TECHNICAL BRIEF

IMPROVING THE QUALITY AND ACCESSIBILITY OF MEDICAL TRAINING TO INCREASE HEALTH WORKFORCE NUMBERS TO MEET UNIVERSAL HEALTH COVERAGE NEEDS

September 2021

Peter Milo, Ian Wanyoike, Sospeter Ndaba, Catherine Mwenda, Caroline Njoki Ndiritu, Tervil Okoko, Dr. Janet Muriuki, Esther Kariuki, Wycliffe Omanya

BACKGROUND

Kenya's health sector has inadequate numbers of crucial health staff, including doctors, nurses, clinical officers, pharmacists, and diagnostic scientists. In addition, there are regional disparities in the distribution of health workers, and hard-to-reach areas have fewer staff. The World Health Organization recommends at least 23 doctors, nurses, and midwives per 10,000 population (WHO 2014). According to the Kenya Health Sector Human Resources Strategy (2014–2018), the country has only one doctor and 12 nurses and midwives per 10,000 population.

A health workforce projections and gaps study (2013) conducted by the Ministry of Health (MOH) and the USAID-funded FUNZOKenya project (2012–2017) led by IntraHealth International (Mumbo et al., 2017), indicated that Kenya would have a shortfall of 2,987 general practitioners, 2,466 clinical officers, 2,050 medical laboratory technologists, and 35,685 nurses by 2020. A major contributor to this chronic health worker shortage is the high cost of medical education, which is out of reach for most Kenyan families and more so for qualified, vulnerable youth, who end up dropping out of training due to financial pressures. Conservative estimates from the Kenya Medical Training College indicate that it costs USD 1,225 per year to attain a diploma in nursing, and twice as much to attain a bachelor's degree in the same field.

Compounding the health worker shortage are the glaring gaps in preservice training, with institutions producing graduates who are not ready for the job market. These gaps point to a mismatch between academia and practice. A training needs assessment conducted by FUNZOKenya in 2015 revealed major gaps in the quality and adequacy of curricula at selected medical training institutions (MTIs). The curricula did not adequately prepare students for clinical placement, as most failed to directly respond to national health needs.

Kenya reviews its medical training curricula after a full training cycle (i.e., six years for medical doctors and three years for nurses), thus preservice training is mostly based on outdated curricula. In contrast, the National AIDS & STI Control Programme and Reproductive/Maternal Health Service Units revise and update their HIV and family planning (FP) guidelines every year. Kenya also has a structural weakness with in-service training— health workers must leave their duty stations to attend specialized trainings, which exacerbates the health worker shortage in their facilities and negatively affects service delivery.

USAID FROM THE AMERICAN PEOPLE

PEPFAR

IntraHealth INTERNATIONAL Because Health Workers Save Lives.

CONTEXT

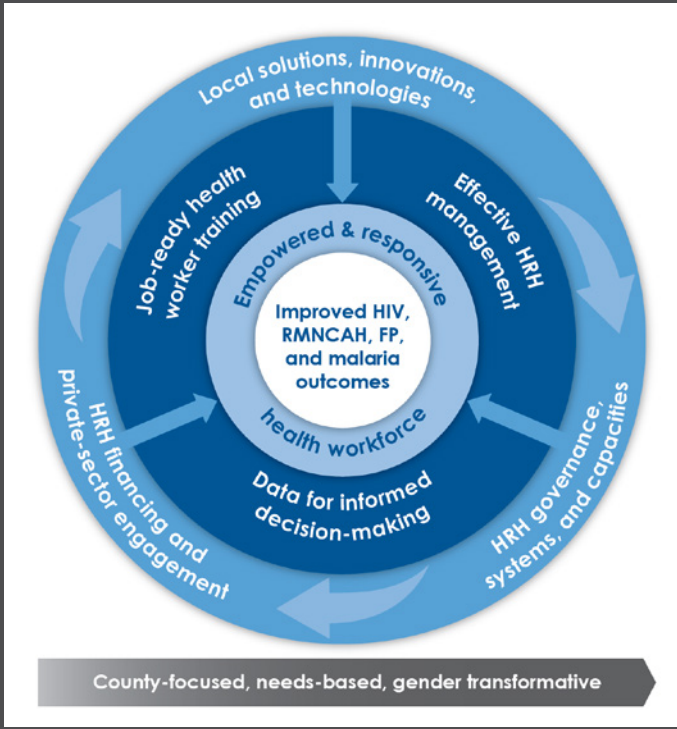
According to the Kenya Health Sector Human Resources Strategy (2014–2018), three disease domains—communicable diseases, non-communicable conditions, and violence/injuries—contribute to the high disease burden in the country. In 2013, the Government of Kenya devolved health service delivery to the 47 county governments, including management of the health workforce. However, devolution occurred before capacity, leadership structures, and organizational arrangements were fully in place to ensure a smooth transition, resulting in weak engagement between county and national governments. This suboptimal transition led to disruptions in health service delivery and recurring industrial unrest.

Kenya's health worker shortages are exacerbated by inappropriate skills mix; high workload; chronic absenteeism; low staff morale; industrial unrest; inefficiencies in staff hiring, deployment, performance, and retention; and limited technical supportive supervision, mentorship, and coaching from supervisors, among other reasons. To achieve universal health coverage, including HIV and reproductive, maternal, newborn, child, and adolescent health (RMNCAH) service provision, as well as the Sustainable Development Goals (SDGs), the following needs must be met: increased numbers and equitable distribution of well-trained health workers; improved quality of preservice training through better and more responsive curricula; and implementation of training needs assessments of employed health workers to establish gaps in in-service training, mentorship, and supportive supervision.

ABOUT THE HUMAN RESOURCES FOR HEALTH (HRH) KENYA MECHANISM

The HRH Kenya Mechanism is a five-year (September 27, 2016 to September 26, 2021) USAID-funded initiative led and implemented by IntraHealth International and its partners Amref Health Africa and Strathmore University Business School. The overarching goal of the Mechanism is to strengthen the health workforce to achieve improved health outcomes. The Mechanism's national-level interventions have included activities related to policy, guidelines, and regulation in support of HRH systems; faculty capacity-building and institution-strengthening at 13 public and select private and faith-based medical training colleges and universities; and support for 27 counties with high disease burden, aligned to the President's Emergency Plan for AIDS Relief (PEPFAR), RMNCAH, and President's Malaria Initiative priorities. The implementation framework has guided structured and vision-centric operations (Figure 1).

Figure 1: Implementation Framework



The Mechanism has supported USAID's efforts toward the journey to self-reliance through its interventions to strengthen HRH management systems at the national, county, and community levels. The Mechanism focused on supporting the MOH, county governments, and the Ministry of Education's Higher Education Loans Board (HELB) to improve the management and development of the health workforce under its three Sub-Purpose areas: 1) improve the quality of training and increase the number of graduating health workers; 2) improve the leadership, management, and governance of the health workforce at the county level; and 3) optimize data use for effective HRH decision-making at the national and county levels. The Mechanism built on successes and lessons learned from prior IntraHealth-led USAID projects (HRH Capacity Bridge and FUNZOKenya).

TECHNICAL APPROACH

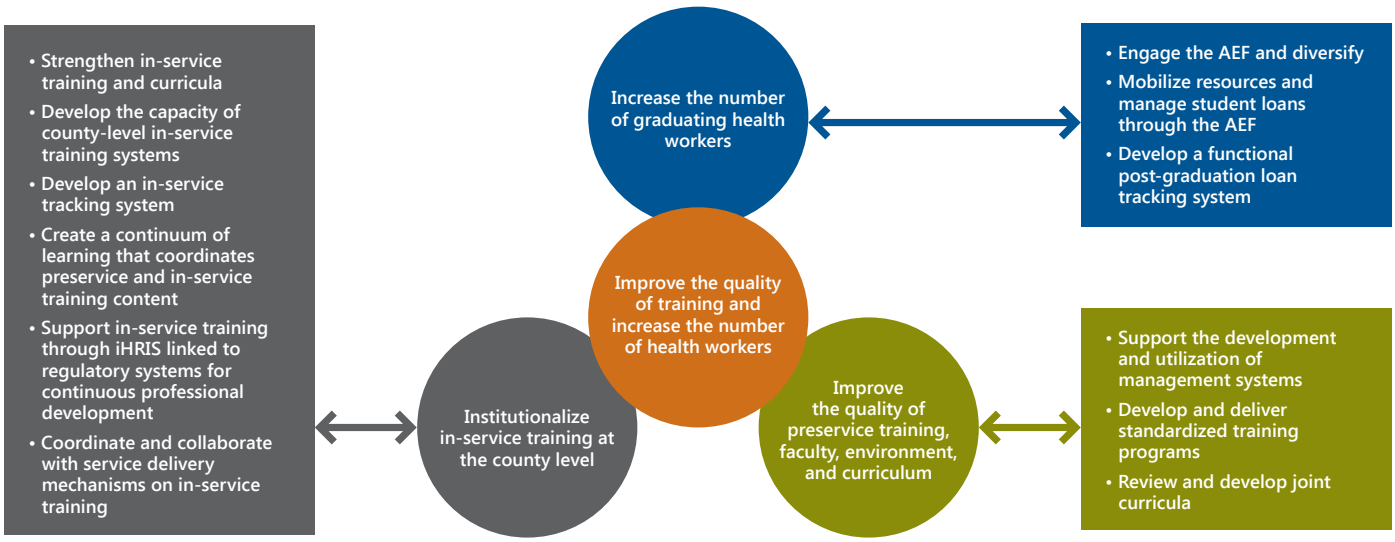
The Mechanism aimed to sustainably strengthen select lead and satellite medical training institutions in improving the quality of their preservice and in-service training and producing graduates with the right skills mix who are then deployed based on county HRH needs. Sustainable financing through the Afya Elimu Fund (AEF) encourages financially challenged students to access medical training. To promote self-reliance, the training institutions are engaged in transformative education toward skills-responsive faculty improvements. Figure 2 illustrates how three programmatic outputs were designed to lead to improved quality of training and increased numbers of health workers.

USAID, IntraHealth, the Ministry of Education through the HELB, and other partners established the AEF in 2013 to provide loans to financially needy health care trainees at mid-level MTIs. IntraHealth worked with the HELB; the MOH; county governments; and private sector partners, such as banks and foundations, to mobilize resources for the AEF. The AEF focuses on mid-level cadres, such as nurses, laboratory technologists, and clinical officers, among others, who form the bulk of the country's health workforce. The HELB administers the funding as an affordable, revolving loan product: repayments are put back into the fund to support new trainees. The 4% per annum interest rate is charged for preservice training loans, and beneficiaries have a one-year grace period before repayments commence. The one-year post-graduation period provides the trainees an opportunity to settle before starting repayments.

The program advocates for sustainable HRH financing and private sector engagement. Though the greatest responsibility for financing the health system belongs to county governments, it is acknowledged that the public sector is unable to fully finance the HRH training needs of the country. In response, the innovative AEF model pools and leverages public, private, and other health-related sector resources to sustainably support health systems. Additionally, the Mechanism engaged ten county government assemblies to advocate for the inclusion and allocation of funds for the AEF in county budgets; develop county AEF regulations; and establish links with nongovernmental organizations, private hospitals, cooperatives, and the MOH to drum up support for increased AEF funding.

The project established a robust AEF Loan Oversight Committee responsible for resource mobilization and governance of the funds. The committee, composed of members from partner organizations, also fosters sustainability, provides strategic direction, supports investment and fundraising initiatives, and identifies priority areas for training. The AEF program monitors and tracks beneficiaries and links graduates to employers through organized employers' forums. To increase the sustainability of the AEF, the Mechanism supported the HELB in undertaking employer inspections and tracking employed graduates for loan repayment. As a result, repaid loans are able to finance more needy students to become future health workers.

Figure 2: Three programmatic outputs leading to achievement of Sub-Purpose 1



PRESERVICE TRAINING, FACULTY ENVIRONMENT, AND CURRICULUM

The Mechanism supported the development of training and accreditation standards and the standardization of core curricula for key cadres, in collaboration with health regulatory boards and councils, the Commission for University Education, the Technical and Vocational Education and Training Authority, and lead and satellite training institutions. Faculty capacity improved by developing key HIV and RMNCAH/FP training materials, namely: the Pedagogy and Andragogy Skills Faculty Manual, the Checklist for Assessing the Preparedness of Health Facilities for Accreditation to Teaching Hospitals, and the Faculty Framework for Cascading Mentorship to Lead Satellite Medical Training Institutions.

The Mechanism promoted laboratory skills methodology, curricula reviews and development, eLearning and management, gender mainstreaming, and clinical practice. Expanded clinical practice sites and more clinical mentors/preceptors at training institutions improve the quality of clinical practice preservice training, aligned to HIV and RMNCAH/FP services. Moreover, facility-based learning resource centers are equipped as skills demonstration sites for students on clinical placement. The Mechanism supported MTIs in resource mobilization and the development of costed strategic plans and/or funding instruments for strategic expansion, quality improvement, and sustainability.

In collaboration with the National Gender and Equality Commission, the Ministry of Education, and the MOH, the Mechanism led development of harmonized gender guidelines for use by MTI staff. With the Commission for University Education, the Mechanism supported a review of preservice and in-service eLearning guidelines and standards, as well as the 2004 standards on open, distance, and e-learning (ODeL), which have expanded access to innovative learning methods.

IN-SERVICE TRAINING

The county governments' health management teams and USAID implementing partners have worked to develop more cost-effective training models; capture trainings in the Integrated Human Resources Information System (iHRIS) for accountability and regulation; strengthen the links between preservice and in-service training to increase curricula responsiveness; and improve faculty and in-service trainers' knowledge of adult education/participatory training methodologies. Strengthened in-service training and curricula facilitate up-to-date knowledge and skills in technical areas by mapping out in-service training providers and capturing data on the trainings provided, their duration and target cadres, course accreditation status, and curricula.

The Mechanism has led efforts to institutionalize in-service training in counties in alignment with universal health coverage requirements and service delivery guidelines for HIV, RMNCAH/FP, and other priority health services. Two steps are critical to achieving in-service training institutionalization: 1) training needs assessments, and 2) customizations by each county of a training guideline based on the MOH Training Policy (2016). The county training guideline provides an institutional framework for the management of training by the county department of health.

The HIV & RMNCAH Key Messages Resource Book for faculty prioritized a set of interventions for scale-up. The UNAIDS 90:90:90 targets were used as a conceptual framework for reviewing the Key Messages Resource Book. As a result of the review, new guidelines were proposed, like partner notification services and self-testing, to enhance uptake of HIV testing services toward integrated messaging for treatment and a differentiated care model. The key messages enabled a revision of the preservice teaching curricula for clinical medicine and nursing at the diploma and degree levels. The Mechanism facilitated over 850 health workers from 17 counties to access in-service training on long-acting reversible contraceptives (LARCs), including Implanon NXT; facilitated a comprehensive training needs assessment to inform health service delivery for universal health coverage; increased FP uptake; and increased the number of HIV clients tested, put on antiretroviral therapy, and immunosuppressed. Furthermore, 13 counties developed and started implementing their county policies and guidelines for health workforce training aligned to both county and national health priorities.

RESULTS

INCREASING THE NUMBERS

As of June 2021, the AEF had supported 40,257 students at a total cost of KES 3.06 billion (USD 30.6 million). This remarkable growth is attributable to the expanded partnership with the private and public sectors. Of the total AEF beneficiaries, 11,878 students have graduated. A total sum of KES 224,017,844 (USD 224,018) has been repaid by the beneficiaries. A total of 3,983 (34% of the graduated) are employed and available to support provision of health services including RMNCAH/FP and HIV prevention, care, and treatment. While the AEF has significantly increased the supply of health workers needed for counties to move closer to universal health coverage, the high percentage of AEF graduates not employed in the health sector needs to be better addressed through advocacy, resource mobilization, and other measures.

CAPACITY-BUILDING FOR SUSTAINABILITY

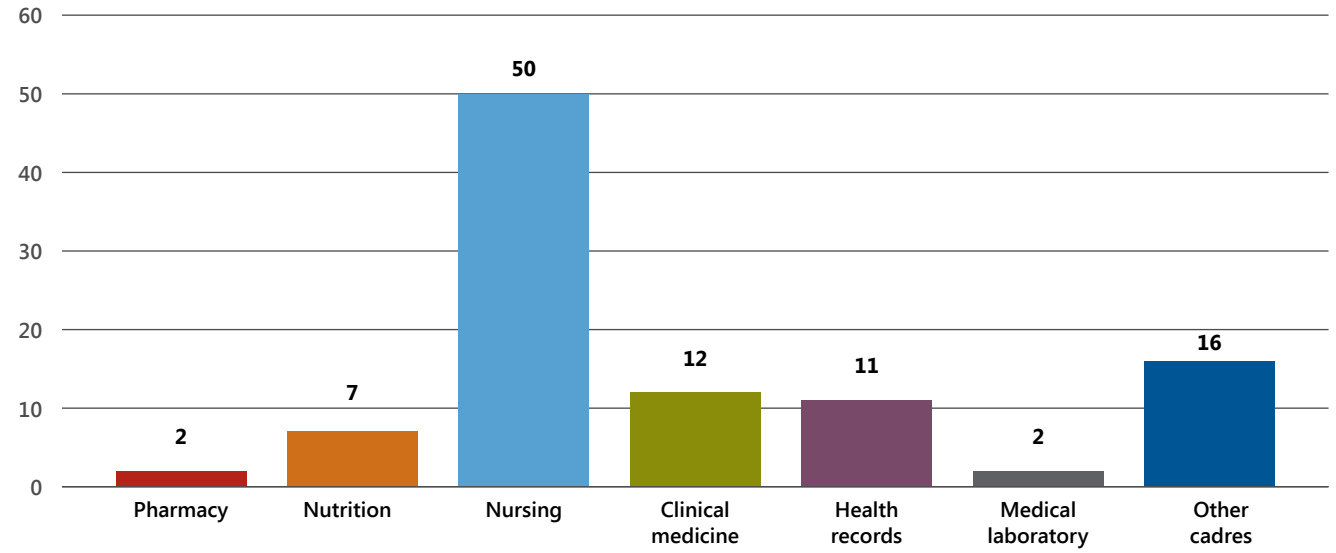
Expanding training infrastructure. A collaborative partnership has been developed that links MTIs to financiers to expand teaching and learning infrastructure for an improved learning environment. Seven training institutions have initiated resource mobilization committees that have progressively engaged with financiers: Kenya Government Public Private Partnerships (PPP) Unit, Citibank, Kenya Commercial Bank, and the Standard Chartered Bank. For example, the Government's PPP Unit approved KES 21 million in funding for Pwani University's PPP development of a teaching and referral hospital to expand teaching and learning infrastructure in Kilifi County.

Mentorship. A structured faculty and preservice mentorship framework and guidelines have been developed and used to prepare faculty from lead

Table 1: AEF summary report as of June 30, 2021

FUNDING SOURCE	AMOUNT CONTRIBUTED	PERCENTAGE	NUMBER OF STUDENTS SUPPORTED
Higher Education Loans Board	2,564,950,740	83.76%	33,328
USAID FUNZOKenya/HRH Kenya	438,100,000	14.30%	5,692
Kakamega County	28, 500,000	0.93%	838
Ministry of Health	10,000,000	0.32%	130
Standard Chartered Bank	15,000,000	0.49%	195
Family Group Foundation	2,500,000	0.08%	32
Rattansi Educational Trust	1,860,000	0.06%	24
I&M Bank	1,250,000	0.04%	16
Glaxo SmithKline Director	100,000	0.00%	1
Total	**3,062,260,740**	**100.00%**	**40,257**

Figure 3: AEF first-time loan awardees by diploma course, 2017/2018



satellite MTIs to be effective preservice educators in HIV and RMNCAH/FP. More than 120 faculty members have been mentored as trainers of health workers in antiretroviral therapy and HIV testing services, and as trainers of trainers in pedagogy and andragogy for skilled cadres (e.g., doctors) to be able to transfer skills to students during in-service training. These lead institutions—Kenyatta University, Pwani University, Maseno University, Moi University, Kenya Methodist University, and Masinde Muliro University of Science and Technology—were supported to cascade the mentorship program to 64 faculty at mid-level (satellite) training institutions.

Strengthening coordination and learning. The annual Chief Officers of Health Forum, the Deans and Principals Forum for MTIs, and quarterly human resources development cluster-level meetings have created platforms for key stakeholders in health service delivery and medical education. These stakeholders—university vice chancellors; county governments, through the Chair of the Chief Officers of Health Caucus; regulators of tertiary education (the Commission for University Education and the Technical and Vocational Education and Training Authority); and USAID—thus have a platform for dialogue on health, education, and service issues. These forums promote collaboration between MTIs and counties; the sharing of best practices, experiences, and progress in the sector; the production of "market-ready" and "fit-for-purpose" graduates; competence-based training; faculty and curricula development; and innovative learning approaches. As a result, the forums led to a review of the 2004 Commission for University Education for ODeL; deployment of MTI eLearning and mLearning for students, faculty, and later health workers with links to in-service training; and revised course outlines and curricula for Bachelor and Diploma programs in medicine, public health, and nutrition. Specifically, 12 MTIs were supported in reviewing 36 curricula, 18 of which were then approved by regulatory bodies. In addition, five hospitals were accredited as clinical teaching sites by regulatory bodies (e.g., Nursing Council of Kenya, Kenya Medical Practitioners and Dentists Council, and Kenya Nutritionists & Dieticians Institute).

CHALLENGES

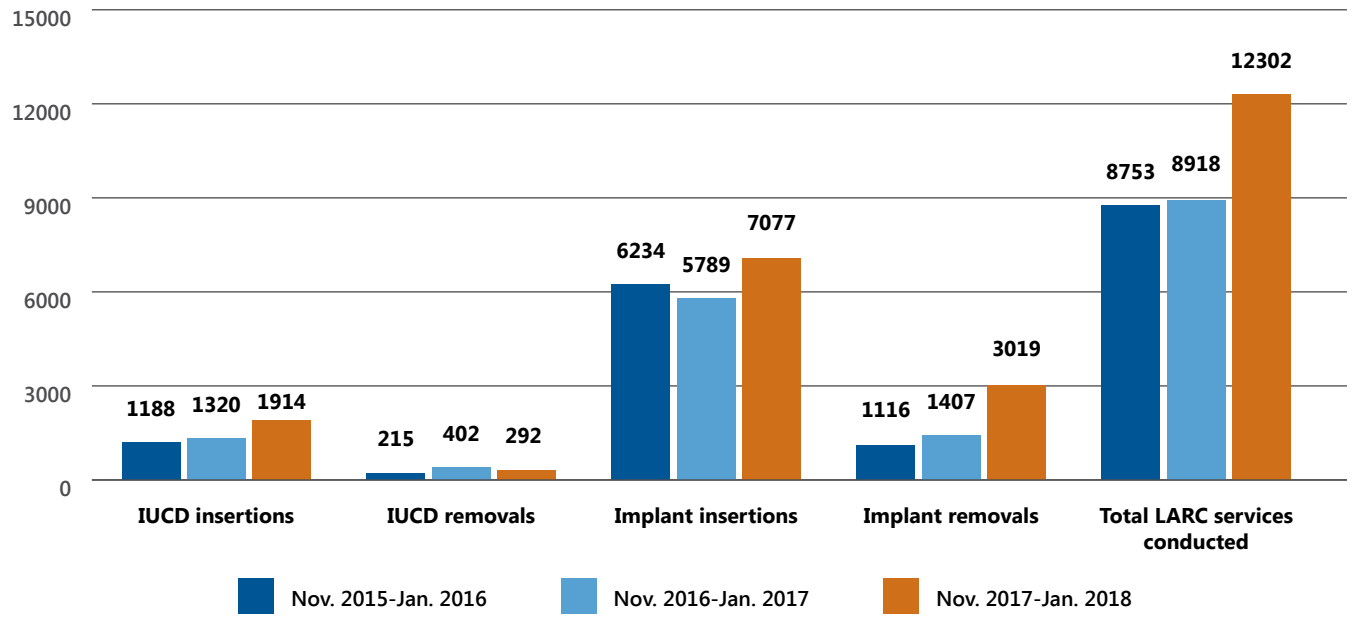
- There is inadequate government investment in human resource development, which has left the health sector largely dependent on donor funds. Shifts in donor priorities are likely to affect the pace of progress, with far-reaching consequences for health service delivery. In addition, counties have limited financial capacity to employ/absorb more health workers.
- The USAID suspension order of May 2017 prohibited working with the national MOH and affiliated institutions. Direct support to the Kenya Medical Training College—the largest mid-tertiary MTI—was greatly affected, as no financial support was extended to faculty for capacity-building.

ILLUSTRATIVE CASE

A post-training follow-up of 274 health workers (32% of the total 850) from 17 counties trained in Years 1 and 2 by Kenyatta University, Pwani University, Maseno University, Moi University, Kenya Methodist University and Masinde Muliro University of Science and Technology, in collaboration with county reproductive health coordinators and service delivery partners, registered improved quality in administering contraceptives, especially LARCs. The study sought to establish the extent to which the trained health workers had: 1) attained the required number of insertions and removals of intrauterine contraceptive devices (IUCDs) and implants, as prescribed in the LARC/FP curriculum; 2) applied LARC/FP skills on the job; 3) applied their learning to improve the quality and/or quantity of FP services offered; and 4) experienced unique factors/conditions supporting or hindering their job performance, among other parameters.

The findings point to: 1) an upward trend in the quality and quantity of LARC/FP services in the counties where the trainings had been conducted; 2) an increase in the number of IUCDs inserted (1,188 to 1,914) and implants inserted (6,234 to 7,077) between 2015/2016 and 2017/2018; 3) a reduction in the number of IUCD removals, from 402 to 292; and 4) increases in implant removals, from 1,116 to 3,019 after training (Figure 4); 84% of the supervisors observed positive changes in the quality of services delivered by health workers trained in LARC/FP.

Figure 4: Findings from post–training follow-up



RECOMMENDATIONS TO GOVERNMENT AND DONORS

- The AEF targets mid-level cadres, such as nurses, laboratory technologists, and clinical officers, as these cadres form the bulk of the country's health workforce. However, it is becoming increasingly apparent that county health facilities are in dire need of health workers with specialized skills. We recommend that the AEF begins to respond to this need; for example, by creating loan products for post-basic specialization training in areas such as anesthesia, imaging and radiology, and renal health services.
- Additionally, with the focus on universal health coverage, there is evident need for community health extension worker training. To meet the impending demand for this health worker cadre, training should be decentralized beyond the Kenya Medical Training College and extended to accredited private and public polytechnics.
- The AEF awards partial loans to students, covering tuition fees only. While this loan for tuition is critical, the exclusion of funds for other basic costs, such as accommodation and meals, does not optimally transition vulnerable students to levels of resilience. Without loan funds to meet non-tuition expenses, their time is spent meeting basic needs, which diverts attention away from their studies.
- There is need to reform medical education such that there are regional model training centers of excellence. As cases of non-communicable diseases increase, individual institutions should be known for specific areas of specialty. Innovative training approaches should be adopted, such as hosting specialized training for medical professionals at facilities (to reduce disruption in workflow or service delivery), as well as eHealth using eLearning. Residency and collegiate approaches of learning can also minimize the health worker absences that occur when training happens off-site. Kijabe and Tenwek mission hospitals have adopted this methodology, and they could serve as models for how the approach could be implemented elsewhere. Additionally, adopting telemedicine for cross-border learning has the potential to reduce training costs, motivate practitioners, and retain skills where they are needed most.
- The accreditation of additional teaching hospitals is critical for student placement and to ensure an appropriate student-training facility ratio, leading to improved competency and skill acquisition by students and health workers during clinical rotation/practice.
- Increased training opportunities and numbers of graduates supported through AEF do not necessarily result in increased availability and use of health workers in facilities. Counties will continue to need to mobilize more funding to employ more health workers as they are available.

CONCLUSION

Kenya's shortage of health workers—and need for greater employment of those who are available—is likely to jeopardize its efforts to realize universal health coverage and attain SDGs. Therefore, there is an urgent need for policies and strategies that provide a holistic approach to human resources development and management in the short, medium, and long terms to bridge existing skill gaps in the 47 counties.

The HRH Kenya Mechanism has supported laying the foundation for quality health service delivery in Kenya. The results indicate remarkable progress on the critical milestones toward self-sustainability in the production of qualified health workers. However, there are glaring gaps in resource support; intergovernmental and private sector linkages and coordination; and integration into routine government systems, which offer the benefits of dedicated financial and human resources. The AEF, like other interventions, is not only changing lives but also changing the landscape of care in areas that have critical need. A strengthened educational system will not only produce desirable numbers of health workers and ensure that learners are up to date on changes to health care services, it will also restore confidence in the quality of care across the country.

REFERENCES

IntraHealth International: Capacity Project. 2010. Taking Forward Action on Human Resources for Health in Ethiopia, Kenya, Mozambique and Zambia: Synthesis and Measures of Success

Ministry of Health. 2014. Health sector human resources strategy 2014-2018. **https://www.health.go.ke/wp-content/uploads/2016/04/Kenya-HRH-Strategy-2014-2018.pdf**

Mumbo, Hazel Miseda, Samuel Odhiambo Were, Cirindi Anne Murianki, Peter Mutuku Milo, Stephen N. Mutwiwa. 2017. "The implication of the shortage of health workforce specialist on universal health coverage in Kenya." *Human Resources for Health* 15:80.

World Health Organization. 2014. A universal truth: no health without a workforce. Geneva: World Health Organization.

IntraHealth INTERNATIONAL
Because Health Workers Save Lives.

sbs

amref health africa

This technical brief is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of IntraHealth International and do not necessarily reflect the views of USAID or the United States Government.

CONTACT

Dr. Janet Muriuki
Country Director, Kenya
Program Lead, HRH Kenya Mechanism
jmuriuki@intrahealth.org

IntraHealth INTERNATIONAL
Because Health Workers Save Lives.

www.intrahealth.org/countries/kenya