

## EDITORIAL

### **MEDICAL EDUCATION PARTNERSHIP (MEPI), ETHIOPIA: OBJECTIVES AND OVERVIEW OF KEY ACCOMPLISHMENTS.**

Miliard Derbew, Netsanet Animut, Damen Haile Mariam, Amha Mekasha

**Background:** Addis Ababa University (AA) is one of the thirteen medical schools (in twelve countries) in Africa that are recipients of the Medical Education Partnership Initiative (MEPI). MEPI-Ethiopia is a consortia project that involved four Ethiopian medical schools (College of Health Sciences (CHS) at Addis Ababa University, Defence Medical College, Schools of Medicine at Hawassa and Haramaya Universities) as well as United States (US) partner Universities: Alabama, Emory, John Hopkins, California-San Diego, and Wisconsin. Funding for the project that spanned for five years has come from Office of the US Global AIDS Coordinator (OGAC) and the Health Resources and Service Administration (HRSA).

The mission MEPI at AAU is to dramatically transform medical education by increasing the number of qualified health care providers available and developing scientific expertise needed for research and innovation through partnership with three regional and four international universities. Operating with focus under three strategic objectives (improvement of medical education, human capacity building and retention, and enhancement of research and bio-ethics capacity), the program strives to improve medical education and retention of the health workforce consistent with the mission of the Federal Ministries of Health and Education, which overall will significantly impact the health status of Ethiopians (1). The award was received at a time when admission of medical students to the School of Medicine at AAU and the other medical schools throughout the country was increased by four fold as part of the government's plan to meet the health targets of the Millennium Development Goals (MDGs).

#### **Highlights: *Strategic objective I: Improvement of the Medical Education System***

As the medical education curriculum shifts to a modularized format across the country, MEPI has supported training for faculty from selected schools on effective teaching and educational assessment, pedagogy and instructional design. In addition, the AAU School of Medicine was selected as a model (with Debre Tabor University Medical School) to implement the newly developed innovative medical curriculum, which is integrated both horizontally and vertically.

Consultations are underway with the Federal Ministry of Health and the University of Michigan for the implementation of the MEPI-supported MSC in Medical Education Program which will be a (face-to-face and distance) program. The objective the program is to produce a critical mass of faculty members that have the knowledge and skills in medical education across the 33 universities in the country. Once such critical mass has been created within the universities, these faculty members can provide short term trainings on medical education as required in their respective universities.

#### **Key accomplishments include:**

- To manage the increased class size, MEPI supports a small class teaching approach;
- Provision of teaching aids and learning resources including skills labs, textbooks, microscopes, and other resources;
- Information Technology (IT) infrastructure enhancement and e-Learning system implementation:
  - ▶ MEPI established a computer lab with a capacity of 120 computers, a second lab of 30 computers to serve as a training center, and laptop loan service for students. Similar computer labs with a capacity of 150, 30, and 25 computers were established at Haramaya University, Hawassa University, and Defense College of Health Sciences respectively;

- ▶ Internet connectivity has been upgraded from 6mbps to 50 mbps and the indoor wireless network now connects the four buildings on campus to the central data center;
- ▶ Students and faculty have been trained on E-Granary and Moodle;
- ▶ The tablet program allows for improved communication and collaboration, access to learning resources and supports team-based learning. Over 5000 tablets were distributed to students with more than 100 textbooks, national health guidelines, and teaching materials loaded in memory cards;
- ▶ More than 10,000 copies of standard medical textbooks were purchased and distributed to all medical schools in the MEPI consortium;
- ▶ Smart classrooms connect three lecture rooms to allow for interactive lectures to be given by one instructor. It can also connect to other medical schools through the Ministry of Education network;
- ▶ Support for community based training in rural areas for medical students and multidisciplinary teams including lab technology, pharmacy and nursing students (2).
- ▶ Revised the syllabus for the multi-disciplinary team training;
- ▶ Acquired a coaster bus to transports students and faculty to the community training sites;
- ▶ Established new rural community training sites that are being supported by MEPI.
- Launched family medicine program in 2013 with eight residents and another 6 residents in 2014 (3);
- Training for faculty and students provided in the last five years included:
  - ▶ Effective teaching and educational assessment methods for 296 faculty and fellows/residents;
  - ▶ Simulation training for 47 faculty;
  - ▶ Clinical laboratory medicine training for 60 faculty; and
  - ▶ Several rounds of extracurricular training were provided to undergraduate medical students on leadership, communications, and stress management.

***Strategic objective 2: Human capacity building and faculty retention***

The AAU MEPI supports the Secretariat for the Network of Medical Schools in Ethiopia (NMSE) that is located within the Federal Ministry of Health. The MEPI-supported NMSE meeting brought members together to deliberate on various issues that pertain to resource mapping within the various institutions to enable optimal utilization of available human and material resources across the universities.

MEPI has allocated time and support to retaining faculty members in competition with higher paying positions at private institutions in Ethiopia and out-of-country (4). This includes paying for faculty teaching overload, female gender promotion, and providing funding for advanced training, research and conference travel.

**Key accomplishments include:**

- Scale up of research support for graduates working in remote areas: Two cohort groups of physicians from different regions of the country have received introductory research methods training and support in developing their research proposals. The first cohort has completed their research and the results are published in this issue (5-8);
- Female gender promotion: MEPI conducts a 'Gender in academic medicine' workshop and supported female faculty from various departments of SOM and consortia universities to participate in the Health Equity Leadership training at the University of Wisconsin (UW) (9);
- MEPI catalyzed the establishment of the Network of Medical Schools in Ethiopia (NMSE) to encourage, coordinate and develop collaboration among medical schools in Ethiopia. Thirteen medical schools signed the memorandum of understanding to establish NMSE. MEPI now supports the Secretariat;
- Outstanding students and faculty received recognition for their academic achievements and their role to promote excellence in medical education.

***Strategic objective 3: Enhancement of research and bioethics capacity***

The activities within MEPI-E's strategic objective for enhancement of research and bioethics are aimed at:

1. Creating conducive environment and culture for research within the medical schools through the development of research mentorship program among medical students;
2. Supporting the research activities of final year medical students during the rural community health training attachment in Zeway;
3. Organizing and providing several rounds of short term training opportunities (on research methods, grant writing, data management, research ethics, good clinical practices, biostatistics, and other relevant topics)

- for faculty and graduate trainees;
4. Organizing and offering a graduate diploma course in research methods for core faculty for staffing clinical epidemiology units within AAU and the local consortia universities;
  5. Strengthening Institutional Review Boards (IRBs) through training and other support within AAU and the local consortia universities;
  6. Developing curriculum for masters training in clinical epidemiology and health systems research that is on the process of being approved by the AAU Senate;
  7. Providing financial support for faculty to conduct operational research in areas that are aligned with MEPI's strategic objectives;
  8. Providing opportunities for faculty to present and disseminate their research results at local and international conferences;
  9. In collaboration with the Ethiopian Medical Association (EMA), supporting the research activities of physicians working in the peripheral and remote areas of the country, thereby creating incentives for retaining these physicians in their areas of operation, in addition to engaging them in evidence-based practice.

Key accomplishments within this strategic objective include:

- With the supportive supervision of their mentors, the first cohort of 10 undergraduate medical students have completed their research activities and are on the process of developing disseminating results and developing manuscripts for publication. The second cohort of 11 students are newly enrolled and conducting their mentored research;
- MEPI has provided training, technical and materials support for 14 medical schools to establish offices of research administration. Hundreds of faculty members and graduate trainees from AAU and the local consortia universities have been trained on research methods, biostatistics, data management, research ethics, and scientific grants writing;
- An assessment of the capacity of existing IRBs/RECs at consortium medical schools was conducted and strengthening trainings have been given to IRB members within AAU and local consortia universities;
- Research culture is being developed among junior medical students (10);
- Research as retention mechanism for physicians working in peripheral areas;
- Support for faculty research activities are undergoing;
- Several manuscripts from research activities conducted by faculty members of AAU and the local consortium universities are being ready for publication and a couple have appeared in this issue (11, 12);
- Support is being provided to team research activities of hundreds of students (medical, pharmacy and laboratory technology) participated in multidisciplinary team training program within the rural community health attachments.

Furthermore, MEPI supported the establishment of the AAU CHS Office of Research Administration (ORA) that serves as the operational wing of the Office of the Associate Director for Research and Technology Transfer. In addition the AAU CHS Clinical Epidemiology Unit (CEU) has now been made functional with the assignment of a new director; and processes are underway for establishing CEUs at Haramaya and Hawassa University. Through the MEPI-linked award called the Initiative on Research and Innovation Management (iRIM), AAU is working in training and capacity building for establishing research support infrastructures within twelve other national universities

## REFERENCES

1. Derbew M, Animut N, Talib Z, Mehtsun S, Hamburger E. Ethiopian medical schools' rapid scale-up to support the government's goal of universal coverage. *Academic Medicine* 2014; 89(8): S40-S44.
2. Haile Maraim D, Solomon A, Baingana R, Couper I, Deery C, de Villiers M, et al. Community-Based Education (CBE) programs in Africa: Lessons from schools within the Medical Education Partnership Initiative (MEPI) network. *Academic Medicine* 2014; 89(8): S50-S54.
3. Philipott J, Shiferaw S, Rouleau K, Cole D, Nicolle E, Bezanson K, et al. A Family Medicine needs assessment: Studying the clinical work of general practitioners in Ethiopia. *Ethiop J Health Dev* 2013; 27(2): 134-140.
4. Hailu A, Haile Mariam D, Fekade D, Derbew M, Mekasha A. Turn-over rate of academic faculty at the College of Health Sciences, Addis Ababa University: a 20-year analysis (1991-2011). *Human Resources for Health* 2013;11:61.

5. Gessesse Z, Tadesse Z, Alemayehu M, Yebyo H, Gebre Michael H, Hiruye A, et al. Determinant factors of Visual Inspection with Acetic Acid (VIA) positive lesions among HIV positive women in Mekelle Hospital, Northern Ethiopia: A case control study. *EMJ* 2015; Suppl 2:17-24
6. Beyene A, Muhiye A, Getachew Y, Hiruye A, Haile Mariam D, Derbew M, et al. Assessment of the magnitude of teenage pregnancy and its associated factors among teenage females visiting Assosa General Hospital. *EMJ* 2015;Suppl 2:25-37.
7. Agidew A, Getachew Y, Enque Selassie F, Hiruye A, Derbew M, Mamo D, et al. Magnitude of disability and associated factors among patients in BoruMeda Hospital, South Wollo Zone, Amhara Region, Ethiopia. *EMJ* 2015; Suppl 2:38-44.
8. Terefe W, Getachew Y, Hiruye A, Derbew M, Haile Mariam D, Mamo D, et al. Patterns of hypertensive disorders of pregnancy and associated factors at Debre Berhan Referral Hospital, North Shoa, Amhara Region. *EMJ* 2015; Suppl 2:57-66.
9. Kvach E, Desalegn D, Conniff J, Tefera G, Derbew M, Haq C, Promoting Gender Equity at Addis Ababa University – College of Health Sciences, Ethiopia. *EMJ* 2015; Suppl 2:9-16.
10. Bagale JP, Macheke ND, Abebaw H, Wen LS. Commentary: Implementation of the Medical Education Partnership Initiative: Medical students' perspective. *Academic Medicine* 2014; 89(8): S32-S34.
11. Mamo T, Yifter H, Lemessa T. Risk factors assessment of diabetic foot ulcer using the 60 seconds screening tool: A hospital based cross-sectional study at Tikur Anbessa Specialized Hospital. *EMJ* 2015;Suppl 2:45-50.
12. Worku T, Tadesse Y, Hughes P, Lemessa T, Patterns of complications seen in patients with hypertension admitted to Tikur Anbessa Hospital: A retrospective analysis. *EMJ* 2015; Suppl 2:51-56