HiC

HEALTH INNOVATION CONFERENCE

REPORT 2021

https://theacademy.co.ug/conference-2021/

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"Collaborating to transform: Lessons from the Pandemic"

Background:

The 3rd Annual Health Innovations Conference, organised by the Academy for Health Innovation at The Infectious Diseases Institute, is a true testament to the resilience and ever evolving nature of the health Innovations landscape in Uganda and the world over.

The Health Innovations Conference (HIC), now in its 3rd year, is an international networking platform that brings together innovators in health, students, Medical workers, government institutions, and Organizations (local & International) with a similar cause; to drive innovations that lead to improved access to better health care. It was born out of a need to create collaborations and partnerships around technological innovations in health. It is hosted by The Academy for Health Innovation, at the Infectious Diseases Institute (IDI) in Makerere University.

The HIC 2021 brought together Innovators, Policy makers, Funding agencies and Implementing partners to discuss the critical lessons from the

pandemic and importantly, the role of leveraging technology in addressing the challenges, with the overall objective of building resilient healthcare systems

The two-day virtual Conference, under the theme Collaborating to Transform: Lessons learned from the Pandemic, was officially opened by Hon Dr Monica Musenero, Minister of Science, Technology and Innovation.

"We need to realize the value of collaboration towards development in all sectors including health. This will create progress and positive change towards the general population as well as the quality of life." - the Honourable Minister encouraged all the innovators not to work in silos but rather collaborate and share ideas.

The Minister encouraged the delegates present to consider Covid-19 a blessing in disguise because it has given us the opportunity to discuss health care issues on an international platform; developing and developed countries. Embracing development through collaborations to raise the level and quality of life.

The virtual event had a robust line-up of seasoned, resourceful as well as young and vibrant players in the innovations landscape who substantiated the Minister's message by giving spirited presentations and discussions. The presenters and participants were from as far as Denmark, Kenya, USA, South Africa and Tanzania. International and local organizations like the World Bank, United Nations Community Development Fund (UNCDF) Digital, NITA-U, World Health Organization (WHO), KTA Advocates, The Medical Concierge Group (TMCG), NFT Consult, CENIT/GIZ-EAC, shared incredible ideas on emerging issues in this health Innovations space.

The event featured the finest in their fields discussing issues straight from: A Keynote session on Leveraging technology to transform Health care, to a plenary session on harnessing private public partnerships as well as delving deep into rich discussions in break-out sessions around building interoperable systems, the sustainability of things as well as making the best of emerging technologies.

<< Keynote session: Leveraging technology to transform healthcare and achieve universal health care.

HIC 2021 tracks were:

1. **Interoperability:** This focused on Human Centred Design for Technologies in Health, Telecom Companies' Role in Digital Health and innovations and ensuring secure linkages of systems across boarders
2. **Sustainability** which focused on: Public Private Partnerships, Biodiversity/Climate Change and Health, Global Heath Security and Evaluation frameworks
   https://youtu.be/VZ4Y5JapJJY
3. **Emerging technologies** which focused on: Big Data, Artificial Intelligence, automated vehicles, Block chain technology, Virtual Reality and Augmented Reality as well as 3D Printing.

Welcoming Remarks:

Dr. Rosalind Parkes Ratanshi: Director, Academy for Health Innovations:

Dr Rosalind noted that the pandemic had affected all aspects of our lives, with everyone finally giving their full attention to health care. It was also emphasized that people needed to engage better and frequently to avoid creating a vacuum of misinformation. There is need to be smart about how and what Information to disseminate to people. She also noted that we need to learn about techniques that can help us be smart about sharing high quality information e.g. IVR, A.I and machine learning, and Chatbot.

She highlighted the need to harness the momentum of this data, "…*people need numbers that make sense. Data capture, management and visualization.*"

Remarks by Dr Andrew Kambugu, Executive Director, IDI

Dr Kambugu welcomed the delegates to the Conference and also applauded the Organizing Committee for the job well done in achieving this event. His address was focused on the Business unusual model that has been at the centre of Health care in Uganda. He juxtaposed the HIV pandemic and the call to action by the President over 20yrs ago with the call to action to combat the Covid-19 pandemic. The business unusual model consists of the strength of Academia, appreciated and celebrated partnership; a trend that has continued to date. IDI boast of strong partnerships like the MoH, USUAID, CDC.

He noted that The Academy has held strong on this business unusual model; looking from inception way back in 2015 to date, "…*we have not broken the momentum. This is showcased by the different innovations like The Medical Drones, ART Access, Call for Life.*"

Below is a summary of some of the sessions that ran through the two days as well as recommendations that arose from the discussions.

Tuesday 9th November 2021 (Day 1)

Interoperability: Sustainability and Emerging technologies

Understanding the building blocks for interoperable systems

Derek Kunaka (CHISU) program- Country Director-JSI Pretoria: Improving health information systems using 'Stages of Continuous Improvement' tool. From idea to Business-How to build a successful technology business.

Maxamed Axmed: Principal Researcher at Microsoft Africa Research Institute (MARI) (Nairobi, Kenya): The challenges for NLP for healthcare in low resource language settings.
Regulatory Frameworks for Emerging technologies:
https://youtu.be/SDcJcDg2wOA

- Kenneth Muhangi: Managing Partner -KTA Advocates
- Olasupo Oyedepo: Director, African Alliance for Digital Health Networks: Ethical use and governance of Artificial Intelligence, in healthcare

Abstract presentations for sustainability and Emerging technology

- Christina Mariki: "fetal heart beat monitoring support belt for pregnant women diagnosed with mild preeclampsia/hypertension in Tanzania"
- Juma Salim: "new-born room temperature control system (problem solving)"
- Nuriat Nambogo: CEO MobiCare Uganda Ltd: A mobile Based Application for Appointments
- Atwine Mugume: Data Scientist/Ace Lab/IDI: Deep Convolutional Neural Networks for the diagnosis of diabetic retinopathy
- Dylan Cawthorne: Associate Professor at the Drone Centre at the University of Southern Denmark in Odense: Value Sensitive Design of Humanitarian and Healthcare
- Eva Nakibuuka: ART ACCESS (IDI): Art Access is a web based application which can be used on the computer and phone. It is used in the real time communication between pharmacies and facilities on the status of these patients. It was piloted in three pharmacies and two KCCA facilities in 2019. In July 2020, IDI was approached by the Ministry of health which then was planning on conducting a nation-wide scale up of the community pharmacy refill model.

World Bank Presentation on Digital Health strategies

- Gabriel Catan: *Digital Health Specialist (World Bank): Digital health assessment and the importance of focusing on the low-hanging fruits of digital health.*
- Tommy Wilkinson: *Senior Economist (World Bank): The importance of having digital health interventions economical evaluation*

Data Security and Privacy (Regional and National Frameworks) Workshop

- Stella Alibateese: National Personal Date Protection Director-NITA
- Bonita Mulelengi: KTA Advocates
- Patrick Mugisha: Innovent Labs Africa

https://youtu.be/iKrGkKixKOw

AI and Gender Workshop

- Dr. Agnes Kiraga: Head of Statistics and Date Management-IDI
- Dr. Rosalind Parkes-Ratanshi: Director Academy/IDI
- Dr. Joyce Nakatumba-Nabende: Head of the Makerere Artificial Intelligence Lab

Global Health/One Health: Combating outbreaks and mitigating climate change Workshop

- Martha Isabella Achan: Developing Public Health Laws during outbreaks
- Dr Solome Okware: Senior Technical Advisor, Policy/IDI: E-IDSR and the future of surveillance in Uganda

Wednesday 10th November 2021 (Day 2)

East African Digital health road map.
- Steve Wanyee; Digital Health Specialist (Kenya)
- Dr Aminah Zawedde: Permanent Secretary, Ministry of ICT
- CENIT/GIZ
- Paul Mbaka: MOH-UG
- Badru Ntege: NFT consults

BREAK OUT SESSIONS

Health innovations addressing Equity and inclusion | Technology advancements/ Innovations for Global Health/ One Health and climate change | Design thinking in Health Innovations

- Dr. Miriam Laker- KS study team at IDI
- Dr. Prosper Ahimbisibwe : CEO of Kangaroo plus, Co-Founder and Clinical lead at MSCAN
- Dr Barbara Custelnovo: Head of Research-IDI
- Bryan Plummer: Co-Founder Signalytic Uganda
- Prof. Catriona Waitt: Clinical Pharmacologist

https://youtu.be/z9Y5Ne-k558

TMCG: Rocket Health's role in complementing MoH efforts during the COVID-19 pandemic

- Dr Rahim Kebe: One Health Information System in Burkina Faso
- Abigail Turinayo: Design without borders
- Nuriat Nambogo- CAMTECH
- Joanita Nvanungi: Industrial Chemist/Co-Founder at Kafunda Kreative

MASTER CLINIC: Mental health awareness in entrepreneurship and innovation
- Liz Kakooza: Founder MindLab
- Jackie Semata: Psychologist and Lead Social Scientist- Academy/IDI

Recommendations:

On regulation of Innovations:

Looking at this in the African context; Africa has 1.3 billion people across 54 countries and 10 territories, the average being 19 years with 77%of the population being less than 35 years but huge challenges lie in infrastructure, capacity so we need to be sure the benefits outweigh the risks and this is where the ethical frameworks and regulations can help to regulate challenges

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> Quote: "In my view there should be a consistent discussion of use cases and scenarios and it is the same way you can build use cases and scenarios on how your tech will be applied. You then apply that same kind of thinking to what if it is used wrongly and see what kind of checks and balances you can put in place before a) before it is misused and b) what kind of enforcement you put in place after it has been abused" Olasupo Oyedepo: Director, African Alliance for Digital Health Networks

Private Public Partnerships and infrastructure scale up

It was agreed that physical infrastructure is probably one of the most effective ways to demonstrate value and impact and in this case around PPP models. "Our countries need to be brave to test these models out from a perspective of learning and continuous improvement, rather than the drawn out ongoing theorising about whether such PPP models work or not since these types of partnerships have been shown to work in other geographies" Dr Louis Kamulegeya; TCMG

The greatest enemy we have is politicising science and innovation if we are to grow to a global level we should focus beyond politics for continuity and sustainability.

Emerging technologies:

A call to action to a) identify new and existing resources that can be leveraged, b) combat the wealth bias in existing datasets and c) consistent capture and curation of healthcare data. A call to action on what problems we should focus our limited resources on and for the collaborations; how do we pool resources, how does the legislation nurture AI for healthcare, how do we train the next batch of practitioners

It was clarified that without policies we cannot have laws that are forward thinking and that a policy allows you to have a framework and direction that would enable to pass laws that would essentially assist or enable the health space with these emerging technologies.

Lessons learned from the Covid pandemic:

Many countries, low to high income, grappled with outdated public health laws during this pandemic
- The relevance of public health laws and the need to continuously update them to current practices
- Necessity of regional collaborations like the Ministry of Health Uganda between the governments

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> Development, deployment, acceptance of electronic platforms has potential to change surveillance entirely and enable countries respond to public health threats before they become public emergencies. Dr Solome Okware: Senior Technical Advisor, Policy/IDI.

From government, to funders, all the stakeholders that can help us improve innovation in health care, if you can come together and come up with a high level strategy that can guide all of the instruments that are going to be in play going forwards

There is a need for transparency in the data used for training and validation of these algorithms and machine learning projects in order to reduce and eventually eliminate the biases in A.I.

The conference closed on a strong note with a Master clinic on Mental Health awareness in Entrepreneurship and Innovation as well as a virtual exhibition of some of the trending innovation products and projects like the Home-Based Care App, The HIV self-testing Chatbot as well as a demonstration Medical drones.

Mental Health Master Clinic led by Liz Kakooza

Speakers And Panelists:
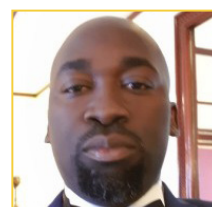
Dr. Monica Musenero

Dr Andrew Kambugu

Dr. Darinka Perisic
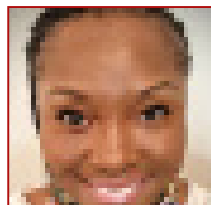
Gabriel Catan

Tommy Wilkinson

Paul Mbaka

Dr Ernest Darkoh
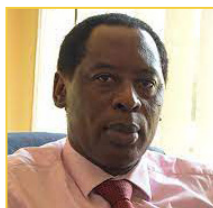
Evelyn Rutazaha

Patrick Mugisha

Huguette

Stephen Ssenkomago Musoke

Dr. Miriam Laker

Steve Wanyee

Badru Ntege

Elvis Mugabi

Derek Kunaka

Charity Mugasha

Dr. Prosper Ahimbisibwe
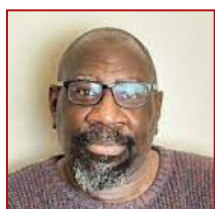
Louis Kamulegeya

Bryan Plummer

Maxamed Axmed

Kenneth Muhangi

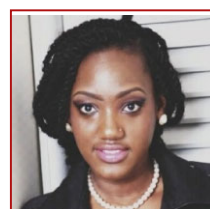Robert Kirunda

Dr Barbara Castelnuovo

Olasupo Oyedepo

Dr. Catriona Waitt

Dr Rahim Kebe

Nuriat Nambogo

Liz Kakooza

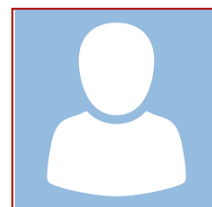Jackie Kisakye

Bonita Mulelengi

Stella Alibateese

Dr. Agnes Kiraga

Dr. Rosalind Parkes Ratanshi

Dr. Joyce Nakatumba Nabende

Abigail Turinayo

Martha Isabella Achan

Dr Solome Okware

Gerald Aluma

Dr. Peter Babigumira

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