Dear Reader,

Welcome to the first Edition of One Health Digest; a publication of Africa One Health University Network – AFROHUN.

As you will read further on in this newsletter, One Health central and Eastern Africa (OHCEA), has grown and transitioned into Africa One Health University Network.

In detail we share with you our journey and new direction.

We also share with you the exciting news about our now one-year USAID-funded One Health Workforce development project, the One Health Workforce – Next Generation project. Working with a strong consortium of partners with diverse competences and expertise, AFROHUN will engage in a suite of highly-innovative activities over this period, including a strong focus on building a sustainable network.

Over the years, we shall be sharing with you our milestones in this work as well as our reflections and learning points.

The last 3 months have been extraordinary in that the COVID-19 pandemic presented us with a unique situation and working environment that we never anticipated. With varying degrees of lockdown in the countries where we work, to contain the spread of the pandemic, we found ourselves in urgent need to innovate in order to continue working while observing the prevention measures in the different countries. The One Health Workforce Next Generation partnership therefore used this opportunity to mount a series of highly-innovative activities over this period, including a strong focus on building a sustainable network.

Our story

As One Health Central and Eastern Africa (OHCEA), we have our roots in the Leadership Initiative of Public Health in East Africa (LIPHEA) and the Health Alliance, which were spearheaded by Makerere University School of Public Health (MakSPH) in Uganda, in collaboration with Muhimbili University of Health and Allied Sciences (MUHAS), School of Public Health in Tanzania since 2005, all established with support from USAID.

Our work

Africa One Health University Network (AFROHUN) is an international network of public health, veterinary medicine, pathobiology, environmental sciences, medicine and global health institutions of higher education. AFROHUN is located in 18 universities in 9 countries in Africa. The Universities are: Université des Montagnes, The University of Ngaoundéré and University of Buea (Cameroon), University of Lubumbashi and University of

KEY HIGHLIGHTS

Partnership creation around One Health Students App development exercise in Kenya Creates window of Opportunities

This activity aims at supporting students in the Students One Health Innovations Clubs (SOHIC) to come up with innovative ideas of developing a national-based App that can be used by...

One Health Students form a Coalition to counter the effects of COVID-19

One Health Students Against COVID-19 (OHSAC) is a student platform that began operations in June 2020 and was founded by the Student One Health Innovation Clubs (SOHICs) of Mbarara University of Science and Technology and Makerere University with a major

Inspired by the evolution of the One Health concept and philosophy, LIPHEA invited schools of veterinary medicine in the region to join hands in the formation of OHCEA, which was inaugurated on 17th October 2010. It all started with seven schools of public health and seven faculties of veterinary medicine in DRC, Ethiopia, Kenya, Rwanda, Tanzania and Uganda.

The focus was initially on disaster preparedness and response, but later there was need to address One Health Workforce (OHW) strengthening in Africa, which was addressed under the umbrella of the USAID Emerging Pandemic Threats (EPT) program.

The initial geographic focus was East and Central Africa but the network expanded to embrace west African universities in Senegal and Côte D’Ivoire, and is still growing.
situation presented, there are useful lessons that were learned. Our country teams share with you interesting happenings in the different countries; the value in working through partnerships, innovations to keep students engaged and active during lockdown and students self-organizing to counter the effects of COVID-19.

Kinshasa (DRC), Jimma University, Addis Ababa University and Mekelle University (Ethiopia), Moi University and University of Nairobi (Kenya), Université Cheikh Anta Diop (Senegal), Muhimbili University of Health and Allied Sciences and Sokoine University of Agriculture (Tanzania), University of Rwanda and University of Global Health Equity (Rwanda), Makerere University and Mbarara University of Science and Technology (Uganda), University Félix HOUPHOET BOIGNY (UFHB) (Côte D’Ivoire).

The network is working to transform the training environment and approaches in universities, in a bid to develop a workforce without disciplinary barriers. Enabling students to understand and appreciate the contribution of disciplines outside their own, in predicting, detecting and responding to the kind of complex health challenges we are witnessing today. This is the next generation workforce that we need in the face of increasing outbreaks of epidemics, pandemics and complex health challenges.

To achieve this transformation, we are reviewing curricula, designing new and exciting experiential learning multidisciplinary training programs, re-tooling teachers and trainers, educating communities on existence and transmission of zoonotic and infectious diseases, while engaging national and sub-national governments to integrate One Health into national policy and strategic planning.

Our new identity symbol: AFROHUN logo

A Snapshot of AFROHUN Impact in Numbers over the years

1) Students trained (up to today) and areas of training (e.g. OH Leadership, etc.)

<table>
<thead>
<tr>
<th>Total Students trained</th>
<th>4,555</th>
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<td>Females</td>
<td>34%</td>
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<tr>
<td>Males</td>
<td>66%</td>
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</table>

- Global Health Security
- Gender and Infectious Diseases
- One Health concepts & practices
- Risk Analysis
- Infectious Disease Management
- Zoonotic Disease Control
- Communicable Diseases
- ID & AMR prevention & control
- Qualitative Methods
- Wildlife epidemiology
- Multidisciplinary Emerging Pandemic Surveillance

2) Faculty trained

<table>
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<tr>
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<td>28%</td>
</tr>
<tr>
<td>Males</td>
<td>72%</td>
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</table>

- Global Health Security
- Gender and Infectious Diseases
- One Health concepts & practices
- Risk Analysis
- Infectious Disease Management
- Zoonotic Disease Control
- Communicable Diseases
- ID & AMR prevention & control
- Qualitative Methods
- Wildlife epidemiology
- Multidisciplinary Emerging Pandemic Surveillance

3) In-service trained (numbers and categories and areas of training)

<table>
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<th>TOTAL IN-SERVICE PROFESSIONALS TRAINED</th>
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<td>24%</td>
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<tr>
<td>Males</td>
<td>76%</td>
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</tbody>
</table>

- Global Health Security
- Gender and Infectious Diseases
- One Health concepts & practices
- Risk Analysis
- Infectious Disease Management
- Zoonotic Disease Control
- Communicable Diseases
- ID & AMR prevention & control
- Qualitative Methods
- Wildlife epidemiology
- Multidisciplinary Emerging Pandemic Surveillance

These and more in this maiden edition of the One Health Digest, coming to you quarterly from Africa One Health Network. Welcome!

Professor William Bazeyo
AFROHUN Chief Executive
Globalization has brought about a rising tide of human prosperity, but with it, a looming threat of outbreaks of infectious diseases and antimicrobial resistance. This wave is propelled by undercurrents of population growth, human migration, and economic development, which are making precarious shifts in the interface of human, animal, and environmental health. USAID’s Emerging Pandemic Threat Initiative has been a bulwark against this threat, building essential capabilities worldwide to predict, prepare, and respond to pandemics. The USAID One Health Workforce-Next Generation (OHW-NG) initiative is a critical opportunity to bring these successes to a new level of scale and sustainability.
The U.S. Agency for International Development (USAID) awarded up to $85 million over the next five years to the University of California, Davis’ One Health Institute and consortium partners to implement the One Health Workforce—Next Generation project. The grant is meant to benefit Africa One Health University Network (AFROHUN) and South East Asia One Health University Network (SEAOHUN).

Africa One Health University Network (AFROHUN), formerly One Health Central and Eastern Africa (OHCEA), will receive up to USD 26 million to support activities aimed at building a next generation One Health workforce for the continent. AFROHUN has benefited from USAID funding under the Emerging Pandemic Threats (EPT) Program over the last 8 years. This current funding under the Global Health Security Agenda (GHSA) is meant to strengthen and scale up what has been done with the previous funding.

The One Health Workforce-Next Generation Project intends to enhance global health security by strengthening the capacity of university networks and their member institutions in Africa (AFROHUN) and Southeast Asia (SEAOHUN). AFROHUN, working with the University of California-David-led consortium will develop and deliver sustainable training and programs that build the capacity of national ministries and the private sector to prevent and quickly respond to disease threats using a One Health approach across human, animal and environmental sectors.

Through three broad objectives, the AFROHUN institutions will develop evidence-based One Health training programs that will build necessary competences in current and future One Health workforce. Working with governments, civil society, private sector and other key actors, programs that deliver cutting edge One Health training will be delivered across the continent through existing education structures.

“We are grateful to USAID for this continued confidence and trust in AFROHUN; continuing to fund us to this tune of money is a sign of commitment to building the capacity of networks to deliver the required One Health workforce”, said Professor William Bazeyo – AFROHUN Chief Executive.

Professor Bazeyo - who is also the Deputy Vice Chancellor (Finance and Administration), Makerere University- added that the Africa One Health University is repositioning itself as a response to the increasing demand for its presence in the wider Africa. “There are many institutions sending in requests to be part of the network from as far as Egypt, South Africa, Benin and other parts of Africa. Additionally, in countries where we are already, many more institutions have also expressed desire to join us. This shows that the network is growing, but also the One Health approach is getting increasingly accepted and gaining traction.

One of the key areas of focus of the OHW-NG project is to ensure AFROHUN grows into an organizationally robust and sustainable network that is a recognized leader in One Health in Africa and globally.
Country team discussions during work planning meeting

A cross section of the participants during the meeting. The meeting was key in creating understanding of the project among the partners.
The project aims to build a transdisciplinary workforce that can integrate efforts across sectors and that has the knowledge, perspective, respect, and skills required to not only rapidly respond to emergent events, but also to effectively collaborate in order to sustainably manage health systems.

The ultimate goal of the OHW-NG is to enhance global health security by strengthening a global health workforce capable of rapidly responding to and mitigating disease threats across the human, animal, and environmental health sectors. A critical issue at this point in this work is the institutionalization of the One Health approach in order to harness the power of a new generation of leaders who are brought up to use critical thinking, collaboration, and a systems approach for problem solving on a daily basis, essential to staying ahead of the looming crises the world faces.

Under the OHW-NG project, AFROHUN will be engaged in developing and delivering world-leading model programs for equipping professionals with transdisciplinary skills to address complex global health issues, in a sustainable way.

The project will contribute to building capacity to influence policy, building ECHO Communities of One Health in Practice, a Knowledge Management platform, and capacity for improved gender integration in AFROHUN work, among many other key developments.

The OHW-NG consortium’s engagement of external partners is critical to amplify the university networks’ positive impact and outreach, providing opportunities to showcase examples of the innovative One Health workforce training conducted in diverse settings and across a range of disciplines.
Senegal Students Receive AFROHUN Small Grants For Short Studies

The three students undertaking this study are;

- Mr. Issaka NACANABO: veterinary doctoral student at the EISMV of Dakar,
- Mr. Mamadou DIALLO: doctoral student in pharmacy at the FMPO-UCAD,
- M. Mohamed Rassoul KANE: Master 2 student at ISE-UCAD


Translation:
The three students propose a multidisciplinary study whose aim is to isolate and characterize the antibiotic resistance of bacteria of the genus <em>Salmonella</em> and <em>Escherichia</em> from different matrices at the slaughterhouses of Dakar, using a One Health approach. This study will provide data not yet available on the resistance profile of the bacteria of the two strains isolated in sheep meat, in bleeding water, on inert surfaces at the Dakar slaughterhouses. Such data will be useful to the government of Senegal, the scientific community, educational institutions and the health sector. These results, especially recommendations that will be made at the end of the study, will allow an improvement of practices throughout the production and slaughter chain of sheep and will contribute to the reduction of antibiotic resistance. Motivated and aspiring to become future ambassadors of this approach in working life, our participation in this program aims to contribute to the promotion of the One Health concept on the one hand. On the other hand, in the strategic plan to fight AMR in Senegal, it contributes to generating data on AMR.


In this article, the student teams express their excitement about this opportunity and enthusiasm to be able to pursue their dissertation studies but also the opportunity to practice One Health in research teams. The students collectively say that the One Health approach, which calls for interdisciplinary and intersectoral action, remains today a key and essential concept for effective management of public health problems. This article is presented in both English and French.

Team 1: The Antibiotic Resistance of bacteria from different matrices at slaughterhouses in Dakar

How Antibiotic Resistance Spreads


Mohamed Rassoul Kane

Je m’appelle Mohamed Rassoul Kane, étudiant en master en Gestion des Ressources Naturelles et Développement Durable à l’Institut des Sciences de l’environnement de Dakar. Je suis très heureux de faire partie parmi les étudiants bousiers d’une subvention de recherche dans le cadre d’un projet retenu par AFROHUN.

Ce programme permettra d’acquérir plus de connaissances sur des travaux qui seront réalisés sur la résistance aux antibiotiques de la viande ovine au niveau de l’abattoir de Dakar. La résistance aux antibiotiques constitue, en effet, aujourd’hui l’une des plus graves menaces pesant sur la santé mondiale, la sécurité alimentaire et le développement. Le projet sera fait avec une approche multidisciplinaire et complémentaire car en tant que environmentaliste je vais travailler en collaboration avec deux autres étudiants du domaine de la santé publique et vétérinaire.

Cela me permettra aussi de soutenir mon mémoire de recherche à la fin de ma formation sur la problématique de la gestion des déchets d’animaux. On sait que les déchets issus des abattoirs regorgent de quantités innombrables de particules microbiennes. Or les mécanismes de traitement ne garantissent pas la décontamination adéquate des déchets parfois rejetés dans l’environnement ou dans le milieu naturel.

Ce projet me permet de mieux m’outiller...
en mettant en pratique mes compétences d'environnementaliste et de travailler plus tard sur la thématique de la gestion des déchets et de leurs traitements, mais aussi de participer surtout à la promotion du concept One Health sur le plan national et international.

Translation:
My name is Mohamed Rassoul Kane, Master's student in Natural Resource Management and Sustainable Development at the Institute of Environmental Sciences in Dakar. I am very happy to be part of the students who have been awarded a research grant within the framework of a project selected by AFROHUN. This program will provide more knowledge on work to be carried out on antibiotic resistance in sheep meat at the Dakar slaughterhouse. Antibiotic resistance is actually one of the most serious threats to global health, food security and development today. The project will be done with a multidisciplinary and complementary approach because as an environmentalist I will be working in collaboration with two other public and veterinary health students.

This will also allow me to write my thesis at the end of my training on the issue of animal waste management. We know that slaughterhouse waste is full of countless microbial particles. However, the treatment mechanisms do not guarantee adequate decontamination of the waste that is sometimes released into the environment or the natural environment.

This project allows me to better prepare myself by putting my environmentalist skills into practice and to work later on the theme of waste management and treatment, but also to participate in the promotion of the One Health concept on a national and international level.

Mamadou Diallo
Je me nomme Mamadou Diallo, étudiant en doctorat 1 de pharmacie de l’université Cheikh Anta Diop de Dakar. C’est un grand plaisir pour moi de savoir

Translation:
I am Mamadou Diallo, a doctoral candidate in Pharmacy at the University Cheikh Anta Diop of Dakar.

It is a great pleasure for me to know that our proposal has been selected for the research grant. Today, bacterial resistance to antibiotics is one of the most serious threats to global health. However, SOHIC Dakar and AFROHUN’s activities have shown me that sustainable solutions to public health problems lie in the collaboration of different sectors with the One Health concept. I have had to work on a study on the resistance of bacteria to antibiotics with only the human health sector and I was very limited. Today I have the opportunity, due to this grant from AFROHUN, to work in collaboration with other sectors (animal health and environment) to contribute to the improvement of scientific knowledge.

Issaka NACANABO
Je me nomme Issaka NACANABO, étudiant en dernière année de formation à l’école vétérinaire de Dakar. C’est un grand privilège pour moi d’être retenu à ce programme de subvention. En effet, ce programme qui promeut l’approche One Health et donc la collaboration interdisciplinaire et intersectorielle constitue une occasion pour moi lauréat de collaborer avec des futurs professionnels de deux secteurs différents à savoir l’environnement et la santé humaine. Cela me permettra d’acquérir encore plus de connaissances en raison des travaux en équipe qui seront menés sur la résistance aux antibiotiques, un des problèmes majeurs qui menacent la santé publique de nos jours. En plus d’être un soutien pour ma fin de formation, ce programme est pour moi un grand élan pour plus tard faire de la santé publique vétérinaire ma spécialité. Enfin, ce programme me permet de m’outiller et de participer surtout à la promotion du concept One Health en mettant déjà en pratique le peu d’expériences que j’ai pu acquérir au travers de mon engagement dans le Student One Health Innovations Club (SOHIC) et dans les activités antérieures de AFROHUN.

Translation:
My name is Issaka NACANABO, in my last year of training at the Veterinary School of Dakar.

It is a great privilege for me to be selected for this grant program. Indeed, this program that promotes the One Health approach and thus interdisciplinary and intersectoral collaboration is an opportunity for me to collaborate with future professionals from two different sectors, namely the environment and human health. This will allow me to acquire even more knowledge as a result of the team work that will be carried out on antibiotic resistance, one of the major problems threatening public health today. In addition to being a support for my graduation, this program is for me a great incentive to later make veterinary public health my specialty. Finally, this program allows me to equip myself and work on a theme that I wish to work on and to participate in the promotion of the One Health concept by already putting into practice the little experience I have acquired through my involvement in the Student One Health Innovations Club (SOHIC) and in the previous activities of AFROHUN.
La propagation des maladies notamment zoonotiques devient un phénomène qui touche tous les pays du monde. Aujourd’hui les systèmes de santé dans leur complexité se donnent pour mission principale d’endiguer ces problèmes de santé publique. Ainsi, pour prévenir, détecter et riposter contre les épidémies et les pandémies, l’approche une seule santé s’impose comme étant le moyen le plus efficace. C’est dans ce sens que notre équipe s’est intéressée de près à ce projet qui nous donne l’occasion d’apporter des réponses à ces crises sanitaires notamment dans ce contexte précis de la COVID-19.

L’équipe est constituée de quatre jeunes chercheurs dont deux hommes et deux femmes. Elle est par ailleurs composée de deux naturalistes, d’une biologiste et d’un historien. Notre projet se fixe comme objectif général de contribuer à la connaissance et à la prise en charge des répercussions sociales de la COVID-19. De manière spécifique il va s’agir de :

- Mener une action d’information et de sensibilisation sur l’approche « une santé ».
- D’analyser les attitudes et les comportements des étudiants face à la COVID-19.
- Comprendre les expériences vécues par les étudiants dans le contexte de la pandémie.
- Proposer des actions pouvant aider à une meilleure prévention et prise en charge des conséquences de la COVID-19 en milieu étudiant.
- Les résultats tirés de cette étude vont constituer une base importante dans la mesure où ils vont permettre aux décideurs de connaître et de comprendre les aspects sociaux incontournables pour une meilleure prise en charge de la pandémie de la COVID-19.

Translation :

The spread of diseases, particularly zoonotic diseases, is becoming a phenomenon that affects all countries in the world. Today’s health systems, in all their complexity, have made it their main mission to contain these public health problems. Thus, in order to prevent, detect and respond to epidemics and pandemics, the One Health approach is the most effective way. It is in this context that our team has taken a particular interest in this project, which gives us the opportunity to provide responses to these health crises, particularly in the specific context of the COVID-19.

The team is comprised of four young researchers, two men and two women. It is also composed of two naturalists, one biologist and one historian. The general objective of our project is to contribute to the knowledge and management of the social repercussions of the COVID-19.

Specific objectives are :

- to carry out an information and awareness-raising action on the “One Health” approach.
- to analyze the attitudes and behaviors of students with regard to COVID-19.
- to understand the experiences of students in the context of the pandemic.
- to propose actions that can help to better prevent and manage the consequences of COVID-19 in the student environment.
- The results of this study will constitute an important basis for decision-makers to know and understand the social aspects that are essential for better management of the COVID-19 pandemic and similar outbreaks.

What Receiving this Research Grant from AFROHUN means to me

Abdoulaye SAMB, (Sénégal)

“Suite à l’acceptation de la demande de subvention que notre équipe a effectuée auprès de OHCEA, je voudrais exprimer mes sincères remerciements à OHCEA et j’assure que cette subvention sera utilisée à bon escient. Je pense que cette subvention de recherche, représente à mes yeux, la reconnaissance de l’interdisciplinarité et je m’en réjouis »

Translation: Following the successful acceptance of our team’s grant application to AFROHUN, I would like to express my sincere thanks to AFROHUN and assure that this grant will be properly used. I believe that this research grant represents, in my opinion, the recognition of interdisciplinarity and I am delighted about this.

Gilberta Elisa Djidiambone Manga. (Biologiste/Environnementaliste)

Pour un jeune chercheur (e) les opportunités de recherche bien qu’elles existent ne sont pas toujours évidentes. Alors, de pouvoir mener cette recherche sur le thème d’une seule santé et dans une équipe pluridisciplinaire est une chance inouïe dont je compte pleinement profiter.

Translation: For a young researcher (e) research opportunities, although they exist, are not always evident. Being able to carry out this research on the One Health thematic issue and in a multidisciplinary team is an amazing opportunity that I intend to fully take advantage of.

ANSOUmana Papa Sané (Biologiste/ Environnementaliste, Sénégal)

L’homme a toujours voulu comprendre le monde et la société dans lesquels il vit, et depuis plusieurs siècles, c’est la recherche scientifique qui tente de répondre à ce besoin. Ce financement est pour moi une opportunité à saisir afin d’apporter notre contribution à la recherche dans un domaine qui me tient à cœur : Une seule santé. Cela nous donne la chance de servir notre pays et le monde entier car l’article qui va être produit pourrait servir à d’autres chercheur dans le monde.

Translation: Humans have always wanted to understand the world and the society in which they live, and for several centuries now scientific research has been trying to meet this need. For me, this funding is an opportunity to make my contribution to research in a field that is important to me: One Health. It gives me an opportunity to serve my country and the world because the article that will be produced will be used by other researchers around the world.
AFROHUN-DRC Engages the Comité de coordination Une Santé for Synergies and better work coordination

Dr. Marc Yambayamba – AFROHUN DRC Country Manager

AFROHUN-DRC is a permanent member of the National One Health Coordination Committee (Comité de coordination Une Santé). During a Committee meeting held at Kinshasa School of Public Health, we had discussions about “the One Health activities and policy Mapping” exercise which is supported by FAO and the presentation of the One Health workforce assessment which was conducted in 2018 with support from AFROHUN (OHCEA, then).

The meeting had representatives from line ministries, professional organizations (physicians, nurses and veterinarians) and partners like FAO. The AFROHUN DRC team took this opportunity to make a presentation about the One Health Workforce Next Generation project and shared ideas with other partners on how we can efficiently support One Health activities in DRC.

Meeting participants were quite interested in our work under the One Health Workforce Next Generation project. They asked questions, most importantly how they can benefit from the project to implement their One Health agenda. I highlighted AFROHUN-DRC’s availability to support them during their activities, where possible.

In 2018, with support from OHCEA then, the Fédération Une Santé -FUS, (National One Health Platform) conducted a workforce assessment activity within 7 line ministries and presented the report in 2019 to the national authorities. At this meeting, the FUS shared the report with other partners to use the data collected for activity planning and decision-making. FAO, Red Cross, Mtabs and professional organizations attended this meeting.

As a follow-on, with support from FAO, the Fédération Une Santé (FUS) will conduct an activity on One Health policy and activity mapping. During the meeting, the FAO One Health Focal Person presented the TOR and data collection tools for this activity. It will consist of identifying all One Health activities and existing policies and regulations in the country. This is an activity whose outcomes AFROHUN can tap into to design activities and programs that address the country’s One Health policy and workforce planning. We are waiting for the report with keen interest.

There were also opportunities for synergies. FAO and Red Cross are implementing projects related to GHSA using the One Health framework, with funding from USAID. We agreed to work together on some of their activities, as AFROHUN has a lot of experience in workforce development.

HOW THE COVID-19 PANDEMIC AFFECTED WORKPLACES: HOW WE FAIRED AT AFROHUN

When the COVID-19 pandemic started unravelling itself in Africa, AFROHUN was just getting ready to start implementation of Year 1 workplan of the One Health Workforce-Next Generation project. With a good number of our activities planned around meetings, gathering of many people and field-based training and other activities, all teams at country and regional level had to re-strategize on how best to deliver without compromising on safety.

In this article, we share some of our individual stories with you, how we were impacted and how we coped, what we have learnt and what we plan to do differently.

My story: Dr. Samuel Wanjohi – AFROHUN-Kenya Country Manager

The COVID-19 pandemic threw a curve ball at the ongoing learning curve. Being new in the network and at the same time trying to learn and understand the workings of the new project, COVID-19 called for a re-organization of activities. This brought in a new norm that I quickly had to adapt to while still trying to get a good grasp on the project. It was the typical “baptism of fire” saying for me.

With all the restrictions that were being placed on movements and meetings among other aspects of life, I kept wondering how the implementation of most of our activities that called for movement and conducting meetings, was going to happen. Additionally, there was the element of team members not being physically available, not picking calls and not responding to emails, etc. which greatly hindered communication and brought to the fore some moments of anxiety.

This situation also called for a delicate balancing act, with the lines between family chores and office work being blurred at times. However, it also afforded the time to appreciate working without outside interferences and exogenous encumbrances like traffic jams, that would erstwhile exert unwanted fatigue both emotionally and physically.

What was your suite of coping mechanisms?

Creating a working space; sharing my work schedule with my family to ensure that they understand when am working inasmuch as am at home, sticking to a work-day schedule and utilizing my work breaks as health breaks; trying to utilize the 80-20 Pareto Principle while working with the team, to achieve the team objectives.

What lessons did you pick up? What does this mean to future planning?

The COVID-19 pandemic brought in new dynamics that one had to quickly adapt to. It demonstrated that working from home can work. As a network we responded swiftly, with the support of our partners to modify our activities to fit the situation. Going forward, considerations should be made for innovations that can enhance the efficient achievement of activities and their objectives. Another lesson is that it is important to identify team members who would be willing to change with you and adapt to the changes & circumstances, to
achieve the set objectives, and work with those.
There were positive outcomes out of this, certainly. The evolution and adaptation to technological change was rapid and commendable.

**My story: Ms. Angella Musewa – AFROHUN-Uganda Country Manager**

Most of our activities are University-driven (involve faculty and students). When the President of the Republic of Uganda announced the closure of educational institutions on 19 March 2020, we had several activities to implement during that month but unfortunately we had to cancel them. This was a major hindrance but of course we had to innovatively think about how best we can implement them.

I got fear in me that we could not be in position to implement thus our country funds were going to be returned. This being a new project, I myself being new in office, I was super worried. However, every challenge gives one an opportunity. As we were selecting activity leads, we had to be very careful, we needed people that could adjust to the new working norm.

What made me most anxious was the fact that we had to quickly make re-alignments among other things.

**What was your suite of coping mechanisms?**

I learnt to adjust, am one person who loves working in a very quiet environment. I had to adjust a little bit to the noisy environment. Children in my neighborhood would always make noise. I had no control over that. It was playtime for them. There was no movement outside the home. Life rotated only around one’s Zoom calendar. It was quite an experience!

**What lessons did you learn? What does this mean to future planning?** Working virtually is possible, albeit with challenges. Also information overload can be disastrous (especially about this pandemic, panic alone was not a good thing).

Moving forward we need to be prepared, the faculty need to be prepared. We need to empower them to support trainings online. There is a very big gap in E-learning across our member institutions.

The positive for me is that we identified other means of working and implementing activities innovatively, so all was not lost.

**My story?- Juvenal Kagarama - AFROHUN-Rwanda Country Manager**

Frankly, it was very frustrating not to be able to do what one had planned to do. I was like ‘Oh my God’, what is going to happen with all those activities we had planned to do? What will it look like turning in zero results come October? Earning a salary without turning in results was very worrying and frustrating indeed.

As we came to terms with the realities of COVID-19 and the new norm of working from home, we had to embrace working online and I soon started enjoying it. With good internet, I found myself working even more hours per day. I was able to have a large extent communicate and engage my team easily and comfortably with zoom. We were in agreement as a team to innovate on how to implement some activities; we agreed to convert many of our field activities in online “theoretical” training packages that would be loaded on university Moodle platform. The good thing about this is that it would benefit a wider student population and it is cheaper.

**Japheth Killewo – AFROHUN-Tanzania Country Manager**

It was very frustrating. We had to re-think how we can go around the pandemic in Africa when the worst impact by the pandemic was affecting USA and Europe. Activities we had planned so well had to be reorganized or postponed and this was a lot of work; leave alone those who were to review our work and approve. Luckily for Tanzania there was partial lock down so some activities could continue though approval had not been received for fear of compromising safety. When approval was finally received we held our first face-to-face meeting on 30th June 2020 and ‘Oh, what a sweet moment!’ We painstakingly observed all the safety precautions recommended by the government, WHO and USAID.

**What lessons did you learn? How does this mean to future planning?** The use of the Zoom platform was excellent. We learnt a new way of communication which became very useful and will become even more useful in future. The Zoom platform became handy even for meetings other than AFROHUN’s. I was able to give three lectures using the ZOOM platform to between 15 and 300 students.

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**AFROHUN ECHO IMMERSION TRAINING OPENS UP A WHOLE NEW WORLD TO THE NETWORK**

Project ECHO based at University of New Mexico is a collaborative model of medical education and care management that empowers clinicians to provide better care to more people, right where they live.

The use of the ECHO platform for the sharing of knowledge is one of the innovations brought on board by the One Health Workforce Next Generation project global consortium.

June 23rd – 26th, 2020, AFROHUN staff and select faculty underwent an ECHO Immersion training which is a new experience for many. We sampled our staff on what the training was like for them and what it promises in terms of work experience. Participants generally had expectations to learn how they can do their work more innovatively, while a few had no idea what to expect, but went in with enthusiasm, all the same.

“I expected to get an in-depth understanding of what ECHO is and its applicability to the One Health–related activities”, Ms. Angella Musewa – AFROHUN Uganda Country Manager.

“Frankly speaking, I did not have any idea about the scope of the training and what new ideas it would bring. Having said that, I was curious and open-minded about any new knowledge”, Dr. Juvenal Kagarama – AFROHUN Rwanda Country Manager.

“My expectations were to see how ECHO works and practice the Mock. I wanted to learn how I can link One Health issues to Project ECHO since I have been leading some activities related to students’ clubs and community interventions”, Gladys Mahiti – Faculty, Muhimbili University of Health and Allied Sciences, Tanzania.

With or without expectations, the Immersion Training participants experienced some really intriguing moments.

“The case presentations were intriguing to me. As the training was unfolding, I couldn’t help but wonder what One Health case presentations we could have. The opportunities and possibilities seemed (and still are) exciting. Additionally, I found the emphasis on “video on” quite interesting, noting that most online sessions call for people to put their videos off. The emphasis on relationship building was very well-appreciated in this regard”. Dr. Samuel Wanjohi – AFROHUN Kenya Country Manager.

“What touched me most was the notion/concept of “moving services to where they are needed most instead of moving patients to service providers. Besides, the idea provides for exchanges of ideas and knowledge among peers, for better service provision- a real example of community of practice”, Dr. Juvenal Kagarama – AFROHUN Rwanda Country Manager.

It appears this is one of those trainings...
where even the most skeptical individual comes out feeling truly immersed in a good thing. It triggered a wave of thinking on how it can be adapted to One Health work which is not clinical.

“I think the training did deliver on expectations even though I did not have any idea about ECHO at the beginning. I now know what it takes to create an ECHO hub and how to make it achieve its objectives”, Dr. Juvenal Kagarama, AFROHUN-Rwanda Country Manager.

“I observed that an ECHO program is not an ordinary webinar but rather a well-designed and articulated program that serves to not only promote capacity building, but build relationships while doing so. Further, it is a program intentionally built to bridge the knowledge gap, moving knowledge to where it is needed. The opportunities and possibilities are exciting”, Dr. Samuel Wanjohi, AFROHUN Kenya Country Manager.

“Putting it into context of One Health requires a lot of reviews. For instance, the example used during the ECHO mock was on HIV, purely clinical and thus one needed to have an understanding of HIV and its clinical diagnosis to be able to make a meaningful contribution. My request would be to have an ECHO as AFROHUN to use our every examples and re-orient ourselves”, Ms. Angella Musewa – AFROHUN Uganda Country Manager.

And the teams immediately went into planning mode, some on paper, while others still have their ideas forming in their heads. Most of the activities that country teams have their eyes on are student field-based training programs and in-service training programs.

“I have been leading SOHIC activities and research during response to emergences for example prioritized zoonotic diseases, preparing learning materials and plans. It will fit well in building capacity from different angles”, Dr. Gladys Mahiti, Faculty – Muhimbili University of Health and Allied Sciences, Tanzania.

“AFROHUN focus on a lot of activities in AFRHOUN country teams innovated around how to keep students engaged and active. June 2020, the DRC Country team engaged students via a virtual meeting. This meeting had two main objectives; 1) Experience-sharing and the role and use of One Health in the response to COVID-19 and, 2) Introduce the One Health Workforce – Next Generation project to the Students’ One Health Innovations Club (SOHIC) leadership and alumni. Although a number of the students could not attend because of issues of internet connection, we had a good turn-up, all the same. It was attended by 14 alumni and 26 students. We hope that for the upcoming engagements, those that attended this meeting, will mobilize their colleagues. Those engaged in the COVID-19 response activities shared their experience with students on how they use the One Health core competencies in their activities.

In general, the discussion was good, first because it was an opportunity for students and alumni to meet since the start of COVID-19 in DRC, in March 2020. As universities are closed, it has been a while. Secondly, they learnt from one another about One Health and COVID-19 response activities. They went ahead and proposed One Health activities to implement during COVID-19 outbreak.

One of the emerging issues from the meeting is the absence of a communication channel for information sharing between students and alumni to inform each other of their activities and the lack of a mentorship network to help early career professionals. Those in attendance resolved to regularly have these meetings to allow information sharing. And we hope we’ll have an opportunity to create a phone application to connect our students and alumni.

DRC Virtual Platforms Help Keep Links With Students Alive During COVID-19 Pandemic

Dr. Marc Yambayamba
Kapenga – AFROHUN-DRC Country Manager

A lot of activities in AFRHOUN focus on engagement of students. While literately all universities and other education institutions in the region were locked down to all forms of teaching and learning, AFRHOUN country teams innovated around how to keep students engaged and active. June 2020, the DRC Country team engaged students via a virtual meeting. This meeting had two main objectives; 1) Experience-sharing and the role and use of One Health in the response to COVID-19 and, 2) Introduce the One Health Workforce – Next Generation project to the Students’ One Health Innovations Club (SOHIC) leadership and alumni. Although a number of the students could not attend because of issues of internet connection, we had a good turn-up, all the same. It was attended by 14 alumni and 26 students. We hope that for the upcoming engagements, those that attended this meeting, will mobilize their colleagues. Those engaged in the COVID-19 response activities shared their experience with students on how they use the One Health core competencies in their activities.

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Partnership creation around One Health Students App development exercise in Kenya Creates window of Opportunities

Dr. Samuel Wanjohi – AFROHUN - Kenya Country Manager

This activity aims at supporting students in the Students One Health Innovations Clubs (SOHIC) to come up with innovative ideas of developing a national-based App that can be used by frontline community workers in addressing One Health problems to disease outbreak prevention, detection and response. At the initial stage, a call for proposals to develop the One Health App was sent out through university listservs. The multidisciplinary teams of students that are involved in developing the App were drawn from participating institutions and were competitively selected. The student teams submitted proposals / concepts that were reviewed by a team of judges drawn from institutions. The students formed multidisciplinary teams that are involved in the competition and the winning team will be awarded for their innovation. This exercise is meant to bring out the innovations of SOHIC in technology and One Health and is to benefit students as the future One Health workforce.

Implementing this activity has been quite an experience for us. The activity has brought on board an exciting range of partnerships. There was a bit of apprehension when floating the initial ideas to the partners, because the outcome could have gone either way. There was, actually, one partner I approached who told me to go back after the idea ‘was well cooked’; sentiments that I appreciated. I }
nonetheless, as they took me back to plan better. Engagements with the remaining two partners were filled with a lot of virtual meetings, characterized with a lot of negotiations and planning for the activity. Fortunately, mutually beneficial agreements were arrived at.

AFROHUN as a network encourages and emphasizes the importance and use of both formal and informal relationships/networks. Subsequently, the use of informal networks was one of the avenues that was used to identify one of the partners from the UK. The other avenue was the use of the formal network. During the country office submissions in one of the AFROHUN Kenya monthly deans’ meetings, the deans recommended a partnership with one of the more experienced stakeholders in the field of organizing student innovation challenges and hackathons. We approached and engaged the stakeholder; discussions that led to a mutually beneficial partnership. So, the deans were instrumental in this identifying and engaging for these partnerships.

The partnerships we have created for this activity provide an avenue for the effective delivery of the activity, through bringing on board perspectives and learning from those who have run such, or similar activities before. Further, these partnerships will ensure that the participating students get a worthwhile learning experience while engaged in the competition/challenge.

These partnerships will offer the students a wider opportunity to engage more in, and utilize the innovation space, while having mentors to guide them through the process. Additionally, the partnerships open up a wider networking space for the students. They will also provide an avenue to equip the students with initial skills relevant for the Next Generation One Health Workforce.

One Health Students Against COVID-19 (OHSAC) began operations in June 2020 and was founded by the Student One Health Innovation Clubs (SOHICs) of Mbarara University of Science and Technology and Makerere University with a major objective of engaging students in the fight against COVID-19 while embracing a One Health approach in all our work. We believe that multidisciplinary teams work best, hence our leadership committee is comprised of students coming from different academic backgrounds and institutions, so is our membership.

At OHSAC, we acknowledge that the COVID-19 pandemic has greatly affected lives of many, globally. For example, in Uganda like many other countries, schools were closed. We therefore utilize our platforms to engage students who are currently at home, in the fight against COVID-19 especially through increasing public awareness about the disease and how it can be prevented. We realize that as the lock down is being lifted gradually, many people are not observing the safety guidelines. Therefore, through our social media platforms, we called upon students to submit information about several aspects of the pandemic in order to educate the public.
The pandemic has also impacted lives of many in several ways for example losing loved ones, financial challenges, inability to carryout fun activities and loss of jobs; all this while there is a huge gap in mental health awareness. We have dedicated the month of August to address this problem. In addition, we have partnered with other student initiatives on the continent through a ‘Mind your Mind’ campaign to reach a wider population.

Currently, we hold online discussions twice a week on carefully selected topics about the pandemic and its effects. Through these moderated discussions, we enable students and other members of the public to share their views, stories and solutions. Through this informal learning space, we have reached out to many people including those from other countries like Rwanda, USA, India, Canada, among others.

Finally, we shall have a webinar on mental health at the end of August 2020. I invite you all to join us through following our social media platforms below and getting involved whenever called upon. Together we can defeat this Pandemic.

Facebook: One Health Students Against COVID 19
Twitter: @ohsac2020
Instagram: ohsac2020
Email: ohsac2020@gmail.com
WhatsApp: +256700117174

The author is a 5th year Medical Student at Makerere University.
How The One Health Workforce Next Generation COVID-19 One Health Updates ECHO Sessions Enhanced Knowledge And Participation In COVID-19 National Responses

The COVID-19 pandemic provided a platform for knowledge exchange and transfer at such exponential speed, it was a wonderful experience being part of this experience.

Under the auspices of the One Health Workforce Next Generation (OHW-NG) project, AFROHUN with partners led by University of California – Davis (UCDavis), organized a series of ECHO Session on COVID-19 to provide updates and create community of practice around management of the pandemic. These events became a permanent fixture on the calendars of many around the world.

Our AFROHUN teams have been sharing their experiences with us on how these sessions enhanced their understanding of the disease and the pandemic dynamics as well as One Health approach in managing disease outbreaks. The ECHO sessions attracted an average of 200 participants per session. The variety of topics covered on these session provided a rich collection of knowledge that opened the eyes and ears of the participants to different possibilities and impossibilities.

“I got different information from different experts and I realized research can bring into perspective different issues and answer community dilemma on the existing pandemic”, Gladys Mahiti, Faculty – MUHAS Tanzania

“The ECHO sessions provided an opportunity for experience sharing, drawing lessons from what other countries were undergoing and what they were doing. The sessions also gave an indication of the dynamic nature of the epidemiology of the pandemic”, Dr. Samuel Wanjohi, AFROHUN – Kenya Country Manager.

“Designing study tools related to COVID-19 has improved given the role I play in the National task force. During the trainings, I was able to contribute more meaningfully to the case definition, laboratory diagnosis”, MS. Angella Musewa, AFROHUN – Uganda Country Manager.

The free sharing of research and expert knowledge, experiences and strategies from practitioners across the world, was an enriching way to learn about COVID-19 pandemic, by our network staff. The role and positioning of One Health approach in management of such outbreaks, was a highlight for many.

“What came out clearly for me from the ECHO sessions was the importance of systems thinking in tackling One Health challenges. Seeing the pandemic unfold and learning how various countries and professionals were handling the same, was a practical lesson in One Health”, Dr. Samuel Wanjohi, AFROHUN-Kenya Country Manager.

Using this knowledge, our staff and faculty were able to design better risk communication materials, plan activities that enabled them participate in national level One Health response measures.

“Yes, during concept development for COVID-19 in collaboration with the Ministry of Health, we incorporated new knowledge on patient identification among others”, Ms. Angella Musewa, AFROHUN-Uganda Country Manager.

The sessions were a global occurrence that attracted participation from Africa, the Americas, Europe and Asia.

Students in Kenya made it a point to take advantage of the COVID-19 semi-lockdown in the country to organize several knowledge exchange events in the form of Webinars. While the rest of the world was wondering what to do with themselves during lockdown, Kenyan students were filling in knowledge and information gaps on a variety of topics. These included;

1) “Time for Nature, Celebrating Biodiversity”

During World Environmental Day. The Moi University Students One Health Innovations Club (SOHIC) held a webinar in commemoration of World Environmental Day. The guest speakers explored the holistic approach to health bringing in the one health/ planetary health perspective. There were discussions around the role of the environment in transmission of diseases. The Dean, Moi University School of Public Health, Professor Mabel Nangami was also in attendance and discussed land use and environmental policies.

2) On June 12th, two webinars were held to commemorate World Food Safety Day with attendees
from all the three colleges.

The guest speakers were from the Ministry of Health, Ministry of Agriculture and Livestock, Nutritionists and a Veterinarian. Discussions were around the different roles the government is playing through the different ministries in promotion of food safety and the major challenges faced, especially in the COVID-19 era. The roles of different stakeholders were also explored in line with the 2020 theme “Food Safety Everyone's Business”. Other items of discussion were on animal welfare and tackling malnutrition through approaches that are holistic, i.e. One Health.

3) The World Zoonosis Day was celebrated on July 6th and student presentations were made on One Health and zoonosis.

Two alumni [Vet, Environmental Health Specialist] were invited to discuss their field experiences and how in their practice they have utilized the One Health approach knowledge they learnt as undergraduates.

The SOHICs also held a virtual outreach activity to Millennium Environmentalists on One Health. There was key focus on the Role of Environment in Health. The audience ranged from environmentalists, architects, engineers, biological conservationists among others and were not familiar with the practical applications of One Health or the term. Plans to have more outreach activities of this nature by the SOHICs in Kenya, are underway.

4) WEBINAR ON ONE HEALTH APPROACH TO PANDEMICS: CASE OF COVID-19

The “One Health Approach to Pandemics” webinar, brought in expert mentors in One Health to speak to students from across diverse disciplines. Discussions were on the importance and justification of the One Health approach, citing COVID 19 as a wakeup call. The students in attendance (undergraduates and postgraduates) engaged in discussions on the challenges with segmented approaches and the need to relook One Health as a concept and its practical applications. There were also discussions on health systems and the need to re-examine the current frameworks through the One Health lens - especially in low resource settings where much emphasis should be on preventive practices.

One output of this activity was formation of student-driven multidisciplinary One Health groups (20) of 5 to 7 students from across different disciplines [Medicine, Vet, Environmental Health, Pharmacy, Nursing, Dentistry, Anthropology and Sociology]. The teams have been exploring different zoonotic diseases with support from mentors with field experience and expertise in One Health.

The Webinar featured two speakers; Dr. Gilbert Kirui and Dr. Richard Ayah

Dr. Gilbert Kirui discussed “One Health Approach and its Application in Pandemics-COVID-19”. He introduced the audience to the One Health concept, its focus on multidisciplinary and transdisciplinary collaborations and the value of promoting local, regional and global collaborations citing COVID-19 as a good example demonstrating the value of One Health. The One Health approach is continuously gaining significant importance, being formally adopted by many professional bodies including the CDC, WHO, AU among others. One Health is more than a concept; it is a way of thinking that promotes innovation and critical thinking. Some of the major drivers for the need of such an approach have been many infectious diseases, which have had a huge impact on man demonstrating the need to intervene before spillage of diseases from animals. He demonstrated the value of assessing sociocultural behaviors, which are also seen as primary drivers of disease. During this pandemic, there have been many studies investigating the virus behavior across species affected, impact of disease and exchange of knowledge across different professionals. Dr. Kirui also discussed the challenges with segmented approaches/interventions and proposed areas of improvement.

Dr. Kirui is a Veterinarian with Interests in One Health approaches to management of infectious diseases, population veterinary medicine, sustainable animal health and poverty alleviation in livestock-dependent communities. He is currently a Lecturer at Department of Animal Health & Production, Maasai Mara University and has been a part of teams coordinating training of current and future workforce on One Health approaches, development of curriculum for antimicrobial use and resistance as well as One Health approach to management of Infectious diseases among others.

Dr. Richard Ayah discussed “Health systems in light of COVID-19 and the OH approach.” He began by reiterating that Hippocrates (considered father of medicine) demonstrated a need for holistic thinking when dealing with patients. Through the years, the need to re-examine human health as part of a larger ecosystem health has continuously grown as many human diseases have had their origins in the environment/animals. The health systems approach is continuously becoming broader, tying the traditional WHO building blocks with environmental and ecological determinants to better influence health outcomes. He noted that the Kenyan population is continuously expanding and for every 3 years, the projected productivity should be 10 % higher to meet the health demands of the population. COVID-19 has shed light on some of the weaknesses of disintegrated health systems and demonstrated the need for strategic approaches to service delivery, information management and governance.

Dr. Ayah is a specialist in health planning and policy and is currently engaged in research focused on innovations in health, determinants of health and health systems and non-communicable diseases. He is a consult for the Kenya Ministry of Health, World Health Organization, UNICEF and UNFPA. This webinar was organized by the University of Nairobi SOHIC in collaboration with Medical Students Association of Kenya, in partnership with Daktari Online. You access the recording of this webinar here; Link to recording.

For More Information about AFROHUN
16A Elizabeth Avenue, Kololo Uganda
PO Box 35270 Kampala
Tel: +256 392 001 642
Email: secretariat@afrohun.org Website: www.afrohun.org @AFROHUN_