Dear Reader,

Welcome to the First Issue in the Second Edition of OHCEA News. As we proceed into the second year of the production of this newsletter, we value your input as well as your contribution. Please do share with us your news; your achievements, challenges and how you think university networks should position themselves in the creation of a One Health workforce.

In this Issue we share stories from across the OHEA network on the amazing things happening in the area of One Health workforce development.

We have reason to celebrate for OHCEA was recently launched in Cameroon at a ceremony attended by several government and university officials.

From Tanzania, do not miss reading the story of the transformation of a veterinary training college to a One Health workforce development centre at Sokoine University of Agriculture. This journey is not without its challenges but it is worth every step travelled.

We bring you the innovations students in Uganda are undertaking to help communities address One Health challenges that have almost become part of their daily lives; read about how students are using locally available materials to develop bat repellent.

In Rwanda a movement is emerging; the University of Rwanda is asking all staff and students to take on One Health as part of their daily routine as they deliver services within their mandate of teaching, research and community service.

From Ethiopia, several seminars on infectious disease management have been conducted to break the ground for students. While for faculty, trainings in the areas of gender and One Health, and risk analysis have provided much-needed expertise to enable faculty deliver better.

Our team in the Democratic Republic of Congo shares their experiences training territorial administrators and introducing One Health to their work environment.

The Melbourne One Health Eco-health Conference just ended and OHCEA was very well-represented at the conference. Both oral and poster presentations were delivered by OHCEA staff and partners, sharing experiences, insights and outcomes of the work done within the network. One of the OHCEA delegates shares her insights and experiences.

We have a lot more for you in this issue of OHCEA News! Sit back and enjoy your reading.

Professor William Bazeyo
Principal Investigator/CEO OHCEA
During the OH Field Attachments in Kasese Municipality, a multidisciplinary team of about fifteen students (Social Scientists (4), Environmental Health Scientists (2), Meteorologist (1), Biomedical Laboratory Technologist (1), Telecommunications Engineer (1) Industrial and Organisational Psychologist (1), Software Engineer (1), Wild Life Conservationist (1), Veterinary Medicine (1), Medical Doctor (1) and Development Worker (1), Veterinarians, Environmental Health officers, Wildlife Health Management Officers, Medical Doctors and Social Scientists) encountered a problem of bats in Kahendero Primary School.

Bats are probable reservoirs of Haemorrhagic Fevers - Ebola, Marburg etc. and rabies. They also emit offensive odours making inhabiting houses where there are colonies of bats difficult.

Previous solutions offered by the Veterinary and Wildlife departments included fumigating the bats and disposing of the dead ones - this was done at Kahendero Health Centre. However, they do return after a period of time and the fumes are toxic to the community especially the occupants of the houses.

One Health Solution offered by the OH Kaseses Multidisciplinary team had three aspects.

Educate the community on the dangers of the bats - the school children, teachers and other interested members of the public were all targeted.

However, bats are also useful to the ecosystem and therefore if it were possible the colonies of bats should be encouraged to relocate back to the bushes and trees instead of colonizing the houses. The students came up with an ecosystem friendly bat repellent made out of ethno substances (eucalyptus bark and leaves and cinnamon) which, when applied to the houses would successfully expel the bats. The pungent smell of the oils from these plants is a good repellent. In order to extract these oils a solution of alcohol was needed and a local gin popularly known as ‘kasese’ was easily obtained. To be able to apply the ecosystem friendly ethno-bat repellent to the buildings paint was used as a base to enable the repellent remain for a longer period of time.

The gaps in the school building between the roof and the walls, which the bats were using to access the school buildings had to be sealed off to prevent them from returning. The students from the College of Engineering, Design, Art and Technology (CEDAT) sealed all gaps in the roof with a cement and mortar base to prevent re-entry by the bats.
Hand Washing: Examples of models delivered by the students on One Health Institute at Makerere University

Frequent Hand washing prevents spread of disease (such as Salmonella, respiratory infections, diarrhoeal diseases) from one individual to another. It is also important that hands are washed properly using correct techniques, with clean water and soap. Where possible prevention of re-contamination of clean hands should be averted when turning off the faucet or taps.

The participants in the One Health Institute at Makerere University interacted with the community offering education on hand washing using the interface of three different one health education activities – (i) The Graduate Fellowship program, (ii) Undergraduate Field Attachment and the (iii) Undergraduate Innovations.

Techniques on Hand-Washing/Hand rubbing

Between June and September 2016, the One Health Institute at Makerere University pioneered high-level fellowship placements of 3 months duration for 20 graduate students. This was done at Institutions and Organizations such as the government ministries, international agencies, private sector, academia, NGOs. At these institutions and organizations, the graduate fellows were tasked to deliver needed services, build competencies especially in one health and build a resume of real work.

The graduate students were drawn from five institutions of higher learning: Makerere University College of Health Sciences (MakCHS), Makerere University College of Veterinary Medicine Animal Resources and Biosecurity (COVAB), Makerere University College of Agricultural and Environmental Sciences (CAES), Makerere University College of Business and Management Science (CoBAMS) and Makerere University Business School (MUBS) in a multidisciplinary, experiential training, and mentorship-training model.

Bayo Maliyamungu Richard, with a first degree in Animal Production and Technology, and pursuing an M.Sc. in International Infectious Disease Management was placed at the International Disease Institute- Global Health. Here, Richard engaged in development of training tools, slides for infection, prevention and control of infectious diseases for health care facilities.

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This included self-training on the World Health Organization (WHO) hand hygiene program in preparation for training other personnel. It basically involved protocols on when and how to either hand-wash with water or hand-rub with alcohol gel.

Demonstration of Tippy-Taps at Primary Schools: interface during field attachment

The main advantage of the Tippy Tap is prevention of re-contamination of clean hands after hand-washing.

The Tippy Tap consists of a small container of water, preferably a 5-liter jerry-can with a small hole punctured near the cap. When filled with water, and tipped using a device with a stick and rope that is passed through a hole in the jerry-can cap, it dispenses reasonable amounts of water for hand washing.

During the undergraduate multidisciplinary Field Attachment, undergraduate students in multidisciplinary teams of 8-15 students at the One Health demo site at Bwera and Rubirizi were engaged in hand-hygiene drives during one health primary school outreaches. In addition to underscoring the importance of washing hands, they taught the pupils how to make tippy-taps.
Innovation installed at a rural secondary school

The improved tippy tap hand washing facility aimed at improving the rate of hand washing in schools. This tippy tap bucket has a higher water capacity of about 20 liters and is connected to a larger water reservoir that traps rain water. The facility automatically refills and therefore the pupils don’t have to worry about refilling the bucket in case it runs empty.

This was research innovation was led by a multidisciplinary team of undergraduate students headed by Ms. Annet Luyiga (Bachelors of Environmental Health from Mak-School of Public Health). The other team members were Mr. Ssengonga Andrew (BSc. Mechanical Engineering); Ms. Akong Deborah; Ms. Namajja Solome and Ms. Ninsiima Lesley Rose, all pursuing a Bachelors of Environmental Health degree.

The team was part of the 24 teams that were competitively selected out of 35 applicants to implement their innovation using an OHCEA grant of U.S. dollars $600.

The improved tippy tap was installed at a rural secondary school Itanda Secondary School, in Buwora village on Kaliro Road in Iganga district that has about 1,374 students.

Use of Mobile Cellphone Apps to Deliver a One Health Service

Three multidisciplinary teams of undergraduate students at Makerere University implemented competitively selected research innovations in the community, that were adapted towards the use of the smart mobile cellphone to deliver One Health service.

These One Health Undergraduate Research Innovations were part of 24 competitively selected concepts that were awarded OHCEA grants of USD 600.

1. Farmers Mobile Phone Application

The project ‘Farmers Mobile Phone Application’ was implemented among farmers in Nabweru division, Nansana Municipality Wakiso district.

Farmers need information within easy reach to help them get solutions to common farming challenges which may range from how to prevent diseases to ideas on good housing and other farming practices. The multidisciplinary team of OH innovators delivered this using an App called “Farmers Mobile Phone App.”

The students’ multidisciplinary team led by Mr. Masengere Paineto (B. Environmental Health), consisted of other team members Kimuli Emmanuel (BVM); Kasumba Robert (B.Sc. Software Engineering); Muwanga Ngobi Stuart (BSc Biomedical Engineering); Lugwala Ngobi Stim (BSc Telecom Engineering) and Cherukut Martha Cheptoek (BSc Agric).

This innovation commenced with focus group discussions in the communities where a total of 30 farmers, in Nabweru division, Nansana Municipality Wakiso district were engaged in order to identify the common symptoms of diseases and symptoms affecting their livestock and crops.

To facilitate the discussion were the Nabweru divisional production officer, Dr. Solome Mukisa (veterinary background), and the extension worker working with Nabweru division, Dr. Joel Mukasa (agricultural background). There were follow up visits by the innovators to the farms to get more information on the common diseases and symptoms for the variety of domestic farm animals being reared in Wakiso.

The veterinarian and agricultural
students in the multidisciplinary innovation team linked the symptoms given to specific diseases with the help of the divisional professional staff. Thus a database of the challenges these urban farmers in Nabweru face like the common pests and diseases affecting their animals and plants was established. This information was used to design a mobile phone application whereby information on common diseases, best farming practices like feeds, housing and biosecurity were availed.

This Android Application was then demonstrated to the farmers.

2. Bulamu (Health) Mobile Application

Bulamu Mobile Application is another android innovative technology that provides quality and timely health information to the public. This is achieved through a number of features in this application, which include the following; (i) HIV Clinics, (ii) Nurses and Counselors, (iii) Ambulances and (iv) Health tips. This smart phone application by undergraduate innovations was implemented by Mr Isa Adam (B. Biomedical Lab Technology) together with team members Mr. Mubiru Jessy (B.Sc. Software engineering); Kakande Mudasir (MB.ChB), Mr. Mukasa Derrick (B.Sc. Education), Mr. Kawuki Ibrahim (B.Sc. Electronic Engineering).

**HIV clinics** feature, gives services offered by those clinics, their contacts and addresses. In future, the feature will also provide a platform where persons living with HIV and medical specialists will chat about their life experiences, living with and managing the condition. While on the **Nurses and counselors corner**, Bulamu mobile application will provide names of nurses and counselors who can offer palliative care to patients. The names will be accompanied by their respective area of specialization, addresses and their contacts. Lastly, the **Ambulance call list**, will provide the nearest ambulance service in that area and their contacts aiding in quick transportation of those in need.

These android smart phone apps can be harnessed in cases of disease outbreaks – (human or animal) to deliver information on the location of the nearest service provider for purposes of diagnosis, information on basic facts about the infectious disease, common symptoms, how to prevent its spread, what to do with the infected subjects etc. This will demystifying many infectious pathogens and diseases among the general public. Currently the innovators are awaiting the third instalment of funds to host the “Mobile Farmers App” and “Bulamu Mobile App” on the web or cloud so that they can be downloaded and availed to this community.

*Illustration of the choices the feature on Ambulatory Services in Kampala offer*
Rwanda One Health Students’ Club exhibits Promise as Future One Health Workforce Ready to address the Country’s Health Challenges

In 2012, the One Health Students’ Club of Rwanda was launched and brought together students and faculty from the University of Rwanda in various domains to work together through a multidisciplinary collaboration to tackle health challenges in Rwanda.

The Club is a team of students passionate about driving transformational changes in communities as far as health is concerned. One key activity that brings students from diverse disciplines together is the One Health demonstration site. The University of Rwanda with its partners brought together students and faculties from College of Animal Sciences and Veterinary Medicine and College of Medicine and Health Sciences in demonstration site activities carried out in August 2016. This activity was organized in the framework of driving transformational changes for continuous improvement of health and wellbeing of Humans, Animals and Ecosystems through multidisciplinary research, training and community service, under the aegis of the One Health Workforce Project. The activity was held at the interface between Wildlife and Human activity around the Akagera National Park; a potential hotspot for health challenges. The purpose of the attachment in this area was to enable students work with the communities around the Park in order to come up with possible cost-effective interventions to existing challenges.

A mini-conference to share results and outcomes of the demo site field attachment, was held on 4th -5th October 2016, and held at University of Rwanda-Nyarugenge Campus under the theme; ‘One Health Breaking Silos between professionals for sustainable health’.

This Mini conference brought together students and staff from the University of Rwanda including the Vice Chancellor Professor Phillip Cotton, Deans from various schools, Director of PREDICT and staff from REMA. Students came from various disciplines including, Wildlife management, Veterinary Medicine, Mental health Nursing, Environmental Health, Clinical Medicine and Community Health, Human Nutrition and dietetics, Biomedical Laboratory sciences and Business and Economics. During the demo-site field attachment, students were exposed to different situations in the community where they were taught to analyze risks of diseases and their transmission through a One Health approach by identifying the health challenges faced by humans, animals and the environment.

Students presenting their findings from the Demo-site field attachment
Topics covered by the student posters

Assessment of the Health challenges caused by Human, Animal and Environmental Interface in Akagera National Park; Identification of Health Challenges at Rwinkwavu Hospital; Assessment of One Health issues at Rwinkwavu Hospital; Assessment of One Health issues met by farmers in Kageyo Village-Kayonza District; and Rabies awareness and Vaccination Campaign in Ndego sector-Kayonza District.

Students and faculty visited, among other places; Cattle farmers in Kageyo Village, Rwinkwavu Hospital, Ndego sector for rabies vaccination and a rice field in Mbarara sector and different other places of the Akagera National Park in the eastern province of Rwanda. Through interviews, group discussions and personal observations, students documented the field results and shared outcome (suggested possible cost effective interventions) to the Public/stakeholders present. The results were presented through posters that were developed by students. In his remarks, University of Rwanda Vice Chancellor, Professor Philip Cotton mentioned that the University of Rwanda has in its programmes, a mandate to carry out research with a focus on diseases that challenge animals, humans and the environment.

He said his dream is to see the University of Rwanda producing professionals who will be able to work in multidisciplinary teams to address health challenges faced by the environment, humans and animals.

His hope, he said, is that staff and students will fully embrace the One Health ideal in University of Rwanda. “Students are also teachers and able to teach One Health so that communities live in a world free from hunger, diseases and other health challenges. One Health practitioner are not only for research to publish and get promotion or attend conferences, but to use the One Health concept to impact changes”, he said.

The mini-conference also featured presentations on proposals that won One Health Workforce Project small grants. Posters demonstrated various outcomes from activities by students who participated in the demo-site field attachment. The posters also highlighted interventions by the students, such as increasing community awareness about hygiene and sanitation through proper waste management; avoiding cattle-wildlife intergrazing system; applying proper breeding system and applying artificial insemination; increasing communication among communities and local leaders regarding diseases, timely reporting of cases of outbreaks; the importance of not sharing watering point with animals, among others.
The workshop provided training of faculty in One Health risk analysis. Risk Analysis is a tool used by intergovernmental organizations (such as WHO, OIE and FAO) to assess potential disease risks in a cost-effective manner. Following the TOT workshop conducted in May 2016, Jimma University cascaded the risk analysis training to 15 academic staff of College of Public Health and School of Veterinary Medicine, Jimma University.

Academic staff who attended the training acquired the knowledge and tools in risk management and risk communication to be able to:

1. Describe the concepts and framework of risk analysis applied to zoonotic diseases and food safety
2. Identify the roles and interactions among the risk assessors, risk managers and stakeholders
3. Apply risk prioritization tools to identify the priorities in zoonotic diseases and food safety in the country or region
4. Apply rapid risk assessment tools for the importation of live animals, biological and agricultural products
5. Design a surveillance and inspection program in zoonotic diseases and food safety in the country or region
6. Communicate effectively risk analysis with the stakeholders

Some of the participants were already involved in the One health club, risk analysis of brucellosis and other one health activities. The participants mentioned that lack of integration and discipline-based complexity were the major challenges they faced during the implementation of one health activities.

Stakeholder engagement took on a scenario approach where participants were asked to identify the potential stakeholders who are supposed to be engaged in addressing the problem of the above scenario; identify their roles and responsibilities and how they would address them in addressing the problem.

After the presentation on Risk management framework and risk management steps participants developed a risk management plan for a specific situation in Ethiopia using the different steps within the risk management framework in their respective groups.

Risk prioritization in food safety. Participants were given a hands-on activity to exercise how to use decision matrices to rank the chemicals in food. Each group used foods highly consumed in Ethiopia and applied the decision matrix to identify the risk level (low, medium, high) of the chemicals.

A presentation on WHO global disease burden estimate was also done. Participants were taken through some activities on how to use the rapid tool of risk score.

Participants received orientation on principles of risk communication and message mapping.

All of the participants were very much happy and they believe that they have acquired new knowledge and some basic skills in risk analysis.
Jimma University Faculty Receive Training in Gender, One Health and Infectious Disease

Participants also developed skills in:
- How to conduct gender analysis by using gender tools
- How to conduct monitoring and evaluation of project plans by using gender tools and
- How to respond to emerging pandemic diseases that have One Health and gender importance.

In general, participants built their capacities to enable them understand and appreciate issues of gender, One Health and infectious disease and engage in any interventions as well as deliver more effectively in teaching, research and community services.

Above and below are the participants during the training busy at work

Jimma University Faculty Receive Training in Gender, One Health and Infectious Disease

A debate on anthrax and Toxoplasmosis was conducted at Mekelle University among students from various disciplines. In this debate students' knowledge and experience on the understanding of the disease, its etiology, transmission methods, clinical signs, detection and response, as well as outbreak investigation in line with GHSA, was assessed. Over 228 Multidisciplinary students from medicine, public health officers, nurses, midwives, pharmacists and veterinarians participated in the debate which was judged by a panel of judges to assess the student's knowledge and experience on disease detection, prevention and response. Finally certificates were awarded to the winning groups.

‘Mekelle University Conducts Seminar on Infectious Diseases for Senior Students

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Mekelle University senior students receive knowledge in Infectious Disease Control

This seminar was conducted with the objective of sensitizing students on infectious disease detection, prevention and response. The seminar focused on detection, prevention and control of infectious disease using the one health approach. Students acquired the necessary knowledge of disease detection, prevention and response. They will participate in community outreach programmes to disseminate the knowledge gained from the seminar. Students clearly indicated that such a seminar was very important for them to upgrade the knowledge that they have on infectious disease management using the one health approach. They said that co-operation among the different sectors is a must for quality outputs during investigation of any infectious disease outbreaks. Faculty who facilitated the training were excited about the new concept of disease detection, prevention and response using one health approach as lots of efforts were done in independent disciplinary silos where output is below effective. Although the seminar didn’t build the capacity of the facilitators, they however indicated that they gained lots of experience and insights from the students. During the discussion students felt that the seminar was useful to them in terms of building their own capacity and understanding the role of other professionals in tackling the infectious disease threats. They committed themselves to work with other disciplines to safeguard the public and to build the economy of the country. The seminar was facilitated by four faculty, namely; Dr. Abreha Tesfay, Dr. Endale Balcha, Dr. Berihu Gebrekidan and Dr. Berihun Afera.
Moi University School of Public Health organizes Workshop to Commemorate One Health Day

Moi University One Health Students’ Club with the technical support of OHCEA Kenya organized a one day workshop to commemorate the celebration. The workshop took place in MECC Hall in the College of Health Sciences. In attendance were students from four schools of: Public Health, Medicine, Dentistry and Nursing. A partner to the club; the Mazingira Bora Initiative Kenya was represented by the director, Mr. Javan Kevins. About one hundred and twenty students (120) and faculty attended and participated in the event.

The topics of discussion for the day were:
1. Introduction to One Health concept
2. Health systems thinking
3. Building one health teams
4. Multidisciplinary approach to health issues
5. Gender and One Health
6. Leadership in One Health
7. Role of environmental health in One Health
8. One Health innovations

University of Nairobi in week-long One Health Day Celebrations

One Health Day is an international campaign co-coordinated by the One Health Commission, the One Health Initiative Autonomous pro bono Team and the One Health Platform Foundation. The goal of One Health Day is to bring attention around the world on the need for One Health interactions and for the world to ‘see them in action’. The One Health Day campaign was designed to engage as many individuals as possible from as many arenas as possible in One Health education and awareness events, and to generate an inspiring array of projects worldwide.

The launch of One Health Week/ Day Celebrations at the University of Nairobi brought
many members together that included College Principal, Dean, Departmental heads, Faculty members (both from University of Nairobi and University of Minnesota) and Students of One Health Club.

The One Health day was celebrated in both School of Public Health and the Faculty of Veterinary Medicine.

The goals of the activity included; official launch of the One Health Week/ Day Celebrations at the University of Nairobi; bringing together the faculty and student one health club members and allow them to reflect on one health matter; sensitizing the college community on One Health matters.

The total number of participants were 144 from the faculty of Veterinary Medicine.

Other activities included One Health sensitisation workshop at the School of Public Health and a field training inside Nairobi National Park

**One Health sensitization workshop at the School of Public Health**

The activities carried out at the School of Public Health, involved 60 medical students. The students shared their experiences in One Health. In attendance was Prof. Carolyn Porta and Prof. Nasra Giama, both from University of Minnesota, School of Nursing. The two nurses introduced to the students a topic on One Health as a model for addressing Infectious disease threats. The sessions were very interactive with students narrating cases in which they have been confronted with scenarios that lead them into thinking about One Health while attending to their patients and in the course of their studies.

**Field Training inside Nairobi National Park**

The climax of the week-long celebrations at the University of Nairobi was a field training to the Nairobi National Park; a wildlife sanctuary situated in an urban setting.

One component of the Kenya Wildlife Service (KWS) mission is to conserve the “wildlife” and natural processes within its units. Wildlife includes everything from large mammals to the smallest organisms, such as bacteria and parasites. Native organisms that cause disease may be part of the naturally functioning ecosystem that is protected within a park. The health of these ecosystems contributes to the overall health of all species - plants, animals, and people!

Today, wildlife is more often victims of diseases that are emerging due to human activities and changing landscapes. In these cases, prevention and management are often necessary to protect and sustain healthy wildlife populations. Wildlife and ecosystem health are key components of the “One Health” concept, which recognizes that the health of humans, animals and the environment
are interconnected. A holistic, One Health approach is needed to understand, protect, and promote the health of all species. In light of this concern, the field training explored the challenges and opportunities for addressing this situation in a One Health context with emphasis on multi-disciplinary collaboration.

In order to carry out this training, four multidisciplinary teams (veterinary, medical, nursing, wildlife, nutrition and dietetics and agriculture) of 15 students each were assigned different thematic areas to identify the current & potential One Health challenges and the current intervention(s) in place in the national park. A total of 56 students participated in the training.

Students were guided by faculty but were expected to conduct the exercise themselves and present their findings on One Health challenge(s), suggest improvements on current interventions and propose new interventions to address the challenges. The students were assessed on ability to identify one health issues, recognition of one health triad and the need for multidisciplinary approach to one health interventions.

The field training exposed the students to practical One Health challenges and interventions at human, animal and environmental inter-face; allowed students to extend their learning and develop solutions to One Health challenges and exposed students to multidisciplinary working environment and inculcated team work. The training was attended by 56 students.
The transformation of a veterinary training college to a One Health workforce building centre: The story of the Faculty of Veterinary Medicine at Sokoine University of Agriculture

By Professor Robinson Mdegela

In June 2016, The Faculty of Veterinary Medicine at Sokoine University of Agriculture in Morogoro, Tanzania was transformed to form the College of Veterinary and Medical Sciences. The key driver for this transformation was the One Health approach that recognizes that the health of domestic animals, wildlife, and people are inextricably linked to one another and the environment.

From the general understanding, the veterinary profession that has been serving human kind for over 250 years, has modern Veterinarians that not only serve as animal doctors, but also animal welfare advocates. In addition, they are key public health workforce because of their crucial role in: reducing global hunger, controlling zoonoses, monitoring food quality and safety, carrying out biomedical and medical research, and protecting the precious environment and biodiversity. Thus the workforce produced from the current veterinary education system, works at the interface of animals, people and the environment to solve complex problems that impact health and conservation.

The Veterinary education in East Africa started in 1942 in Makerere College which was affiliated to University of London. In 1959 this Veterinary school shifted from Makerere University in Uganda to Nairobi in Kenya where in 1962 the School was incorporated into University Collage of Nairobi, Kabete Campus. Later the school was elevated to Nairobi Faculty of Veterinary Medicine in 1972 and started to award the Bachelor of Veterinary Medicine. In Tanzania the Veterinary Education started in 1976 when the division of Veterinary Science was established under the Faculty of Agriculture, Forestry and Veterinary Sciences of University of Dar es Salaam. After establishment of Sokoine University of Agriculture in 1984, the Division of Veterinary Science was elevated to form the Faculty of Veterinary Medicine. In June 2016, this Faculty was transformed to the College of Veterinary and Medical Sciences. Establishment of this College was officially approved by the University Council in June 2016 to spearhead quality training, research and outreach services.

For the time being, the CVMS is composed of eight departments; 1) Department of Anatomy, Histology and Cell Biology; 2) Department of Physiology, Pharmacology and Toxicology; 3) Department of Microbiology, Parasitology and Immunology; 4) Department of Medical Sciences; 5) Department of Veterinary Medicine and Public Health; 6) Department of Veterinary Surgery and Theriogenology; 7) Department of Veterinary Pathology; 8) Department of Biochemistry, Molecular Biology and Biotechnology.

At Undergraduate level, initially the Faculty was offering the Bachelor of Veterinary Science (BVSc) which was later changed to Bachelor of Veterinary Medicine (BVM). It also offers programs in biotechnology, laboratory science and tropical animal health and production.

The current academic and research focus of CVMS is on Animal Health, Medical Sciences, Biomedical Sciences and Veterinary Public Health.

The College is a One Health college with a number of One Health projects and programs including: OHCEA, SACIDS, AFRIQUE One and Global Health as well as a number of other One Health-related projects funded by National and International organizations.

Transformation from the Faculty of Veterinary Medicine to the College of Veterinary and Medical Sciences is reflected from the immense contribution the institution has made in supporting the movement from the Once Health Concept to practices.

- In 2010 the College initiated the Network of One Health networks. This initiative has been transformed to a platform with activities executed by the One Health coordination unit, under the Prime Minister’s Office, in the Department of
Disaster Management.

Veterinary graduates from the CVMS are now getting employed as academic members of staff in Medical schools including Muhimbili University of Health and Allied Sciences; and Catholic University of Health and Allied Sciences in Bugando, Mwanza Tanzania.

Veterinary graduates from the CVMS who are now employed as researchers in Medical schools and at the Institute of Medical Research (NIMR) in Tanzania.

Pre-service One Health training for staff and students from veterinary and medical schools through exchange programs.

One Health multidisciplinary collaborative initiatives including joint field attachments at One Health Demonstration sites specifically the Kilosa demonstration site. In addition, different joint activities are implemented through the One Health Students Club.

- In-service One Health and leadership training workshops, Continuing Professional Development Programs (CPDs); and presentations during the professional associations’ meetings/conferences.

The recognition that over 60% of new, emerging, or reemerging diseases have animal origins, justifies the need to widen the scope for joint research, training and outreach within and between Institutions using the One Health approach. Tomorrow’s workforce for health sector must collaborate across disciplines and employ One Health approaches to produce simultaneous gains in human, domestic animals, wildlife and environmental health. Using effective cross-disciplinary collaboration will also create the potential for a multiplier effect of the efficiency and effectiveness of health interventions.
Due to zoonotic disease threats, several initiatives and strategies are in the process of being implemented. Amongst these strategies is that of ‘One Health’ which encourages multi-sectoral collaboration and multi-disciplinary approach to resolve issues of health, the application of the International Health Regulations (IHR 2005) and the health security program in the world (Global Health Security Agenda - GHSA). In this context, there is need for seasoned, competent, legally-recognised territorial staff to apply the principles of prevention and control of emerging and re-emerging diseases. The training of the territorial staff in D.R.C aimed to strengthen their capabilities in the application of the principles of prevention, early detection and management of public health emergencies that threaten the country. This training enables the territory administrators of the Decentralized Entities to acquire the necessary capabilities to work in multi-disciplinary teams in the prevention and response to epidemics, epizootic diseases and natural disasters.

The training of the territorial staff was built around three modules subdivided into units. These modules cover the concepts of leadership, organization and operation of the territorial units and Emergency Management. Module 1 gave the trainees a succinct and clear idea about the concept of leadership in the One Health approach. It develops the One Health approach based on the skills expected of the territory administrators now expected to work in a team to better communicate necessary information and to exercise better leadership to prevent and respond to outbreaks, contagious diseases and disasters. This module is divided into two units covering respectively the theoretical concepts and key skills of leadership, including the team dynamics, the common vision, change management and communication.
Module 2 aimed to strengthen the understanding and knowledge of the trainees in relation to the new territorial organization and administrative areas of the Democratic Republic of the Congo. Territorial administrators have a mission to administer the entities, to ensure the application of laws, regulations and guidelines and to ensure the safety of persons and their property and to promote their well-being. This module defines their roles and tasks in light of the different health and socio-economic situations that arise in their jurisdiction. This module is divided into two units, namely: the current configuration of the territorial

and the missions of the territory administrators.

Module 3, entitled “Management of Public Health Emergencies”, addresses issues related to analysis of risks, the mobilization and the assessment of the needs of the community as well as the operations of emergencies. It has the aim of preparing the territory administrators to acquire the necessary skills that will enable them to be competent in the management of public health emergencies occurring in their jurisdictions. This module is composed of four units, namely: the analysis of risks, the organization and the operation of an Emergency Operations Center (EOC) as well as social mobilization and the assessment of community needs.

For the first intake, twenty (20) territory administrators, including sector heads, chief medical officers of health divisions and general administrators were trained. They came from the two territories of the Kongo Central province (Kasangulu and Madimba).

In the second batch, a total of thirty seven (37) were trained, coming from the three territories of the province of Kongo Central (Kimvula Mbanza-Ngungu, and Songololo).
OHCEA is a network of 21 Public Health and Veterinary Higher Education Institutions that are located in eight African countries including Cameroon. OHCEA’s main goal is to build capacity in One Health through multi-disciplinary research, training and community service. The Faculty of Health Sciences, University of Montagne became a member of OHCEA in July 2015. A year later, OHCEA expanded the network in Cameroon by adding University of Buea’s Faculty of Health Sciences, and Faculty of Agriculture and Veterinary Medicine. Following one year of implementation of the USAID funded One Health Workforce project in Cameroon, OHCEA was officially launched on 28th October 2016 at the Hotel Mont Febe in Yaoundé. The launch brought together key One Health (OH) stakeholders in Cameroon government, EPT partners, Development Partners, USU Partners, University Representatives and OHCEA representatives. The representative of the Minister of Health, Cameroon Professor Samuel KINGUE was the chief guest. Also in attendance were officials of the Ministry of Higher Education; some members of the Diplomatic corps accredited to Cameroon; Representatives from Predict; P&R; Faculty members of both Universities, members of the Students One Health club and local media. Prof John David Kabasa, was the Head of delegation of OHCEA. Other OHCEA members included, Prof Tadesse, a Board Member, Dr. Irene Naigaga, Program Manager and Dr. Juvenal Kagarama, One Health Workforce Technical Advisor, Francophone. 

In his welcome address, the President of the University des Montagne, Professor Lazare KAPTUE, the host, thanked everyone for honoring the occasion with their presence. He particularly paid tribute to OHCEA for having admitted the two institutions into the network thus giving them the opportunity of building a professional workforce capable of responding to zoonotic diseases. He promised to work with partners to contribute to Global One Health Movement.

In his speech, the P&R Country Deputy Representative, Serge Nzietchueng outlined the long-term relationship between world population growth and the emergence & spread of pandemic diseases.

Professor John David Kabasa delivered the occasion’s key note address on the role of Universities and Education in general in shaping a professional workforce capable of combating emerging and re-emerging zoonotic diseases. He cautioned that Africa being a ‘global bio-risk incubator’, there is need to be safe and clean as Africa moves about to integrate and do business in the global world. He called for a dissolution of ‘sectoral and discipline tribalism’, starting with university training, urging that the future is intertwined.
The Inter-States Veterinary Medical School conducted a workshop in August 2016, at Saly (Mbour), and assembled 18 participants coming from several institutions (EISMV, ISED, Senegal Ministry of Environment, Senegal Ministry of Livestock, International Union for Nature Conservation). This workshop whose initial goal was to develop a module on wildlife and disease surveillance for VPH master student was finally oriented towards the development of a complete Master’s program. Thus, the attendants proposed the Master on “Wildlife Management and Health Surveillance” with two specialties which are “wildlife veterinary medicine and protected areas” and “Wildlife Veterinary epidemiological surveillance.” Ten (10) core training modules and 5 modules for each specialty were developed and potential stakeholders as well as course credits and the number of hours have already been proposed.

A second workshop was held in October 2016 for the consolidation and validation of the program contents and their transformation into Licence-Master-Doctorat format. This activity was supported by two experts: Prof Germain Jerome SAWADOGO, curriculum design expert and Prof Ayayi Justin AKAKPO, Epidemiology and animal health expert.

The training of selected ministry and university professionals took place in September 2016 and was supported by 2 seasoned facilitators; Dr. Diafuka Saila - Ngita from Tufts University and Dr. Victor Ndibualondji from University of Lubumbashi, Democratic Republic of Congo. In total the 5-day training was attended by 24 participants from academic institutions (ISED, EISMV, ISE) and ministries (Ministries of Armed Forces, Ministry of Commerce, Ministry of Livestock, Senegal Ministry of Environment, Senegal Ministry of Livestock, International Union for Nature Conservation).

Participants pose for a group photo

The workshop focused on how to promote the One Health concept; the ideals of multi-sectorial and interdisciplinary collaboration.

Between late August and early September 2016, a workshop was held at Saly (Mbour), to review the two curricula in order to incorporate IHR, PVS pathway, OH competencies and GHSA.

Twenty four (24) participants from the respective disciplines (animal, human and environmental sectors (EISMV, ISED, Prime Ministry, Environment School, Direction of Laboratories, Infectious disease service, FAO, Ministry of Livestock), attended the workshop, aimed at developing a common One Health module for master degree for both students in Veterinary Public Health (VPH) and Master of Public Health (MPH).

The regional consultant, Dr. John Amuasi, advised the team to design a module on “One Health” of 6 credits including 3 components:

1. Introduction to One Health approach and concepts
2. Epidemiology applied to “One Health” and integrated health monitoring of zoonoses and emerging and re-emerging diseases.

For each component, the following outline has already been sketched:


A follow-on workshop was held in October 2016 for the consolidation and validation of the program contents and their transformation into
Multidisciplinary teams working on OH module contents

Introducing OHCEA network to participants

Licence-Master-Doctorat (LMD) format. This activity was supported by two experts: Prof Germain Jerome SAWADOGO, curriculum design expert and Prof Ayayi Justin AKAKPO, Epidemiology and animal health expert.

Students Celebrating One Health Day in Senegal

To celebrate the International One Health Day November 2016, the One Health Students’ Club of EISMV participated in a 3-day campaign to treat cattle and sensitize communities in Pikine, Dakar. The activity was organized by the MOUDESS (Movment of Breeders for Senegal Development) and benefited from technical support from the Students’ Club.

The students started off the campaign by providing medical consultations and treatment of cattle from the Pikine area. A total of 1430 ovines, 408 bovines and 16 camels were treated. They also used the opportunity to create awareness about the One Health approach and sensitize the participants about One Health approaches and how actor collaboration and community participation are important to improve health.

The President of the One Health Students’ Club explained how the One Health approach is important in addressing zoonoses and described the links between animal health, human health and environmental conditions.
One Health Central and Eastern Africa (OHCEA) and One Health workforce delegates showcased their work in four papers presented in oral breakaway sessions under the themes: Education, One Health - What’s working and why, Ecosystem sustainability and health, and Social and political considerations in disease and invasive species management. Four poster presentations were also presented on OHCEA work.

OHCEA had a strong presence at the conference, including Dr. Irene Naigaga the Program Manager, Ms. Agnes Yawe (author of this piece), Mr. Timothy Wakabi, Ms. Winnie Bikaako, Dr. Innocent Rwego, Dr. Andrew Thaiyah and Prof. Idi Abdallah Ngona.

My presentation was on “Building Strong One-health Collaborations in Academia: Key Building Blocks”.

Increasing disease burdens with human-animal-ecosystem interface calls for robust approaches to deal with the intertwined nature of diseases. While one-health approach has gained prominence globally, the art of multi-disciplinary collaboration among health professionals is still a challenge with minimal collaborative efforts mainly during disease outbreak response. Successful multi-disciplinary collaborations are needed now more than ever before to handle recurrent disease burdens. This paper is about a successful one-health collaboration in higher institutions of learning “One Health Central and Eastern Africa (OHCEA)” working across human and animal health disciplines in diverse geographic areas in Africa and was shared during the One Health Eco Health Conference in Melbourne in December 2016.

It enumerates three key building blocks behind the OHCEA model focusing on “soft elements”. OHCEA is a mega coalition model going by Canadian Coalition for Global Health Research. It is a complex collaboration involving southern and northern institutions of higher learning (Universities) working to re-construct learning and teaching at universities to deliver One Health-ready graduates needed in health workforce to take on the current health challenges. The three key building blocks for its success are: One Health leadership of visionary individuals at strategic positions backed by strong personal conviction and effort in driving the needed changes for one health; Institutional policies and mechanisms that facilitate change processes to thrive; and a strong support function at different levels that fuels and serves as backing for the complex collaboration to succeed.

Some personal insights based on sessions attended.

1. The conference presentations were characterized by good research work conducted by multidisciplinary research teams, international and national one-health collaboration efforts, and a few one health/ eco health interventions in practice.
2. There has been tremendous OH work done in the research area albeit more presentations were from researchers from Western countries. Reflections on presentations, researchers showed a deeper appreciation of the contribution of multidisciplinary research teams to the outstanding research findings and models developed out of the research work.

3. At the inter-government level, impressive cross sectoral collaborations between OIE, FAO, WHO were shared. What stood out for me was the articulation of very specific areas of collaborations that had been initiated including the on-going efforts to share information data sets, joint risk assessments, co-development of SOPs, these provide very definite proposals of what multi-sectoral collaborations can look like. At the conference, joint symposia were organized by the trio making the collaboration efforts visibly clear. Such efforts offer good learning points on what could be replicated at the national level - by governments but also what could be replicated within the academia. Of special interest and relevance to OHCEA, the information data sets by the trio including the JEE, PVS, IHR reports do offer good information and tools for enriching network interventions. Specifically the OIE PVS gap analysis tools and assessment reports conducted in almost all African countries do offer useful national data sets for the network. Follow up missions evaluating the PVS gap analysis has also been done in some countries. In addition strategies such as the OIE AMR strategy are key reference documents when designing programs & activities.

4. Under One health in practice; P&R sessions shared the OH platform models in different countries and enumerated the pros and cons of each model. The two models shared were highly institutionalized model within government in a neutral sector with mandate to coordinate multi-sectoral efforts such as the office of Prime Minister, this was a model in Cameroon. The other model is a coordination office (semi-autonomous) with representation from different sectors set up outside the government mainstream structures. Lessons from the different models were appreciated by participants that largely related to sustainability, financing.