



William Bazeyo is an Associate Professor of Occupational Medicine at Makerere University College of Health Sciences, School of Public Health and is currently the Dean of the School.

He received an MBChB from Makerere University and M.Med in Occupational Health from University of Singapore, Singapore. He has been teaching in the University for more than 20 years and has done research and Published in several areas including Health Care Financing, Leadership and One Health. He was the among the key pillars of The HEALTH Alliance (Higher Education Alliance for Leadership Training for Health) which was formed in 2005 with funding from USAID that brought together 7 schools of Public Health in Six Countries. An organization that he has lead till now which addressed the Leadership gaps in Health, Health Emergency management Programs for the District first responders that trained and equipped District staff and responded to Emergencies like the Bududa landslides in Uganda, and Post Elections violence in Kenya to mention but a few. He organized the formation of the Summit of 14 Deans of Schools of Public Health and Schools of Veterinary in the Six Alliance Country members. He is the Current Chair of the Summit. The Schools are implementing the One Health activities under the umbrella of OHCEA- One Health Central and Eastern Africa net work funded by USAID in the EPT program through RESPOND. The Project is being implemented in DRC, Kenya, Tanzania, Ethiopia, Rwanda and Uganda with US partner Universities namely University of Minnesota and Tufts University.

He is the Principal Investigator of various projects such as, Strengthening and Expansion of One Health Central and Eastern Africa Net Work, Monitoring and Evaluation Technical Assistance a CDC Program that offers M & E support to CDC supported institutions and also the Director of the newly established Centre for Tobacco Control in Africa which is aiming at reducing the consumption of tobacco by supporting governments in implementing evidence-based tobacco control strategies in Africa, USAID Higher Education Network- Resilient Africa , it's a consortium of 20 African Universities led by Makerere University School of Public Health together with Stanford University, Tulane University and Center for Strategic and International Studies (CSIS) which provides insight in how programming affects the resilience of populations, Strengthening Leadership In Disaster Resilience Program

## **WILLIAM BAZEYO**

Dean

*School of Public Health  
Makerere University  
Uganda*

# INTEGRATING HEALTH

## Priorities and Workforce Employers in Curriculum Development

### **William BAZEYO**

Dean Makerere School of Public Health/  
Chair One Health Central and Eastern Africa (OHCEA)

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### **INTRODUCTION**

With support of USAID through the RESPOND project, in the year 2010, 14 Institutions of Higher Education (7 Schools of Public Health and 7 Schools of Veterinary Medicine) agreed to establish a university based network to champion One Health Approach in the Central and Eastern Africa region (OHCEA). The network covers six countries; Democratic Republic of Congo, Ethiopia, Kenya, Rwanda, Tanzania, and Uganda. The establishment of the network benefitted from the five years of experiences documented by Health Alliance, a network of 7 Schools of Public Health in the region. During the period 2011-2014, the USAID support will be utilized to Strengthen and Expand the OHCEA network with two main objectives; i. Expand the human resource base needed to detect and respond to potential pandemic disease outbreaks, and ii. Increase integration of animals, wildlife and human disease surveillance and outbreak response systems.

Curriculum Development in institutions of higher education is in practice a preserve of the institutions with insufficient or minimal input from

the potential employers of the graduates from the academic institutions. The extent to which health priorities of the bodies that employ the graduates of the universities are integrated in the development of various curricula requires strengthening. One such priority or challenge is how to address the current complex health problems that may not be resolved by a single sector as has been the traditional practice but rather to use a different approach that enables multi sectoral collaboration to address identified complex problems. Thomas Kuhn (1) in "The Structure of Scientific Revolution" (1962) notes that Paradigms change when old systems and methods don't solve new problems and when events occur that can't be explained by current models.

The Bellagio Working Group (2) adopted a definition of One Health - One Health approach requires working collaboratively across disciplines and professions to address complex contemporary health issues. A One Health approach enables better understanding of the threats and greater innovation for more holistic and integrated intervention strategies.

## **INTEGRATING ONE HEALTH PRIORITIES AND EMPLOYERS IN CURRICULUM DEVELOPMENT IN CENTRAL AND EASTERN AFRICA REGION**

Creating a more sustainable public health human resource base requires not only preparing the workforce, but also enhancing worker performance. OHCEA proposes to address both of these areas by developing and providing pre-service and in-service training, as well as improving communication and collaboration between sectors and stakeholders who traditionally operate in isolation. (3)

Assessment of Training Needs of health related professionals currently in service and in service training

Before developing curricula for in service training the professionals in health related sectors in the Central and Eastern region, OHCEA has developed a Training Needs Assessment tool to be used to determine the training needs that will be addressed through a cascade training model. Each of the six countries will assess the needs in the months of January 2013. The Training needs will be validated by stakeholders that will include the employers of the respective professionals. The training needs assessment will focus on the One Health Core Competencies domains agreed on in a regional OHCEA workshop that drew delegates from Government sector ministries.(4)

The core competencies domains agreed on are:

- Management
- Communication
- Values and Ethics
- Leadership
- Systems Thinking
- Culture, gender and beliefs
- Policy and Advocacy

- Collaboration and Partnership
- Research

A regional workshop will be convened to develop training materials for Training of Trainers(60) who will in turn develop training materials for training health Professionals at country level (600 in two years). The trained personnel will in turn train 3000 first responders in two years (3)

### **Strengthen and Develop University Curricula and Programs**

One of the key activities for OHCEA is to develop a cadre of One Health experts through developing curriculum at both pre-service and in-service level that support the capacity needs of government, countries and the region. Competency-based training programs will be developed and curriculum mapping customized at the country level based on the identified core competencies.

To promote cross-disciplinary collaboration, OHCEA focal persons together with UMN and Tufts faculty will implement inter- and intra-University workshops. Workshops will facilitate cross-disciplinary collaboration through co-teaching, curriculum review and partnership. OHCEA will also foster One Health promotional activities for faculty and students including brown bags, health days, bomas, OH student clubs and seminars. DRC for example, plans to create Scientific Multidisciplinary Groups involving public health veterinary and nursing schools. Each of the OHCEA institutions also plans to foster One Health collaboration and training through OH student internships, field attachments and applied field experiences in partnership with relevant stakeholders (EPT

partners, IGOs, government agencies, private sector).

OHCEA also plans to focus significant effort on strengthening and building pre-service courses, programs and curricula. This will include strengthening existing pre-service courses and programs, reviewing existing curriculum, and creating new courses or new programs at certificate, masters, professional and undergraduate levels. Where appropriate and possible, US and African OHCEA universities will work with OHCEA schools to develop new curricula to be approved, accredited and implemented at the country level in collaboration with stakeholders. Examples of pre-service approaches currently proposed by OHCEA include: 1) strengthening of wildlife curriculum and faculty development in wildlife health across OHCEA institutions; 2) development of One Health pre-service curricula for vet technicians in DRC; 3) review of existing and development of new undergraduate and graduate level degree programs at OHCEA schools; and 4) delivering quality assurance training to OHCEA schools to strengthen curricular development and management approaches. Some OHCEA institutions are interested in developing wildlife and environmental expertise to include Emerging Zoonotic diseases and Wildlife training. (5)

OHCEA plans to develop Regional collaboration sites (One Health Demonstration Sites) for capacity building, outreach, and applied research in One Health where student, faculty and government will work together to address joint complex health problems in long-term research, training and outreach at the human-wildlife-livestock-environmental interface. A situational analysis will be conducted to identify regional One Health sites.

A team of faculty across the region interested in the concept will be identified and this faculty team will review regional commonalities at the OH intersection and identify sites of interest. Specifically, OHCEA and US faculty will review existing field based programs and attachments, identify sites of interest in interested countries, conduct situational analysis and planning/preparation for each site and engage local, regional and national stakeholders to assure that activities align with priorities and existing activities. MOUs will be developed as needed based on local/regional government and institution requirements. A cross disciplinary group of students will be identified and attached to these chosen OH demonstration sites. Once the students have finished their attachment to the field site, they will jointly develop and present field activities and projects. OHCEA and US university faculty will identify and fund research and outreach projects in the sites across the region and disciplines. These sites will be used to foster international faculty and student exchanges and promote communication and collaboration across One Health organizations and projects.

In addition to review and development of health curricula, OHCEA schools in partnership with US universities will develop, implement and support innovative applied One Health education and training programs. The One Health Residency at Makerere University plans to recruit 2 veterinary, nursing and public health professionals as residents to participate in this applied, experience-based training program where students earn a Masters level degree (MPH, MSc) while spending 75% of their time working on practical, real-world projects

with Stakeholders to build skills in identified competencies. Each OHCEA country will send two in-service staff to attend a two year MSc. program in Preventive Veterinary medicine with Field Epidemiology track at Makerere University. Other innovative programs identified include Team Outbreak, One Health curriculum for vet technicians and nurses, and Vet-Nursing-Medical students' joint field practicums. For example, training materials for the vet-nursing-medical joint field practicum will be developed by OHCEA and students will jointly be attached to the field to acquire hands-on experience in OH activities.

OHCEA faculty and its leadership will conduct One Health seminars, lectures and campaigns to support sensitization of One Health concept at existing and new OHCEA schools.

## CONCLUSION

By 2014, OHCEA will have established itself as a fully functional regional One Health network with in-house capacity for sustaining continuous improvement of health and well-being of humans, animals and ecosystems through multidisciplinary research, training and community service. From its regional base OHCEA strives to contribute to One Health as indicated by its collaboration with international partners. OHCEA members and the human, veterinary and wildlife health systems they represent will be demonstrably better trained in the One Health approach and linked through integrated institution function, communications, operational protocols and policies. Curricula jointly designed and tested by these partners will be in place and utilized by pre- as well as in-service personnel. National government offices responsible

for disease surveillance and response will form key partners in OHCEA's transformation strategy and be targeted as a beneficiary of its training efforts. Most importantly, the new capacity and coordination facilitated through OHCEA will result in more rapid detection and response to emerging and episodic zoonotic incidents, thereby limiting loss of human and animal life and reducing the risks of pandemics while simultaneously operating more effectively to address common debilitating and deadly diseases.

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