

## THE AGA KHAN UNIVERSITY

### Annual Early-Career Health Researchers' Symposium

November 24, 2023

Theme:

#### RECENT TRENDS AND INNOVATIONS IN HUMAN HEALTH RESEARCH – A CRITICAL COMPONENT OF THE ONE HEALTH AGENDA

The Aga Khan University (AKU), Nairobi 7<sup>th</sup> Annual Early Career Health Researchers' Symposium (AECHRS) provided an avenue for early career health researchers from our region to showcase their research outputs, strengthen their scientific profile and network in a rich collaborative environment with scientific research leaders thus promote cross-generational experience and learning.

The symposium theme, 'Recent Trends and Innovations in Human Health Research' reflects the dynamic and ever-evolving nature of the field in an era marked by unprecedented global challenges. Trends and innovations therefore play a crucial role in advancing the 'One Health Agenda'. It is imperative to foster interdisciplinary collaboration and explore innovative approaches to address the complex interplay between human, animal, and environmental health. One of the most noteworthy trends is the increasing recognition of emerging and re-emerging zoonotic diseases. The recent epidemics experienced including COVID-19 and Ebola remind us of the interconnectedness of the one health triad and have stimulated much research. Notably, innovations in genomic sequencing have enabled disease and pathogen surveillance which has aided researchers to understand the zoonotic disease dynamics. This has been fundamental in detecting the genetic makeup of viruses which has gone a long way in understanding virus origins and evolution.

Significantly, close attention should also be paid to the rise of digital health technologies such as telemedicine and wearable technology. Similarly, advances in molecular and imaging diagnostic technologies will continue to revolutionise access to healthcare – easier and early disease diagnosis, enhanced treatment, monitoring, and management

of communicable and non-communicable diseases – hence effectively improve the healthcare of patients. This continuous improvement in health technologies will enable a holistic perspective to disease management and surveillance that recognizes the relationships between human, animal, and environmental health.

Though not new, the One Health Agenda has gained momentum through AI-driven technologies that are reshaping disease surveillance, diagnosis, treatment, and policy formulation across human, animal, and environmental health domains. AI-powered algorithms are transforming personalised medicine by analysing Big Data, genomics, and patient profiles. Simultaneously, large-scale data collection, integration, and analysis are upscaling our understanding of complex health interactions among humans and the environment.

As we bring health closer to the people through the transition to Primary Health Care (PHC), there is a need for innovative approaches to patient care. Technology and innovative interventions tailored to various contexts is thus essential to achieving Universal Health Coverage (UHC) and calls for adoption of such innovations in developing contextualised, integrated guidelines for health delivery and interventions to translate basic research into implementation research. Insights into innovative financing models, policy frameworks, and collaborative approaches that bridge healthcare gaps and extend quality services to all individuals and communities are therefore essential.

Speaking to the Symposium Theme, findings by Early-Career Health Researchers were presented at AECHRS under four sub-themes, namely:

- a. Therapeutics and Antimicrobial Stewardship
- b. Non-Communicable Diseases
- c. Health Systems Strengthening
- d. Screening and Diagnostics

The abstracts are herein shared.

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