



MAKERERE UNIVERSITY'S 1ST AFRICAN BIOMEDICAL SCIENTISTS' CONFERENCE

MAK 1ST ABMSC

Theme: Rethinking the global healthcare systems. Are Africa's biomedical scientists well equipped to combat emerging and non-communicable diseases?



CONFERENCE REPORT

2ND MARCH 2019, HELD
AT KAMPALA KOLPING
HOTEL



MESSAGE FROM THE CHAIRMAN

Welcome esteemed bibliophile to MAK 1ST ABMSC 2019 Report. You are just about to disentangle a great piece of work that shall most certainly turn out to be a worthwhile investment of your time.

Purposefully, it has been put together to give you a wholesome awesome experience of MAK 1ST ABMSC in its inimitability. The report seeks to accompany you through the origins of the

conference while stirring your attention to our healthcare systems and most importantly inspiring devotion from within yourself to engrossed contribution to stronger health systems through the advancement of biomedical sciences, the heart of healthcare.

Gone are the days of heroism in healthcare. Gone are the days of intrepidity in its supportive specialties of research, laboratory and academia. Long gone are the olden days of “the sole scientist”. Solutions to challenges like AMR, NCDs, Emerging Infectious Diseases, etc. of our days, these days, shall be developed through collaborative research and multi-disciplinary style of practice in healthcare which shall be supported by a grossly revolutionized world of academia that in some parts of Africa, is still a reverie seemingly.

However, leaders, governments, for profit and non-for-profit organizations, world class academics, researchers and healthcare providers those at Makerere College of Health Sciences inclusive are relentlessly striving and toiling to realize the vision. In most African Countries with proof from the Ugandan context, biomedical scientists have not been recognized yet. That’s sad!

With the knowledge of the afore mentioned ABMSC seeks to join the rest of the world in this noble struggle and chooses to focus on advocacy for biomedical sciences and biomedical scientists and in the first of its kind, interesting scientific presentations were made, a great panel discussion was hosted and several concerns that are undoubtedly worthy of consideration by the powers that be were raised.

Deep rooted gratitude goes to our patron Dr. Kalanzi Joseph, our university and college administrators, lecturers, personal mentors Dr. Margaret Lubwama and Prof. Michael Rape, conference organizing committee, sponsors, partners and attendees. I appreciate the support from friends.

Leoson Junior Ssetaba

For the advancement of biomedical sciences. For the progression of biomedical scientists.

Service inspired by definiteness of purpose. Providence of God.



MESSAGE FROM THE VICE CHAIRMAN

How are you our esteemed reader? Thank you so much for taking off time to share this great stride in bettering the African and global health system with us.

I would like to appreciate the good Lord for the success of this day and appreciate all the organizers, participants, stakeholders and sponsors who made this day a success.

The global health demands and priorities have greatly evolved over the years. In order to cope up with this, the health professionals and intervention strategies have had to be remodeled. The conference was aimed at dissecting the African health system to explore its strengths, weaknesses, opportunities and threats and to examine the critical role played by biomedical scientists and asses their ability and competence to combat the emerging and non- communicable diseases.

The Ugandan biomedical scientists have great potential of helping to mitigate the current health burden. Unfortunately, a number of hindrances prevent the full exploitation of this potential. I bare the hope that the dream shall be eventually realized.

I appreciate the great works done by College of Health Sciences-Makerere University, Makerere University Biomedical Science Students Association (MUBSSA) and all stakeholders.

I also welcome you all to support the development of Biomedical Sciences in Uganda and Africa at large. Thank you.

Solomon GOBBA

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MESSAGE FROM THE PATRON



I take this opportunity to congratulate you all upon the recently concluded Makerere University 1st African Biomedical Scientists' conference. The conference was an extreme success by all measures. The journey of one thousand miles begins with one single step. By holding this conference, we believe the journey has started.

Let me begin by appreciating all the participants and delegates who attended and contributed towards the conference in one way or another. Your generosity is very appreciated. We hope to continue collaboration in the future.

Organizing a conference, more specifically the inaugural one, is not an easy task as many would think. It calls for sacrifice from the organizers, confidence, trust and belief from the public and seniors and lastly finances to meet the operational costs. The latter is the hardest part. However, organization of Makerere University's 1st African Biomedical Scientists' Conference has been possible because the above prerequisites were forthcoming.

Allow me in a special way to extend my appreciation to the students. It has been a pleasure working with the students in the run-up to the conference. This team of dedicated individuals consisted of the Organizing Committee; Makerere university Biomedical Students' Association and various partners engaged with for advice and guidance right from the beginning. I thank them for their commitment and hard work towards the success of this conference. I would also like to thank Makerere College of Health Sciences, The Principal, administrators and faculty, sponsors and partners for their financial and technical support in various ways.

In conclusion, I would like to take this opportunity to appeal to more individuals, organizations, ministries, companies and universities both local and international to join Makerere university College of Health Sciences in the subsequent series of the African Biomedical Scientists' Conferences envisioned. The objective for these annual conferences is to create a platform that allows for continual sharing of evidence-based knowledge and research in the field of biomedical sciences in our country. Together we should strive for stronger healthcare systems, advance biomedical sciences and ensure progression of biomedical scientists.

For God and My Country

Dr. Kalanzi Joseph



MESSAGE FROM THE PRESIDENT MUBSSA

I would like to take this opportunity to greet you in the name of the Highest God.

The Makerere University's 1st African Biomedical Scientists' Conference that occurred on the 2nd of March, 2019 was one of the biggest ventures I have ever been involved in the whole of my life so far. With the great vision of my colleagues and I to host

the first ever event of such a kind with an aim of trying to assess whether or not Biomedical Scientists are of any importance in the current health systems in Africa and Uganda in particular, we decided to create a platform for discussion. Our curiosities led to the formulation of the conference theme, "Rethinking the global healthcare systems: Are Africa's Biomedical Scientists well equipped to combat emerging and neglected diseases/epidemics? Since the profession is still seemingly new in the country, many questions are often paused by the students who take up the program (Bachelor of Science in Biomedical Sciences) which is currently offered at Makerere University, Habib medical School and Kampala International University. It is rather absurd that their queries are never satisfactorily addressed due to the vast knowledge gap about the program and the profession. It's for this reason, therefore, that we thought it important to begin by defining the status quo in terms of medical research and health, the gap, and how Biomedical Scientists come to address the gap.

Clear knowledge of who Biomedical Scientists are and their role in society then give us a go ahead to focus on bigger and more specific goals accomplishment of which shall contribute to stronger healthcare systems. It's with such a background that I would like to extend my sincere thanks to all the parties that sided with us as students of Biomedical Science at the Makerere University College of Health Sciences under our unifying umbrella of Makerere University Biomedical Science Students' Association (MUBSSA). Great thanks to the College administration and the School of Biomedical Sciences for trusting us with the responsibility of capacity building through organizing such an event for the benefit of the students and the general public. To the patron of the association, Dr. Joseph Kalanzi, words may never express our gratitude in its fullness, but we appreciate.

To all our funders (individuals and organizations), thanks so much for supporting us from such humble new beginning and I promise that we won't forget you even when the dream gets to its fullness. Thanks for standing with us as we took our first step, May god bless you abundantly.

Habi Joseph

President Makerere University Biomedical Science Students' Association



MESSAGE FROM HEAD SCIENTIFIC COMMITTEE:

I would like to take this opportunity to thank and at the same time congratulate all the students, attendees, presenters, panelists and members of the organizing committee upon completion of this challenging task. In a special way, I would also like to thank the members of the college administration, lecturers, sponsors, partners and mentors upon the

nurturing, unending support and dedication towards making this conference a possibility and most especially an outstanding success.

When I was approached and requested to head the scientific committee, I knew it was not going to be an easy task but took up the challenge anyway. Taking the bold step to serve the rest of biomedical scientists in that capacity turned out to be not only a great but also an interesting idea. The journey that began with consultations and materialization of the conference idea onto paper culminated in a success. I know success. He's got many faces. As I and the rest of my team hoped, we hosted the magnificent one on the 2nd March 2019. The program was executed proficiently with recognizable input from all attendees, presenters, panelists, O.C members and our patron. I am grateful to the patron, Dr. Kalanzi Joseph for his technical support and tremendous inspiration while constantly gearing us towards reality and the achievable through his unprecedentedly witty advice.

Alumni of Bachelor of science in Biomedical Sciences Uganda and the greater parts of Africa are still struggling, unfortunately with identity and recognition in the professional spheres of the region. Being part of a team that looks at a theme like: rethinking the global health care systems, are African biomedical scientists well equipped to combat emerging and non-communicable diseases, was a chance for me to participate in the struggle towards making professional lives of biomedical scientists successful and productive in Africa. It is non other than the conviction held by many that the contribution of biomedical scientists to health is without doubt central to the progress we desire that should inspire action to advance biomedical sciences.

I want to conclude by thanking Mr. Leoson Junior Ssetaba who was the Chairman Organizing Committee and doubled as GRC School of Biomedical Sciences for the unending zeal and dedication towards making this a reality. Great honour to him, the rest of the team and God above all. They didn't tire. They didn't fear. They didn't stop. My gratitude to them fits no measure at all.

Kayiwa Robert.

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ACKNOWLEDGEMENTS

We extend our gratitude to the numerous organizations and individuals whose effort and support contributed to making Makerere University's 1st African Biomedical Scientists' Conference (MAK 1ST ABMSC 2019) a great success.

Our immense gratitude goes out to Makerere University College of Health Sciences and particularly to the School of Biomedical Sciences, for enabling us organize this conference.

We in the same regard, thank the various organizations and individuals that extended both financial and technical support. Our heartfelt gratitude goes to School of Biomedical Sciences, National Drug Authority, ACHEST, Ebenezer Ltd Clinical Laboratory, MedVin Pharmaceuticals, School of Public Health, Jubilee Dental Clinic, MBN Clinical Laboratory, Vexilla Consultants, ElitePro, Joint Medical Stores, Permanent Secretary Ministry of Education and Sports, Microbiology and Family Medicine departments at College of Health Sciences.

We thank the Vice Chancellor Makerere University, Prof. Barnabus Nawangwe, the Principal College of Health Sciences Prof. Charles Ibingira, the Dean School of Biomedical Sciences, Prof. Moses Joloba, the Head of Microbiology Department Dr. Henry Kajumbula, Head Molecular Biology department, Dr. David Katete, Head Physiology department, Prof. Kasolo, Head Pharmacology Department, Dr. Jackson Mukonzo, Head Anatomy Department, Dr. Buwembo, Head Pathology Department, Dr. Lukande, Heads of family medicine and medical illustration departments.

We acknowledge the patronage efforts and services made by Dr. Kalanzi Joseph all the way through the organization process and most especially in planning and developing the conference concept note, call for abstracts and program as well guidance on varied invitations and requests for partnership and support made. We particularly acknowledge his significant financial and technical contribution to the success of this conference. We also thank him for his presence the whole time during the conference and technical advice on executing the conference program, most especially when changes had to be made abruptly due to absence with apology of Guest of Honour and a few other dignified speakers and persons.

We thank the representative of PS MOH who made efforts to come but was unable to, the panelists and partners who realized the importance of the conference and took their valuable time to attend and present their remarks thus showcasing their belief in and commitment to developing partnerships with us for the advancement of biomedical scientists.

We would also like to specially mention the enthusiastic support and the relentless spirit of the organizing committee who saw the practical day to day planning, organization and functioning of the conference.

Last, but not least, many thanks are due to all the presenters, participants, governmental and non-governmental partners who graced and supported the conference. Your positivity and optimism helped to make this event a great success. We hope you found MAK 1ST ABMSC 2019 worthwhile and look forward to working with you on the second.

Makerere University Biomedical Science Students' Association (MUBSSA) and MAK 1st ABMSC O.C

ACRONYMS

MAK 1ST ABMSC:	Makerere University's 1st African Biomedical Scientists' Conference
MOH:	Ministry of Health
ACHEST:	African Center for Global Health and Social Transformation
DHAPP:	Department of Defense HIV/AIDS Prevention Program
URC:	University Research Co. LLC
CHS:	Center for Human Services
CHS/SOBMS:	College of Health Sciences, School of Biomedical Sciences.

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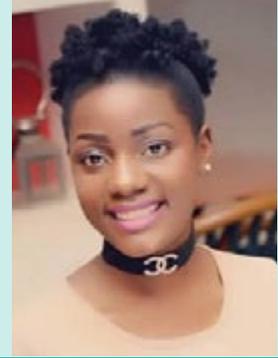
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SUMMARY

INTRODUCTION

Makerere University's 1st African Biomedical Scientists' Conference took place on 2nd March 2019, at Kampala Kolping Hotel. It was convened by Makerere University Biomedical Sciences Students' Association with support from the College of Health Sciences and Makerere University at large.

CONFERENCE THEME

Rethinking the global healthcare systems. Are Africa's Biomedical Scientists well equipped to combat emerging and non-communicable diseases?

SUB-THEME 1: Epidemiology, Disease burden and Risk Factors

Emerging diseases

1. Antimicrobial resistant infections
2. Viral haemorrhagic fevers (Ebola, Marburg, Crimean Congo haemorrhagic fever)
3. HIV/AIDS and associated Infections (Tuberculosis, Cryptococcal meningitis etc)
4. STIs (Syphilis, Gonorrhoea, Trichomoniasis, etc)

Non-Communicable diseases

5. Diabetes
6. Cardiovascular Diseases (Heart Failure, Hypertension, Ischemic Heart Disease)
7. Chronic Obstructive Pulmonary Disease (Asthma, Chronic Bronchitis, Emphysema)
8. Cancers (Cervical, Breast, Lung, Prostate, Gastrointestinal Cancers)
9. Sickle Cell Anaemia

SUB-THEME 2: Reflection on African Healthcare Systems

1. Strengths and weaknesses of the African healthcare systems
2. Hindrances and Gaps in handling the emerging and non-communicable diseases
3. Strategies and Solutions to strengthen African healthcare systems
4. History and Threats of Bioterrorism

SUB-THEME 3: Human Resource - The Role of Biomedical Scientists

1. Career choices and Opportunities
2. Work Force Education and Development
3. Resource and Data sharing
4. Contribution to Biosecurity

OBJECTIVES

1. To identify the strengths and weaknesses of the current African healthcare systems and opportunities therein.
2. To concretize the role of biomedical scientists in the African healthcare systems.
3. To improve the institutional status of Biomedical Scientists in Uganda and Africa (The Ugandan Context)
4. To build the capacity of Biomedical Sciences Students Africa wide with scientific writing, project implementation, advocacy and communication, leadership and fundraising skills.
5. To culture a spirit of research in Biomedical Sciences Students through research dissemination

EXPECTED OUTCOMES

A. Healthcare system analysis and concept development.

1. An in-depth understanding of current healthcare systems on the continent to combat emerging and non-communicable diseases.
2. Benchmarking the institutionalization of Biomedical Scientists in Uganda with developed countries where the profession has been established.
3. Institutionalization of Biomedical Scientists in Uganda for legal integration into the public service scheme of the Government of Uganda.

4. Introduction of UGANDAN BIOMEDICAL SCIENTISTS ASSOCIATION that will undertake process of registering the Ugandan Biomedical Scientists into a professional umbrella. The association will further champion all Biomedical Scientists' projects /purposes /struggles in the nation from then onwards. Attendees from other African Healthcare systems can do the same in their home countries after the conference.

B. Student development

1. Participants would be able to network and establish new strong collaborations with various students and professionals from different institutions/universities and countries for improvement in training and career development.
2. Participants will nurture research, scientific writing and presentation skills. They shall be challenged to write and read more as these are the backbones of "bench" biomedical research that is crucial in the development of discoveries and recommendations that translate into medicine, improved diagnostic and therapeutic strategies for the improvement of human and animal health.

BACKGROUND AND RATIONALE

The world population reached nearly 7.6 billion in mid-2017. It is growing at a rate of 1.1 percent per year and is projected to increase to roughly 8.5 billion by 2030 and 10 billion by 2050 (UN Department of Economics and social Affairs, 2017). This trend is taking place against a back drop of dramatic changes in the way humanity inhabits and interacts with the planet. Urbanization is exploding to such a point that more than half of the world's population lives in cities. This in combination with the ongoing industrialization of developing countries is dramatically changing the earth's biosphere. Natural disasters are becoming more frequent and more severe. (EM- DAT database, 2015). All of this has dramatic implications for public health and well-being of populations.

Emerging diseases such as Ebola, tuberculosis and HIV/AIDS in this era of antimicrobial resistance pose additional threats to countries. The outbreaks of these diseases are common in developing economies and very often, these outbreaks progress to serious epidemic crises. It is impossible to respond effectively to health crises without improving or strengthening the capacity of healthcare systems in developing countries. This is not only essential to the health of populations but also key to preventing the spread of epidemics across borders. In light of these shortcomings and new challenges, a rethinking of how to strengthen approaches to managing global health is needed more than ever (Independent on multi intension, 2017).

Non-communicable diseases (NCDs), such as cardiovascular diseases, cancer, diabetes and chronic respiratory diseases, are the leading global cause of death and are responsible for 70% of deaths worldwide. These NCDs share key

modifiable behavioural risk factors like tobacco use, unhealthy diet, lack of physical activity, and the harmful use of alcohol, which in turn lead to overweight and obesity, raised blood pressure, and raised cholesterol, and ultimately disease. They continue to be an important public health challenge in all countries, including low- and middle-income countries where more than three quarters of NCD deaths occur. Effectively tackling NCDs and their key risk factors requires a detailed understanding of the current status and progress as well as contribution from all healthcare professional. (Noncommunicable Diseases Progress Monitor, 2017).

According to a paper that was published by Financial Times this year entitled: Africa squeezed by burden of disease and lack of investment, Africa may be rising economically but progress on the health of its inhabitants remains strikingly sluggish. Outcomes have been rising gently and differences between countries reducing, but health life expectancy remains just at 53.8 years. As the recent Ebola outbreak in DRC highlights, with 77 deaths, infectious diseases are a significant threat in the region, lower respiratory tract infections, HIV, diarrhoea, and malaria stay on top for causes of death (Andrew Jack et al, 2018). Africa is also continually being challenged by Non-communicable diseases yet little is spent on health care and research; overall, just nine governments in Africa are spending more than \$500 per head per year on health and half spend less than \$140. Without greater commitment from African governments, health gains and access to treatment remain limited (Andrew Jack et al, 2018).

East Africa suffers a huge health gap and in Uganda, 75% of health care is accounted for by private spending. In this region of Africa, in addition to the globally prioritized NCDs; Diabetes, cancer, and lung disease, East Africa faces regionally important NCDs including rheumatic heart disease and sickle cell disease. These diseases that claim only 40% of the deaths are expected to rampantly take over the now debilitating communicable diseases (HIV and opportunistic infections, Viral haemorrhagic fevers and parasitic infections) as leading causes of disease in the next 20 years (Trishul Siddharthan, 2016). On 17th October 2017, the ministry of health, Uganda notified the world health organization of an outbreak of Marburg virus disease in Kween district, in eastern Uganda. As of 14th November, 3 cases had been reported with a case fatality rate of 100%, this is not to understate the recently declared outbreaks of Ebola and Crimean Congo haemorrhagic fevers in the country (WHO, 2018).

We ought not to turn a blind eye to the impending threat of bioterrorism with the use of anthrax, small pox and other biological weapons by non-state armed groups posing a grave threat to global security as well as health of millions. Advances in biotechnology and genetic engineering combined with readily available information for manufacturing biological agents means that the threat of bioterrorism is more likely to occur now than ever before (Syra Madad, 2014). The risk has been further heightened by attempts by some radical groups to develop bioweapons and release them into civilian populations. (The Hague Center for Strategic Studies, 2016).

Since Biomedical Scientists are at the heart of healthcare, all of them have ethical responsibilities to prevent bioterrorism, including duties related to research, publication, editorial review, public education, expert opinion, advocacy for responsible conduct of Biomedical Research and very importantly, reporting suspicious activity. Globally, bioterrorism should be prevented and healthcare of all should be facilitated at the intervention of Biomedical Scientists.

CONFERENCE OUTCOMES

1. Uganda Biomedical Scientists' Association successfully introduced.
2. Aims and objectives/goals for introduction of Bachelor of Science in biomedical sciences degree program successfully at Makerere University retrieved.
3. Strengths of African Healthcare systems identified.
4. Opportunities for Biomedical Scientists in global healthcare systems identified.
5. Gaps for improvement in the Health systems identified.
6. Role of Biomedical Scientists in African healthcare systems identified. (Ugandan context)
7. Different avenues for registration/recognition of biomedical scientists by Allied Health Professionals' Council explored. Alongside peaceful negotiations by the University with AHPC, the students and alumni agreed to take the quest for recognition legal and whence activities for industrial action are under organization.
8. Recent research by Biomedical Science student, alumni and a few other professionals presented.

CONFERENCE KEY RECOMMENDATIONS

1. Recognition and integration of Biomedical Scientists into the African healthcare systems.
2. Strengthen multi-sectorial collaborations to escalate the healthcare systems.
3. Increase investment in health workforce education and development (most especially in training biomedical scientists) to improve scientific research and innovation and ultimately quality of healthcare delivery.
4. Outsource for international inter-university collaborations in nurturing biomedical scientists with assistance from the university, governmental and non-governmental organizations.
5. Outsource for local MOUs with locally based research organizations, laboratories and universities.

OPENING

Welcome Remarks

Mr. Gobba Solomon, Projects Coordinator MUBSSA and Mr. Busuulwa Ian Peter, President of Makerere University Biotechnology Students Association were the

Conference's Anchors. They introduce the speakers, engaged the audience and ensured that the program flowed seamlessly.

Opening Prayer

A participant thanked God for convening participants and prayed that the conference yields fruition.

ABSTRACTS AND PRESENTATIONS.

Presenter 1. Asio Gloria Joy.

MIRU-VNTR Genotyping of Mycobacterium tuberculosis isolates obtained from Uganda

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Introduction

Tuberculosis (TB) is one of the most common global health problems and also one of the world's deadliest communicable diseases. For example, in 2014, an estimated 9.6 million persons developed tuberculosis, and 1.5 million died. Uganda, like other Sub-Saharan countries, continues to identify thousands of tuberculosis (TB) cases (43,858 TB patients of all types were notified in 2015/16), yet these are only half of the estimated TB cases. The WHO has classified Uganda as a country with a high burden of TB. However, there currently is little information available regarding prevalent genotypes circulating in Uganda.

This study aimed at identification of Mycobacterium tuberculosis strains present in the 17 isolates obtained from Uganda and to determine the most predominant strain of the different M. tuberculosis strains in Uganda.

Methods

MIRU-VNTR genotyping was carried using 15 different loci with dissimilar Variable Number of Tandem Repeats (VNTRs) which were then PCR-amplified, and analysed to obtain fingerprints of unrelated Mycobacterium tuberculosis species.

Results

This study proved presence of selected representative isolates that included Beijing, EAI, Delhi/CAS, Ghana, Uganda I and Uganda II in Uganda. Furthermore, this study deduced, Uganda II was the most predominant genotype (with a percentage of 46.15%), followed by Delhi/CAS and Ghana each with a prevalence of 15.38%.

Conclusion

MIRU-VNTR genotyping confirmed earlier reports that MTB strain "Uganda genotype" is the predominant lineage in Kampala, Uganda.

Recommendations: Adherence to treatment regimen should be strengthened by the National tuberculosis control program to stop on-going transmission of

tuberculosis. Data on sub-lineages need be analysed by age and sex, in order to draw firm conclusions from such a study. A similar study should be carried out country wide (on a large number of isolates or rather on a large scale) in order to come up with conclusive analysis which would be largely important in policy making and implementation of TB control program.

<https://www.slideshare.net/MAK1stABMSC2019/miruvntr-genotyping-of-myco-bacterium-tuberculosis-isolates-obtained-from-uganda-137123982>

Presenter 2. Faridah Mugala.

PROPORTION OF CARBAPENEM RESISTANCE AMONG ENTEROBACTERIACEAE ISOLATES AT THE CLINICAL MICROBIOLOGY LABORATORY, MAKERERE UNIVERSITY.

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Background

Enterobacteriaceae is a family of Gram-negative bacteria that form part of normal inhabitants of the intestinal flora and among the most common human pathogens, causing infections that range from cystitis to pyelonephritis, septicaemia, pneumonia, peritonitis, meningitis, and device-associated infections. They are the most common source of both community- and nosocomial infections. B-lactam drugs are the primary therapeutic options for such infections, unfortunately, they are becoming increasingly resistant to many commonly prescribed antibiotics. Carbapenem in particular having a broad-spectrum antibacterial action is used as the last resort for controlling infections caused by Gram-negative bacteria that are resistant to the other β -lactam drugs. However, recently, carbapenemase-producing Enterobacteriaceae (CPE) that inactivate these antibiotics have increased and have emerged worldwide and have become a major concern.

Main objective: To determine the proportion of carbapenem resistant Enterobacteriaceae isolates from clinical samples between 1/1/15 to 31/3/18 and the comparison of the modified carbapenem inhibition method with the conventional carbapenemase screening methods.

Research methodology: This was a retrospective document review and experimental study. It consisted of both a quantitative and qualitative study which involved reviewing stored laboratory records and carrying out IMP/EDTA synergy test, Boronic acid-based inhibition method, MHT and mCIM with 30 most carbapenem resistant Enterobacteriaceae spp including *Pseudomonas* and *Acinetobacter* spp. Data was collected on the following samples: CSF, blood, sputum, tracheal aspirates, endocervical, wound swabs, pus swabs, ear swab, ascitic fluid, tissue, urine, catheter tip, joint effusions and pleural fluid.

Results: The proportion of carbapenem resistance was 347/1281(27.09%) among

the isolates that qualified for carbapenemase screening, with *Klebsiella* spp as the most isolated species from sputum with the highest carbapenem resistance of 30%. We did isolate 4 KPC, 1 AmpC and 14 metallo-beta- lactamases. This study showed a low proportion of carbapenem resistance but over the years this resistance has increased compared to the previous years with an increase of 4.69% from the 22.4% phenotypic reported in 2015 by Okoche et al.

Conclusion and recommendations: This study therefore states that this resistance should be kept under surveillance for epidemiological and infection control purposes. The mCIM method should be adopted by the laboratory as a routine method for detection of carbapenemases since its cheap and easy to carryout. The laboratory should be more efficient in screening for resistant organisms and reporting them for better management of patients. This is very critical because lives can easily be lost when such preventive measures have not been emphasized and taken seriously.

<https://www.slideshare.net/MAK1stABMSC2019/proportion-of-carbapenem-resistance-among-enterobacteriaceae-isolates-at-the-clinical-microbiology-laboratory-makerere-university>

Presenter 3. Brian Kalule.

Title

The barriers to utilization of antiretroviral therapy for the elimination of mother-to child transmission of HIV in low-resource settings: A review of literature with case studies from Uganda.

Kalule Brian Kasule; MSc. Public Health (Global Health)

Background

The advent of Option B+ policy ensued universal ART access to pregnant and breastfeeding; greatly reducing the rate of vertical HIV transmission in resource-limited settings. However, programs aimed at eliminating vertical transmission suffer from high attrition at different stages of the treatment process, which has limited the impact of such interventions for HIV-exposed infants. This study highlights some of the barriers to utilization of this program in SSA countries using case studies from Uganda.

Methods

This work was based on a review of literature published between 2011 and 2017. The scientific literature search was carried out using databases like PubMed, Web of Science, and Scopus. Qualitative, quantitative articles and conference papers written in English on the barriers of EMTCT focusing on Option B+ in sub-Saharan Africa were all included. The review of literature was enhanced with case studies using model EMTCT centres from Uganda.

Results

The study revealed a constellation of health systems barriers such as fragmentation of healthcare, accessibility challenges, resource constraints, and weak institutional capacities. The barriers related to the health systems were

inextricably bound to the health seeking behaviour challenges. The barriers to healthcare seeking included; program design, low level of male partner involvement in treatment, failure to disclose serostatus, ARV misuse, AIDS related stigma and discrimination, knowledge gaps, vulnerable periods, and cultural dispositions, that may lead to underutilization of EMTCT and missed opportunity in zeroing vertical transmission in low-resource settings. However, these programs have devised some mitigation mechanisms such as supported disclosure, partner service clinics, creating awareness through health education, family and community engagement.

Conclusion

Lifelong antiretroviral therapy programs remain threatened by several barriers due to either the configuration of health systems or health seeking behaviours of service-users. The barriers to utilization of lifelong treatment from both the sub-Saharan Africa and Uganda were quite similar. The review also identified some important facilitators to utilization that could help overcome some of the barriers if implemented. In order to overcome these barriers to utilization of EMTCT, countries with limited resources should put much emphasis on addressing the broader health systems challenges.

Keywords

EMTCT; Option B+; PMTCT; PLHIV; mother-to-child transmission; Sub-Saharan Africa; low-resource setting.

Presenter 4. Ntonde Usher Kirungi.

Biomedical Engineering Student at Mbarara University of Science and Technology.

HYDROCEPHALUS TREATMENT; Reducing the infection rate by use of antimicrobial impregnated catheters in the shunt systems.

NTONDE USHER KIRUNGI kirungiusher@gmail.com

Hydrocephalus is the most common neurosurgical condition in children and is a major contributor to the global burden of surgically treatable diseases. Hydrocephalus is a condition in which excessive accumulation of cerebrospinal fluid in the brain increases intracranial pressure. It is common in infants with an observable sign of a swollen head. The most common and effective treatment of hydrocephalus is the Cerebrospinal Fluid shunt system implanted into the brain ventricles to drain excess cerebrospinal fluid into the peritoneal cavity and it has been used for over 50 years.

The burden of hydrocephalus in developing countries is that many families do not have ready access to treatment or neurosurgical care. Other factors have led to death of infants due to hydrocephalus for example parents feeling shame carrying around a child with a large head, unawareness of treatment, poverty, initial use of traditional healing methods, ignorance of early signs and symptoms and lack of easy access to health care.

In Sub-Saharan Africa, hydrocephalus in infants may alone represent more than 100,000 new cases per year. Yet excluding South Africa, Sub-Saharan Africa has fewer than 100 neurosurgeons. In East Africa, there is 1 neurosurgeon per 10 million people and in Uganda, hydrocephalus accounts for 59% of neurosurgical conditions.

Infection of shunts is the most prevalent cause of shunt failure in the treatment of hydrocephalus resulting in morbidity, mortality, prolonged hospitalization, higher number of revision surgeries and therefore high costs. Infections can be caused by bacteria entering the skin during the insertion procedure or bacteria adhering to the inner surface of the catheter due to microscopic surface irregularities hence leading to biofilm development.

Bacteria adhering to the outer surface of the shunt catheter can be cleaned by the cellular immune system but the inner surface is isolated from the immune system and provides an environment for bacteria colonization eventually leading to shunt failure.

Antimicrobial impregnated catheters have been used since they allow sustained release of antimicrobial agents and protect both the inner and outer surfaces of the catheter reducing on bacteria colonization and spreading.

<https://www.slideshare.net/MAK1stABMSC2019/hydrocephalus-treatment-reducing-the-infection-rate-by-use-of-antimicrobial-impregnated-catheters-in-the-shunt-system>

Presenter 5. Owot Raymond.

**Bachelor of Social Work and Social administration. Makerere University
Presentation on Sub-Theme 2: REFLECTION ON AFRICAN HEALTHCARE
SYSTEMS**

Health is a huge concern that affects each one of us in society. As a broad definition, it has various meanings from the ideas and thoughts of different authors, philosophers, and educationists. Good health is not all about having a healthy body but also involves the aspects of the mind and the surrounding environment. According to Mahatma Gandhi, he quoted that “It is health that is real wealth and not pieces of gold or silver.” In the space of every coin has two sides, the health sector has two sides that is the strength and the weaknesses. Health in general has greatly reduced on the mortality rates of individuals for example women, children, elderly, and men among others. This has risen the life expectancy of individuals thus adding more years to people’s lives. However, having improved on the lives on individuals, evolution of the world has made health to take a U-turn from traditional to modern health services which has made these amenities more effective, efficient, and reliable to individuals who can access them. Though these health services have experienced a step back due to understaffing, distortion and mainly located in urban areas which affects the bulk of the population that resides in rural areas and rely a lot on traditional medicine to meet basic health needs. The health sector is also highly dominated by the private sector whose user fees aren’t favorable to majority of the

population that is barely distant from the poverty line of two dollars per day according to the UN and World Bank. As we can observe from the research and stasticians in that field, our continent Africa has a number of excellent health providers but the majority are privately owned for example Gambro health care located in Swaziland, AIC Kapsowar Hospital located in Kenya, Institute Pasteur de Madagascar located in Malagasy Republic among others. Some of the health providers are publicly managed by the different governing bodies but are not satisfying the required needs of the masses. This has posed a great question on people's minds "When illness or outbreaks erupt who will support me through the pain and anguish plus suffering?" this has made masses to opt for reform rather 7than retreat because times have changed and the once treasured traditional formulae for treating illnesses is downs capping due to environmental degradation, westernization among others. Therefore there are key measures that need to be put in place to rotate our health sector back on track as follows; reallocation of expenditure among different levels of health care system, introduction of new high cost and high efficiency basic health technologies, large cuts in public health expenditure, improved economic and political environment, anti-poverty measures, improving targeting and decentralization of health expenditure, increasing basic flow of resources to basic social services, move towards a multiplicity of service providers among others. All these measures cannot fully take effect if there are other issues at hand that aren't addressed like economic decline, complex humanitarian emergencies, famine among others. However, it's important to note that without a shift to a new model of economic development, to a more stable political condition and to a less tense ethnic and social relation, it will be difficult to improve permanently, substantially, and rapidly the health status in many African countries.

Presenter 6. Kibuule Michael

Preparedness of Health Care Systems for Ebola outbreak response in Kasese and Rubirizi Districts, Western Uganda

Author: Kibuule Michael, Master of Public Health-Disaster Management, School of Public Health Makerere University kibuule.michael@gmail.com +256772949430.

Background

The West African Ebola virus disease (EVD) outbreak in 2014, led to rise of countries globally to step up preparedness efforts. Preparedness is knowledge and other capacities developed by individuals, communities, governments, professional response and recovery organizations, to effectively anticipate, respond to, and recover from impacts of likely and imminent or current hazardous events or conditions.

Methods

The study was conducted in Western Uganda using across sectional descriptive study design to determine the level of health care system preparedness of different health facilities. A total sample of 189 health care workers were interviewed using a structured questionnaire and 22 health facilities were

assessed. Data was summarized using descriptive statistics, disaggregated by district and type of health facility and presented using frequencies and proportion in appropriate tables and figure. Logistic regression analysis was used to determine the association between the covariates and the dependent variable. Odds ratio and confidence intervals were reported for the unadjusted and adjusted estimates.

Results

Overall 55% (12/22) of the health facilities were categorized as not prepared in terms of infrastructure. Similarly, 55% (12/22) of HFs found not have adequate logistic capacity. Overall, 54% (102/187) of HCWs were not knowledgeable about Ebola Virus Disease. The Older HCWs were 67 times less likely to be knowledgeable OR, 0.33 CI: (0.11-0.91).

Conclusion

Above district's health care system is not prepared for Ebola outbreak and response. Infrastructure, logistics and knowledge of health care workers had gaps. I recommend that districts trains, form well-structured Rapid Response Teams, organize, conduct top-table simulation exercises and avail case definitions to facilities.

Word count: 300

Key Words: Preparedness for Ebola outbreak and response.

<https://www.slideshare.net/MAK1stABMSC2019/preparedness-of-healthcare-systems-for-ebola-outbreak-response-in-kaseses-and-rubirizi-districts-western-uganda>

Presenter 7. Kayiwa Robert.

Finalist student of biomedical sciences at Makerere University.

He presented excellently on behalf of Leocardia Kwagonza from Uganda Cancer Society.

Understanding cancer burden and risk factors in Uganda.

Power Point presentation.

<https://www.slideshare.net/MAK1stABMSC2019/understanding-the-cancer-burden-and-risk-factors>

Presenter 8. Hassan Wasswa.

Finalist student of cytotechnology at Makerere University.

Imprint Cytology.

Power Point presentation.

<https://www.slideshare.net/MAK1stABMSC2019/role-of-imprint-cytology-in-the-diagnosis-of-breast-tumors-at-mulago-hospital>

Presenter 9. Dr. Eric Lugada.

Epidemiologist. DHAPP, URC, LLC. Transformational leader in global/public health.

[A little about Dr. Eric Lugada](#)

Dr. Eric Lugada is a medical epidemiologist and an experienced leader in the global/public health with a bias towards transformational leadership. Since the month of February 2019, he has served as the Program Director, Department of Defiance HIV/AIDS Prevention Program (DHAPP) Uganda at the University Research Co., LLC (URC)

And Center for Human Services (CHS), Kampala Uganda. He was the ASSIST North Director at the University Research Co., LLC (URC) and Center for Human Services (CHS), Gulu, Uganda from November 2016 to September 2017. He was the Senior Technical Advisor at Axios Foundation Inc., Uganda from November 2014 to November 2016. He was also the Country Director at Axios Foundation Inc. Nigeria and Sudan from August 2009 to October 2014. Dr. Eric was also the Director Program Implementation Unit/Associate Research Scientist ICAP at Colombia University, Nigeria and Director of Research, Monitoring and Evaluation at Axios Foundation Inc., Tanzania. He was also the Medical Epidemiologist at Centers for Disease Control and Prevention (CDC) Uganda and the Global AIDS Program (GAP), Uganda. He was also the Project Officer CDC and GAP, Uganda. Dr. Eric was also the Medical Officer at Medical Research Council (UK), Uganda. He is a graduate of Makerere University (MBChB) and the University of Bergen (PhD Epidemiology).

Epidemiology, disease burden and risk factors for emerging and non-communicable diseases.

He elaborately, while tactfully involving he audience presented the burden of epidemics in Africa and highlighted the fundamental role of innovation and development of new cutting age research biomedical scientists have to serve to change the status quo.

Power Point presentation.

<https://www.slideshare.net/MAK1stABMSC2019/epidemiology-of-disease-burden-in-uganda>

Presenter 10. Dr. Elsie Kiguli-Malwadde.

Director Health workforce education and development, ACHEST.

A little about Dr. Elsie Kiguli-Malwadde

Dr. Elsie Kiguli-Malwadde is the Director of the MEPI Coordinating Center for Global Health and Social Transformation (ACHEST). She had until December 2010 been an associate professor and head of the department of Radiology at the College of Health Sciences, Makerere University. She worked with Makerere University for 14 years. Apart from her radiology training she is a Fellow of the Foundation for the Advancement of Medical Education and Research (FAIMER). She also holds a Masters in Health Professional Education from Maastricht University in the Netherlands.

Dr. Elsie is a graduate of Makerere University where she received both her MBChB and Masters in Medicine in Radiology. She has been at the forefront of promoting and enhancing quality health professions education in Radiology, General

Medicine, Medical Radiography, and other health professions within Uganda and has over 14 years of experience directly supervising academic medical research at both the undergraduate and postgraduate levels. She has been involved in Faculty committees responsible for curriculum development, medical and research ethics development, and developing ethical procedures for quality medical research in Radiology and other health professions education. She has worked extensively with Mulago Hospital and Makerere University College of Health Sciences as a key member of various Faculty project teams involved in enhancing professional health education in Uganda and assessing training needs within the medical profession. She has published many journal articles in Radiology and Imaging, as well as in Medical Education, and has presented papers at many international workshops and conferences. She has been a Global Faculty discussant and advisor in Philadelphia. She has been a member of the Faculty for the South African FAIMER Institute (SAFRI)

She merited the choice for the talk on health workforce education and the Keynote address.

Health workforce education and development and human resource in the health sector.

Dr. Elsie started her excellent inspirational presentation by encouraging all participants to work hard and emphasizing that there is no shortcut to success but hard work. She talked about how the health workforce drives everything in health systems and on the flip side of things in Africa, noted that there is inadequate health workforce density as compared to the disease burden and called for changes to meet the need for better training and retention of health workers in Africa.

Dr. Elsie further encouraged the participants to pursue big research carriers. During the Q and A session, two of the participants inquired about the measures ACHES has in place to register for recognition/registration of biomedical scientists and honestly declared that she personally didn't know they weren't registered but further encouraged us to approach the target bodies and ministries to advocate for biomedical scientists and pursue registration.

Power point presentation.

<https://www.slideshare.net/MAK1stABMSC2019/health-workforce-education-and-development-and-human-resource-in-the-health-sector>

Presenter 11. Mohammed Tariq.

B. Pharm, MBA (UK), MSc Pharm.med (Germany)

Director Operations. MedVin Pharmaceuticals.

He presented about what MedVin does. He further talked about the contribution of pharmaceutical industries to the epidemiological sector also and emphasized the undisputable role of biomedical scientists in pharmaceutical research and the dire need for Uganda and Africa at large to develop a large workforce for bio-

medical scientists. The Q and A session was a very interesting one especially during his reaction to a question about AMR and the measures MedVin is taking against it. He said MedVin, like so many other pharmacies follow regulatory guidelines most especially in dispensing drugs and are investing in research and innovation for combating AMR. It even got more interesting when a participant inquired about the employment opportunities biomedical scientists have in the pharmaceutical industries. He then emphasized the point he had made earlier about research in the pharmaceutical industries and how important biomedical scientists are in this field. He noted that pharmaceutical companies like MedVin are ready to invest more than 30% of their profits from sales in research for the discovery of a new active ingredient.

KEYNOTE ADDRESS: REFLECTION ON AFRICAN HEALTHCARE SYSTEMS.

By Dr. Elsie Kiguli-Malwadde.

Director Health workforce education and development, ACHEST. She enlightened the audience about ACHEST and what they do. She talked about health and emphasized ownership of health outcomes, partnerships and collaborations between individuals and organizations, health systems and the necessity for integration of biomedical scientists to harmonize multisectoral approach and the necessary government efforts to realize universal health coverage and implications for Uganda.

Power point presentation.

<https://www.slideshare.net/MAK1stABMSC2019/reflection-on-african-healthcare-systems-the-ugandan-context-and-health-systems-implications-for-uganda>

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PANEL DISCUSSION: INSTITUTIONALIZATION OF BIOMEDICAL SCIENTISTS

Moderated by Dr. Kalanzi Joseph,
Head Department of Emergency Medicine.

He gave an excellent preamble of the purpose of the panel discussion and most ably introduced the panelists and their roles.

Mr. Talemwa Seti

Distinguished Student Leader at Makerere University.

Former President of Makerere University Medical Students' Association. Introduction of Bachelor of Science in Biomedical Sciences at Makerere University.

The Goals, Aims and Objectives.

http://mbl.mak.ac.ug/index.php?option=com_content&view=article&id=29&Itemid=106

He highlighted the main goals/aims/objectives the University/College of Health Sciences had for the introduction of bachelor of science in biomedical sciences and these were indeed novel ones. Namely:

Program goal

To build capacity for enhancement of excellence in health care delivery, biomedical research, Biomedical training, and acceleration of the training of medical doctors and dentists, and Improved medical education in all tertiary health training institutions, both public and private in Uganda and the region at large.

Specific program objectives

1. To produce biomedical scientists with sufficient competencies to enrol on clinical medicine, and other health professional programs, as a postgraduate program.
2. To train biomedical science graduates with knowledge and skills to support health care delivery in any community in Uganda and the region.
3. To equip graduates with knowledge and skills for safe and scientific biomedical practices.
4. To produce biomedical science graduates with sufficient Knowledge skills, and ethical conduct to work as part of a team in health care delivery.
5. To produce biomedical science graduates with the necessary entrepreneurial and managerial skills to support biomedical industries in the country
6. To produce biomedical scientists with sufficient competencies to conduct biomedical research
7. To produce biomedical scientists with sufficient competencies to undertake graduate training in the same specialities to become teachers in biomedical sciences in the various tertiary health professional training institutions in the region.

Career Path of a grandaunt of Bachelor of Science in Biomedical sciences.

He elaborately informed participants of all the avenues of professionalism gradaunds of the course could pursue in and out of the country namely: Academia including but not limited to administration and teaching, Scientific research, Laboratory jobs. He further noted that all these were achievable on basis of one's level of academic achievement in the biomedical sciences.

Mr. Hannington Semitala.

Pioneer student of Biomedical sciences. Senior Alumnus.

Celebrated Leader in Makerere University.

Former President College of Health Sciences.

Narrative of encounter with the University Administration and Allied Health Professionals Council Leadership in the quest for AHPC to register/recognize biomedical scientists.

He noted sadly that all their efforts, peaceful talks and meetings with AHPC were futile and that the resistance they mate from AHPC had left professional grounds and had unfortunately become personal, explaining their adverse negativity.

Strategies taken before and way forward.

He called for peaceful demonstrations by Alumni and students against AHPC negativity alongside the peaceful talks by the University Administration. Hannington called for a legal approach against AHPC and noted that preparations are already in the pipeline. He however brought to the attention of the participants that this was an expensive venture that called for resource mobilization amongst the students and alumni of the course to raise the amount of * million in total to pay Counsel Semakadde for his legal services.

Dr. Ekwaro Obuku.

President Uganda Medical Association.

A little about Dr. Ekwaro Obuku.

A natural leader, Ekwaro A. Obuku started his political career as a community mobiliser since his school days in St. Mary's College Kisubi (SMACK, 1992 - 1998) where he was Sports Prefect, Kiwanuka House and Captain SMACK Eagles Basketball team captain. While at University (1998 - 2003), Ekwaro was the President SMACK Old Boys Association, campus chapter; Secretary for health and eventually Chairman of the Gallant Rats in Mitchell Hall. Before ascending to the Presidency of the Uganda Medical Association, Ekwaro served as the Mobilization Chief (2013 - 2015) and Secretary General (2015 - 2017) in both cases elected unopposed, where he instituted policies that tripled accrual of membership from 300 in 2013 to 1,000 in 2017.

In his campaign for the UMA Presidency, Ekwaro focused on the following 10-point program:

1. Agenda setting through a new UMA 5-year strategic plan 2018 - 2023 focusing on People, Problems, Policy and Politics.
2. Open UMA diaspora chapters to expand participation of Ugandan Doctors globally.
3. Increase civic awareness of Ugandan Doctors via Legislative reforms and legal AID.
4. Establish the AMA Investments Limited (UMAIL) as a special purpose vehicle for the UMA plaza and other private sector driven enterprises.
5. Negotiate to lift ban on recruitment for 1,000 government Doctor jobs.
6. Promote professionalism through ethics and standards.
7. Engage His Excellency President Museveni constructively to build a new consensus around "health is wealth"
8. Scholarships for Senior House Officers worth 2.5 billion Uganda Shillings.
9. Hostels for Junior House Officers (Intern Doctors)
10. Strengthen labor and industrial relations via the Mungherera Petition.

Ekwaro A. Obuku is a medical doctor (M.B., Ch.B., Makerere University 2003) and a clinical trialist (MSc. Clinical Trials, University of London 2009) with experience in implementing large public TB and HIV programs. He has worked with local and international state and non-state agencies including the Adjumani District Local Government; Arua Regional Referral Hospital; National TB and AIDS Control Programs; Infectious Diseases Institute (IDI), Makerere University; Case Hospital; Makerere University Business School clinic (MUBS); Makerere University Joint AIDS Programme (MJAP); Joint Clinical Research Center (JCRC) and the University of Maryland/Institute of Human Virology. Ekwaro is a PhD Research Fellow in Health Policy at Makerere University College of Health Sciences.

It is his level of achievement and professionalism that inspired us to invite him a panelist to talk about the "Multi-sectorial collaboration in combatting health challenges"

Multi-sectorial collaboration in combatting health challenges.

He ably and tactfully elucidated the role of biomedical scientists and their importance to the practicing doctors. He further highlighted the mile stones achieved by other countries that have relentlessly pursued multi-sectorial collaboration in healthcare delivery.

Dr. Obuku, just like Semitala, also brought it to our attention that denial of licensure for biomedical sciences by AHPC could most probably have reasons beyond professionalism. He further encouraged all alumni and students of the course to relentlessly pursue and focus on opportunities beyond those that are government availed. He noted the availability of great research and teaching opportunities with multiple research/health organizations and universities.

He suggested that the Alumni and students, together with the administration should increase their efforts and noted that the former should actually put in more than the later if positive results are desired sooner than later. To emphasize his point, more so in reaction to a question by a participant, Dr. Obuku further noted that gradaunds of the course needed a practicing license to be in position to pursue employment opportunities abroad and therefore the sooner they got recognition the better.

In addition, he advised participants to solicit for placements with other universities, more so international universities with great research profiles and local and international research organizations. He suggested that students should more urgently pursue for placements with research projects of their lecturers for capacity building and mentorship.

He recommended that if we were to achieve all these, we needed to form an umbrella association for Uganda Biomedical Scientists and register it as a limited organization and not a non-governmental organization. He also asked us to register MAK ABSMSC as a limited organization too and concluded his powerful submission.

INTRODUCTION OF UGANDA BIOMEDICAL SCIENTISTS' ASSOCIATION

It was at that juncture that Mr. Habi Joseph, President Makerere University Biomedical Science Students' Association, introduced the Uganda Biomedical Scientists' Association that we were working on, together with the alumni, tirelessly to found. In his speech, he brought it to the attention of the participants that the aim of the O.C was to launch this association together with Dr. Ekwaro Obuku but this didn't happen because of the great challenges, more so in finding the alumni who would constitute the executive of the association. However, most of the fundamental requirements were already in place and thus the introduction of the association at the conference. The association shall have advocacy, scientific, research and executive committees. It is this association that shall spear head all interests for biomedical scientists in Uganda, starting with those developed from this conference. We hope to launch it official any time soon.

Resolutions/Strategies/Way forward were ably developed from Q and A session/Open discussion after submissions by panelists. These are listed as conference outcomes already.

CONFERENCE CLOSURE

Closure address.

Mr. Odoi Erisa

From the department of physiology, College of Health sciences.
Senior student of Biomedical sciences at Makerere University.

Mr. Odoi Erisa literally summarized the conference discussions and activities. He did not stop there. Mr. Odoi also gave a word of encouragement to participants, highlighted a very important development and upgrade at the department of physiology and most especially in their laboratories and encouraged biomedical sciences students and alumni to take up their roles there. He further stressed the need for biomedical scientists to get integrated into the healthcare system and scheme of public service.

He then invited dr. Ekwaro Obuku to give the closing remarks.

Closing remarks.

Dr. Ekwaro Obuku

President Uganda medical association.

Dr. Obuku, thanking the organizing committee, praising the persistence of the members O.C that approached him in person and recognizing the distinguished performance of the presenters, panelists and participants in the audience, called upon the alumni and students and all participants to be very proactive in all endeavors. Introduction of Uganda Biomedical Scientists' association was a brilliant step and great efforts should be taken to make it a success. He drew the audience's attention back to his suggestions/advice and recommendations more about pursuing inter-university and international collaborations and was honored to declare the conference closed.

APPENDICES

About Biomedical Sciences at Makerere University.

http://mbl.mak.ac.ug/index.php?option=com_content&view=article&id=29&Itemid=106

<https://courses.mak.ac.ug/programmes/bachelor-biomedical-sciences>

PROGRAMME

TIME	ITEM	FACILITATOR
08:00am-08:15am	Arrivals and Registration	Organizing Committee
	Presentation of Abstracts	
08:15am-08:25am	MIRU-VNTR Genotyping of Mycobacterium tuberculosis isolates obtained from Uganda	Emmanuel Biryabarema
08:25am-08:35am	The barriers to utilization of antiretroviral therapy for the elimination of mother to child transmission of HIV in low resource settings.	Kalule Brian Kasule
08:35am-08:45am	Proportion of carbapenem resistance among Enterobacteriaceae isolates at the clinical microbiology laboratory, Makerere University.	Faridah Mugala
08:45am-08:55am	Hydrocephalus treatment: Reducing the infection rate by use of antimicrobial impregnated catheters in the shunt systems	Ntonde Usher Kirungi
08:55am-09:05am	The impact of unrealistic drug screening and marketing on public health: Clinical analysis of probable drug related disorders.	Yilka Tariku
09:05am-09:15am	Preparedness of healthcare systems for Ebola outbreak response in Kasese and Rubirizi districts, Western Uganda	Kibuule Michael
09:15am-09:25am	Cancer burden and risk factors in Uganda	Leocadia Kwagonza/Kayiwa Robert
09:25am-09:35am	Healthcare systems	Owot Raymond
09:35am-09:45am	Cancer	Hassan Wasswa
10:15am-10:30am	Morning tea	Organizing Committee

10:30am-11:30am	Epidemiology, disease burden and risk factors for Emerging and Non-communicable diseases.	Dr. Eric Lugada
11:30am-12:00am	Opening Ceremony	Dr. Kalanzi Joseph (Patron MUBSSA) Prof. Charles Ibingira (Principal College of Health Sciences) Dr. Diana Atwine (Permanent Secretary Ministry of Health)
12:00am-01:00pm	Implementation science	Prof. Achilles Katamba
01:00pm-02:00pm	Lunch	Organizing Committee
02:00pm-02:20pm	Health workforce education and development and Human Resource in the health sector	Dr. Elsie Kiguli Malwadde African Center for Global Health and Social Transformation (ACHEST)
02:00pm-02:30pm	Medvin Presentation	Medvin
02:30pm-02:50pm	Keynote Address: Reflection on African Healthcare systems - The Ugandan Context	Dr. Elsie Kiguli Malwadde African Center for Global Health and Social Transformation (ACHEST)
02:50pm-05:00pm	Panel Discussion: Institutionalization of biomedical scientists	Moderator: NBS Representative Mr. Samson Kasumba Panelists: <ul style="list-style-type: none"> • Ministry of Health Representative • Dr. Ekwaro Obuku (President Uganda Medical Association) • Prof. Moses Joloba (Dean School of Biomedical Sciences, CHS) • Mr. Hannington Semitala (Senior Alumnus) • Mr. Talemwa Seti (Student Representative)
Working tea	Evening Tea	Organizing Committee
05:00pm-05:15pm	Introduction of Uganda Biomedical Scientists' Association (Association for Alumni)	Dr. Ekwaro Obuku Ministry of Health representative
05:15pm-05:30pm	Closing Ceremony	Dr. Kalanzi Joseph Dr. Ekwaro Obuku

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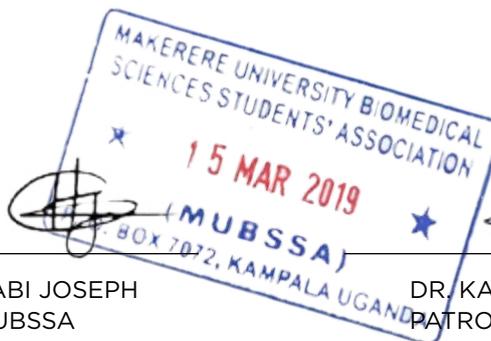
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LEOSON JUNIOR SSETABA
CHAIRMAN



HABI JOSEPH
MUBSSA
PRESIDENT

DR. KALANZI JOSEPH
PATRON



2ND MARCH 2019