2015 MEPI Symposium Report

Sustaining MEPI Achievements: Leadership built, Lessons learnt and Partnerships created towards an AIDS Free Generation

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LIST OF ABBREVIATIONS

AAS  African Academy of Sciences
AAU  Addis Ababa University
ACHEST  African Center for Global Health and Social Transformation
AESA  Accelerating Excellence in Science in Africa
AHS  African Health Sciences
AIDS  Acquired Immuno-Deficiency Syndrome
AITRP  AIDS International Training and Research Program
AMSA  Association of Medical Schools in Africa
ANHER  Asian-Pacific Network on Health Professional Education Reform
CBE  Community Based Education
CBME  Competence Based Medical Education
CDs  Communicable Diseases
CDC  Centers for Disease Control
CHEER  Collaboration for Health Equity through Education and Research
CHRIS  Rheumatic Heart Disease Intervention Strategy
CITI  Collaborative Institutional Training Initiative
COBERS  Community Based Education, Research and Service
CONSAMS  Consortium of New Southern African Medical Schools
COPC  Community Oriented Primary Care Approach
CPD  Continuing Professional Development
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>CVD</td>
<td>Cardiovascular Disease</td>
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<tr>
<td>CWYW</td>
<td>Cite While You Write</td>
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<tr>
<td>DELTAS</td>
<td>Developing Excellence in Leadership, Training Science</td>
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<tr>
<td>DFID</td>
<td>Department for International Development</td>
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<tr>
<td>ENTRÉE</td>
<td>Enhancing Training, Research and Expertise in HIV Care</td>
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<tr>
<td>EPAs</td>
<td>Entrustable Professional Activities</td>
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<tr>
<td>FASED</td>
<td>Focused Assessment Sonography for Endemic Diseases</td>
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<td>FIC</td>
<td>Fogarty International Center</td>
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<td>FM</td>
<td>Family Medicine</td>
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<td>FOA</td>
<td>Funding Opportunity Announcement.</td>
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<td>FUCHS</td>
<td>Forum of Universities and College of Health Sciences</td>
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<td>GWU</td>
<td>George Washington University</td>
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<tr>
<td>HAART</td>
<td>Highly Active Antiretroviral therapy</td>
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<td>HIV</td>
<td>Human Immuno-Deficiency Virus</td>
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<td>HPE</td>
<td>Health Professions Education</td>
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<td>HRH</td>
<td>Human Resources for Health</td>
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<td>HRSA</td>
<td>Health Resources and Services Administration</td>
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<td>HS</td>
<td>Health System</td>
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<td>HSRU</td>
<td>Health System Research Unit</td>
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<td>HWF</td>
<td>Health Workforce</td>
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<td>Acronym</td>
<td>Full Form</td>
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<tr>
<td>IMHERZ</td>
<td>Improving Mental Health Education and Research in Zimbabwe</td>
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<tr>
<td>ICT</td>
<td>Information and Communication Technologies</td>
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<td>KCMUC</td>
<td>Kilimanjaro Christian Medical University College</td>
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<td>KIU</td>
<td>Kampala International University</td>
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<td>KNUST</td>
<td>Kwame Nkrumah University of Science and Technology</td>
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<td>UKZN</td>
<td>University of KwaZulu-Natal</td>
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<td>LIS</td>
<td>Library Information Science</td>
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<td>MakCHS</td>
<td>Makerere University College of Health Sciences</td>
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<td>MDGs</td>
<td>Millennium Development Goals</td>
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<td>MEPI</td>
<td>Medical Education Partnership initiative</td>
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<td>MEPI CC</td>
<td>Medical Education Partnership Initiative Coordinating Center</td>
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<td>MESAU</td>
<td>Medical Education for Equitable Services to All Ugandans</td>
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<td>MIHER</td>
<td>Mozambique Institute for Health Education and Research</td>
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<td>MMC</td>
<td>Medical Male Circumcision</td>
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<td>MMeds</td>
<td>Masters in Medicine</td>
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<td>MOOC</td>
<td>Massive Open On-line Course</td>
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<td>MOH</td>
<td>Ministry of Health</td>
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<td>NECTAR</td>
<td>National Institute of Health Clinical Trainees and Researchers</td>
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<td>NEPAD</td>
<td>New Economic Partnership for Africa's Development</td>
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<td>NEPI</td>
<td>Nursing Education Partnership Initiative</td>
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<tr>
<td>Argument</td>
<td>Description</td>
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<tr>
<td>NCDs</td>
<td>Non-Communicable Diseases</td>
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<td>NGO</td>
<td>Non-Government Organization</td>
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<td>NIH</td>
<td>National Institutes of Health</td>
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<td>NIMART</td>
<td>Nurse Initiated Management of Antiretroviral Therapy</td>
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<td>NMSE</td>
<td>Network of Ethiopian Medical Schools</td>
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<td>OGAC</td>
<td>Office of the (U.S.) Global AIDS Coordinator</td>
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<td>OSCE</td>
<td>Objective Structured Clinical Examination</td>
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<td>OHRB</td>
<td>Office of Human Resources Board</td>
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<td>PEPFAR</td>
<td>President’s Emergency Plan for AIDS Relief</td>
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<td>PHC</td>
<td>Primary Health Care</td>
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<td>PI</td>
<td>Principal Investigator</td>
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<td>PLWHIV</td>
<td>People Living with HIV</td>
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<td>PrEP</td>
<td>Pre Exposure Prophylaxis</td>
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<td>PRIME</td>
<td>Partnership of Innovation Medical Education</td>
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<tr>
<td>RFA</td>
<td>Requests for Applications</td>
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<td>RIME</td>
<td>Research in Medical Education</td>
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<td>RSC</td>
<td>Research Support Center</td>
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<tr>
<td>SDG</td>
<td>Sustainable Development Goals</td>
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<td>SSA</td>
<td>Sub Saharan Africa</td>
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<tr>
<td>Su-HEC</td>
<td>Stellenbosch University Area Health Education Centers Project</td>
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SURMEPI  Stellenbosch University Rural Medical Education Partnership Initiative
SWOP  Strengths, Weaknesses, Opportunities and Strengths
THEnet  Training for Health Equity Network
TWGs  Technical Working Groups
UB  University of Botswana
UEM  University of Eduardo Mondlane
UK  United Kingdom
UNZA  University of Zambia
UPMDC  Uganda Medical and Dental Practitioners Council
US  United States
USA  United States of America
USAID  United States Agency for International Development
USG  United States Government
UZCHS  University of Zimbabwe college of Health Sciences
VOIP  Voice over Internet Protocols
VM  Virtual Microscopy
WHO  World Health Organization
WSU  Walter Sisulu University
BACKGROUND

Theme: Sustaining MEPI Achievements: Leadership built, Lessons learnt and Partnerships created towards an AIDS Free Generation

PRE 2015 MEPI SYMPOSIUM

The African Center for Global Health and Social Transformation (ACHEST) is the African coordinating center for the United States Government (USG) funded Medical Education Partnership Initiative (MEPI) program that oversaw the organization of the 2015 MEPI Symposium. ACHEST, worked with George Washington University (GWU) in the pre-conference preparations and onsite management. The 2015 fifth MEPI Annual Symposium Steering Committee included eleven members representing PI leadership from the MEPI Schools and the Coordinating Center as well as Office of the (U.S.) Global AIDS Coordinator (OGAC), National Institutes of Health (NIH) and Health Resources and Services Administration (HRSA). This committee was in charge of the organization of the pre symposium activities which included; development of the technical agenda, key themes, messages and invitations. The committee held thirteen meetings during this period. Prior to the symposium, at the end of the regular site visit to the University of Zimbabwe, the site visit team had discussions with the Zimbabwe team concerning the logistics and also approved the venue for the symposium.

2015 MEPI SYMPOSIUM

The fifth Annual MEPI symposium, under the theme: “Sustaining MEPI Achievements: Leadership built, lessons learnt and partnerships created towards an AIDS free generation” was held at the Rainbow hotel from 14th to 16th July, 2015 in Harare, Zimbabwe. The conference brought together approximately 211 participants from a network of people across Africa, all 13 MEPI universities and representatives of their consortia, government officials, representatives of the US Government, ambassadors, scientists, MEPI local and international partners who actively
participated in thematic discussions, sharing experiences, challenges, lessons learned, innovative ways and best practices in improving health care in Africa.

There were a number of thematic sessions that were presented in seven different plenaries, workshops, and an average of six breakout sessions per day as well as technical working groups (TWGs) sessions. These were moderated by experts with practical experience and knowledge on the subject matter under consideration. There was a poster session at the end of day two where participants from the MEPI universities showcased their innovative work and research on improving health in Africa. Information sharing at the conference had a far reaching audience that included the 211 that attended the symposium and those beyond through twitter, Facebook and live audio streaming.

MEPI OVERVIEW

The Medical Education Partnership Initiative is a five year project (2010-2015) funded by PEPFAR through the Office of the Global AIDS Coordinator in the United States (US), State Department and by the National Institutes of Health (NIH) and Health Resources and Services Administration (HRSA). The project provides funding to 13 Sub-Saharan African medical schools as prime beneficiaries. The number of medical schools that are included in the African consortia total 32 and the number of US and United Kingdom (UK) institutions that are included in the partnership are more than 20. Two institutions; George Washington University (GW) based in Washington, DC and African Centre for Global Health and Social Transformation (ACHEST) based in Uganda, form the Coordinating Center of MEPI. The implementation of MEPI is overseen by OGAC, HRSA, and Fogarty/NIH. The goals of MEPI are (a) to increase the capacity (number and quality) of medical graduates and specialists (b) increase their retention in their countries and (c) implement country/regionally relevant research. Other thematic areas include the creation of communities of practice and sustainability strategies to buttress the initiative. MEPI has held annual symposia since 2011.
The 5\textsuperscript{th} and last, annual symposium of this grant was held in Harare, Zimbabwe from 14-16 July, 2015. It was preceded by a MEPI Principal Investigator (PI) Council meeting on 13 July. The previous symposia were held in Johannesburg (2011), Addis Ababa (2012), Kampala (2013), and Maputo (2014). The purpose of these symposia is to enable schools and partners to present their experiences of various aspects of the MEPI program. US agencies that play a key role in the implementation, evaluation, and performance of MEPI include PEPFAR, NIH, HRSA; Centers for Disease Control (CDC) and United States Agency for International Development (USAID) are invited to participate in the symposia. Experts in medical education, research capacity strengthening, and health systems are also invited to share their experiences at the symposium. Key stakeholders in Africa and globally, such as the African Union, African Development Bank, the World Bank, and Wellcome Trust are invited to share their experience. Leading editors of journals such as the \textit{Lancet}, \textit{Lancet Global Health}, \textit{Academic Medicine}, as well as African online journals are also invited.
PLENARY SESSIONS

Plenary 1: OPENING SESSION

This plenary comprised of welcome remarks and framing of the conference which was presented by James Hakim, PI Council chair for 2014-2015. Other speakers at the opening ceremony included Robert Scott the Deputy Chief of Mission at the US Embassy in Zimbabwe, Maureen Goodenow the OGAC representative, Ambassador Eric Goosby from the University of California San Francisco and Holly Wong, the Principle Deputy Assistant Secretary for Global Affairs at the US Department of Health and Human Services.

James Hakim welcomed everyone and highlighted the symposium objective, intended to engage the participants on the importance of this program and show what MEPI has done in the area of medical education in Africa. He then briefly took participants through the program book.

Robert Scott also welcomed all participants and gave a brief summary of what MEPI has achieved throughout Africa with a focus on MEPI Zimbabwe achievements. He informed participants of PEPFAR Zimbabwe's aim to ensure that achievements made in building research capacity and human resources for health in general are sustained in Zimbabwe. He confirmed that PEPFAR Zimbabwe aims to fund more health related programs within the country and priority will be given to leadership and management skills within health systems which is of key interest to PEPFAR as a whole.

Maureen Goodenow thanked all participants for taking time to attend the symposium. She spoke about efforts taken to control the HIV epidemic which has been at the center of PEPFAR’s agenda. She noted that a significant decline in HIV prevalence in SSA and other developing regions has been achieved, and can be credited to prevention of mother to child transmission initiatives. She emphasized the need to reach out to adults, especially males within societies, if an HIV free generation is to be attained. She reaffirmed that there is a short window of opportunity to attain high impact on HIV control, but noted this can only be achieved through “focusing on the right things, in the right places, and right now.” The right things would mean focusing on health
systems, and right places refer to focusing on countries with the highest burden of HIV. She also said that access to health resources remains a major barrier in developing countries. The foundation built by the MEPI program is therefore very crucial. The impact of MEPI is transformational and has brought human resources for health to the forefront. MEPI has led to an increased availability of health workers within the various countries, not only in relation to HIV, but has had a ripple effect for health systems as a whole. PEPFAR has released a new Human Resources for Health (HRH) strategy which will work to ensure high-quality HRH is availed to high burden countries as quickly as possible. Some of the objectives of the new Human Resources for Health strategy include; developing sustainable HRH financing, continue building local capacity and expanding focus of the PI Council. She concluded by thanking all participants on behalf of PEPFAR for the hard work and commended all on the achievements made.

Eric Goosby welcomed everyone to the annual MEPI Symposium 2015. He went ahead to give a brief background on the foundation of MEPI and the objectives for starting this initiative. MEPI was formed with the aim of maturing HRH and eliminating the exodus of expertise from developed countries with the aim of building capacity within local environments. The funding mechanisms therefore had to change and partnerships in the medical arena were seen as the best way forward to focus on the quality of health workers that was needed in developing countries. MEPI was formed with the aim of making sure that the services that were being offered were timely and relevant. This would only be achieved through partnerships that build capacity of local health workers. Building research capacity and networks with the various Ministries of Health (MOH) has also been a key target for PEPFAR and MEPI. The Requests for Applications (RFA) process for MEPI program remodeled what the focus of MEPI would be as ideas were got from previously existing partnerships from institutions that applied for these funds. The challenge faced by MEPI is fostering retention of students within partnerships in their own countries so that brain drain can be curbed. We need an understanding of where we are in with regard to Global Health; we need to understand the sustainability of programs that have been put forward for HRH and health systems improvements. Non Communicable Diseases (NCDs) are becoming dominant in countries that were previously dominated by communicable diseases (CDs). Platforms made by PEPFAR are sufficient to cover NCDs as well, so we need to move
towards integration of health services so that we use platforms formed for both communicable and non-communicable diseases. Partnerships formed within the medical arena will provide leadership required for countries to move from a CDs predominant health system to a NCD one.

Holly Wong acknowledged the presence of all keynote speakers. She then spoke about MEPI and achievements made. MEPI has been transformative in a number of different ways which serve as foundations for the future as we prepare to continue with similar interventions. The partnership approach has led to a more sustainable HRH structure. Curricula have been aligned in most universities for impact to be more relevant to local communities. Similar efforts are being carried out in the US to influence the country’s health system. We should look for further opportunities for innovational learning in order to sustain achievements made so far. Through MEPI, the PEPFAR foundation for infrastructure has been built. Because PEPFAR’s target to increase HRH has been reached, a new HRH strategy has been formulated. There is need for efforts at country and community levels for these strategies to be implemented. Over the next five years, the US government has dedicated itself to work with various countries in order to attain successes in global health based on partnerships including south-north, north-north and south-south co-operations.

**Plenary 2: EDUCATION INNOVATIONS: MINISTERIAL PANEL**

The session was about innovations in medical education since the inception of the MEPI program.

Damien Haile Mariam, Professor of Health Economics at Addis Ababa University, spoke about initiatives for innovating medical education in Ethiopia focusing on the deliberate efforts to increase the number of physicians in order to respond to the brain drain problem in Ethiopia. The ratio of health workers to the population is still low despite various interventions to increase health worker.

Problems within the health sector in Ethiopia include; low density and an insufficient skills mix, low training capacity, poor health staff distribution among regions, lack of standardized in-service
training, poor human resources for health planning and management at all levels, lack of organized human resource information, and an inadequate regulatory framework. Brain drain remains a major challenge within the country. For example, out of the 4262 physicians who graduated in 2010, 1,162 were working abroad. In response to the growing health worker shortage in Ethiopia, the government has accredited more medical schools increasing the number from 3 to 33. This has been done by involving the private sector and linking regional hospitals to academic centers. The government has also implemented a policy of minimum service requirement whereby newly graduated doctors are required to serve in government hospitals for at least a year. There has been an overall increase in student enrollment from 336 in 2004 to 2,560 in 2010.

In order to assure maintenance of quality with the increase in enrollment, harmonization of curricula has been started, and there are plans to standardize it at all medical schools. There is also use of information technology and other simulation infrastructure in learning. The government plans to start national level licensure examinations in 2015 and a mandatory in-service training program after graduation. Higher education relevance and quality have been added to the training policy. MEPI has contributed to quality assurance through initiating effective teaching skills and student assessment training programs, providing training support for modularization of the medical curriculum, encouraging small class teaching, development of simulation capacity, introducing e-learning and IT infrastructure expansion including smart classrooms and a MEPI tablet program, launching a Master of Science degree in Medical Education program recently at the Addis Ababa University, and supporting the secretariat for Network of Medical Schools in Ethiopia as it ensures the scale up of good practices from one school to another.

Professor Chipo Dyanda, a child development specialist from the University of Zimbabwe, explored the education innovation experience with the MEPI program. National Institute of Health Clinical Trainees and Researchers (NECTAR) has had an impact on the university and the community since 2010. In 2010 the university developed a five-year strategic plan that has been supported to ensure quality assurance, information technology, and research development.
MEPI goals fit well within the NECTAR goals and those of the strategic direction of the University of Zimbabwe. Interventions have been done in five key areas namely;

- **Leadership and self-reliance**: Universities are expensive to run but must review their funding sources. It was good that the college sought this MEPI funding to fill in this gap to respond to the gaps in medical education.

- **Promoting subject specific education**: A lecturer must acquire professional skills to effectively deliver and also need to internalize subject specific competencies. The college has adopted competency based education, and faculty has received training and will serve as mentors.

- **Advancing research**: The College has developed a research support center using funding from various sources. This is also a powerful example of self-reliance.

- **Strengthening the use of modern technologies in education**: ICT-electronic equipment and training of staff and students has been effective.

- **Reaching out to the community**: University education has got to be relevant to the community. The thrust that the college has taken in the rural program for doctors in training is commendable. ICT in peripheral centers allows for continuous communication of students in training in rural areas among others.

Luisa Panguene, the Deputy Human Resources for Health Director in Mozambique, highlighted innovations made towards improving the quality of health workers since 1975 to 2014. The first human resource planning was done in 1992. Surgical technicians were trained to care for patients in the rural areas with 92% of caesarian deliveries within rural areas being done by surgical technicians. In a bid to respond to the national reproductive health worker shortages, training in maternal health nursing was started in 2004 with the first cohort graduating in 2008. ART treatment training was started in 2008 for medical technicians and in 2012 was scaled up to maternal health nurses. Innovations in curriculum design task analysis were done from 2008 to 2009, and in 2012 the OSCE objective structured clinical examination method was introduced. A training information system and continuous education information system were introduced with the number of students, classrooms, teachers, and levels of teachers being increased. Continuing
medical education training and the use of information and communication technology for training were introduced. In the past five years, innovations in form of pre-service training, in-service training, and the use of telephones to help in ARV treatment have been introduced.

**DISCUSSION**

- **With the capacity building interventions in Ethiopia, is brain drain still a problem in Ethiopia?**

  It is still a problem but has reduced in terms of magnitude since there is a service requirement in the country. If one cannot fulfill the service requirement; they then have to pay a large sum of money which most cannot afford.

- **Mozambique training has very deliberate plans and follow through. Training is based on needs and resources and a great information system had been developed. University of Eduardo Mondlane has MEPI, is there an interface between what the UEM is doing and the government?**

  The Ministry of Health is working closely with MEPI. Medical education in Mozambique is not the responsibility of Ministry of Health (MOH) but because of the relationship, the university has worked with government to develop the strategies. A relationship has been developed where MOH programs on task shifting are designed by the university.

- **Why were Ethiopian universities unwilling to engage governments in increasing pay of medical workers to reduce brain drain?**

  Focus is on increasing institutions and trainers. However there is a lot of financial commitment to increase trainees and reduce brain drain. There are still issues to be addressed by the government.
• **How has the Mozambique government funded IT technologies in a country with very low resources?**

These costs have been covered with partnerships with cell phone companies and donors.

• **What challenges has Mozambique encountered in the task shifting process?**

Challenges have included lack of clarity by health workers on when a patient should be sent to the next level, how to ensure that medicines are used correctly by the nurses, etcetera since physicians are very few to assist the population.

• **What have been the quality concerns in Ethiopia, and what has been put in place to address those demands?**

With the scale up, it is obvious that there is a problem of quality. The thinking is to focus on numbers and the issue of quality will come later. Focus has been on reduction of faculty turnover through in-service training, research support, specialty training, and enhancement of research capacity of faculty to provide evidence based training. There has been investment in small class teaching

• **Mozambique should focus on training more medical doctors as task shifting should merely be a temporary plan.**

Note that in the last ten years, the number of medical schools increased in Mozambique from 1 to 3 public schools and the private schools have also increased, the problem of shortage of medical personnel will be solved in the next 10 years.

MEPI contribution is not so much of numbers; it strived to address the issue of quality by ensuring harmonization and standardization of training programs as well as introducing innovations that improve the quality of training. MEPI has been effective in the creation of medical education innovations at the schools emphasizing training within the communities, thus creating national relevance.
Plenary 3: IMPACT ON HEALTH SYSTEMS

Francis Omaswa noted that without health workforce, health systems are non-functional. In some countries, the situation is worsening. A new agenda for Sustainable development Goals (SDG) is to be launched in September 2015. The global health workforce challenge is getting worse. A disturbing finding was that 24% of the disease burden reported in 2006 remains the same. The situation has not changed but it has also worsened in some countries. Goal 3c of the SDG focuses on health workforce. We are moving from MDGs to SDGs which implies moving towards a new global strategy on HRH that anticipates future health workforce requirements. Africa is a priority because it is still struggling, and the HRH crisis is getting worse. We therefore need to use the strategy.

Prosper Tumusiime represented the regional director of WHO-AFRO and highlighted the importance of using health workforce for strengthening of health systems in Africa. The health trends in Africa are such that we are still struggling, but there is some progress. There is now the double burden of disease (both communicable and non-communicable diseases) and therefore we have to be ready to deal with both. The health workforce situation in Africa is still below the threshold compared to the global situation. It’s projected that the populations are increasing and therefore more health workers are needed. There is no health without a health care workforce.

Peter Mugyenyi, the executive director of Joint Clinical Research Centre in Uganda, spoke about HIV/AIDS treatment in Uganda. It’s been 40 years since the HIV epidemic reached Uganda and a lot has been achieved in terms of treatment. Treatment in Uganda has gone through 3 phases i.e. pre-ART (time of despair), pre-access (access denial phase), and treatment (PEPFAR, Global Fund). In some countries, over 90% of the people who get treatment actually survive. There are still challenges; for example, very few People Living with HIV (PLWHIV) are treated (only 45% in Uganda) and AIDS care and treatment remains donor dependent. The epidemic is still raging because there is the issue of ‘doing the same thing and achieving the same results’. Evidence in support of 90-90-90 is available but requires resources. Therefore, there is urgent need for locally generated HIV funds.
Plenary 4: TRANSLATING MEPI RESEARCH

Elizabeth Irungu from the Kenya Medical Research Institute gave examples of translating MEPI research in Africa. For innovations to have impact they should move to practice settings. Translation of innovations is not uniform; some innovations get translated fast and others take longer. It depends on characteristics of the innovation, strong commitment and leadership. The hepatitis B vaccine was introduced in 1982 but wasn't utilized in low income, high incidence countries for two decades. Medical Male Circumcision (MMC) was found to be effective in reducing risk of HIV. Kenya rolled it out in 2008 after WHO gave recommendations in 2007. Therefore, it has been well received within the country. We are now at the point of demonstration projects, in a real world setting for Pre-Exposure Prophylaxis (PrEP). PrEP should be a fast idea. We need to deliver PrEP, an option for HIV prevention beyond what is currently available. For research to inform practice, begin with the end in mind (problem to address) and target who you need to change and understand them (learn to present the message to the policy makers in a way that they understand). We need to be observant, look at trends, what we can change, and publish findings. We need to apply tact, be humble and recognize team effort.

Exnevia Gomo spoke about research support centers in MEPI. There are a number of conditions for sustainable research capacity and excellence (i.e. national, individual, institutional, and international). It's all about enhancing the abilities of individuals, organizations and systems to undertake and disseminate high quality research efficiently and effectively. There are challenges in low resource institutions. There is need to bridge the gap between competitive funds and basic funds. One challenge is that the career path in our institutions is not straightforward because of limited mentorship. We need to make sure that the capacity strengthening models include individual skills development and institutional strengthening so that local institutions are able to attract, train and retain capable researchers.

Objectives of RSCs include: strengthening research capacity and capability, linking institutional research to global research network and wider societal responsibilities, increasing and allocating resources to facilitate productivity and reward excellence, establishing research clusters/centres of excellence and enhancing institutional status and mission. There is need to operationalize RSCs
through breaking them down into essential elements. We should have a “one-stop-shop” providing support for all the different activities (Grants administration, data management, etcetera). There is evidence from three MEPI schools (Malawi, Zambia, and Zimbabwe) that this type of RSC is possible. RSCs are contributing significantly to resource mobilization. There is a need to shorten research related courses as many clinicians don't have time to attend them. Visibility of the structures and information dissemination is important. A RSC is essentially an activity web linking many activities. The main challenges facing RSCs are institutionalization and sustainability. MEPI has contributed by providing funding, expertise, sharing experiences and through TWGs. Strengthening research support services is a critical component of sustainable research capacity building and research excellence. It is NOT an OPTION!!

Roger Glass highlighted the importance of investing in research capacity building from the FIC perspective. Sometimes the things you think about doing that seem obvious are really not. Small investments can make big differences. For example, ORS research was developed in Bangladesh with a few million dollars. You can’t improve medical education without research. Investing in people through trainings brings significant returns. In Africa, HIV, Malaria and other communicable diseases are the major causes of death. So we have to have this in mind. The FIC strategic plan goals 2014 – 2019 include building research capacity of individuals, institutions and networks to meet future and evolving global health challenges. We need to learn to treat diseases from countries where they occur. This is why it is vital to invest in global health research for example lymphoma cancer was learnt to be treated in Uganda. The examples around the world give us the importance of investing in global health for example what was learnt in Ghana with regard to Ebola can help in other parts of the world. FIC has invested in leaders (Fulbright scholarships, AIDS International Training and Research Program (AITRP)) from which we have all benefitted. NIH has put in over 100 grants into research institutions independent of MEPI. This has enhanced research significantly.

We share many problems in global health and research will be essential to address them. We need to partner if we want to accelerate discovery and solve problems. Training the next generation for research will ensure continuing innovation. Development of a supportive research
culture, a career structure, and an infrastructure with funding are essential elements of success. Opportunities for research are available on the FIC/NIH website: www.fic.nih.gov.

Kevin Marsh presented about a new platform for supporting excellence in African science. Africa only accounts for 0.1% of researchers although the continent is changing including 5% annual economic growth. The fundamental idea is to develop a highly professional platform which acts as both a think tank for developing a pan African strategy for building scientific excellence, and as an implementing body working in partnership with major funders. African Academy of Sciences (AAS) is a pan African organization with a triple mandate to recognize scientific excellence, provide think-tank functions, and implement major scientific programs on the continent. The New Partnership for African Development (NEPAD) is the technical arm of the African Union spearheading socio-economic development programmes of the Union. Welcome Trust, The Department for International Development (DFID), and other donors are developing excellence in leadership, training and science. Key elements in building a strong research capacity include high quality mentorship, supervision, strong institutional leadership and support, clear criteria for success, career structure, etc. DELTA’s 60 million dollar initiative aims at creating a new generation of researchers to play a major role in driving the health research agenda in Africa over the next 50 years. If the research happens in Africa, then the funding should also happen in Africa.

Plenary 5: RETENTION STRATEGIES

Retention of health workers in communities and medical school faculties is vital to improving medical education and health outcomes.

Jehu Iputo shared experiences with local recruitment at a medical school in South Africa. He said that Walter Sisulu University (WSU) is located in the Eastern part of South Africa called Mthatha which is very rural. “It is clear from international experience that medical schools in developing countries do not produce doctors who are equipped with the relevant skills, knowledge and
attitudes to deal with the health care problems of communities in developing countries.” Students should not therefore follow the western academic curricula.

The health and societal needs of the community guide the academic program at Walter Sisulu University. The university is a socially accountable institution and it has a defined society THEnet (The Training for Health Equity Network) to which it is accountable.

“What sort of doctor would effectively participate in transforming the Transkei society?” This question guided the development of the medical curriculum at the university. Health and societal needs of the rural communities guide education, research and service programs. The curriculum is community based, oriented and engaged. A substantial part of the training takes place in those settings a doctor is likely to find themselves after medical school.

Students are recruited from local communities especially those with the greatest health care needs. Priority is given to students from rural communities. Academics participate in screening applicants and this is then followed by oral interviews to select students that have the heart for becoming a medical doctor.

The university is looking for prospective students from the more deprived communities within the Eastern Cape. Entry criteria will be adjusted for these academically at-risk students. Challenges this approach is facing at WSU include;

- Students being poor and unable to afford fees. Government sponsorship is now dependent on the political environment within the country.
- Inadequate funding
- Inadequate infrastructure
- Inadequate faculty
- Process of identifying needy students has become increasing challenging as more detective work is needed with a number of students masquerading as poor/needy.
- Location of the University.
The school has so far graduated 1,700 medical students. Most students stay to work within the Eastern Cape. The main reason they give for staying in that area is because it is home and it helps fulfill the community needs. Practice locations of most students who graduated are in rural areas of the Eastern Cape with fewer in township. Most are choosing general practice and some have gone into specialized practice.

Walter Sisulu University only produces about 5% of the medical students in South Africa (SA), yet is providing about 30% of practicing doctors within the Eastern Cape.

In summary, the policy of recruiting and training medical doctors locally has led to a high retention of physicians within the community.

Jonathan Matenga spoke about retaining faculty at the University Of Zimbabwe College Of Health Sciences. He said, health workforce migration is a big issue in Zimbabwe and in Sub-Saharan Africa as a whole. It has an impact on health delivery and health professionals training within the country. Migration of health workers occurs in many dimensions: rural/urban, public/private, and national/international.

Reasons for health workers leaving the country included: better remuneration, declining national health services, no future in the country, lack of facilities, and continuing medical education as shown by the results of a study carried out in Zimbabwe. Other reasons for migration were: a move from rural to urban, search for higher income, better living conditions, better schools for children, unavailability of equipment within facilities, and better opportunities to find future partners in urban areas. Other factors that will determine the rate of migration within health workers include; age, sex, marital status and origin of the student (rural or urban).

Impact of health worker migration has been said to include; physician per population ratio is largely declining in SSA yet the burden of disease is increasing and population growth rates are very high.
MEPI has led to a gradual rise in the number of specialists registered by the Medical Council in Zimbabwe. Faculty within the various medical schools has also increased since the start of MEPI.

In conclusion, private-public partnerships should be encouraged to help strengthen retention. "What about Private Practices versus Lecturers?" Should lecturers in medical schools be allowed to have private practices alongside their medical academic careers? This is a discussion that should be considered as a possible contribution to physician and specialist retention levels in hospitals.

Yakub Mulla and Fastone Goma discussed rural retention of health care workers: program experiences, lessons, and strategic actions. They said that Zambia’s population is greatly spread out over the vast land in the country. Therefore rural areas are really rural. A rural patient will have to travel between 300 -500 km before they can get to a health facility. Further, rural hospitals are run by one doctor and usually no nurse. Health care needs in rural areas are different from those in urban areas. The rural population comprises of mostly elderly and children with a high dependency ratio.

The number of health care workers and physician density is very low. Distribution of health care workers is skewed towards urban areas. The face of the crisis is a cycle that includes recruitment, attrition, retention and distribution.

There is still a crisis in health worker retention in Zambia which has led the MOH in Zambia to introduce the Zambia Health Workers Retention Scheme from 2003 – 2011. The scheme’s objective was to decrease attrition levels of physicians in rural areas. Mechanisms to operationalize this scheme included monetary and non-monetary incentives, compulsory rural posting for one year after graduation, a monthly hardship allowance which was given to health workers working within rural areas, end of contract incentives, and priority consideration for government sponsorship in postgraduate training.
The scheme failed to maintain retention of health workers within rural areas. This was attributed to erratic implementation. After eight years of implementation of the program, it was stopped as it did not meet the expectations of health workers within the country. There was need to communicate how health workers can interact with rural life. Countries have different needs and challenges and should consider these before trying to implement retention schemes.

Local problems must have local solutions and stakeholders need to be involved in decision making. Sustainability should also be considered for any retention scheme to succeed. Political will is also key to the success of these retention strategies.

Training based strategic choices considered under MEPI, pre-service and post-service training, are some ways of promoting retention. Pre-service training ensured that training programs were community based and community engaging as they lived within the communities during their training. With post-service training, most postgraduate trainees stay within rural areas and are taught to start profitable ventures to supplement their incomes. So far the strategy seems to be working well.

Improving in-country retention through changing the academic environment has been a key focus for MEPI through research possibilities, networks, creating new training programs and academic progression.

Through the linked award, monetary incentives were prearranged to encourage specialists to stay within hospitals which reduced absenteeism from the hospitals.

Ruth Nduati’s presentation on community based education and rural retention highlighted the importance of exposure to community focused education. She said the University of Nairobi (UON) has a five year training program and in the second year of training students do theoretical basis of community health. In the fourth year students do rotations in Community Health, Pediatrics, and obstetrics and Gynecology. The students work at the community health units to get acquainted with places where they will work after medical school.
UON has established decentralized training sites and other cadre training programs have taken followed. The university exposes its students to a number of seminar series which make a large difference in the quality of skills students graduate with. The university has included two weeks training in management and leadership using MEPI funding.

Community driven action plans have included malnutrition and alcoholism prevention in various communities. Other partnerships for example with AMREF have also increased the research capacity of students.

Decentralized training has improved retention of specialists at the decentralized sites. Some challenges for this program in Kenya include financial support for students, lack of accommodation and increased insecurity in some parts of the country.

**DISCUSSION**

**How is retention for Clinical Officers in Zambia holding up? They tend to do more work and are easier to retain at postings than the doctors.**

There is an active clinical officer’s training and their curriculum is being upgraded so they can attend to more medical emergencies than they were initially trained for.

**What strategies are there for schools to be able to document success that MEPI has been able to achieve?**

UON uses e-medicine for tutorials and in terms of long-term and sustainable stories of MEPI, the e-program is self-sustaining and there will a record of the long term successes in MEPI.
Plenary 6: LEVERAGING LEADERSHIP

James Hakim highlighted the function of the PI Council in MEPI. He stated that though the MEPI PI Council was not provided for in the original MEPI FOA, at the beginning of MEPI; the need for a leadership forum was realized. Hence the PI council was formed in 2011 to offer leadership for the MEPI implementation.

There was recognition of PIs as senior health leaders in their countries and schools as well as implementers, advocates and relationship builders. The PI Council is made of the PIs of the 13 MEPI schools and those of the coordinating center (ACHEST and GWU). The PI Council meets twice a year.

The PI council is responsible for decisions on the implementation of activities that cut across the MEPI schools like TWG activities, the annual symposium, publications to mention but a few.

One big concern is the issue of sustainability of the MEPI activities. This includes the sustainability of the PI Council and how it will be funded? A draft strategic plan was developed at the Nairobi adhoc MEPI PI Council meeting in February 2015. At this meeting the sustainability plan was discussed. All schools have been given a no cost extension and it has been decided that the PI Council activities will continue.

Fitzhugh Mullan and Irene Atuhairwe presented on HRH capacity building: Global Health Service Partnership and Seed Global Health (GHSP). They said that the Global Health Service Partnership program is active in 3 countries – Uganda, Malawi and Tanzania. It is a collaborative to improve medical and nursing education in the region.

GHSP’s mission works in such a way that volunteers serve as faculty at medical and nursing schools, provide clinical instruction, mentoring and other faculty activities, and help build national capacity in medical and nursing education. The GHSP model is such that it is for physicians and nurses. The participants have a year-long commitment whose priority is teaching, mentoring and work to work with faculty peers causing a multiplier effect.
The GHSP volunteer cycle in Uganda includes pre service training (4 weeks), in service training (1 week), mid-year reviews and evaluations and close of service conference. There are transitional challenges for the volunteers including hospital staff and faculty shortages, patient demand exceeding clinician supply, practice transition to lower resource systems and coping strategies given high patient mortality. Two universities have been added to the program for the coming year, the government of Uganda is in support of the program and they actually chose which universities to work with.

Key outcomes include; strengthening clinical supervision and teaching, promoting of critical thinking, introducing new teaching methods, and increasing support for faculty and modeling professionalism, expanding of physician and nursing education opportunities, building resources, and developing curricula.

In conclusion, the future intent is to increase the number of countries involved in the program, increase the number of disciplines involved and increase partners participating in the program.

Francis Omaswa went on to discuss leadership, management and governance of health systems in Africa where he explained that the context in which he was discussing the topic was around the health of the people as a precondition for productive life. It’s a challenge to get Africa to the level of the rest of the world.

He said that there was an era of hope, the era of decline and the era of new hope with Africa rising. Now is the time for the African lion to roar, but this will take strong leadership and education. He noted that things are getting better in Africa, as demonstrated by the report from WHO showing low mortality rate, but still Africa lags behind.

Unless we Africans feel the shame and pain of lagging behind, then there will be no change. The government leaders/presidents have done their part of supporting programs. Even the global leaders are in support. He said that the triangle that moves the mountain includes knowledge creation (academia), social mobilization and political involvement.
ACHEST is responding to this call by undertaking studies, and creating dialogue platforms, doing work in human resources for health, publishing a book with guidelines for Ministers of Health. Many other organizations like ACHEST are in place and are doing their best.

Government has got a key role and without strong governments, change will not occur. The work environment is important to effect change, knowledge alone is not enough. We, however, need to have and teach locally applicable knowledge in our schools. It is also important to embed health in governance issues in the curricular.

To sum it all up Africans should grasp this window of opportunity. Unless we Africans, individually and collectively feel the pain and the shame of our condition, we will not have the commitment to take the needed actions to correct our situation. Finally, until and unless in each and every county, there is critical mass of individuals and institutions that work with their respective governments as both support and accountability agents, it will not be possible to create and sustain an enabling environment for quality improvements. Leadership is urgently needed. He concluded that this is your Africa, only the best is expected.

**Discussion**

**Qn: Concerning** Peace Corps participants, it was noted that some don't complete the assignments, what strategies do you have in place to deal with this?

During the orientation there is sharing of experiences, interviews on videos, alumni communicate and share ways of coping with psycho-social issues, and there is an effort to identify individual who can cope with the challenges.

**Qn: Peace Corps is a one way traffic – do u have ways of taking Ugandan students to see what excellence looks like?**

Bilateral exchanges are indeed good, but it is not part of the Peace Corps program though there are other programs that do that.
Qn: How do we evaluate the Peace Corps program?

We have a full time M&E officer that collects both qualitative and quantitative data and also the perspective from the people on the ground where these volunteers are working.

Qn: We see doctors that join government and forget their trade. Is there a way of training these doctors not to forget?

The tools are there, but it comes back to our leaders including you, the students.

Qn: Peace Corps – Is there a strategy where the program can be integrated into the system so that they don’t abandon all the work to the volunteers?

It is a concern that we can work on.

Qn: Will the student report be accepted by council and shared with the USG? Yes.

Comments

- It was noted that for most projects implementation is the problem but the answer lies within us.
- At continental level, in order to continue the work of MEPI, we need to have some kind of association with a board and a secretariat.
- A question arose as follow” How are we investing to be competitive in this knowledge driven economy?” This was not answered.

Plenary 7: CLOSING OF THE SYMPOSIUM

The closing ceremony was moderated by Miliard Derbew from Addis Ababa University and James Hakim the current Symposium Steering Committee Chair and host PI for the 2015 Symposium. Chris Samkange from the University of Zimbabwe presented the PI Council next steps, followed by speeches by Deborah Parham Hopson the Associate Administrator for the HIV/AIDS Bureau at HRSA, and then another speech by John Palen the Deputy and Senior Advisor of the Office of
Sustainability and Development at OGAC in the US Department of State. The symposium closed with remarks from the government of Zimbabwe.

James Hakim said the three days of the symposium had been fruitful and successful. The symposium had informed and enlightened the participants about the successes and challenges of MEPI and medical education as a whole.

He thanked Francis Omaswa for ably guiding the steering committee and thanked all members of the steering committee especially Elsie Kiguli-Malwadde and Seble Frehywot for the good work done. He extended appreciation to the staff at GW, ACHEST and the University of Zimbabwe for all the work they had done to make the symposium a success. He also thanked the US Embassy and USG in Zimbabwe, the sponsors of the MEPI program, PIs of MEPI schools and the Coordinating Center, all of the school delegates, and the University of Zimbabwe medical school students among others.

The MEPI PI Council elected Peter Donkor as the new Vice Chair. Milliard Derbew from Addis Ababa is the new chair of the MEPI PI Council and was handed the instruments of power.

Milliard Derbew accepted the position of the PI Council Chair and said that it was a great pleasure working with Professor Hakim who was always available. He expressed pleasure in working with the PIs of the different MEPI schools and thanked the CC for supporting the PI Council activities.

Chris Samkange spoke about MEPI moving forward, he summarized the key messages from the opening session as a session where participants were appraised and also common themes were highlighted as addressing need for HRH, institutional and systems strengthening, improving teaching and learning processes, creation of research capacity and relevance of curricula. MEPI has had great impact in research which has created changes in faculty promotion at the medical schools.

Achievements of MEPI: note that some of the outcomes were expected/intended and some were unforeseen outcomes. One of the most exciting outcomes is the issue of social mission i.e. schools have been expanded their leaning beyond the university campuses, to prepare learners
to work in communities and to meet community needs. Addis Ababa University shared a study on how to address gender equality in medical school intake. Stellenbosch University established how to get deficient students from high school and prepare them for medical school among others.

Teaching and learning: the strength of the medical schools depends on their curriculum. MEPI has led to curricular change, and has taught teachers to focus on the need of the students as a guiding factor in training. There have been a lot of innovations in teaching such as use of simulation and mannequins among others. Decentralization of teaching has led to community relevant learning. There has been decentralized postgraduate training in Nigeria, Kenya and Mozambique. Also global health competencies, such as having benchmarks of what we teach, has been developed through partnerships (for example Uganda and Johns Hopkins). Developing and growing partnerships is important such as the US and African Institutions partnerships, South-South linkages and Public Private Partnerships.

Develop and grow a research capacity: As a nation it is important to develop local research capacity that is community driven, owned and relevant. MEPI has made a reality that research becomes a part of the schools. MEPI also developed the linked awards that help to raise the bar in areas where the schools have capacity.

Retention and Impact on Systems: There has been focus on trainers, building capacity and retaining staff that leads to sustainability.

Leadership: The creation of the MEPI PI Council helps to drive our agenda. It is the agenda of all the PIs and the leadership and governance is up to the leadership. Once the students see the relevance of MEPI it will live on for a long time

As MEPI moves into sustainability, we carry the rewards and the spirit of transformative innovations (donor-recipient relationships, community based training). We have to commit to leadership, ownership and sacrifice for the cause.
Deborah Parham said PEPFAR was started in 2003 as a partnership to make a change; however, it is important to do more and based on this Ambassador Goosby started MEPI which has turned out to be a resounding success.

MEPI has become a strong community of learning around the world. As partners and schools, together with the funders, have strengthened institutions and models of learning, improved production capacity, increased the number of postgraduate and undergraduate trainees, strengthened resources for research and the quality of research.

With these achievements, it is now the responsibility of all to share what was learnt from MEPI with others, continue to learn, to search for new knowledge and share whatever has been learnt.

She finally thanked all partners and the Coordinating Center and congratulated all on a job very well done.

John Palen noted the success of the symposium and the five years of MEPI. He recognized and thanked the PIs of all the schools for a great partnership and leadership and congratulated them for the success and impact they have had. He recognized the faculty and staff of all the medical schools and thanked them for their day-to-day work and recognized them for being the backbone of the program. He further thanked the US medical school partners for fruitful partnerships, the coordinating centers ACHEST and GW for the administrative leadership, NIH and HRSA staff and other government staff that have worked on PEPFAR and other linked awards for technical support.

He thanked all the students for working hard as the next leaders in healthcare. He hoped that the training they have received prepares them for future leadership.

Innovation is key but needs to be contextualized for it to be relevant. New approaches are required to increase the human resources. There are increasing health demands and innovation
are necessary to tackle these. He noted that Medical training institutions need to foster partnerships with governments despite their low health budgets and inability to meet international health targets.

Establishing a regional forum for medical education such as the PI Council would be useful. Research is also important to address African health challenges through mentorship, publications, and faculty promotion.

The US plans to continue with the promotion of health. $16.5 million dollars was announced as earmarked for health worker training in Africa. Those with high HIV burden will be a priority so as to produce adequate capacity for HIV training. The expectation is to go beyond MEPI, since what has so far been done are pilots. The PI Council is planned to be more regional. The program is expected to expand to other fragile countries using the lessons learnt from MEPI and NEPI. It was highlighted that PEPFAR will continue support to increase access, coverage and retention. Special focus will be on translating research into practice and implementation research among others.

Finally, the symposium was closed by Midion Chidzonga, the dean College of Health Sciences University of Zimbabwe, who thanked everyone for the MEPI support. He noted that MEPI funding has come to an end but the activities the MEPI activities will continue. Sustainability, leadership and thinking outside the box are key issues that have been highlighted throughout the three days as a requirement for success.

In conclusion, as MEPI ends, the PI Council is in place and will continue to serve as the steering committee of the medical schools. He said that there is a need to learn to advocate for what is important in education and that no amount of money and commitment can ever be enough for the training of students. Finally he said that MEPI was formed with the spirit of individualism developed into a stronger entity collectively and is stronger with the spirit of Obuntu
BREAKOUT SESSIONS

Break Out 1: MEPI “INNOVATION” SESSIONS

Break Out 1A: SOCIAL MISSION

The moderators of this session were Oathokwa Nkomazana from University of Botswana and Christine Lim from HRSA. Presentations in this session included; Fitzhugh Mullan from George Washington University who gave a presentation on the social mission of medical education, Moses Galukande from Makerere University presented on “Equitable Access to Health Professional Training in Uganda: A Cross Sectional Study.” Kalay Moodley spoke about “Preparing School Learners for University Education: Early Results from an Outcome Evaluation of the Stellenbosch University Area Health Education Centers Project (Su-Hec).” Milliard Derbew on “Promoting Gender Equity at Addis Ababa University and Georgina Odaibo from University of Ibadan discussed “The Impact of HIV/AIDS and other STIs Formal Education on Behavioral Change of University Students in Nigeria”

Social Accountability is increasingly becoming a topic of discussion within medical education and was therefore a worthwhile topic for presentation at this symposium. The question asked was “What is it about social mission in medical education that makes it stand out”?

Fitzhugh Mullan from George Washington University spoke about the social mission of medical education. He noted that social responsibility is important. People have to acknowledge that they have some social responsibility to the society they live in. With responsibility comes social accountability. In a study comparing and ranking US medical schools based on social mission factors, African American schools in the US ranked highly in social responsibility and so did public schools.

Community engagement involves diversity promotion, disparities reduction, cost value concern, and engagement with social determinants of health. The philosophy behind Flexner’s model
begins with the education of the child, having much in common with the educational theories of John Dewey, and is based on learning by observing and doing. Flexner believed that all education should be utilitarian and should prepare the individual for the responsibilities of citizenship and for an occupation or a profession. Based on Flexner's educational philosophy rather than the four-year medical school model that bears his name, the education of the physician is reexamined. Recommendations are made concerning the interface between the last two years of college and the first two years of medical school that would better equip the future physician to face the complexities of medical practice in the next century.

There is currently a growing movement beyond teaching and research, called social responsibility. We have to figure the contribution of social mission to global health. But this definitely gives us a better platform for discussion.

Moses Galukande from Makerere University spoke on “Equitable Access to Health Professional Training in Uganda: A Cross Sectional Study.” He said that it has always been known that health professional education in Uganda was skewed towards the middle and upper class but nothing has been done about it. So an initiative was taken to find out the level of inequality. From this initiative it was found that: There are inequalities in health professional education in higher education in Sub-Saharan Africa and this need to be stopped as early as possible. Disadvantaged social groups such as women, minorities and the disabled ought to be focused on since they are a neglected group that has a lot of value to add and have a right to benefit from health professional training.

This research covered four universities of which three were public and one private. The majority of enrollments at these universities are predominantly from the top ten secondary schools in Uganda. 0.4% of secondary schools contribute over 80% of admissions to medical schools which is a huge inequality since most slots are taken up by the smallest percentage of schools. In terms of regions, most schools are found in the central part of the country which happens to be the most urbanized implying that the rural areas have few schools of which most are not competitive enough to send students to the university.
It was proposed that to rectify this situation of inequality a number of interventions should be deliberately made. These interventions include: create more entry tracks, support rural schools (Rural schools lack sufficient labs for students to be adequately taught science subjects), more Medical Schools should be opened to absorb more of the 80% students who cannot be absorbed by the four universities in this study. Also pre-entry exams are important to allow for sieving and also to give everyone an equal opportunity at entry level. Finally, to create equitable access to health professional training in Uganda, community participation should be ensured, where the marginalized communities decide who should go to medical schools from their communities with the aim of being responsive to their needs.

Kalay Moodley talked about “Preparing School Learners for University Education: Early Results from an Outcome Evaluation of the Stellenbosch University Area Health Education Centers Project (Su-Hec).” She explained that this model was adapted from the US where students from minority communities were taken through medical schools and later sent out to practice in their communities. Stellenbosch University intends for their university to be representative of the community in which it resides.

The project aims at increasing the number of medical schools from underserved areas so as to create equity and respond to the needs of more people in these communities. However, education in these regions is really poor and therefore students are not getting required pass rates of science. The university is now intervening by getting students from these communities and ensuring that they can pass the required sciences. They also enhance life skills for these learners and parents from the communities are involved thus contributing to the adherence to this program, this is in relation to the career classes that the learners receive.

Students get tutored in Math and Sciences and if they get the desired grade by Stellenbosch University then they receive a bursary for whatever course they desire to follow. There are around four hundred learners in the project; however, due to the limited funds, the university has requested private funders to step in for other underserved regions where they have no presence. The private funders fund the other university requirements and Stellenbosch funds the
tution component. The procedure is such that learners go from grade seven all the way to grade eleven.

Out of two hundred and twenty students enrolled into the program in one year, one hundred and sixty went to Stellenbosch University and they all received bursaries.

Factors that influence success of such projects include: Partnerships with private funders, parents, faculties of education, local teachers among others. Also good databases are important. In conclusion, education is the most powerful weapon one can use to change the world, a quote from Nelson Mandela.

Milliard Derbew on promoting gender equity at Addis Ababa University said that the university is a MEPI funded university in Ethiopia that is working on gender equity in medical education. Some may wonder why focus on gender? Gender equity is a human right, a social justice, and is important for economic development. Gender equity most of all contributes to building the size and equity of the health care workforce.

Working on incentives that encourage women to get into the medical field voluntarily is important since every profession needs a balance.

The trend of the female to male ratio decreases with each advanced level of education. This is also reflected within faculty at medical schools. 86.3% of female university faculty staff reported workplace abuse or sexual harassment. Workplace harassment leads to depression, poor academic performance, and a high level of attrition for female students among others.

It is hard to reach the desired number of the health workforce in a country without involving women. It is evident that female physicians tend to be more reliable in practicing medicine. Based on this, MEPI has undertaken some interventions which include; fellowships to train future female faculty, gender climate survey of female students and staff and engagement of
stakeholders at AAU-College of Health Sciences who are influential and can move the project forward.

Several mid-level Ethiopian female students are sent to the University of Wisconsin to undertake specialties of their choice. A number have returned and have been promoted within their departments. A gender equity action plan has been formulated in AAU with various priority actions all aimed at creating gender equity.

Georgina Odaibo from University of Ibadan discussed the Impact of HIV/AIDS and other STIs Formal Education on Behavioral Change of University Students in Nigeria. She said the rate of HIV prevalence is high among the younger generation. As part of the MEPI program, University of Ibadan decided to develop a course to teach younger people on HIV and STIs.

The expected outcomes were to equip the students with knowledge, and equip them as agents of change.

The main methods of teaching were online and face-to-face project lectures on weekends. A course evaluation was carried out at the end of this intervention. A survey was done before the course and then after the course and an impact evaluation was carried out.

70% of the students involved are in the age bracket of 15-19 years implying that they are barely adults. The results showed a decrease in STI prevalence which is attributed to gaining knowledge on STI’s. These evaluation tools looked at past sexual experience, condom use, HIV tests done, the period within which students took HIV tests, views on HIV related stigma, and knowledge transfer among others.

It was found that 99% of students that have taken this course acknowledge gaining knowledge on STIs compared to what they previously knew. Beneficiaries have more positive attitude and less stigma towards HIV infected individuals.
Break Out 1B: TEACHING AND LEARNING

Session moderators were Steve Kamiza from University of Malawi and Charles Michelo from University of Zambia. The presentations in this break out were; “Focused Point-Of-Care Ultrasound: Pilot Study on Feasibility of Non-Specialist Training for Diagnosis of HIV-Related conditions in an African Setting by Ana Olga Mocumbi, from Eduardo Mondlane University, Mozambique. Aloysius G Mubuuke from Makerere University, Uganda, discussed a Structured Portfolio for Reporting HIV/AIDS activities by Undergraduate Medical Students at MESAU Schools in Uganda: Practical and Affordable in Resource Limited Settings.” “HIV clinical management diploma programme: A Model for Developing Capacity among Health Workers to Scale up HIV Treatment and Support” was presented by Sandy Pillay from University of Kwazulu-Natal, “Development of a Massive Open On-Line Course (MOOC) on Tropical Parasitology at the Kilimanjaro Christian Medical University College,” by John Bartlett while Kalanga from Kilimanjaro Christian Medical University College focused on “Faculty Satisfaction and Intent to Stay: Comparing the Results of Faculty Satisfaction Surveys at KCMUC”

Ana Olga Mocumbi said that Mozambique has few specialists (only four radiologists) and no radiology technicians. Doctors are not trained to use ultrasound reducing its availability in clinical practice. Ultrasound machines are available in peripheral health units for use by few specialists (some paediatricians and other physicians). The experience was described of task-shifting from doctors to nurses in obstetrics and gynaecology where nurses perform focused ultrasound (Mmode and 2D) to screen for high risk pregnancies in antenatal care clinics.

Ultrasounds can be used to modernise training, improve access to good quality care and promote research if taught to the new generation of medical doctors. The objective of this is to assess the feasibility of ultrasound training for diagnosis and management of common HIV-related conditions by non-specialists in a low income country with high prevalence of this infection.

The most important causes of acute Heart Failure were hypertension, rheumatic heart disease, dilated cardiomyopathy and pericardial tuberculosis. For several endemic conditions that are
associated to HIV in our setting, abbreviated ultrasound provides information that allows diagnosis, adequate management and follow-up

Two methods have been used: Focused Assessment Sonography for Endemic Diseases (FASED) and Stepwise and Tailored Approach

In conclusion, the most frequently performed exams were abdomino-pelvic one hundred and seventy (55.2%), cardiac ninety (29.2%) and pleural space forty four (14.3%). After initial training of forty residents, twelve met the criteria for admission to supervised training sessions and four progressed to do unsupervised training.

Aloysius G Mubuuke from Makerere University, discussed Uganda a Structured Portfolio for Reporting HIV/AIDS activities By Undergraduate Medical Students at MESAU Schools in Uganda: Practical and Affordable in Resource Limited Settings.” He said MESAU is a consortium of 5 medical schools in Uganda including Makerere, Mbarara, Busitema, Kampala International University and Gulu University. Uganda has taken strides in addressing the HIV epidemic. MESAU came up with nine competencies. The tool used is a portfolio template to guide students in engaging in HIV prevention and also promote student learning. It is a short tool focusing on few significant areas.

The plan is to use one tool to be used across all 5 medical schools and it was built on what already existed. Implementation has already begun and students are better organized. Students and faculty have welcomed the tool.

In future, full implementation will be done at all the medical schools, an evaluation of the impact on service learning will be carried out and it will be used as a source of vital data.

In conclusion, it is not easy, but we are trying to make the tools acceptable across all the five schools.
“HIV clinical management diploma programme: A Model for Developing Capacity among Health Workers to Scale up HIV Treatment and Support” was presented by Sandy Pillay from University of KwaZulu-Natal, South Africa. He said of all the PLWHIV in 2013, 18% were from South Africa and of the proportion of new infections was 16% for SA while that of the deaths was 13%. There has been increased access to Highly Active Anti-Retroviral Therapy (HAART) over the last ten years. There was an increase of 33% in the number of people receiving Anti-Retroviral Therapy (ART) in 2010-2013.

Diploma programs in clinical HIV management registered at University of KwaZulu-Natal in 2004, coinciding with national rollout of ART. They registered as a part-time, two year, “mixed mode,” post graduate program delivered by Enhancing Care Initiative, it was aimed primarily at doctors, nurses and pharmacists and was implemented as a faculty-wide program including Departments of Medicine, Paediatrics, Family Medicine, Virology, Obstetrics and Gynaecology, and Public Health

A diploma level course aimed at doctors and nurses is an effective way of developing sustained capacity for the management of HIV infected people. Such a program can be shared with schools so that this program can benefit other high HIV burden countries.

The discussion on “Development of a Massive Open On-Line Course (MOOC) on Tropical Parasitology at the Kilimanjaro Christian Medical University College,” by John Bartlett from Duke University brought to the front that the internet is increasingly available in resource-limited settings. It is important to expand access to educational materials. Topics are optimally taught by faculty with greatest familiarity and experience. The MOOC is conceived as a complement, not a replacement, for didactic teaching.

In November 2013, Duke University Centre of Instructional Technology (CIT) called for MOOC development applications; KCMU College/ MEPI faculty developed a proposal on tropical parasitology. In December 2013, KCMU College’s application was selected for $10,000 support from CIT, supplemented by MEPI resources. CIT provided expertise in MOOC development,
instructional design, filming, editing and implementation and KCMU College/MEPI faculty developed content including field filming and clinician interviews and finally it was launched through Duke Coursera website February 9, 2015.

This MOOC was successfully developed through a MEPI partnership. Tropical parasitology filled a content void and was rapidly disseminated. SSA faculty have important knowledge and experiences to share, and should be encouraged.

Kalanga from Kilimanjaro Christian Medical University College focused on “Faculty Satisfaction and Intent to Stay: Comparing the Results of Faculty Satisfaction Surveys at KCMUC in 2012 and 2015.” Two surveys in 2012 and 2014 were done and these aimed at measuring level of satisfaction during MEPI intervention with provision resources, working environment and support at KCMU College, to identify areas of strengths and areas for improvement.

The questionnaire adapted from a Duke Faculty survey originally done in 2010, but was adapted to the KCMUC situation. It was established that the major reasons that faculty at KCMUC retention are: academic career advancement, conducive work environment, preference for teaching and research, prospects for research work and a conducive teaching environment through the application of e-learning facilities. Most faculty now have a reduced burden especially because of using on-line examination. Since the faculty workload reduced there were more publications produced and there was substantial reduction of stress.

**Break Out 1C: PARTNERSHIPS**

Moderators for these sessions were Lynn Atuyambe from Makerere University and Yakub Mulla from University of Zambia. Presentations under partnerships included; "Building sustainable Partnerships for Medical Education: The experience of the MESAU consortium in Uganda" by David Mafigiri from Uganda, “Medical Education and Curriculum implementation in Ibadan-Overcoming Challenges” by Adesola Ogguniyi from Ibadan University, “The Role of Medical Education Partnership Initiative to Expand and Maintain Quality of Medical Education at Addis
Ababa University” by Amha Mekasha, “Scaling up Palliative Care Services in the Public Sector in Southern Malawi: A Mentorship and Supervision Programme” by Mwandika Nkoma from Malawi and finally “Towards Sustainable Medical Education through Collaborations between SURMEPI and BOMEPI” by Marietjie De Villiers from Stellenbosch University.

This breakout looked at partnerships and how they have helped the students to achieve their goals for example the MESAU consortium in Uganda, IBARAPA project of Nigeria, AAU change of the curriculum in Ethiopia and the SURMEPI and BOMEPI collaboration which is built on the existing foundation and the palliative care project which is mentoring a big group of the people of Malawi.

MESAU Consortium looks aims at offering medical education for equitable service of all the Ugandans. Its concept is the need to leverage limited resources through the use of the novel approach to implement such a project and a very active south to south collaboration.

IBARAPA PROJECT is about early courses and clinical training to encourage critical thinking.

AAU aims at small class teaching approach to allow interactive lectures.

SUMEPI and BOMEPI partnership was on the e-learning faculty development and health system research support.

In Malawi, the palliative care project helps support the new and emerging services in this area of the health sector.

It was highlighted that collaboration is the best way of strengthening the health systems and easing the implementation of the projects which in turn will be sustainable for the community and family medicine drive for MEPI.
Break Out 1D: STUDENT CENTERED LEARNING

This session was moderated by Jeanne McDermott from NIH and had five presentations namely:

“A Brief Simulation-Based Educational Intervention Improves Neonatal and Pediatric Resuscitation Performance among Postgraduate Trainees at Makerere University, Uganda”
by Sarah Kiguli from Makerere University, Uganda

“Introduction of Diagnostic Laboratory Techniques to Medical Students at the Kilimanjaro Christian Medical University College” by Mimano Lucy from Kilimanjaro Christian Medical University College, Tanzania

“UkZN First Year Medical Students Make a Difference and Strengthen Graduate Attributes”
By Sandra Glajchen of University Of Kwazulu-Natal, South Africa

“The Role of Tablets in Enhancing Teaching and Learning among Medical Students at the Kilimanjaro Christian Medical University College”
By Glory Ibrahim from Kilimanjaro Christian Medical University College, Tanzania

“Introduction of Simulation-Based Medical Education at School of Medicine College of Health Sciences, Addis Ababa University: Experience and Challenges” by Estegent Gedlu from Addis Ababa University, Ethiopia

Sarah Kiguli from Makerere University said the background to her presentation was that rates of newborn and child mortality are high and yet simulation improves educational and clinical outcomes. It was hypothesized that simulation based educational interventions would improve neonatal and pediatric resuscitation performance. The Intervention was a three day pediatric resuscitation course. It was a pre/post design with outcome measures of simulation based OSCE, written knowledge test, and pre/post surveys.

She said scores moved from thirty three units to sixty five units in the pre and posttest which meant the post test was significantly higher. Performance was significantly better in how they assessed and how they treated different scenarios, in the post tests results were higher than in the pretest. Ability to apply oxygen was much better and administration of fluid boluses and CPR.
Post results showed that resuscitation of the baby was much higher after the intervention and the timing to initiate ventilation was much improved after the training. Also, time to critical action in checking for responsiveness, checking pulse, applying oxygen was higher as well as confidence in performing procedures after training with overall scores of four point five out of five.

Lucy Mimano went on to say that the Introduction of diagnostic laboratory techniques to medical students at the Kilimanjaro Christian Medical University College was done to make sure that clinicians who might work in rural health centers with no laboratory technicians can still function fully/optimally. The idea was to impart skills that can allow medical personnel to do basic laboratory tests and point of care diagnostics.

She said the results produced a laboratory with an inbuilt IT system where students in the classroom could view what was happening in the laboratory. The laboratory safety training was done with all, point of care tests, hematology among others and after this training, the students go to the field with a tool kit to allow them make a more focused diagnosis. Physiology training is also done in the wet laboratory and the number of students using the facility has increased since 2012. In conclusion, as a result of this intervention wet lab training has been well taken up by the students and they have attained point of care diagnostic skills.

Sandra Glajchen on UKZN’s first year medical students make a difference and strengthen graduate attributes presentation explained that this concept is out of the program called Making a Difference and it’s among the first year medical students. It comprises of an HIV program with six workshops, then making a difference group community.

Student views about the program were that it gave them the first contact with community work. It also gave them a focus was on how to build empathy, problem solving and specific graduate attributes right from first year. It focused on working with students to build on their own strengths, how to build students self-trust, self-coping skills among others should become a foundation for their professional development.
The HIV programme comprised of 6 workshops whose focus was on the mind and heart of the students to allow them to come to terms with their own meaning of why they entered the medical profession. This brought in the role of the arts within medical education. It also focused on formal teaching; evidence based learning and needed to build self-awareness. In this programme, transformative learning was also at the forefront. It was noted that it is important to focus on the value of social justice, student’s integration of alternate/multiple world views bearing in mind their own cultural views.

The Making a Difference group had to make a difference in community, build self-awareness, while building reciprocal learning.

Glory Ibrahim presented the role of computer tablets in enhancing teaching and learning among medical students at the Kilimanjaro Christian Medical University College. The presentation highlighted the fact that five years ago, in 2010, MEPI grants enabled the strengthening of IT infrastructure. The purpose of this intervention was to facilitate learning outside and inside the campus. Tablets were considered because of their portability, pre-installed applications and their durability. Tablets also have good power storage and have large screen space. Android tablets also had an interface of USB.

Outcomes of this intervention were that 87% of students were found to use tablets at least 3 days a week. They were said to use tablets for the following purposes: communication, news, searching for information, writing reports, taking field pictures and watching educational videos.

It was concluded that tablets were a useful tool for continuous learning on and off campus and they were especially useful for students out for rural training in keeping track with events.

Estegenet Gedlu while presenting on an Introduction of simulation based medical education at AAU School of Medicine, College of Health Sciences: experience and challenges said that to respond to the human resource gap due to brain drain in Addis Ababa, it was decided to start simulation based medical education. Simulation based education is an education modality that
replicates or imitates a real clinical environment. It was introduced because of the increased number of students. They use mannequins among others as a teaching tool.

She said this project started with training of trainers. The first training was in 2012; however, faculty remained skeptical about using simulation to grade students. The challenge is that establishment of SIM centers and running to full capacity for several years was difficult and harmonization of the program with current academic programs is a challenge. Also there is need to train more faculty in the use of simulation based education.

**Break Out 1E: NORTH SOUTH PARTNERSHIPS**

The session was moderated by Jean Nachega from Stellenbosch University and Joe Kolars from the University of Michigan. Presentations were on “Transformative Medical Education: A Partnership between the University of Nairobi and University of Maryland in Baltimore” by Sylvia Ojoo, Yukari Manabe shared “An experience of strengthen traditional and non-traditional peer mentorship to enhance the quality of PhD research training”, “Perspectives on partnerships for innovative medical education in Kenya” was presented by Farquhar Carey

Sylvia Ojoo said there is increased demand for medical training within this new environment of changing disease patterns. There is however no dedicated department that provides leadership and guidance on medical education in Kenya. There is also inadequate support for research.

The core objective of the initiative is to improve the quality of medical education using various methods of leadership engagement which include benchmarking visits at high level reaching out to deans of each school, guidance in developing a medical education unit through a medical education expert, faculty training in medical education, librarian teams engagement, skills training introduced – technical assistance provided and faculty trained on skills teaching.

Research Mentorship has grown, research fellows under the program are provided with research mentors who provide twelve week face-to-face mentoring sessions.
The results of this intervention has been training of the curriculum committee members, three ongoing masters in health professional education, developing of the roadmap for establishing a medical education unit defined, training of four librarians, setting up of an internationally accredited and institutionalized skills lab and increased utilization of the lab, supporting four implementations science fellows, CITI certification was obtained for University of Nairobi and there was strengthened bilateral relationship between University of Nairobi and University of Maryland.

Perspectives on partnerships for innovative medical education in Kenya was presented by Farquhar Carey. The presentation highlighted the fact that International AIDS Research and Training program in 1989-2015 resulted to date in fifty three degree graduates and one hundred and five non degree trainees.

Afya Bora Consortium Fellowship in Global Health Leadership has been in place since 2011 and is engaged in training future leaders who can bridge HRH gap in academic institutions, government ministries and NGOs.

The program outputs include: FIC HIV Care Cascade 2013, HIV and implementation Training, MPH, PHD at University of Nairobi and sandwich program (one year certificate program), and two year fellowship for junior faculty.

The Prime K Framework includes research training, health research, and medical education. The aim is to improve the quality of medical education at UoN, extend reach of medical training outside Nairobi, increase retention, and working towards attaining quality as opposed to quantity.

Bilateral benefits include; opportunity to contribute to broader agenda, increased administrative capacity at both schools, new sustainable programs for example clinical education partnership initiative.

Yukari .C. Manabe shared an experience of strengthen traditional and non-traditional peer mentorship to enhance the quality of PhD research training. It involves mentorship models generally one on one. She noted that the number of senior mentors is limited, senior faculty
rapidly get promoted to administrative jobs, there is a tendency for supervision as opposed to mentorship, and there is a need to answer question on whether high quality PHD students can be successfully mentored in groups for economies of scale.

The results include; the first group/cohort was selected in 2011 and there are eleven programmatic and two linked awards. Thirty five manuscripts have been produced and sixteen PhD students have been mentored. There is a high completion rate of high quality PhDs and rapid increase in number of PhDs. There are six monthly meetings attended by supervising faculty, PhD students began small group sessions for peer mentorship which led to higher quality presentations and papers.

All in all, the MEPI grant presented an opportunity for effective and mutually beneficial south-north partnerships. Through local leadership the partnerships has been effective in catalyzing change in health professionals training. Also, MEPI has facilitated better quality students and improved mentorship of postgraduate students while enhancing retention capacity of medical education institutions. The PhD students are unlikely to leave the country because they are passionately associated with the environments. They feel they are doing something important for their community and they see opportunities in the local environment for research.

**Break Out 1F: COMMUNITY BASED EDUCATION**

The break out session was moderated Nelson Sewankombo from Makerere University and Isaac O. Kibwage from University of Nairobi. Emilia Noormahomed from University of Eduardo Mondlane presented on "UniLurio Community Based Education, a strategy to promote community education through health professionals training." Atiene Sagay from the University of Jos presented a score card from preliminary evaluation on decentralization of clinical medical training through rotation of specialists to community based hospitals. "Decentralization of post graduate training for Health Professionals in Low Income Countries as a strategy for retention and sustainability" was presented by Ana Mocumbi. Olayinka Ayankogbe from Lagos University
presented “Clinical preceptor program as a strategy to engage undergraduate medical students in community oriented primary care.”

The breakout focused on community based education with universities presenting innovate interventions they have implemented or are implementing to take medical education to the communities.

The University of Eduardo Mondlane presented on UniLurio Community Based Education, a strategy the university is using to promote community education through health professionals training. The approach allows the university to provide services to the community while being trained and community also gaining skills.

The students engaged in the program are as follows: Medicine two hundred and thirty eight, Pharmacy one hundred forty, Dentists one hundred thirty one, Nutrition two hundred twenty nine, Optometry One hundred eight and nursing one hundred forty four. Students provide health education to the community and encourage families to participate in the project codenamed “one student one family.”

The areas of focus include consumption of drinking water, the rational use of medicine and their conservation, diet habits and personal and collective hygiene. In total over 1000 families have been engaged and the community has responded positively to the initiative.

The University of Jos presented a score card from preliminary evaluation on decentralization of clinical medical training through rotation of specialists to community based hospitals. The intervention aimed to improve clinical training program and enhance acquisition of clinical and communication skills. The intervention helped medical students and residents doctors to acquire requisite skills. There is demonstrable improvement in health outcome from the evaluation.

Ann Mocumbi said the new course is envisioned to increase the offer of postgraduate courses in the northern region of Mozambique and the whole country contributing to academic qualification of faculty and researchers, giving them tools that allow them to improve their knowledge, perform research and progress academically in an environment where people are satisfied and motivated, thus resulting in human resources retention.
Lagos University presented clinical preceptor program as its strategy to engage undergraduate medical students in community oriented primary care. It envisions providing structured learning experience in the community in general practice, improving communication skills and application of core clinical skills.

They trained a network of fifty clinical preceptors to teach core clinical skills in family medicine to undergraduate medical students. The university envisions strengthening this training approach.

In conclusion, community based training is anticipated to produce fit for purpose medical workers who can be retained in places where they are needed most. This is well aligned to the aims of MEPI.

Break Out 2: SHARING TECHNICAL WORKING GROUPS’ INNOVATIONS

Break Out 2A: COMMUNITY BASED EDUCATION TWG: A MEPI COMMUNITY-OF-PRACTICE ENGAGED IN COLLABORATIVE RESEARCH: THE CBE TWG MIXED METHODS STUDY THAT EXAMINES THE VALUE OF BRINGING ACADEMIA TO COMMUNITIES.

The session was moderated by the study lead and TWG convener Zohray Talib from GWU and had presentations from seven of the participating MEPI Schools Stellenbosch University, University of Kwa-Zulu Natal, Makerere University, University of Zimbabwe, University of Zambia, UEM Mozambique, and Addis Ababa University. The MEPI-CBE TWG research study is a collaborative initiative within MEPI comprising of eleven medical schools in ten African Countries. The study objective is to explore the contribution medical students make to community health facilities during their community based clinical rotations. The first presentation was from Zohray Talib who presented the study rationale, design and the process of conducting collaborative research. Specifically the study involved gathering qualitative data, interviewing the health facility managers, clinical supervisors and clinical staff at each study site. The study also gathered quantitative data on the services provided at community health facilities. So far, five schools have
completed data collection, four schools are still conducting interviews, and two schools are awaiting IRB approval. The Study Sites are a mix of rural and urban hospitals. The focal person in each School is the PI in the respective country.

School PIs presented some of their preliminary findings from interviews which suggest a range of experiences depending on duration of rotation and disciplinary focus. Many students get hands-on experience with inpatient and outpatient activities, including caring for mothers, children, and patients with HIV and TB. Some presenters described how community health facilities that host students are perceived as academic centers when communities witness teaching and learning on site. In some cases, students contribute to overcoming barriers such as shortages of health workers and limited opening hours. School PIs on the study described how students sometimes reduce waiting time, improve staff attitude and improve relations between health facility staff and communities as they are more welcoming and understanding. One presenter described how students enhance community utilization of health service. Health center staff seem to gain experience and guidance from students. At some sites, students are found to be efficient and actually take on much of the clinical work at the health facilities (while at other sites, students slow their supervisors down). One school PI indicated that facilities benefit from hosting students as there are many specialists who come to supervise the students and in the process provide consultation to patients.

Preliminary findings of the study also shed light on some of the challenges of CBE activities. In some cases, it takes longer for patients to be seen as students take more time during investigation and history-taking. Furthermore sometimes the students do not get the necessary equipment and supplies for their level of training. Continuity of care is also sometimes compromised when the students complete their community rotation and return to the tertiary facility and medical school.
Break Out 2B: COMPETENCE BASED MEDICAL EDUCATION TWG CONSENSUS ON AFRICAN PHYSICIAN COMPETENCIES

This session was moderated by Oluwabunmi Olapade-Olaopa from Ibadan University and Elsie Kiguli-Malwadde from African Centre for Global Health and Social Transformation.

The competence based medical education technical working group has advanced competence based medical education over the duration of MEPI project through working on publications in this area. There publications have so far been produced by the group. The group has shared online material and held online discussions. This has built consensus on the understanding of CBME.

Olapade Olaopa from the University of Ibadan spoke about consensus on African physician competence with a focus on the “fit to practice” which targets graduates. There is a standard set of competences required for basic patient care such as the ability to independently obtain clinical information from the patient in a logical and organized manner, ability to request and interpret common investigations and how to handle emergency care, ability to communicate effectively and carry out inter professional activities, and work with a multi-disciplinary healthcare teams.

Adesola Ogunniyi from the University of Ibadan emphasized that multidisciplinary knowledge is required to uphold holistic patient care especially on clinical information gathering and planning management.

Sarah Kiguli reiterated that when introducing CBME to Makerere University, there was initially the involvement of the stakeholders. She highlighted that a survey done involving the stakeholders indicated that some critical skills like communication skills, ethical practices, leadership and management needed to be emphasized for the graduates from her school. This led to a review of the curriculum so as to ensure that these critical skills were addressed.

C.E Ndhlovu from the University of Zimbabwe talked about expert medical knowledge which should be applied through clinical, socio-behavioral and fundamental biomedical sciences to the patient across the age spectrum with both common and life threatening conditions.
In conclusion it was noted that there was a need to build consensus on the competencies needed for Sub-Saharan African health workers.

**Break Out 2C: RESEARCH SUPPORT CENTERS TWG: PROFESSIONALIZING RESEARCH ADMINISTRATION: ACHIEVEMENTS, CHALLENGES AND LESSONS LEARNT**

This session was moderated by Thokozile Mashaah from University of Zimbabwe.

Kwame Nkrumah University of Science and Technology has been able to boost research efforts including developing research administration, start an initiative on research and innovation management, train researchers and have an annual summer school. The research support centre has carried out mentorship and sharing with partner institutions. Institutionalizing of the research administration within the university has taken place. Work is ongoing to have the office recognized by the VC office, build a decentralized system, create awareness of what they do and advocate for research administration as a career path. Purchase of Software for research and grant management is underway. Achievements of the research centre at KNUST include: Institutionalized research, support from trained research administrators, helping other universities as a model centre, mentoring and sharing with other Universities, stronger research collaborations and increased research presence in the global community. The research support centre has faced some challenges which include the requirement of a new specialized and dedicated cadre as more research administrators are needed, and the change and adoption of new systems being a slow process. Various lessons have been learnt including the value of collaboration in learning, promoting the value of what can be done for researchers, and the effectiveness of peer learning or learning through sharing. The support centre has built research capacity and strengthened collaborations.

The University of Zimbabwe discussed professionalization of research support centers. Professionalization requires availability of resources and presence of a curriculum. Models of professionalization include; progression, formal recognition, and on job training. Strategies used
for professionalization include; human skills training, on job training, workshops, professional conferences, specialized seminars, and mentorships. University of Zimbabwe has a Research administration course with a well-defined curricular, local and international collaborations, and is a member of the Association of Research Members of Zimbabwe. Integration into the universities is one of the challenges faced by the research administration. There is need to develop modules that orient people to research administration.

Addis Ababa University highlighted achievements made towards professionalization of the research administration. With the support of MEPI, the Office of Research Administration was established at the university, the epidemiological unit at AAU has been revitalized, the university now celebrates a research day, students have been trained on research methods, sharing visits with Emory, Makerere University, and UKZN, a system has also been instituted to support undergraduate students to do research, there is recognition of the best researchers, and the number of publications is going up by the year. Major challenges faced by research administration include internal and external brain drain, and the lack of sustainability. Key lessons learnt include the need to engage major research PIs, importance of giving incentives to staff, and the need to involve the top management of the university.

Makerere University reported highlighted the need to encourage the Research Administrators are encouraged to take on higher level appropriate training at master’s level. The cost is however a challenge. There is collaboration with various institutions for example, the University of Malawi and other universities from the US. The main challenge faced by the research support centers is a shortage of personnel. The rationale is to coordinate and align activities of the various research centers.

Universidad de Eduardo Mondlane sited challenges faced by its research centre which included sustainability issues, and increase/establishment of new collaborations or partnerships. The support of administrative and fiscal management capacity is critical to long term sustainability of research support centers and research administration.
In conclusion, it important for the TWG to establish if research support centers have been useful during the five years of the MEPI existence, and also determine how they can be sustained post MEPI.

**Break Out 2D: LIBRARY INFORMATION SCIENCE TWG: BUILDING THE CAPACITY OF RESEARCHERS IN MEPI-MESAU INSTITUTIONS: ACTIVITIES OF THE LIS TWG**

This sessions was moderated by Alison Annet Kinengyere from Makerere University.

Library and Information Science is a profession that is full of people passionate about making a positive change in the world and they tend to be happy about what they do. A paper on reference management trainings carried out by the LIS TWG in MESAU Consortium during the last year was presented. The training was carried out in four MESAU institutions: Makerere University, Mbarara University of Science and Technology (MUST), Busitema University and Gulu University and there were evaluation reports from each institution.

Targeted audience included faculty, researchers, IT staff, librarians and graduate students. The main training objective was to build the capacity of graduate students, faculty, librarians, and IT staff in the use of reference management tools. Specific objectives included; to introduce participants to reference management tools (specifically EndNote), to train participants on how to use EndNote to create and populate a library of references, to introduce participants to using the Cite While You Write (CWYW) feature to make citations in Microsoft Word while automatically generating references, to equip participants with skills to manage their EndNote libraries.

Challenges faced during training include the fact that most librarians are not trained in using reference management tools. They cannot therefore train others. The LIS TWG faced challenges including; slow / no response from librarians, faculty/researchers, lack of sustainability, non-response from other MEPI countries, and LIS and E-Learning TWGs tend to be in parallel sessions.

It should be noted that there is a clear difference between E-learning and Library information
Science and for this reason it's important that librarians from all MEPI Institutions be invited whenever there is a symposium.

**Break Out 2E: E-LEARNING: ELEARNING BEYOND MEPI**

The E-learning TWG was moderated by Yianna Vovides from George Washington University.

E-learning is electronic learning and typically this means using a computer to deliver part, or all of a course whether it's in a school, a part of your mandatory business training or a full distance learning course.

Experiences from MEPI schools show that e-learning has led to the networking of most university faculties. There are also beneficial online interactions between students and their lecturers, as there was evidence from Kumasi and other universities. Telemedicine was also discussed and a case from Liberia reported to be progressing well, the University of Liberia has gone ahead to provide close to 100 desktop computers and e books to the Faculty of Medicine. This has led to the revising of the curriculum for the University. A Research Ethics module has been developed by University of KwaZulu-Natal where the Law and Ethics guidelines are uploaded and are now being used by the government. Zimbabwe noted that ELearning has led to partnerships with communication companies which have provided devices to students so that they can use them during community attachments. E-learning has been greatly embraced as students in some Universities now use it for investigation, disease surveillance, and accessing e-books. This has led to a tremendous change in attitude and adoption of the new learning system.

The way forward for the MEPI e-learning TWG includes determining what an eLearning toolkit might look like and sharing it with all the MEPI schools as well as with other interested institutions. Governments could potentially facilitate dissemination of such a toolkit and incorporate it into government bodies like National Council of Higher Education as is the case of Uganda, as a way of scaling up for sustainability. Collaborative research should be taken into account and capacity building of the users in terms of various software and hardware to be used.
Lastly there is need to develop an e-learning module for African medical schools that can be adopted by choice.

The MEPI e-Learning TWG has facilitated a community of practice and there was agreement that such a community should continue.

**BREAK OUT SESSION 3: TOPICAL BREAKOUT SESSIONS**

**Break Out 3A: MEPI STUDENTS’ PERSPECTIVES**

This session was moderated by Moses Galukande from Makerere University and Folasade Ogunsola from University of Lagos. Mosa Moshabela from the University of KwaZulu-Natal presented “lessons learned by medical students from community-based organizations in rural KwaZulu-Natal” and “The Five-Star Doctor: Voices of Medical Students Regarding Their Role Models Among Doctors Working in Rural District Hospitals (Level 1) in South Africa. Rhona Baingana from Makerere University presented “Results from an impact evaluation of the Medical Education for Equitable Services to All Ugandans (MESAU) Community Based Education Research and Services (COBERS) program”. While Kebaabetswe Poloko shared “Results from a qualitative review on medical students’ perspectives on rural training in Botswana”.

Community-based training is important as it gives students varied experiences which change their perspectives regarding the societies they serve.

Mosa Moshabela from the University of KwaZulu-Natal shared lessons learned by medical students from community-based organizations in rural KwaZulu-Natal. Medical students get placements within community based organizations for six weeks as part of their final year of training. It is the responsibility of these students to find an organization to get attached to and then find ways of venturing into the community while there. Students are required to take pictures that show what they have achieved during the six weeks and explain the picture/ attach a testimony.
Most students give feedback in relation to finding eye opening experiences when they get to the communities and see the community health and social needs which impacts their values and morals. They are confronted with the realities of the life the patients they see in hospitals live and they therefore start seeing more than just a patient, and see people with socio-economic challenges. Exposure to the community plays a part in forming them as medical students. Disorienting dilemmas for the students show them how the community can educate them as well.

Rhona Baingana from Makerere University shared results from an impact evaluation of the Medical Education for Equitable Services to All Ugandans (MESAU) Community Based Education Research and Services (COBERS) program. The objective of MESAU COBERS project was for communities to have an impact on students. Because of what community-based education is, we would expect that it should have an impact on the community and not just the students. An evaluation was therefore carried out to see the impact these students are having on the communities when they get placed into the community. This evaluation targeted students’ impact on health facilities, impact on leadership in the communities and impact on service delivery.

First year students had been placed within communities and their impact on the communities was being evaluated. Data was collected using FGDs, key informant interviews with opinion leaders in the community etc. Her focus of discussion was on results that came from Amai Community Hospital in Amolatar District which is on a landing site. Sanitation and hygiene standards were very low in this community with very few people having pit latrines and fewer people washing hands after using pit latrines. Many people from the community said that the students participated and mobilized the community to clean public pit latrine which were built by AMREF but was blocked and silted. The community latrine was re-opened and the committees were set up to ensure that the public latrine is kept clean. Some community members even started digging their own pit latrines at home. Community leaders admitted to the students influencing their leadership as they were challenged by students who could mobilize community members to work together for the good of their community without pay. She concluded by saying that students make tangible contributions that meet the real needs. CBE needs to be
comprehensively examined in order to recognize, quantify and optimize the health system impact from students.

Kebaabetswe Poloko shared results from a qualitative review on medical students’ perspectives on rural training in Botswana. Botswana is a young country in terms of medical training. The first cohort of medical doctors trained in Botswana graduated in 2014. A study was carried out to find out if students will work within rural communities after graduation. Student perspectives were gained through face to face interviews in a voluntary study. Third and fifth year students participated in this study.

With regard to the rural training environment; attitudes were positive. Students thought that the rural people were very welcoming and cooperation among staff in rural health facilities was good. There were mixed feelings on learning experience as some students thought they learned a lot while others thought it was not beneficial as work was really limited. Perspectives on rural training influence on future specialty were also mixed. Logistical concerns expressed by the students include limited supervision, poor training structure, and poor equipment. The majority (85%) of the students said they would not like to work in the rural settings although some that originated from rural areas said they would like to go back and work there.

Students’ recommendations on rural training included having more staff to supervise students, training residents and rural staff on how to supervise students and enriching rural training in curriculum. She concluded by saying that rural training if carried out in a comprehensive and effective way will have an impact on the health system of Botswana as students bring back perspectives that can guide health policy.

Mosa Moshabela from the University of KwaZulu-Natal (UKZN) also highlighted what students who worked in rural hospitals considered as the “five-star” doctor. UKZN is institutionalizing transformation in the health professions curriculum including medical education. Students get placements in community organizations where they are trained by general practitioners instead of specialists. An evaluation was carried out to see if the students could see the talents that general practitioners possessed. Medical students were required to write a journal and explain
about a role model identified while working within the community. They were supposed to comment on the doctor’s clinical knowledge, skills and competence.

The study realized that students’ perspectives of a five-star doctor was that a role model is a scholar, empathetic with patients, accountable, respectful, people-centered, dedicated, committed, confident, diligent, has humility and integrity. A five-star doctor will make decisions in the interest of patients and is very resourceful and creative when considering the limited resources that patients in rural communities possess. Students learned a lot regarding characters of doctors and what kind of doctor they would like to become.

Discussion on the MEPI Students’ Perspectives yielded some recommendations from the participants of this session. UKZN should consider evaluating the role of specialist on influencing students as they did that of the general practitioners from rural hospitals on students. Medical Schools should consider the packaging community-based training programs vital to results these programs will yield. Perhaps it is important to inform the students that this training is beneficial to someone who loves a challenge, who is creative and who is out to make a major difference in society. Supervision during rural training should also depend on the level of maturity and exposure of the students. Third year students will require a lot more supervision than the fifth years, and they cannot be expected to have the same support when it comes to rural training.

The experience students have when they go out into rural settings contributes to whether they will want to work in rural settings after medical school, social scenes, internet/ phone network, infrastructure of the health facilities. Governments need to look at various incentives like infrastructure in terms of accommodation, internet access, and better hospital equipment. A connection with the central through technology is also critical; doctors need to be able to comfortably take exams or upgrade their education from rural areas, with of course some additional salary incentives.

The challenges of the health systems in Sub-Saharan Arica are not about to change, but we need to acknowledge the need that societies within the rural settings have. We need doctors that are willing to work within these settings and be patient as we work towards the ideal of better
facilities, better housing or even better technology.

**Break Out 3B: RURAL TRAINING**

This session was moderated by Atiene Sagay from University of Jos, Nigeria and John Bartlett from Duke University, US. The presentations included; "An integrated Approach Used to Reduce Rural-Urban Mal-distribution of doctors in Tanzania: The Case of Kilimanjaro Christian Medical University College" by Crispina Narsis, "Good Practice Model for Rural Decentralized Training" by Susan Van Schalkwyk from Stellenbosch University, "Botswana Medical Students Perceptions of Facilitators and Barriers to Practicing in Rural Areas" by Tonya Arscott-Mills from university of Botswana and finally "Readiness of Health Facilities to Provide Adolescent Friendly Reproductive Health Services in Rural and Peri-Urban Uganda" by Lynn Atuyambe from Makerere University.

Crispina Narsis from Kilimanjaro Christian Medical University College elaborated on an integrated approach used to reduce rural-urban mal-distribution of doctors in Tanzania. Rural training was started as a response to creating a holistic approach in training of medical students to become care providers, decision makers, communicators, leaders and managers. The rural doctors club has this saying “joining hands touching hearts”, this is through career counselling as a guide to the students who will be joining the professional group. Rural training aims at exposing medical students to integrated education interventions like the community health integrated system through the curriculum. Use of the tool kit by the students which have been provided to them by the institutions ease their work at the rural centres for example the wet laboratory skill and diagnostic test that have been integrated.

Susan Van Schalkwyk from Stellenbosch University shared a good practise model for rural decentralised training. A lot of evaluation work has been done but how should it be infused in the institution is the question. It started off with the role of Family Medicine and primary care training getting established by restructuring of the faculty to focus on multi-disciplinary and professional work for them. They all received decentralized training and there is an on-going evaluation and review for the first graduates.
The participation of the community and the transformation of learning through this system is indeed good; because of the shared understanding of the community-based education program, the commitment of rural and site clinicians has improved, and has created a visionary faculty that influences the academic hospital complex to produce champions in “high places”. In conclusion it is a healthy and good model practise for all institutions to engage the community through social investment in decentralized programs.

Lynn Atuyambe highlighted the readiness of health facilities to provide adolescents with friendly services. It is an area which needs a lot of work as people are still very reluctant to communicate freely about sexual health to the adolescents. The traditional way of is for elders to communicate to adults before they enter marriage. It therefore leaves a gap for the adolescents to get information on reproductive health let alone understand it as it is when passed on by their peers. Thus there is a need for critical assessment of adolescent friendly services.

**Break Out 3C: LINKED AWARDS 1**

The moderators of this session were Sanday Pillay from University of University of KwaZulu-Natal and Ogunniyi Adesola from Ibadan University. The presentations included; “Improving Surgical Care in Rural Areas of Mozambique and Building Surgical Research Capacity within UEM” by Carlos Funzamo, “Improving Mental Health Education and Research in Zimbabwe (IMHERZ)” by Shamiso Jombo, “Integrating Neurology Training into HIV Care to Solve Local Problems” by Elly Katabira from Makerere and finally “PRONTO Simulation Training in Emergency Obstetrics and Newborn Care” by Onesmus Gachuno from University of Nairobi.

Carlos Funzamo from the Universidad de Eduardo Mondlane (UEM) presented information on the linked award program awarded to the university. The Surgery linked award aims at identifying the best strategies for building emergency and essential surgical capacity in rural areas of Mozambique through a series of small community and rural hospital based surveys. The objective of the linked award is to improve surgical care in Mozambique, and building surgical research capacity for UEM and its partner, the University of
California San Diego. The partnership and didactic surgical research have resulted into the development of nineteen research projects, eighteen surgical residents have benefited from trainings, and different surgical capacity building courses have been added to the curriculum. With regard to sustainability, the university intends to continue with studies and research at the referral level. In conclusion, MEPI has resulted in significant progress at UEM.

Shamiso Jombo from the University of Zimbabwe shared information on the linked award program at the university which aims at Improving Mental Health Education and Research in Zimbabwe (IMHERZ). This award stemmed from a needs assessment that was carried out and found that there was no training offered in the field of mental health. The goal of the linked award program is to improve mental health in Zimbabwe. The program has achieved this goal by building research capacity through holding masters classes in collaboration with partners like University College of London and Kings College London, UK, exchange visits and partnership visits, research collaborations formed, and fellowships awarded to masters’ students through the scholars program. Three faculty members have so far graduated thru the NECTAR program.

The linked award program has contributed to faculty retention and recruitment through modernization of curriculum for both undergraduate and postgraduate. Research capacity has been developed, an inpatient case register created, and five publications submitted to peer-reviewed journals. Two research grants have been funded through IMHERZ, and psychiatric lecturers have increased in number. The university aims at sustaining achievements made through leadership built, lessons learned, and institutionalization of the program leading to retention. Other steps to be taken towards sustainability include; continuing improvement of the quality of service, strengthening of clinical audits, establishment of new, and strengthening of already existing partnerships, giving lead roles to junior faculty, and carrying out mentorship for leadership. In conclusion, IMHERZ has greatly transformed mental clinics in Zimbabwe.

Onesmus Gachuno presented information on the linked award program at the University of Nairobi (UON) aimed at strengthening Maternal, Newborn and Child Health (MNCH) in Kenya through a pronto simulation training in emergency obstetrics and newborn care. PRONTO was
initiated in North America and consists of two modules; teamwork, obstetric hemorrhage and neonatal resuscitation. Achievements of this program include training of one hundred and seventy health workers by cadre in Kenya, majority being nurses/midwives, building local training capacity and a significant improvement in postgraduate training. The university plans to carry out an impact evaluation of this program as a step towards sustainability of achievements realized. The school also responded to an RFA by USAID in relation to MNCH and received funding that will enable the continuation of these trainings. In conclusion, the PRONTO simulation training has proved to be an innovative and sustainable training intervention.

Elly Katabira from Makerere University Kampala (MUK) shared information on the linked award program at the university that aims at integrating Neurology training into HIV care in order to solve local problems. The university received this linked award in 2013, two years after MEPI started. Objectives of the program include; building capacity for neurology training, establishing and strengthening collaborations and stimulating research. This program was awarded as a result of Uganda’s contribution in the field of HIV and HIV care through community mobilization, and the fact that students and health workers in general feel uncomfortable in neurology areas related to HIV which needed to be addressed.

The linked award program has supported and trained student researchers studying the interaction between HIV and neurological conditions. It has also managed to demystify neurology among undergraduate students, improved health seeking behavior and recognition of risky lifestyles among graduate students, health workers, and the local communities. The program has built capacity through soliciting new students to take up research in neurology by providing research funding and mentorship. A community survey has also been done in parts of the country to establish the neurological burden. So far, ten master’s students have been trained and two PhD students have been funded. Appropriate neurology training should be encouraged, and interest in neurology should be proactively encouraged.
Break Out 3D: LINKED AWARDS 2

The session moderator was Rhona Baingana from Makerere University and the presentations included; Bellington Vwalika from the University of Zambia on “Helping Mothers and Babies Survive Program”, Walter Mangezi from the University of Zimbabwe on Consolidation of Cardiovascular Research Training at the University of Zimbabwe: Year 5 of the Cardiovascular, Heart Failure, Rheumatic Heart Disease, Interventions Strategy (CHRIS) Linked Award” Yvonne Brenda Nabuunya spoke about the “MEPI-CVD linked award: Experience Over the first 5 years” and finally Dalton Wamalwa from the University of Nairobi on “ Strengthening MNCH Research Training in Kenya: Decentralized Research”.

Bellington Vwalika from the University of Zambia highlighted experiences with helping mothers and babies survive program curriculum. Helping babies breathe is a neonatal resuscitation curriculum for resource limited circumstances. This is an innovative training program with a component which aims to provide targeted clinical training to midwives and nurses in primary and secondary care facilities with a focus on improving maternal and child care outcomes. The curriculum uses other additions to reach out to the provincial hospital to mentor, teach and offer service. The objective of this training is to mentor the nurses, doctors and clinical officers, and ensure that there is standardized approach.

Methodology used included modifying the curricula of the Helping babies breathe and helping mothers survive courses to include other causes of maternal morbidity. Training was to reach provincial hospitals in ten provincial areas. Training was conducted by maternal and new born champions including obstetricians, midwives and theatre nurses. It is a one and half day training program that uses manikins to ensure that skills are mastered and eventually actual practice on patients is done.

A total of one hundred ninety staff participated including; twelve nurses, thirty five Senior Health Officers, thirty seven Registered Midwives, fifty nine Enrolled Nurses, sixteen Registered Nurses, eighteen Certified Mid Wives, six Clinical Officers and seven Medical Laboratory Assistants. A lot
of knowledge gaps and some practices that could be harmful to patients were found prevalent; 60% of nurses said they used electrical suction machines, 54% were scared to use Magnesium sulphate while 58% could not mix it properly, there was only 50% partogram use, 52% of Senior Health Officers (SHOs) managed the emergencies proficiently, only 52% use Active Management of the Third Stage of Labor (AMTS), and there was no ongoing Continuing Medical Education (CMEs). SHOs felt they benefited from the training. USAID recommended that this could be adapted as an ongoing mentorship course in preference to the Emergency Obstetric and Neonatal Care (EmONC) curriculum which takes three weeks. Helping Mothers Survive and Helping Babies Breathe curriculum provides for a good abridged course which can be introduced before internship or before rural posting. The program is highly applicable and recommended for confidence building of various health cadres especially nurses.

Walter Mangezi from the University of Zimbabwe highlighted efforts made towards effecting change in the health system through IMHERZ service development model. The project was conceived against the backdrop of the following compelling factors: limited psychiatry faculty, inadequate trainees, limited resources, no psychiatry sub specialty expertise or services, lack of coasted national mental health strategy, high levels of perceived and enacted stigma directed towards patients and careers, and lack of integration within general medical curriculum. The goal of the project is to strengthen mental health services through capacity building of faculty and curriculum development of undergraduate courses. Activities include; master classes aimed at building expertise and services, staff retention, and creation of communities of practice; exchange visits which nurture research, build expertise and build services; and the IMHERZ mentored scholars program.

Two clinics were established in May 2013 & June 2015 with each site having two weekly clinics in which four hundred and ten children have been seen to date. The project carries out outreach visits to sites outside Harare. Two fulltime consultant psychiatrists have been recruited in Zimbabwe Prison Service. The MMed forensic psychiatry training module has been developed, and the decentralized psychiatric services eased burden on tertiary units. Four pilot outreach sites established for clinical support services, and training of staff was conducted. Staff evaluation done after each service, seventy cadres are trained every quarter.
IMHERZ scholars who have gone on attachment to UCT for specific subspecialty have led service development in the mental health sub sector. An IMHERZ scholar in forensic psychiatry recently appointed to head forensic psychiatry services covering half of the country in Zimbabwe. Continued coordination of services, working in multidisciplinary teams, decentralization and community outreach are factors key in the effective delivery of mental health services. Service development is a process that needs commitment. Commitment from government and stakeholders is critical and leads to buy-in. Service development models contributed to positive changes in the mental health system and is managed by local psychiatrists.

Jonathan Matenga from the University of Zimbabwe spoke about the consolidation of cardiovascular research training at the University of Zimbabwe through the Cardiovascular, Heart Failure and Rheumatic Heart Disease Intervention Strategy (CHRIS) linked award program. The program goal is to address the human resource constraints, training needs and research in cardiovascular diseases at the University of Zimbabwe (UOZ). Strategies used in consolidating cardiovascular research training include the use of visiting professors, triangular mentoring, student exchange, creation of CVD registers, and ICT improvements.

The program has created an academic environment engendering research and evidence based practice. There has been an increase in research output and publications, specialist units and clinics have been established, majorly focusing on stroke, cardiac, epilepsy, diabetes, and bronchoscopy treatments among others. Trained scholars from various specialties have included nine in cardiology, six in neurology, three diabetology, three pulmonary, twenty one physiology, and ten in echocardiography making a total of fifty two scholars. With regard to program achievements, there has been an improvement in teaching capacity, new services have been put in place including a cardiac clinic, pacemaker program, and stress testing. So far one pacemaker implant was done in 2012, four implants in 2013, fourteen implants in 2014 and two implants in 2015 done independently by CHRIS scholars. The first ever stroke unit was established in 2013 with eight bed units, three nurses, five registrars, four hundred fifty five patients admitted to date, and first week mortality reduced from 24.7% to 13.7% in 2013. Respiratory services have been introduced which include bronchoscopy services, respiratory clinic and spirometry services.
A diabetic clinic was also established. Other program outcomes include various research projects carried out, enrollment of MMED students, community based research, seven publications out to-date and numerous conference presentations. Trained cadre will undergo advanced training and train other cadre in ToTs to ensure sustainability.

Yvonne Brenda Nabuunya spoke about the MEPI-CVD linked award program and how it has built capacity for prevention and control of cardiovascular disease in Uganda. The MEPI-CVD program aims to build capacity for CVD research and training among medical students, residents and faculty, and to determine the magnitude of the CVD distribution and risk factors. The program has integrated the CVD component into the CBE curriculum; students have led ten CVD awareness campaigns to date, and interest in cardiovascular disease research and management has been generated among students.

Twenty five postgraduates have been supported, with eleven others in the pipeline, five graduates have become practicing cardiologists, and one PhD is celebrated and 2 PhD candidates in the pipeline. The program has also procured two ECHO machines. The MEPI-CVD linked award program has managed to leverage resources and attract further funding, formed global networks through participation, and built local leadership in clinical care research and training. In the future the program plans on expanding to other universities within the country, promoting online modules for cardiovascular training, expanding RHD school screening and prevention, carrying out health systems strengthening and implementation research for CVD, venture into new areas of research in HIV and CVDs and look for further grants.

Dalton Wamalwa from the University of Nairobi spoke about the MEPI linked award program at the university which aims at strengthening maternal newborn and child health research training in Kenya. The university has a robust masters training program in health sciences with most research happening in tertiary hospital. Little or no inter disciplinary research is carried out. The objective of the program is to promote implementation research in decentralized non tertiary MOH facilities. A total number of eighty students have benefited from the program, and five specialists chose to remain at work where they undertook research as clinical pharmacists. Improvement in MCH practices at sites where research was undertaken has been observed.
Closer ties with MOH have been created and direct input from policy makers received. Feedback on research findings has been received from hospital superintendents and the culture of publishing research has been built. Sustainability and future directions include establishing strong institutional leadership, creating a collegial spirit with MOH and an interdisciplinary nature of research.

**Break Out 3E: RESEARCH 1**

The breakout session was moderated by Jean Nachega from Stellenbosch University and Milliard Derbew from Addis Ababa University. Presentations included “Mentoring Undergraduate Medical Students in Research with Experience and Lessons from Kilimanjaro Christian Medical University College (KCMUCo)” by Imani Israel, “Translating MEPI Research: the Mozambique Experience” by Carrilho Carla, “Towards an AIDS Free Generation; Supporting Mentored Research Scholars Contribute Knowledge to HIV/AIDS Research” by Zvavahera Mike Chirenje, “MEPI-Ethiopia’s Contribution for Enhancing the Research Environment at Addis Ababa University” by Damen Hailemariam and “Research Ethics Capacity Building: MEPI UKZN presented” by Nivedhna Singh

KCMUCo established an approach to sensitize faculties/scientists to engage undergraduate medical students in research through Workshop Trainings on; Human Subject Training, Mentoring vs. Supervising and Responsible Conduct of Research. KCMUCo has set up seven criteria for a successful proposal to be included in the Research Program. To make the strategy competitive and self-driven from scientist, KCMUCo limit the request for proposal award up to twelve proposals for each RFP Announcement that takes place every year. From programmatic year 2011/12 -to- 2014/15 total of 109 proposals have been received and reviewed, 55 proposals met the criteria and were selected as follows; Community medicine (2), Pediatrics and child health (9), HIV/AIDS and reproductive health (13), Non-communicable diseases (14), Bacterial and Parasitic infections (17).
MEPI-Ethiopia enhanced research by strengthening Clinical Epidemiologic Units; and Training of local Institutional Review Boards (IRBs). Another experience in Addis Ababa was creating conducive environment and culture for research within the medical schools through the development of research mentorship program among medical students. Addis Ababa University also supported students and faculty to undertake operational research at community attachment sites and review of a nearby Data Security Services (DSS) to provide students with the necessary exposure and experience. Organizing and providing several rounds of short term training opportunities for faculty and graduate trainees on research methods, research ethics and other relevant topics. MEPI provided financial support to conduct operational research in areas that are aligned with MEPI’s strategic objectives in collaboration with the Ethiopian Medical Association (EMA) and supported the research activities of physicians working in the peripheral and remote areas of the country.

UKZN established the BREC Fellowship to provide onsite applied REC/IRB training and allow the candidate to gain an understanding of the theoretical and operational aspects of research ethics review.

There is also South African Research Ethics Training Initiative (SARETI) modular training component of MEPI-RESCAP where ten selected students are funded annually to attend two SARETI masters-level research ethics modules. Grant writing workshop invite UKZN and other MEPI sites staff to be trained in grant writing and grant management.

From the UZCHS experience, MRSP had activities like; Mandatory research skills training (one year long) where scholars had to attend each of the workshops below; Friday lunchtime Research, Methodology course, Supervision and mentorship for postgraduates workshop, Proposal writing workshop, Grant writing workshop, Scientific writing for publication workshop, Research ethics workshop. They carried out quarterly research seminars, ongoing administrative support (Printing, photocopying and stationery and Internet), and financial support for research projects (Research costs and Conference attendance).
Despite challenges faced mentorship in research is an important career development tool in shaping students’ academic and leadership standing. Therefore Medical schools should invest in mentorship programs in order to arouse interest in regionally relevant research.

**Break Out 3F: RESEARCH 2**

The session was moderated by Robert Bollinger from John Hopkins University and Alfred Kien Mteta from KCMUCo. The presentations were “Research and Innovation Management: Experiences from the University of Zimbabwe College of Health Sciences” by Exnevia Gomo, “Simulating Interest in Research Among Medical and Dental Students Through a Mentored-Research Program” by Ogunniyi Omigbodun, “Translating HIV Research into Improved Emergency Care Training and Practice by Nadia Tagoe from KNUST and “Availing Research Resources as a Strategy for Faculty Retention at University of Nairobi” by Julius Oyugi

The breakout focused on research in the MEPI projects at the universities of Kwame Nkrumah (Ghana), University of Nairobi (Kenya), Ibadan University (Nigeria) and University of Zimbabwe.

Nadia Tagoe of Kwame Nkrumah University of Science and Technology introduced the group to ways through which the university has translated HIV/ AIDS research to address patient handling at emergency units. The outcome of the study led to the development of HIV/AIDS care at emergency units and guidelines have been adopted at national level and owned by government. A total of thirty seven medical staff have been trained in emergency care practice across the country. The research was a success and its findings have informed national documents used for training health workers handling emergency and accident victims.

Julius Oyugi from the University of Nairobi highlighted how the university is using research enhancement through availing of research resources as a strategy for faculty retention. The university was faced with high brain drain and is thus supporting faculty with funding to conduct research. Faculty engaged in research has been promoted and publications have now increased.
Fellowships have also been introduced and a training to address the research gaps set up. No faculty member has left the university since the introduction of the intervention.

Ogunniyi Omigbodun shared experience from the University of Ibadan on the use of a mentored-research program for stimulating interest in research among medical and dental students at the university. Medical and dental students are encouraged to carry out research which was not part of the graduation requirements. Top performing students were selected and 30 are being mentored and carrying out the research.

Exnevia Gomo highlighted ways in which the University of Zimbabwe has carried out research and innovation management. The university has engaged in developing tools to guide administrators of research to effectively manage research. This has resulted into the formation of a national association of research managers. Translation of research findings into outcomes is an integral part of doing research. Findings are only valuable once they have been translated into relevant policies for influencing change.

**BREAK OUT SESSION 4**

**Break Out 4A: IMPACT ON HEALTH SYSTEMS**

Moderators were Peter Donkor from KNUST and Vincent Ojoome from ACHEST. This session had four presentations including; “Enablers and Constraints for Longitudinal Teaching and Learning at Rural District Hospitals” by Marietjie De Villiers from Stellenbosch University, “Audit of Infant and Child Deaths in Ramotswa, Molepolole, and Gaborone, Botswana 2011-2014” by Moses Thato Potlakwe, “Impact of the University of Nairobi MEPI Program on Health Outcomes in Kenya” by Onesmus Gachuno, University of Nairobi, and “Impact of MEPIN Mentored Research on Skills and Research Output of Young Faculty in Nigeria” by Georgina N. Odaibo of University of Ibadan.

The breakout discussed interventions that MEPI grantee universities have put in place and contributed towards strengthening the health systems in their countries.
Stellenbosch University conducted a longitudinal integrated clerkships aimed at increasing the numbers of medical graduates through decentralized clinical training. It was noted that there was positive contribution to patient care, with patients expressing gratitude since the students were involved with community and accepted by community. It was seen as a complete new way to do clinical training which supports recruitment and retention of doctors to primary and rural health care. Students work for extended period (usually one year) in the same clinical setting which has impacted on the way students look at being based in a rural community which has helped retain graduates in places they are needed most.

Botswana University targeted to determine the cause of the high rate of child mortality in Botswana. They focused on children who die in selected health facilities or their catchment areas; three hospitals prospective audit of all children aged 0 - 13 years dying in three sites. The study found out that neonatal mortality is a major cause of under-five mortality at study sites and more than 60% of deaths were due to: Respiratory infections, Sepsis, Diarrhoea and its complications and malnutrition.

University of Nairobi Kenya initiated interventions through PRIME-K envisioned to improve health outcomes in Kenya through medical education and clinical research and established a skills lab, medical education unit, digital library, distance learning, decentralized training, research opportunities and partnerships. Training of health workers is now done in places where they work, more resources are available digitally and the skills lab has been audited. PRIME-K interventions now have a bearing towards improving qualitative health care. Finally, it is important to sustain these interventions to avoid slackening and to push towards a long term impact.

The University of Ibadan looked at developing interest and building capacity for research among postgraduate students, resident doctors and junior faculty. The intervention mentored new faculty members and students to conduct research. Manuscript writing, grant writing, abstract presentation at conferences, time management, winning of scholarship/fellowship and teaching were also promoted. All mentees acknowledge that the overall mentoring program have been
very useful to them and have now published more than twenty articles in good journals. Eight of the mentees have received other support (grants/fellowship awards) and this they attributed to the impact of the overall MEPIN mentoring program. It is evident that the initiatives have contributed to the strengthening of health systems in their countries. It is now important that sustainability mechanisms are designed to ensure the impacts created last to the test of time.

**Break Out 4B: IMPACT ON HEALTH SYSTEMS 2**

Ana Mocumbi and Steve Kamiza from Eduardo Mondlane University and University of Malawi respectively were the moderators. “How Students’ Community Based Education Research and Service (COBERS) Projects Contribute to Strengthening Uganda’s Health Services, The MESAU Experience” was presented by Gad Ruzaaza from Mbarara University, from University of KwaZulu-Natal, Moise Muzigaba's presentation was titled “how the UKZN 6th Year Rural Health Block is Effecting Transformative Learning and Influencing Career Plans: ? Post-Rotation Analyses of Students’ Prior Concerns and Actual Experiences”. James Henry Obol spoke on “Community Perception and Demographic Characteristics Associated with Household’s Interaction with Health Professional Students among Ugandan Communities”, Emilia Noormahomed from Eduardo Mondlane University presented on “MEPI Impact on Health Systems” while Sekelani Banda from University of Zambia spoke on “Community Based Education (CBE) Curriculum Review Process”.

This session was a continuation of impact on health systems one and it also discussed interventions that MEPI grantee universities have put in place and contributed towards strengthening the health systems in their countries.

On “How Students’ Community Based Education Research and Service (COBERS) Projects Contribute to Strengthening Uganda’s Health Services, the MESAU Experience” by Gad Ruzaaza, Community based learning enhances leadership and management skills among students. It’s also important to note that students are change agents, they motivate collaborative learning (Center of learning for everyone), they are resources which we bank on to obtain information that can
be used for evidence based decision making, can motivate health promotion and disease prevention and they contribute to prevention of a number of diseases.

Students are also able to mobilize stakeholders and can therefore be a fulcrum for further strengthening of health policy that is sustainable for addressing existing communicable diseases.

Moise Muzigaba’s presentation was titled “How the UKZN 6th Year Health Block is Effecting Transformative Learning and Influencing Career Plans: Post-Rotation Analyses of Students’ Prior Concerns and Actual Experiences”. He said that the six year rural health block at UKZN stands out from other clinical blocks and aims at practical implementation of knowledge and skills in a Primary Health Care (PHC) context. The university identified ten rural hospitals to which the students are sent. The program is designed with self-directed learning – students are not guided as to what they should learn.

Formative evaluation of the training was carried out to explore students concerns before they started the program, and assess the impact of the program on the students. Some of the student concerns before start of the program included; inability to work independently as a student, lack of resources, being away from family, challenges with cultural differences, language barriers among others.

Self-reported knowledge and skills was evaluated based on baseline carried out before students started the program. The rating for thirty five out of thirty nine learning objectives of the program were very high. Five gaps were identified and these included the ability to demonstrate appropriate evidence-based management, ability to conduct family planning consultation, language barriers with patients among others.

The evaluation further focused on how the students were transformed. It was realized that the students were transformed in the following ways; their sense of responsibility was enhanced, they were more responsible, they learnt teamwork, they became more confident and understood the meaning of being a doctor.
The key question in the evaluation was, “What is desired is to see that the rural training programme models students into the rural doctors we want them to become?”

James Henry Obol spoke on Community Perception and Demographic Characteristics Associated with Household’s Interaction with Health Professional Students among Ugandan Communities. A study was carried out to evaluate the impact of students in COBERS on the community. COBERS sites were selected based on criteria and non-COBER sites were also selected using similar criteria in order to compare findings.

Most community members gave positive responses to questions regarding positive impacts of students on waiting lines in health facilities, on leadership, and on health mobilization activities.

It was concluded that health Profession training should increase COBERS sites so that more communities benefit from the students’ presence in the community.

Emilia Noormahomed presented on MEPI Impact on Health Systems. She said Mozambique has a limited number of medical specialists. The country is increasing its medical education capacity, increasing research, and taking on sustainable medical education initiatives such as the Firm Chief System.

A master’s program in Health Education has been started out in Mozambique for the first time. 18 residents completed internal medicine between 2010 – 2014 at UEM which is four times more than the number that has been trained in the past.

A number of courses have been started on critical health skills with a substantial amount of research being published which has guided policy within the country.

With regard to retention strategies and sustainability, bilateral meetings with stakeholders took place to discuss ways to push forward medical education and related ministries have been involved in decision making regarding the future of medical education.
The results achieved in postgraduate and undergraduate training will have a positive impact on the entire National Health System, providing an increase in number and better trained generation of medical doctors.

The required improvement of coordination between the stakeholders will also have a catalytic effect on quantity and quality of human resources for health in Mozambique.

Finally from Zambia someone presented on Community Based Education (CBE) Curriculum Review Process. He said the CBE program in Zambia has been running for approximately 15 years. MEPI has boosted this program over the five years through supporting the review of the CBE curriculum and carrying out an evaluation of the curriculum. Feedback to the communities has been introduced to curb community fatigue and the CBE program has undergone a long overdue overhaul through a process of first gathering information on what is working and what is not from the previous program.

**Break Out 4C: LEVERAGING LEADERSHIP**

Four presentations were made on leveraging leadership and these included “UoN-Research and grants management Information system: Towards vibrant research enterprise” by James Machoki, “Establishment of Medical Medical Education Unit in Ibadan University, the pains and gains” by Adesola Ogunniyi, “Palliative Care services” by Alex Chitani, University of Malawi and “Outcome of the writing for publication training for graduating scholars in the school of medicine by University of Zambia” by Charles Michelo from University of Zambia

James Machoki said UoN is the pioneer institution in Kenya, with six colleges each headed by a dean. The university established the office of deputy vice chancellor research to enhance the production and promotion of vibrant research.
In the promotion of vibrant research; some challenges were met such as delays in procurement processes, inadequate systems for tracking records, burdensome reporting requirements, and technical complexity of reporting, increased demand and expectations of researchers which were poorly addressed.

Despite these challenges, they were able to fully develop a Research and grants implementation strategy as well as sustainability plans.

From this intervention, UoN learnt that as an institution of higher learning there is need for support and service delivery systems to be put in place.

Adesola Ogunniyi explained that the University of Ibadan was started in 1948. The medical education unit has been in existence with the purpose of organizing seminars, coordinating research and training teachers. This unit has four member of staff in total and the plan is that it will be headed by a full professor, who is a senior educator.

This unit has led to more medical staff specializing in medical education and organized retreats on pedagogy. There have also been gains in assessment of students where there has been a change in grading standards leading to an increased number of students getting distinctions. It has led to better logistics management, better equipped lecture rooms, more office space available, more support from alumni and collaboration with other faculties. A lot of this has been supported by MEPI.

However, the unit has had some pains which include inadequate funding, not enough personnel, resistance to change, lack of trust on integrated curricular, core lecturers out of sync, slow implementation, disruption by strikes, and increased burden with addition of new courses.

To deal with the pains of setting up this unit and the challenges, the university plans for orientation of new faculty staff, involvement of senior faculty members, insurance of compliance through monitoring.
In conclusion, the college is up and running and endures to curtail the pains and enhance the gains. It was finally noted that the future outlook is bright.

The University of Malawi presentation on palliative care services explained that this is an approach to improve the quality of life of communities; it was started in 2003 with a desire to scale up the services, reduce ward overcrowding, and to respond to the problem of poor access to HIV testing. The number of patients accessing palliative care has gone up since 2011.

This project has achieved palliative care in all wards, mentorship programs are ongoing, research projects for students were established, palliative care staff have been able to do research, there have been clinical attachments for students, and impact has been made in terms of adding life to days and not just days to life of the recipients of palliative care.

The main challenges of this intervention have been multitasking which is often difficult, mentorship becomes difficult and transfers of trained staff to other stations stifles the work.

University of Zambia presented on Outcome of the writing for publication training for graduating scholars in their School of Medicine.

Research is not research until it is published. Currently, analytical support clinics have been instituted, mentorship teams set up, journal clubs instituted, grant writing clinics set up, and scientific writing workshops functionalized.

The writing for publication training has been set up because scientific writing is increasingly becoming important for scholars; it requires disciplined writing and communication, including clear and precise thinking. The aim of the trainings has been to build capacity and equip faculty. There are three cohorts scholars that have so far undertaken writing for publication training.
Out of this, by January 2015, over 70% of the articles had been published. Other scholars in the school have been motivated to publish their research work and scholars have contributed to scientific writing capacity and the number of research work published has increased.

**Break Out 4D: E-LEARNING/ ICT**

This session was moderated by Oathokwa Nkomazana and Sarah Kiguli from University of Botswana and Makerere University respectively. Presentations included; Mriro Muvoti from University of Zimbabwe on “the Challenges to Introducing Emerging Technologies in Low Resource Settings: University of Zimbabwe College of Health Sciences (UZCHS) Experience”. Ismael Mamundo from Eduardo Mondlane University on “The MEPI contribution to E-Learning and the sustainability of public Medical Schools in Mozambique”, Aaron Kimwise from Kampala International University (KIU) shared the “E-Learning Strategic Plan for Kampala International University” and Frank Dubi from KCMUCo on “The Simplified and Modern way of Reviewing Electronic Proposals through the use of Mentors IRB Software at Kilimanjaro Christian Medical University College.

Pre-MEPI there was traditional wired internet, fixed desktops, two resource rooms with less than fifty users, rotational access and use of internet cafes for further research and learning. After MEPI, there has been Wireless LAN- desktop-to-mobile shift, Infrastructure upgrading, Data center set-up and a three site campus VPN configuration.

The university came up with strategies to address MEPI goals to employ modern technologies that is to upgrade to robust, scalable and reliable infrastructure, relevant e-resources, training and awareness, and sustainability.

A bit of what was planned was achieved including network upgrade- high powered Dell servers, Storage upgrade- two storage arrays with 20T each scalable, Implementation of wireless LAN, Inter-campus VPN, and Piloting free videoconferencing tools for virtual lectures.
The main challenge was financial for example the buildings were old with brick walls which made it expensive to make installations. Also human and skills shortage (only two people were available) and the university therefore relied on the partners from University of Stanford at the start.

With the start of MEPI, e-learning was extended to the School of Health Sciences. The E-learning resources included SMILE, REDCap, eGranary, among others. The university was targeting 25% of the faculty to deliver the lectures with e-learning but unfortunately this has not been achieved, about 66% of MMeds are using REDCap. There has not been good response to the utilization of e-Granary and SMILE.

Strategies to deal with the financial challenges and other gaps included fundraising, partnerships with Stanford and Denver Universities, policy formulation (ICT policy), ICT campaigns and capacity building.

In summary, MEPI has brought opportunities some of which have been well received and other are still being worked on.

Ismael Mamundo while presenting the MEPI contribution to E-Learning and the sustainability of public medical schools in Mozambique said, there are three public medical schools in Mozambique with Eduardo Mondlane being the oldest. E-learning has been successfully introduced by MEPI to Mozambique public schools.

All the three master courses at Faculty of Health Science at Nampula have a long distance e-learning component. There is one doctor to every thirty thousand residents. Therefore the need to train more doctors and e-learning can contribute significantly to this. The strategic programs include bioinformatics; e-learning and the e-learning strategic plan principles including obtaining stakeholder commitment and training of medical students.

Achievements so far are connectivity improvement, Virtual library at Faculty of Medicine EMU, Voice –Over-Internet-Protocols (VOIP) to deliver lectures at UniLurio and also with University of San Diego. The main achievements were training medical students, distance learning, and support training.
Finally, the strategic plan is to integrate e-learning in the development program. He noted that the MEPI program in Mozambique has resulted in significant progress in developing sustainability.

Aaron Kimwise from Kampala International University (KIU) shared the E-Learning Strategic Plan for Kampala International University. He acknowledged that MEPI has done a wonderful job at KIU whose vision for e-learning is to become a proactive and responsive e-learning center that can provide e-learning support and services to health professionals’ education at KIU.

KIU is a private university and has many campuses with some in Kenya and Tanzania and what is implemented in one has to be done in all campuses. Achievements since 2014 include; provision of LAN and internet, digital library, learning management system, faculty and technical team training.

Internet connectivity at the campus is still a challenge, the e-learning environment is currently hosted outside but servers were bought and soon the university will be hosting it on their own. It was noted that e-learning is not well understood by everyone at the university so there is need for more sensitization of the people to bring them on board.

All in all, most of the work is being run by the board of trustees with MEPI as the only partner. However, there are moves to work with more partners.

Frank Dubi went on to discuss the simplified and modern way of reviewing electronic proposals through the use of mentors IRB software at Kilimanjaro Christian Medical University College. The IRB is a committee that has been formally designated to approve, monitor and review human subject research. At KCMUCo there is an e-IRB form. All things that were done manually are being done electronically. This system increases efficiency and cuts on cost. There is a move with the M&E team to do pre and post e-IRB evaluation so as to assess impact. There is a platform that is used by those that have to make submissions to the e-IRB, CITI – after e-IRB is going to be introduced. CITI increases the research knowledge of the researchers.

Finally, there is Dura Space (Dspace) for undergraduates who are not doing research to also learn about research at an early stage. It is accessible by everyone at the college. Papers/ articles are
uploaded so that they can be accessed easily by faculty and students. All this has been achieved through collaboration with MEPI and other stakeholders.

In KCMUCo, it is mandatory to use the system. Demonstrations have been given to the leaders and faculty to show the effectiveness of the e-Platform especially on marking the scripts. Investment in e-learning has made a big impact on KCMUCo.

**Break Out 4E: MONITORING AND EVALUATION TWG-EVALUATING THE IMPACT OF MEPI IN AFRICA – THE M&E TWG APPROACH**

**Lead facilitator: Francis Njiri**

Key Question: What has Africa got from MEPI?

Impacts of MEPI have been at two levels; to individuals and to organizations. To the individuals it has been through trainings, skill and performance outcomes. This session was seeking to establish what the achievements have been at the organizational.

What has MEPI done so far?

Some of the achievements include:

Twenty five thousand one hundred ninety five new health care workers trained, nine thousand nine hundred seventy nine in-service training, forty new courses developed, thirty seven curricula revised, nine new training labs were set up, sixteen centres of excellence were established, twenty one new training units were established, Schools developed community based education programs and three thousand four hundred and seventeen posting of students to one hundred ninety four community based sites. Also, there are four hundred ninety two new investigators, eighty six grants applications and one hundred forty seven grant awards. This is information from MEPI schools.
What M&E heads need to know in order to tell the story is to have the key reason why there is need for M&E clearly highlighted. Also, there must be indicators for an evaluation to be a success. There is a lot of information that is useful for the M&E teams to utilize.

There is need to work on frame work so as to have driving indicators for the evaluations to be useful for the schools and to be sustainable. The outcomes must be demonstrated for the people to see that MEPI contribution is or has improved the quality of health care in Africa. The way forward for the M&E TWG was discussed including: Sharing of information by all the M&E heads of different schools, making the M&E work understood and visible to the PIs, drawing attention of the importance of M&E to all the school teams and coming up with a frame work and financing will have to be sorted by the schools.

Break Out 4F: MEDICAL EDUCATION RESEARCH TWG

TOWARDS SCHOLARLY MATURITY: HOW HAS MEPI INFLUENCED THE MEDICAL EDUCATION RESEARCH LANDSCAPE IN AFRICA?
Lead facilitator: Susan van Schalkwyk, Stellenbosch University, South Africa
Co-facilitator: Zohray Talib, GWU

The session took on a discussion mode with sharing of experiences on medical education research. The group discussed their collective perspectives on the field of medical education research which included the growing recognition of the need for educated educators, importance of medical scholarly skills training, the importance of standardization in research. Importance of conducting needs assessments in medical education training using the evaluation capacity that has developed through MEPI.
How can we strengthen the field of medical education research in Africa? Would need to start with a baseline and then look at the MEPI investment. To what extent did MEPI develop the field of medical education research? One suggestion was for the CC to quantify and categorize the MEPI-related publications.

The scholarly maturity of the publications could be gauged to encourage more rigorous research. There is also now a need to support colleagues across Africa by citing their work when publishing in international journals.

How to encourage scholarly writing? Scholarly writing is a process that requires one to grow in their writing and start by publishing locally, nationally, and then internationally. Through presentation of people’s research at the MEPI symposium it helps others question the work and coin research questions.

What are the enablers for Med Ed Research? The enablers of medical education research include; funding, opportunities to reflect on practice, partnerships, catalysts, site visits, seeing ourselves as scholars. Change requires evidence and evidence justifies change. Other enablers include sharing approaches/ processes and methods, symposium/workshops, TWGs, potential for visibility and credibility, and the community of practice.

What are the constraints? The constraints of medical education research include; lack of inclusion of medical education research as part of the frameworks for promotion, not enough time for scholarly writing, funding constraints for protecting time, limited technical assistance, opportunities for networking, limited grants for fully fledged research units, lack of mentorship, lack of confidence, anxiety about the way forward, Lack of focus and a broad picture of where we are going (NIH, HRSA should think of continuity-teach the funders about the better way to give grants in the future based on lessons learnt from the concluded research).
The next agenda for Medical Education Research in Sub-Saharan Africa Which areas of research are needed, how can we facilitate collaboration, what can we do to enhance the quality of our outputs? What can we do to extend our reach and impact?

- Convene a group to develop a research agenda on medical education research. This agenda would leverage the effects of MEPI and describe a framework for the way forward. Questions that need to be answered.
- The TWG could write a report that could summarize the activities and propose the way forward for the community
- One suggestion was to create a formal alliance/association between the heads of the Medical Education departments at African medical schools. Would need some seed funding to initiate the group but the common interest among the group could likely sustain the effort.

Break Out 4G: PHYSICIAN TRACKING TWG: PHYSICIAN TRACKING TEMPLATE FOR MEPI SCHOOLS

The session was moderated by Moses Simuyemba from the University of Zambia. The topic was “Enhancing Graduate Tracking Capacity at MEPI Institutions” by Rose Mwangi (KCMU), Kalay Moodley (Stellenbosch), Michael Drane (Capacity Plus), and Moses Simuyemba (UoZ).

This was a presentation about graduate tracking program in MEPI schools which was supported by Capacity Plus, a USAID-funded health workforce strengthening project. The program is aimed at assessing the extent of brain drain, helping governments and stakeholders with statistics for planning purposes, measuring outcomes/impact of interventions aimed at health worker retention, assessing rural retention programs and establishment of school alumni databases.

Zambia chairs the TWG while Capacity Plus supports the activities. They carried out structured KII in eleven MEPI Schools, identified where individual schools were at in graduate tracking, each school’s readiness to implement graduate tracking and current processes used by the schools.
Program activities include locate graduates, collect/Update graduate Info, search and view graduate Info, create graduate tracking survey tools, managing graduate tracking survey response data, generate reports, and upload information.

The program outcomes include a functional version of software, a draft one hundred day action plan, revisions to graduate tracking page and a software named MEPI connect – ‘Uganisha’ was developed. The system features include manual entry of individual data, filter search results, customize reports, contact log, and graduates can log and update their records. Once fully functional the platform will have reporting capabilities: Cross reverences and capacity to generate reports.

There are various challenges like tracking new graduates is a full time exercise that has to be continually undertaken in order to keep to date with the group. It can lead to very sad outcomes sometimes – many recent graduates may be faced with unemployment, disillusionment and even cases of mortality shortly after leaving university. More recent graduates are more likely to be found as compared to older graduates and graduate tracking is very dependent on the willingness and readiness of alumni to mobilize peers.

To enhance current initiatives it is recommended that a cohort study of recent graduates be commissioned.

In conclusion, the MEPI institutions are currently customizing the software to their individual needs with support from Capacity Plus. Respective institutions are now working on their data specifications and customized reports list. The need to track graduates upon entry in the job market is very critical in fostering retention in the professional fields of medical practice.
WORKSHOPS

There were three workshops held on “Faculty Promotion in Sub Saharan Africa and North America” convened by Joe Kolars, Henry Sondheimer, Elsie Kiguli-Malwadde, Oluwabunmi Olapade-Olaopa. “A MEPI Community of Practice Engaged in Collaborative Research” convened by Zohray Talib, and a “Synthesis of Digital Resources for Medical Education (synDRME): Utilizing digital medical education resources to address faculty shortages in African medical schools” convened by Leigh Anne Butler.

There were various open discussions one of which was on Research capacity in MEPI schools convened by David Olaleye from the University of Ibadan and Isaac Kibwage from the University of Nairobi.

VIDEO SESSION

There were three video sessions from the University of KwaZulu-Natal and Kwame Nkrumah University of Technology and Science these included:

- Student Rotation Video
- Students Experiences with Cato Crest Nursing Community Group Video
- Emergency Medicine Video
The respondents/symposium attendants were asked to rate their level of satisfaction with each day's sessions for all the three days of the symposium. It is observed that the majority of the respondents were very satisfied with the sessions. It is also noted that only one respondent was dissatisfied on day one and none were very dissatisfied.

The respondents were asked to report the most significant or remarkable insight, detail or message that they took away from each day's session. On day one it was “Treatment while the epidemic rages leads to donor fatigue”. On day two “Sustainability strategies through the RSC. Having RSCs is vital for enhancing research within an academic institution” and “Retention of medical graduates in the rural areas through local rural recruitment/community based training” On day three the most exciting message was “Sustaining MEPI in future; commitment for future partnership based on MEPI successes, “We Africans are the engine for change by fighting corruption so that we can prosper; we have the potential” and “There is positive impact of rural postings on development of clinical skills and empathy though it is hard to retain doctors there” “Well organized with very valuable information. Great sessions”

The evaluation was mainly on symposium content and the feedback showed that most respondents thought that the symposium was “Well organized with very valuable information”
they also said the symposium “Was well organized and became fruitful by showing the funders that all MEPI schools benefited from the grant” and that there were “Relevant topics regarding research addressed”. The participants advised that “MEPI needs to document best practices for the retention that the initiative has influenced.”

Overall the symposium was a success and was appreciated by the respondents. The contents and logistics were assessed as good and the criticisms were only 5% of the overall comments.