BUILDING AN EFFECTIVE HEALTH WORKFORCE THROUGH IN-SERVICE TRAINING DELIVERED BY REGIONAL TRAINING HUBS: LESSONS FROM KENYA

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BACKGROUND

The FUNZOKenya Project, led by IntraHealth International and funded by the President's Emergency Plan for AIDS Relief (PEPFAR) through USAID, scaled up access to in-service training (IST) for practicing health workers through eight regional training hubs. The project defines a regional training hub as a network of medical training institutions, hospitals that serve as sites for practicum training, and health service delivery stakeholders such as the Ministry of Health (MOH) in a defined geographic location.

In 2012 FUNZOKenya supported the MOH in conducting a rapid training needs assessment to establish priority IST needs, understand the training environment, and improve health service delivery. The assessment showed that over 80% of IST workshops were conducted in expensive hotel venues and were donor-funded. Less than 12% of the health workforce had been trained on priority service delivery areas: HIV/AIDS, maternal and child health, and family planning. Further, the assessment identified most IST as lacking practical experience, using curricula that were non-responsive to service delivery needs, and operating on a poor system of trainee selection (MOH 2012).

For IST to be effective there is need for utilization of multiple techniques that will lead to transfer of competences (Bluestone et al. 2013). Learning settings should be selected to support relevant and realistic practice so as to increase the efficiency of IST. Alternatives to hotels such as training institutions and hospitals are viable options for reducing costs of IST as well as being appropriate venues (MOH 2012). There is documented evidence of involvement of academic institutions in providing health leadership capacity building through IST in other countries; for example, in Uganda, IST in leadership for doctors and nurses was done through a blended approach that included didactic and online sessions (Nakanjako et al. 2015). Adapting these concepts, FUNZOKenya piloted eight regional hubs, each serving a cluster of counties, which would train health workers for five years (2012-2016) on priority service delivery topics.

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FUNZOKenya TRANSFORMING HEALTH WORKFORCE TRAINING

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TECHNICAL APPROACH

Establishing the regional training hubs

Stakeholder engagement: FUNZOKenya engaged and consulted a wide range of stakeholders prior to establishing the hubs, including the MOH technical departments and divisions responsible for HIV/AIDS, maternal and child health, family planning, and human resources management. The project held meetings with county departments of health, county health management teams (CHMT), health development service delivery partners, and medical training institutions. The project also identified and participated in quarterly county health stakeholders' fora to advocate for the training hubs.

Training needs assessment: The rapid training needs assessment (June-September 2012) established priority technical and clinical areas for training. The project employed the rapid result approach already adopted by the Government of Kenya as a tool for results-based management through setting achievable goals within a period of 100 days (Obong'o n.d.). The cross-sectional survey targeted 77 respondents: 8 heads of MOH technical departments and divisions, 46 health facility managers, 17 medical training institutions, and 6 regulatory authorities. In 2014 and 2015 the project conducted post-training assessments to establish effects of IST support through the regional training hubs.

Selection of regional training institutions: A competitive process including a request for applications, short-listing, and final selection by a committee was used. Selection criteria assessed the following capacities: 1) human resources management, 2) finance 3) administration capabilities including expertise to manage donor funds, 4) technical expertise, taking into account health courses currently on offer, faculty expertise, and use of technological innovation in learning and teaching. Finalist institutions were subjected to a pre-award assessment that established existing technical and administrative capacities to deliver high-quality IST and identified areas for capacity building. Selected training institutions received service contracts with a clear scope of work outlining the specific IST areas and trainee targets from the county clusters. Selected training institutions included public, faith-based, and private universities and colleges with vast teaching and learning expertise in medical education that also had the capacity to offer IST to health workers from remote locations.

Training implementation

Training curricula: To ensure content standardization and consistency in training delivery, the regional training hubs utilized the same MOH-approved curricula for specific service delivery areas such as prevention of mother-to-child transmission (PMTCT) of HIV, HIV counseling and testing, paediatric HIV treatment, integrated management of childhood illnesses (IMCI), commodity management, emergency obstetric and neonatal care (EmONC), and long-acting and permanent methods of family planning. Where a curriculum was missing, the institutions developed new courses based on clearly identified gaps as per the training needs assessment. During the curriculum development process regional hubs collaborated with resource persons from MOH technical departments, health service delivery partners, and the private sector to ensure IST courses met health service delivery needs.

Trainee selection: To minimize health workers attending the same course several times, the MOH led improved coordination in trainee identification through county focal persons (MOH 2014), with selection done by a team that included the county department of health, project partners, the regional hubs, and FUNZOKenya.

Training calendar: The training hubs are intended to coordinate and offer IST that minimizes disruption of health service delivery due to absence of health workers attending training. To achieve this objective the hubs developed calendars to publicize upcoming trainings, including the location, duration of training, and commencement dates. This assisted health workers and their supervisors to identify appropriate times to undertake a course based on work schedule.

Capacity building for the regional training hubs: Using results from the pre-award assessments, FUNZOKenya collaborated with relevant MOH technical departments and resource partners to build the capacity of the training hubs to fill identified gaps in areas such as eLearning content conversion, training of trainers, and faculty development in select technical areas identified in the training needs assessment.

Practicum training: MOH-owned hospitals that were sufficiently equipped, with well-trained health professionals, were used as clinical practicum sites during IST. Some of the practicum sites received capacity-building support for updated training in the areas of HIV/AIDS; reproductive, maternal, newborn, and child health (RMNCH); and family planning. Most of these facilities were already practicum training centers for pre-service education. These health facilities provided sufficient clients for clinical practice in HIV, RMNCH, and FP services. Depending on the training program,

practica lasted two to three days for a one-week IST course.

Regional training hub quality control and assurance

To ensure the IST delivered at each hub was of high quality, FUNZOKenya managed the following factors: 1) adherence to standards as defined by the training curricula and health service guidelines, 2) conformity to signed contract agreements with regional hubs, and 3) continuous monitoring and evaluation of training implementation. The following activities were undertaken to ensure high-quality training:

Training coordination: A training coordination team including representatives from the county department of health, partners, and the training institutions was responsible for planning, implementation of training, and post-training follow-up activities. The project hired a manager for each hub to supervise and ensure training was conducted to specifications defined by curricula and as per the service contract. During visits, managers conducted checks to ensure pre- and post-tests were administered, end-of-course evaluations carried out, and follow-up actions addressed, and assessed the level of preparation for effective practical-based training.

Human resources information system (HRIS): Previously, the national government, counties, and development partners did not have a clear picture of training activities in the country. Information was fragmented among MOH technical departments, training institutions, and partners supporting IST. To address this, FUNZOKenya implemented IntraHealth's open source iHRIS Train software to capture IST data and is transitioning this system to the MOH for sustainability. Regional hubs were also trained on the system to allow them to input data on people trained.

Progress review forums: Quarterly progress review meetings with the training hubs were held to share successes, challenges, and best practices, and receive feedback. The feedback from these meetings was useful in the alignment of IST courses to meet actual health care demands. The training hubs were also included as members of MOH county training committees that plan and implement training at the county level.

RESULTS

Priority IST needs: Table 1 lists the 10 priority in-service areas identified by MOH technical departments and health facility managers from a list of 25 for health service delivery (MOH 2012).

Table 1. Priority training needs identified	**% of total respondents (N=54)**
Cervical cancer screening	42.6 % (23)
HIV – PMTCT	33.3% (18)
Focused antenatal care (FANC)	31.5% (17)
IMCI	31.5% (17)
Newborn care	31.5% (17)
Active management of third stage labor (AMTSL)	29.6% (16)
HIV – Paediatric care	27.7% (15)
Commodity management	27.7% (15)
Monitoring and evaluation – MOH tools	25.9% (14)
Integrated management of adult illnesses (IMAI)	22.2% (12)

More health workers trained: Eight regional training hubs were established in North Rift, South Rift, Nairobi, Western, Central, Eastern, North Eastern Kenya, and Coast regions. The regional training hubs were comprised of 14 medical training colleges that included Kenya Medical Training Colleges (KMTC) and public, private, and faith-based universities. A total of 15,864 health workers were trained in the priority areas by the regional hubs between July 2012 and February 2016. The hubs and utilization of iHRIS Train provided a coordinated platform in which training data were available.

Capacity building for training institutions and linkages to health institutions: MOH technical departments trained and certified 95 faculty members from the hubs on PMTCT, new guidelines for antiretroviral therapy (ART), HIV testing and counseling, nutrition-infant young child feeding, and long-acting and reversible methods of contraception (IntraHealth International 2016). Twenty-five faculty members from the hubs were trained on eLearning content conversion. One training institution converted a previous face-to-face in-service laboratory commodity management course to an eLearning course that was offered to 47 county laboratory health workers. In addition, training institutions updated their pre-service curricula drawing on the training from MOH technical departments. Enhanced collaboration occurred among regional training institutions, county departments of health, and service delivery partners in the regions (IntraHealth International 2016). One training institution developed a new course on phlebotomy based on market need with technical support from a private-sector pathologists company.

The regional training hubs generated income from training services that FUNZOKenya would have

incurred if it had engaged training companies, consulting firms, or individual consultants to offer the same. With the realized savings from IST services the hubs procured equipment such as LCD projectors, computers, and other materials to improve teaching and learning in their schools. One training institution used savings to begin hostel expansion in order to admit a new class of diploma course students in clinical medicine.

Cost-effectiveness of regional training hubs: Regional training hubs were found to be 37.7% more cost effective than hotel-based training (Milo et al. 2014). Table 2 provides a costing analysis for a 10-day training on PMTCT conducted in five different counties, comparing the regional training hub and hotel-based training.

Additionally, for the hotel-based model, 1,662 health workers received training in a six-month period (July-December 2012), compared to 2,862 (72% more) using the regional training hub model (April-September 2013).

Effects of regional training hubs on health service delivery: Post-training, most health workers trained under the regional hubs, supervisors, and stakeholders reported improvement in availability and quality of health services; 96% of health workers trained reported that post-training they were providing the services they were trained on (IntraHealth International 2016).

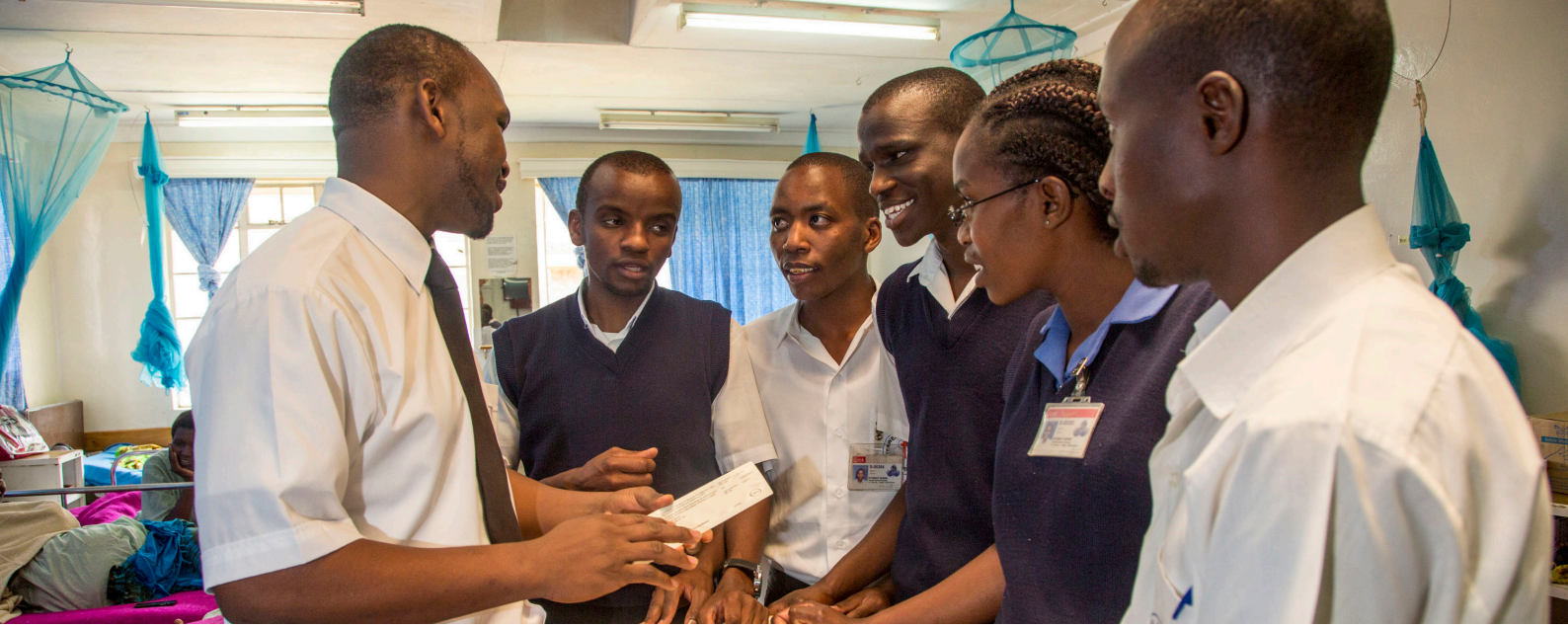
Challenges: In the initial year, regional training hubs witnessed a postponement of IST due to competing activities in the counties, including campaigns such as immunization for polio and measles. Insecurity in certain parts of the country, such as North Eastern Kenya and parts of the coast, led to deferment of training for several months in the third year. There were occasional stockouts of practical training materials, especially family planning training placebos, which led to borrowing from neighbouring counties. The training coordination team had to quickly adjust and develop training calendars that took into account all these developments. We also documented perception challenges among health workers and stakeholders. These included, at the onset, a feeling that regional training institutions were not up-to-date and capable of IST, as well as perceived fear and resistance to system change, and perceptions that the regional training institution-based training environment and lower allowance was demoralizing versus the extra comfort of a hotel (IntraHealth International 2016).

Table 2. Unit cost comparison for PMTCT training in hotel vs. training institution

Training location (county)	Unit cost for hotel venue (USD)	Unit cost for training institution (USD)	% cost reduction
Nakuru	594	413	30.49
Nyeri	815	518	36.5
Mombasa	890	568	36.24
Kakamega	830	517	37.71
Nairobi	622	324	47.89
Average unit cost	**625**	**390**	**37.65**

DISCUSSION

The regional hubs proved effective because of several factors: 1) the training needs assessment provided a roadmap for addressing gaps through training, 2) existing technical and administrative capacities in medical training colleges and universities were well suited for knowledge and skills transfer to health workers under training, and 3) collaboration among hubs, county departments of health, MOH technical departments, and service delivery partners provided a fertile ground for training implementation and learning. This also served to counter the initial perception that training institutions were not up-to-date and ready for IST. Great potential exists to accelerate the utilization of training hubs in Kenya through advocating with county departments of health and other development partners, especially given the fact that each county has specific priority health challenges they want to address. With the regional training approach it is also envisaged that IST will inform revision of pre-service training to produce health service-ready graduates over time.



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