Integration of Improvement in Pre-service Health Worker Training Curriculum: Lessons Learned

Background

The lack of competency of health care workers to continually improve the care they are providing contributes to problems such as poor retention in HIV care and treatment or low uptake of ART among pediatric HIV-infected population. The USAID Applying Science to Strengthen and Improve Health Systems (ASSIST) Project, managed by University Research Co., LLC, had been supporting the Government of Kenya in the development of the Kenya Quality Model for Health (KQMH)1 and related in-service training. Beginning in July 2015, ASSIST teamed up with the Kenya Ministry of Health (MOH) Department of Health Standards, Quality Assurance and Regulation (DHSQAR) and the FUNZOKenya Project (FKP) to integrate improvement into the curricula of Kenyan health worker training institutions. This activity was funded primarily by the USAID/Washington Office of HIV/AIDS and Office of Health Systems Strengthening with some funding from the former USAID/East Africa Regional Bureau and approval from USAID/Kenya.

To date, the majority of work supported by PEPFAR in introducing improvement methods to health workers has been done during the in-service, or on-the-job, setting. As one part of institutionalizing improvement, health care systems need a critical mass of the health workforce competent in using improvement methods and approaches. Building a workforce which has the technical competence to innovate and address gaps in critical programs, such as HIV or maternal newborn health, is an oft-overlooked strategy in most health assistance priorities. The best way to begin systematic competency building is through integration in pre-service training curriculums. This will ensure that health care workers are prepared to continually improve HIV, maternal newborn health, and other services in order to improve outcomes.

ASSIST has been participating in the ongoing Kenya Ministry of Health’s pre-service curriculum development committee under the Quality Management Technical Working Group (QM-TWG), which included designing a quality improvement module for pre-service health care training institutions. This ASSIST activity to integrate improvement into pre-service training provided additional resources to enable four pre-service medical training institutions to move forward with the development of an improvement module. The participating institutions are: Kenya Medical Training College (KMTC), Moi University, Kenya Methodist University (KeMU), and University of Nairobi. KMTC trains over 80% of health workers in the country, so integration of improvement in their curriculum would be far-reaching.

1 https://www.usaidassist.org/resources/kenya-quality-model-health-training-course-health-sector

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Goals and Objectives

The original goals and objectives were modified in July 2016 based on difficulties in implementation, which will be discussed below. The revised goal of this activity was to prepare students from different health fields to be able to continually review and improve the quality of the services they provide once they are deployed to improve health outcomes, with a focus on HIV services. The objectives of this activity were:

- To assess the inclusion of elements of improvement in existing curricula.
- To develop medical training institution faculty improvement competencies for teaching improvement to support student preparedness for better performance and health outcomes, especially those related to HIV services.
- To develop an improvement module outline that could be integrated into curricula during institutions’ regular curricula review process.

This work aimed to strengthen PEPFAR and USAID/Kenya Office of Population Health (OPH) human resources for health (HRH) efforts. The activities contributed to PEPFAR’s HRH priorities for strengthened supply and quality of the health workforce for HIV service delivery. The products resulting from this activity will provide medical training institutions in PEPFAR-funded countries with guidance on how to initiate and design improvement modules for pre-service curriculums for different health care cadres. While this activity took place in Kenya, the resulting products can be adapted and applied globally.

Implementation

Beginning in August 2015, ASSIST and Kenya’s MOH held individual discussions with leaders from the four participating institutions in Kenya to determine their level of interest, obtain internal approvals for participation, and plan for the initial start-up meeting. The institutions chose faculty to be the points of contact for the activity and to participate in the curriculum review and development process. In addition, ASSIST held multiple meetings with the MOH and participating universities to encourage buy-in and facilitate bureaucratic processes. During these meetings, the Commission for University Education (CUE) stated that any curriculum review process has to be based on an identified need/gap. Therefore, a baseline assessment, which had been a minor activity in the initial work plan, became an important prerequisite for the process. The MOH requested that all relevant professional organizations be included in the discussions around the integration of quality improvement into pre-service curriculums. While these organizations play an important role in curriculum design, the addition of more actors complicated consensus building.

In November 2015, ASSIST held a workshop to meet with the faculty from each institution, MOH staff, and other stakeholders, such as professional organizations and FKP, to update participants on improvement and the KQMH and agree upon key activities and timelines for the project. Of the four universities that signed on to participate, only University of Nairobi and KMTC were well represented, and Moi University did not participate due to a scheduling conflict. Following the workshop, participants reviewed the implementation schedule with their respective institutional leaders. University of Nairobi wished to continue as an observer to the process through attending meetings, but were not able to actively participate in module development.

In January 2016, ASSIST, the MOH and FKP held a Technical Working Group meeting to finalize the readiness baseline assessment tool and make a plan for data collection. KMTC, KeMU and Moi University sent representatives to the meeting. During this meeting, participants reviewed and refined the readiness assessment tool, planned for faculty sensitization meetings, determined a sample size, and set up preliminary data collection schedule.

While the faculty of each institution suggested and set the deadline of February 2016 for data collection on the readiness assessments, they ran into multiple administrative hurdles in their respective institutions; for example, accreditation activities. ASSIST continually followed up with each of the institutions to
provide assistance and support where needed in the completion of the readiness assessments. To mitigate these challenges ASSIST started a WhatsApp\textsuperscript{2} group for the faculty from different schools to come together as a community of practice and share challenges and ideas with one another. In addition, ASSIST hired a consultant, a professor familiar with institutional bureaucracy and curriculum development, to assist in communicating with the institutions, facilitating with the bureaucratic requirements and processes, and supporting the curriculum review process. To move the readiness assessment forward, ASSIST, the MOH, and FKP held faculty sensitization meetings to introduce the readiness assessment and jumpstart data collection between March and June 2016. Baseline readiness assessments for the three institutions were finally completed in early July.

In July, in preparation for a curriculum development workshop, ASSIST provided faculty with a self-study guide on improving health care quality. The materials were a combination of free online courses and resources, two academic books (provided to faculty), and an assignment to conduct a simple rapid improvement project. In August 2016, ASSIST, the MOH, and FKP held a workshop to train faculty in improvement and begin the development of an improvement module with curriculum development. The first two days of the workshop were dedicated to reviewing the results of the baseline assessment and training the faculty in improvement. Although ASSIST had agreed with institutions on the continued participation of the same faculty, many participants of the workshop were participating for the first time, which required time to be spent on bringing them up to speed. The last three days of the workshop were spent discussing the institution-specific details of an improvement module which could be incorporated into existing curriculums. The participants discussed the time needed, learning objectives, key content, and other aspects of curriculum development. As part of the discussion, participants drew upon two products which ASSIST supported previously; specifically, the KQMH training materials, developed with the MOH, and the East Africa Core Competency Framework for Quality Improvement\textsuperscript{3}, developed with stakeholders across the region. Each institution left with a general outline of a module and plans to expand the module further. The activity built the capacity of a core group of faculty prepared to integrate improvement competencies into their existing curricula and developed recommendations on content and teaching approaches. Following the workshop, ASSIST visited each institution to develop specific plans for further development of the module, faculty training, and support for a pilot implementation of the module.

Limitations

There were several challenges that limited the progress of this activity. Gathering faculty points of contact proved difficult due to their differing academic schedules. Understandably, faculty could not be pulled from teaching their classes. While ASSIST, the MOH, and FKP together had many discussions and gained buy-in from the four participating institutions before activities began, there were continual administrative hurdles, additional requirements for approvals, and other bureaucratic bottlenecks in trying to move forward. There was general interest in the activity, but the internal processes for changing curricula are long and complicated. As a result, additional activities (such as extra faculty sensitization meetings) and constant need for follow-up delayed implementation and drained resources from an already limited budget. The challenges and delays meant that no institution had integrated improvement into their curricula before the end of the activity and funding in September 2016. It is hope that additional funding from USAID/Kenya will enable the activity to move forward as discussed below.

\textsuperscript{2} WhatsApp is mobile application that provides free text messaging and group messaging services.

\textsuperscript{3} https://www.usaidassist.org/resources/core-competency-framework-quality-improvement.
Lessons Learned and Recommendations

ASSIST has several lessons learned and recommendations from the implementation of this activity.

1. Each medical training institution had their own bureaucracy and approval processes, which led to multiple rounds of onboarding and roadblocks as new requirements for approval popped up.

   **Recommendation:** At the beginning of the activity, request a meeting with all relevant levels of the bureaucracy to walk through each point of the workplan to determine exactly who needs to review and approve each step, activity, and deliverable and create an institution-specific plan for addressing all of these bureaucratic needs.

2. Faculty time to participate in curriculum development activities is limited and work has to be done within the constraints of an academic calendar.

   **Recommendation:** At the beginning of the activity, review the implementation timeline in comparison with the academic year to revise the schedule accordingly. Add in time for the approval and review process in addition to the time needed to complete the actual activity per recommendation #1.

3. The faculty members were unfamiliar with approaches for improving health care and/or had their own ideas or misunderstandings of what this meant. Different institution representatives at every meeting meant that any progress in understanding the context from prior meetings was lost at the next event. Time was wasted repeating project goals and explaining improvement at each meeting.

   **Recommendation:** Request more than one point of contact and a pool of faculty who will participate in the ongoing training activities. In the event that one person cannot attend a meeting, another knowledgeable person is able to take their place.

4. The original activity plan had an improvement training for faculty scheduled following the development of the module, right before teaching. The schedule was changed to incorporate the improvement training with the curriculum development workshop to help faculty better understand of the content they were going to work with. ASSIST did not introduce the self-study materials until shortly before the improvement training at the curriculum development workshop.

   **Recommendation:** Begin training and/or self-study activities from the beginning, including using simple online courses such as the Global Health eLearning Improving Health Care Quality course⁴, to create a common understanding. Develop an agreement with the participating institutional leadership that only faculty who have done self-study or participated in a training will participate in curriculum development activities.

5. The faculty self-study guide was a good approach to give faculty more in-depth academic background than a short training might provide. The academic background and scientific basis for improvement are important for faculty to understand.

   **Recommendation:** Use the self-study materials as a base for faculty to understand both the practice and academic background.

6. Faculty schedules varied widely and it was often difficult to bring them together as a group. ASSIST started a WhatsApp group to be able to discuss scheduling meetings, but it also served as a sharing platform for faculty on their experiences.

   **Recommendation:** Decide with faculty what the best technological platform for sharing experiences and logistics are (could be the same or different) to allow for a user-friendly way to stay in touch and encourage active participation.

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⁴ https://www.globalhealthlearning.org/course/improving-health-care-quality
7. There was not an opportunity to pre-test the improvement module and for students to practice improvement in HIV care in practicum sites due to all of the bureaucratic delays. While there was not an opportunity to improve HIV care through the practicum, the faculty involved in the module development teach a wide range of clinical classes, in which HIV is taught as an integrated topic. This introduction to improvement concepts and approaches has the potential to influence the faculty's thinking.

**Recommendation:** Involve a wide variety of faculty in trainings on improvement, the development of modules, and teaching improvement and not only infectious disease faculty. This ensures that improvement is associated with all aspects of HIV care and is applicable to other areas of care as well.

**Way forward**

As a result of this activity, ASSIST prepared several products in addition to this Lessons Learned document:

- **Baseline readiness assessment report:** This report provides the analysis of surveys given to faculty and student about their institution's readiness for integrating improvement into existing curricula and whether QI concepts are already incorporated. This report will include tools which could be adapted by other institutions.

- **Faculty self-study guide for medical training institution faculty:** This self-study guide can provide an introduction on both an academic and practical level for faculty involved in integrating improvement into medical training curriculums.

- **Improvement Module Outline:** Based on the work of the three Kenyan institutions, ASSIST will prepare an improvement module outline which can be used as a model for adaptation by other medical training institutions. The module includes recommendations on time, structure, teaching methods, and content.

ASSIST will continue to explore ways to provide support and encouragement to these four institutions through activities such as continued participation in the quarterly pre-service Quality Management Technical Working Group sub-committee on curriculum development mentioned above. ASSIST will distribute these materials widely through its website and through its connections with ministries of health and medical training institutions in other countries. These activities were the critical first steps in permanent integration of improvement skills into medical training institutions in Kenya and beyond. The lessons learned in Kenya can be applied in new countries and at new institutions to jump start the process of integration. Training medical workers of all cadres in improvement from the beginning of their career can help facilitate a culture shift throughout a health system towards continuous quality improvement for critical areas, such as HIV services.