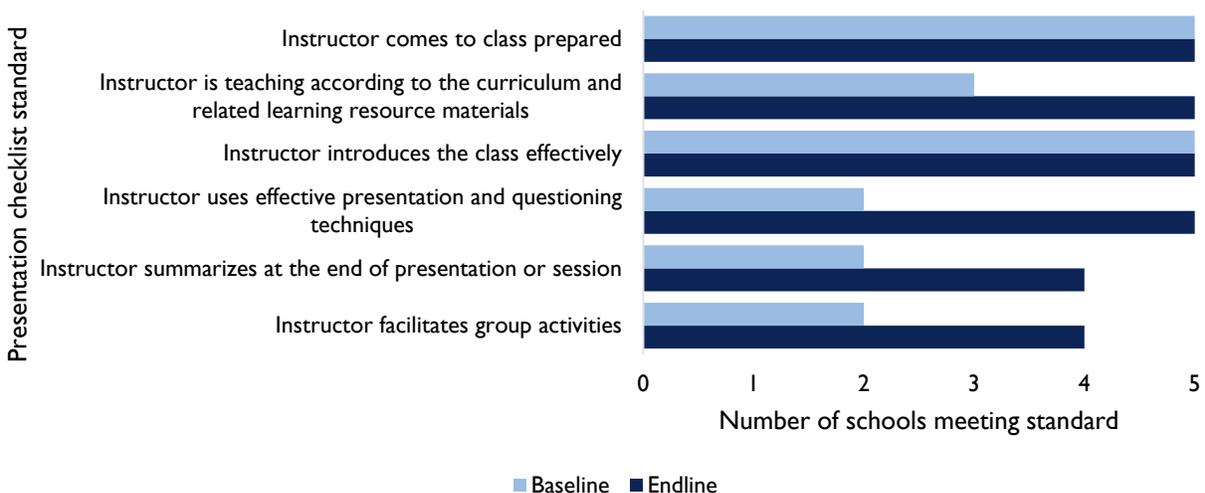
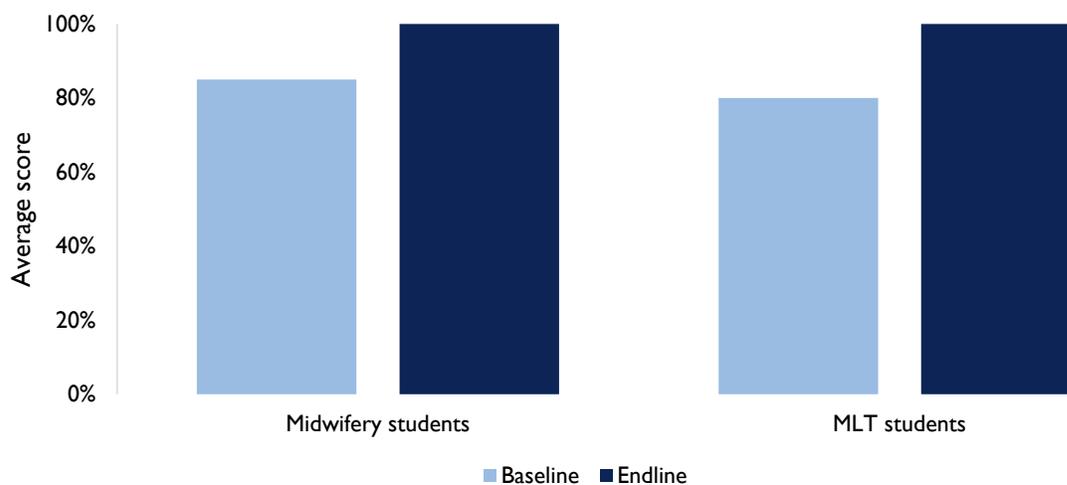


Figure 3. Average End-of-Program Objective Structured Clinical Examination Score for Medical Laboratory Technician and Midwifery Students



Although MCSP efforts to improve the teaching capacity of faculty and preceptors happened only recently, meaning that sustained impact is difficult to gauge at this time, some data are available to show that this work and other interventions implemented by MCSP are leading toward lasting results. Eighty-one percent of midwifery students passed their state board exams in 2016, while 97% of midwifery students passed in 2017. In addition, the proportion of prospective midwifery graduates passing the end-of-program OSCE was 85% at baseline (June 2016) but had increased to 100% at endline (July 2018), while the proportion of prospective MLT graduates passing the end-of-program OSCE was 80% at baseline but 100% at endline (see Figure 3).

Lessons Learned

MCSP's experience revealed lessons learned to improve future efforts to improve teaching practices in PSE schools:

- MCSP's approach was effective in Liberia for several reasons:
 - Courses were interactive and required participants to practice their new skills, evaluate each other, and develop action plans based on feedback.
 - PSE mentors attended the trainings so that they could provide supportive supervision and mentoring to help staff retain their learning, apply their skills, and continue to improve after the training.
 - MCSP designed the program to be sustainable with concentrated mentorship for new staff.
- Cascaded trainings should happen after those who attended the original trainings have at least one month to try out their new skills on the job. Allowing this extra time between the original trainings and the cascaded trainings will allow the original participants to further understand the skills, see how they work in the classroom, and provide experienced instruction to their peers.
- Future programs should provide all reference materials, job aids, and tools during the training rather than waiting until several weeks later to ensure that teachers are able to start using them immediately to remind themselves about skills taught and begin applying those skills.
- Programs should support the schools to develop standardized and harmonized calendars so that faculty are free at the same time for training; currently, the school schedules vary widely.

Recommendations

To continue the progress that MCSP made in increasing faculty and preceptor teaching skills:

- The schools must take ownership of their responsibility to ensure that their faculty are appropriately trained. They should continue supportive supervision and mentorship for teachers and ensure that new faculty participate in co-teaching and intensive mentorship as planned.
- Schools should continue to deliver the Preceptor Orientation and Simulation Center Management courses on a regular basis to ensure that those supervising students in clinical settings are adequately prepared.
- Hospital managers from the clinical sites must also be involved in ensuring that preceptors are prepared to fulfill their roles and responsibilities and that classroom and clinical instruction are coordinated.
- Regulatory boards must continue to supervise school performance and regularly update their accreditation standards to ensure that the quality of instruction remains high.

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