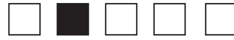

The Dawn of Family Medicine in Ethiopia

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BACKGROUND AND OBJECTIVES: This article describes the development of the first training program in family medicine in Ethiopia that was launched on February 4, 2013, at Addis Ababa University (AAU). The postgraduate program will prepare highly trained doctors for all parts of the country who choose generalism for their lifelong career. The paper describes a series of strategies that were used from 2008 to 2013 to take the Ethiopian family medicine program from vision to reality. There is no single model for the development of family medicine in a country where it does not yet exist. In this case the strategies included Continuing Medical Education events, discussions with stakeholders, international collaboration, needs assessment, curriculum design, and faculty development. The article also reviews both the potential for a new program in family medicine to contribute to the country's health system plus the challenges that are expected in the early stages of establishing a new specialty. The challenges include the ambiguous roles of the family physician in the Ethiopian health care system, uncertainty about career opportunities, adaptation of the curriculum to address local needs, expansion of the training programs to produce larger numbers of family physicians, development of Ethiopian faculty who will be teachers of family medicine, and internal and external brain drain. Family physicians will need to maintain a respectful relationship with other specialist physicians as well as nonphysician primary care providers. The development of this AAU family medicine residency is an example of a successful inter-institutional relationship between local and international partners to create a sustainable, Ethiopian-led training program. Insights from this article may guide development of similar training programs.

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Ethiopia's first training program in family medicine was launched on February 4, 2013, at the Addis Ababa University (AAU) College of Health Sciences, School of Medicine (SoM). General practitioners (GPs) have been an important part of the health system for decades. But until now there has been no postgraduate training program for generalist physicians. The family medicine program will provide such training, and its graduates will be highly skilled comprehensive-care doctors for urban and rural areas of Ethiopia who choose generalism as a lifelong career choice. This article describes the early development of the specialty of family medicine in Ethiopia. The lessons learned could guide development of similar training programs.

Ethiopia has a population of 94 million.[1] It ranks 174 out of 187 countries on the United Nation's Human Development Index.[2] Mortality from preventable illness is high, with most deaths caused by communicable infections, followed by malnutrition and maternal and neonatal conditions. Only 10% of births are attended by skilled birth attendants, reflected by a maternal mortality rate that remains starkly high at 590 per 100,000 live births.[3-5] Though the under-five mortality rate has been reduced, it is still high at 106 per 1,000 live births in 2010.[6] The introduction of family medicine in Ethiopia is a strategy to improve these adverse health outcomes and manage health care costs for the growing population.

There have been discussions and debates about the roles of generalist physicians in addressing the health needs of Ethiopia for many years. In 1995, AAU Professor Jemal Abdulkadir noted "The place of general practice in Ethiopia's health care system is still undefined. There are very few incentives to attract young doctors to

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it as a career. As a result, most see it as a temporary occupation."[7] He also had the foresight to describe the potential role of generalist physicians in primary care teams and suggested that "the nearest thing to personalized medical care in a country like Ethiopia for the foreseeable future is within a well-organized health team with the doctor as the leader and other members of the team sharing diagnostic and therapeutic decisions according to their level of competence."[7]

Despite longstanding awareness of the need to bolster the role of generalist physicians, the movement to develop specialty training for family physicians is relatively recent. This movement has been supported through strong advocacy from AAU senior faculty, including Dr Pawlos Quanaa who exhorted in 2011, "Is it not time to launch the forgotten family physician graduate program?"[8]

Rationale

The current supply of trained health workers available is insufficient to address the overwhelming health care needs of Ethiopia. In 2009, there were only 2,152 physicians in the country.[9] Of these, 53% were specialists who had completed postgraduate training, and 47% were GPs who had completed medical school and a 1-year internship. The national average physician-to-population ratio is 1:36,158, which is well below the WHO minimum target of 1:10,000 for developing countries. This number obscures regional variations, particularly as the majority of physicians are located in urban areas, and 83.6% of the population lives in rural areas.[4] In a 2006 survey of 76 public hospitals outside of Addis Ababa, nearly half had no specialists on staff, and several had no physicians at all. Reasons for the low physician-to-population ratio include a high rate of physician emigration, rapid population growth, and low physician production rates. It is estimated that from 1986 to 2006, over 70% of physicians left the public sector to work in another country or within the private sector or a non-governmental organization.[10] Ethiopia has lost an investment equivalent to approximately $260 million USD by training doctors who have since migrated out of the country.[11]

The Ethiopian Federal Ministry of Health (FMoH) is addressing this critical shortage of human resources for health through its long-term Health Sector Development Program (HSDP), which began in 1993 and is now in its fourth phase. Strategies include increased annual enrollment of medical students; education and deployment of health extension workers (HEWs), health officers, and midwives; and training health officers for surgical and obstetrical emergencies.[12] These efforts are primarily intended to bolster the capacity of low- and mid-level health workers in rural areas (see Figure 1), including primary hospitals, health centers, and health posts.[4] The innovative HEW program—which provides 1 year of training to local high-school graduates to provide public health outreach in their communities—has resulted in modest improvements in communicable disease prevention, immunization rates, contraception and prenatal care utilization, and environmental hygiene and sanitation.[13] Though the HSDP has expanded access to health care through task shifting to facilities staffed with allied health workers at the community level, the stark reality is that the majority of facilities in the primary and many at the secondary level (see Figure 2) have no physicians—GPs or specialists.

The introduction of the new specialty of family medicine to Ethiopia is another strategy to provide the country with a new cadre of highly trained comprehensive care physicians. Family physicians, like GPs, would have a broad scope of practice. The additional training in the specialty of family medicine will consolidate clinical skills, improve quality of care, and enable family physicians to function as scholars and health system leaders. This is expected to improve health outcomes and to reduce costs;[14] provide skilled leadership for primary care teams; and improve the recruitment, retention, and distribution of physicians who are generalists.

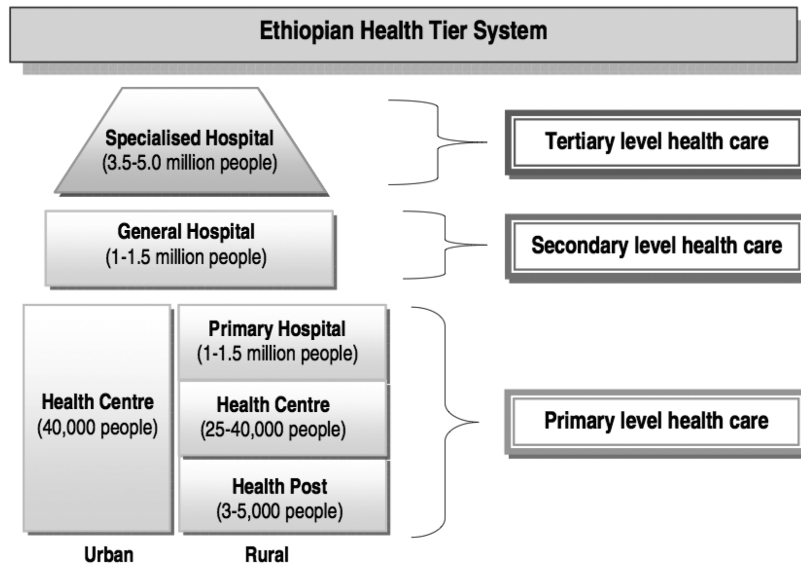
Development

The development of the family medicine residency program began in earnest in 2008 when AAU hosted an International Workshop on Postgraduate Programs. The 120 attendees representing universities from 21 countries were invited to consider potential collaboration in the development of new postgraduate programs at AAU.

Eleven faculty members from the University of Toronto (UT) attended the meeting. Prior to this time there was a successful partnership between UT and AAU to support a residency in psychiatry that was launched in 2003. This was considered a model that could be used to introduce other postgraduate clinical training programs. One of the potential areas for collaboration was the introduction of a new training program in family medicine. At the meeting in 2008, the topic of family medicine was specifically discussed with the dean of medicine (Dr Miliard Derbew), the president of the Ethiopian Medical Association (Dr Yirgu Hiwot), and the co-leader of the Toronto Addis Ababa Psychiatry Project (Dr Atalay Alem). They were enthusiastic about the potential for a program in family medicine and advised that the family medicine residency should be 3 years in duration in order to align with all other specialty training programs.

There is no single model for the development of family medicine in a country where it does not yet exist. Each country has a unique set of circumstances that will inform the most appropriate path for program development.[15-18] Experience from Brazil suggests that government commitment, followed by needs assessments, continuing education for health workers, and team training are important steps to be considered

Figure 1: Ethiopian Health Tier System[4]



prior to launching a residency program.

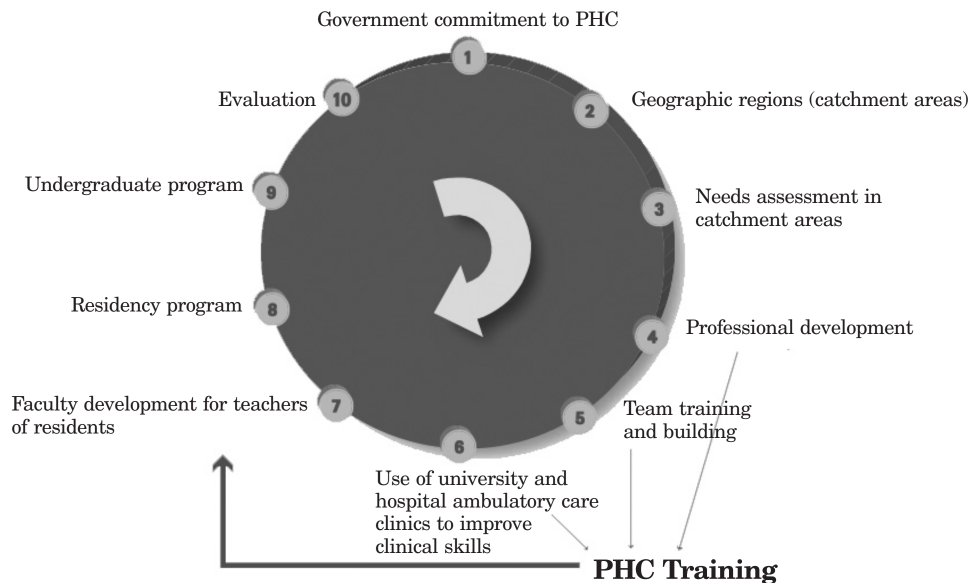
In the case of Ethiopia, a series of strategies were used from 2008 to 2013 to take the family medicine program from a vision to a reality. These strategies included continuing medical education (CME) events, discussions with key stakeholders, international collaboration, needs assessment, curriculum design, and faculty development.

Continuing Medical Education (CME) was identified as an early and important step in the introduction of family medicine. The first CME workshop on family medicine, which was hosted by the Ethiopian Medical Association (EMA) with support from UT,[19] was held in 2009 and was followed by a series of similar events. The program combined didactic sessions with interactive discussions about the roles and responsibilities of family physicians within a larger health system. The event was effective in raising awareness and preparing the way for the new program. A subsequent event inspired two GPs who attended to apply to be among the first family medicine residents in the country. Presentations about family medicine in Ethiopia were also made at the EMA Annual General Meeting in 2011, at a second CME event in 2012, and at Wonca Africa regional conferences.

Stakeholder Discussions and Engagement

Some models that have been proposed for the introduction of family medicine in a new setting suggest that the first step should be a commitment from the government.[15] In the case of Ethiopia, the FMoH has worked to build a strong system of primary care over the past 2 decades

Figure 2: Capacity Building in Family Health[15]



PHC—primary health care

with a focus on training primary-level health care workers.[12] Discussions about enhanced postgraduate training for physicians as part of the primary care team were coordinated in large part by senior faculty members at the AAU SoM, who in turn liaised closely with the FMoH throughout the process of the program development. International partners were also involved in discussions with policy makers. In April 2010, there was a formal meeting about family medicine that involved the FMoH Dr Tedros Adhanom Gebreyesus meeting with the Dean of the AAU SoM Dr Miliard Derbew and UT faculty. In October 2011, the FMoH officially approved the concept and requested that AAU proceed with plans to start a new residency training program in family medicine.

International Collaboration

A common ingredient for new programs in family medicine has been support from international colleagues to assist with program development.[16] Due to the absence of any preexisting discipline of family medicine in Ethiopia, UT and the University of Wisconsin (UW) became involved as international partners.

Efforts Built Upon Longstanding Collaboration Between UT and AAU

This relationship existed since 2002 for the purpose of building capacity in postgraduate clinical training at AAU, including development of a psychiatry residency program.[20] The Toronto Addis Ababa Academic Collaboration has been a successful model that involves UT faculty who volunteer for 1-month blocks of teaching at AAU several times each year in order to build local capacity and therefore strengthen new training programs.

UW faculty visited AAU in 2001 to explore the potential for academic collaboration and initiated discussions about the potential for family medicine training with academic leaders. By 2008, AAU leaders had identified emergency medicine (EM) as a priority training need. A series of faculty exchanges between AAU and UW led to a partnership to support the development of an EM Training Center, EM residency, and a master's in emergency nursing beginning in 2008. During the course of this collaboration, UW faculty contributed to discussions about the development of family medicine at AAU. Additional funding to support the development of family medicine training was secured through the US government-funded Medical Education Partnership Initiative (MEPI) beginning in 2010. MEPI provides grants to sub-Saharan African medical schools to collaborate with US medical schools for health system strengthening. MEPI Ethiopia was granted to AAU in partnership with three additional Ethiopian and four US universities, including UW. The goals of MEPI-Ethiopia are to strengthen the undergraduate and postgraduate training of physicians and to promote faculty development and research training. Family medicine was included as a strategy to train and retain family physicians in Ethiopia.

Needs Assessment

A needs assessment study was conducted in 2011 for the purpose of informing the curriculum about required competencies for generalist physicians practicing in Ethiopia. This was an observational study using a modified time-motion design and brief interviews to analyze the work of 46 GPs across 10 sites in Ethiopia. The results of this study will inform the development of a competency-based curriculum.

Curriculum Design and Faculty Development

The first draft of the curriculum was prepared in April 2010. This curriculum was developed using multiple resources including AAU specialty curricula, international literature pertaining to family medicine competencies,[21] and examples from other countries, including several in sub-Saharan Africa. The AAU Graduate Medical Education Council approved a final version of the family medicine curriculum in January 2012.

A group of eight AAU faculty members from the departments of Internal Medicine, Pediatrics, Surgery, Obstetrics-Gynecology, Psychiatry, and Public Health participated in 2-week faculty development fellowships in Toronto and Wisconsin in 2011 and 2012. The AAU faculty met with Canadian and US family physician educators and visited academic departments, clinics, and hospital training centers to learn more about the scope of family physicians' practices and the process of training family medicine residents.

Due to the absence of experienced family medicine faculty in Ethiopia, AAU and UT recruited three full-time Canadian family physicians as visiting faculty beginning in 2012. These physicians worked with the Ethiopian residency program director and other Ethiopian faculty to prepare for launching the program. A Canadian family medicine residency program director spent a month in Addis Ababa to help develop the program curriculum and academic teaching sessions. The group held a continuing medical education program for prospective trainees. Regular communication with the initial collaborators from UT and UW also helped to shape the program.

Recruitment of prospective trainees was accomplished through the CME program, local advertisements, and word of mouth. Ultimately, eight residents were accepted into the program: four men and four women. Years of planning and hard work culminated with the official launch of the family medicine program at AAU on February 4, 2013. Dr Dawit Wondimagegn was the inaugural program director for family medicine at AAU. In his remarks at the opening ceremony, Dr Dawit stated, "I think family medicine is going to change the face of primary care in Ethiopia."

Immediately following the inauguration, the new residents participated in a 2-week orientation to the

principles and development of family medicine provided by local AAU faculty and visiting faculty from UT and UW. Faculty development was emphasized as an essential component of the residency, with one of the main goals of the program being to train prospective teaching faculty for family medicine in Ethiopia, both at AAU and at other training sites in the country.

Discussion

Family medicine is a new specialty in Ethiopia. Its introduction brings tremendous opportunity to improve the country's health system.

Family medicine will face many challenges, including the undefined roles of family physicians in the Ethiopian health care system, uncertainty about future career opportunities, need for adaptation of the curriculum to address local needs, need for expansion of the size and number of training programs to produce more family physicians, development of Ethiopian faculty who will be the future teachers of family medicine, and internal and external brain drain.

The Roles of Family Physicians

The roles and responsibilities of family physicians in the health care system have not yet been clearly defined. It is expected that family physicians will function in the primary and secondary health care levels (see Figure 1). This may include working at general hospitals, primary hospitals, and health centers. Family physicians will be skilled clinicians, but they will also have competencies to function as health managers and team leaders. Roles will presumably be different for family physicians working in urban versus rural areas. Family physicians working in health centers or district hospitals may act as consultants to other health care workers, may have greater community and public health roles, and will be able to provide emergency surgical and obstetrical services. These and other roles are likely to evolve over time and will vary according to their locations of practice and other personnel and health resources available. Family physicians will need to develop and sustain respectful, complementary relationships with other specialist physicians as well as nonphysician primary care providers.

Career Opportunities

Attracting prospective residents into this unknown discipline may be a challenge. Opportunities for advancement and professional development for family physicians are currently unclear. The future career path and potential remuneration, including opportunities to work part-time in private practice, have not been delineated. However, some progress has been made, eg, the Ethiopian FMoH has confirmed that family physicians will be considered specialists, with commensurate salary on completion of their 3-year residency program.

Curriculum and Accreditation

An immediate challenge will be revising and implementing the training curriculum for family medicine residents as greater certainty is attained with respect to where they will be working and/or what skills they will require. For example, the need for more advanced surgical and obstetrical training has become evident. The program will need to stay flexible to prepare graduates with the skills necessary for clinical practice in a variety of locations. AAU leaders are currently working with international partners to create examinations and an accreditation process.

Expansion of Training Opportunities

A larger challenge will be training enough family physicians to have a significant impact on the country's health and its health care services. The FMoH has already started a massive expansion of undergraduate medical education programs. A significant proportion of these graduates must be family physicians if they are to have a significant impact on health outcomes in Ethiopia. Expansion of family medicine to other universities throughout the country will be essential, not simply to increase capacity, but also to ensure that family physicians are trained according to local needs and requirements.

In 2012 the FMoH opened 13 new medical schools with innovative community-oriented curricula that may help to produce graduates oriented toward community-based family medicine. The new specialty of family medicine will be introduced to undergraduate medical students at AAU through a 1-week block devoted to family medicine and participation by Canadian family physician faculty in courses such as Physical Diagnosis. At the UT, family physicians are major contributors to undergraduate clinical teaching, and about 40% of its graduates choose a career in family medicine.

Faculty Development and Capacity Building

Ethiopia does not have a body of family physicians from which to draw faculty and will have to be creative if it is to dramatically expand its family medicine training program. Continued contributions from foreign academic family physicians will be necessary, at least for the first several years until Ethiopian faculty are trained. Recruitment and development of specialists in other disciplines as "champions" of family medicine will also be necessary. Recruitment of family medicine residents who have the capacity and desire to become future faculty is critical to the future of family medicine in the country. Ongoing collaboration with UT and UW will provide continued input and assistance; at the same time, longer-term plans for withdrawal of intensive foreign involvement are necessary as Ethiopia develops capacity to operate these programs independently.

Retention

Ethiopia loses large numbers of its trained health care professionals to

other countries and internally to non-governmental organizations.[10] Retention of family physicians will be as important as training them. The psychiatry residency program at AAU that started in 2003 with the support of UT has had notable success in retaining its graduates.[20] Family medicine should incorporate lessons learned from programs such as this to retain its graduates in the public sector in Ethiopia.

Conclusions

After years of planning and hard work, the dawn of family medicine in Ethiopia is an exciting step forward in strengthening the primary health care system in the country. The development of the AAU family medicine residency is an example of a successful inter-institutional relationship between local and international partners to create a sustainable, Ethiopian-led training program for Ethiopian physicians. Though there are many future challenges to face, the program is off to a promising start. In the words of an Ethiopian proverb, "Kes be kes inkulal be igru yehedal": "Slowly, slowly, the egg will grow to walk."

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