

RUFORUM Webinar Series (2020)

Introductory Note for Webinar 3

Date: 03 July 2020

Time: 14.00-16.00 East African Standard Time

Universities' role in preparedness, response and monitoring of emerging and re-emerging pandemics

Globally, the risk of the emerging and re-emerging infectious diseases has increased significantly in the past years owing to different factors, some of which are related to humanitarian emergencies, wars, fragile health systems, weak surveillance, limited laboratory diagnostic capacity and global inter-connectedness from air and freight travel. The World Health Organisation indicates that, on a monthly level, it is monitoring up to 7000 potential outbreaks. Between 1980 and 2013, the world has witnessed 12,012 infectious diseases outbreaks with 44 million cases. These new and re-emerging infectious diseases cause much human suffering worldwide. Many of these diseases are zoonoses with epidemic to pandemic potential. The recent outbreak of the novel Corona virus (COVID-19) has raised global awareness of the devastating effect that emerging infectious diseases have on human populations and economies.

Africa especially Sub-Saharan Africa region is highly biodiverse with large rural populations that are highly dependent on nature, livestock agriculture as well as consumption of wildlife and wildlife products. Evidence available indicates that movement of pathogens between animals and people increases as the domestic populations expand, creating novel ecotones and ecosystemic perturbation¹. With increasing food and nutrition security demands, intensification of livestock and agriculture is required leading to invasion of forested ecosystems and dramatic land use and land cover changes, increasing the evolution and spillover of novel zoonoses to humans.

This century has seen a heightened emergence of previously unknown zoonotic respiratory tract infectious diseases with epidemic potential including; Avian influenza, Severe Acute Respiratory Syndrome (SARS), and Middle East Respiratory Syndrome (MERS), and most recently the Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) responsible for the COVID-19 pandemic. In 2015 during the West African Ebola virus epidemic outbreak, an important milestone providing the world with the risk associated with an infectious disease taking hold locally, the originating region as well as the entire world gets at equal risk due to ease of international travel, global food

¹ Zumla, A., Ippolito, G., McCloskey, B., Bates, M., Ansumana, R., Heymann, D., Kock, R. and Ntoumi, F., 2017. Enhancing preparedness for tackling new epidemic threats. *The Lancet Respiratory Medicine*, 5(8), pp.606-608.

systems, livestock trade, and inadequate capacities to identify and respond to outbreaks. Certainly, lessons should have been learned by the global disease experts and populations from the SARS, MERS and Ebola crisis that would have guided effective response capacities.

However, at outbreak of the corona virus, 80% of countries that were assessed for their preparedness were not ready to find, stop or prevent an epidemic. Within Africa, Gilbert *et al.* (2020) provides evidence of Africa's limited preparedness capacity² while Kapata *et al.* (2020) based on earlier studies indicated that the continent's distribution of infectious disease epidemics, disasters and other potential public health emergencies was considerably high among 87% of the countries in the continent (41 countries); these countries had had at least one epidemic, and 45% (21 countries) had at least had one epidemic annually³. This demonstrates the urgent need to change the status quo and tackle these challenges decisively.


However, changing the status quo requires that resources, intensified surveillance, and capacity building are urgently prioritised in the continent to in particular respond to continental bottlenecks as well support countries that are ill-prepared to detect and contain disease outbreaks. Universities have a fundamental role to play in these processes as centers of innovation, research and capacity building. This webinar Universities' role in preparedness, response and monitoring of emerging and re-emerging pandemics will discuss: (i) Universities innovations in response to COVID-19 situation; (ii) Innovations for technical and policy response to public health emergencies; (iii) Capacity building needs for Africa's excellence in the new normal (diagnostics-laboratory infrastructure, molecular, clinical management, therapeutics, vaccines); and (iv) Africa's collaboration and financing for health innovations in the new normal.

Panelists

1. Dr. Raiji Tajudeen, Head NPHIs and Research Division, Africa Centre for Disease Control Addis Ababa-Ethiopia
2. Dr. Ruth Aceng, Minister of Health, Government of Uganda, Kampala-Uganda
3. Prof. Jan-Ingvar Jönsson, Vice Chancellor, Linköping University-Sweden
4. Prof. Willian Bazeyo, Deputy Vice Chancellor, Makerere University, Kampala-Uganda
5. Prof. Simeon Mining, Director of Research & Professor of Immunology, Moi University Eldoret-Kenya

² Gilbert, M., Pullano, G., Pinotti, F., Valdano, E., Poletto, C., Boëlle, P.Y., d'Ortenzio, E., Yazdanpanah, Y., Eholie, S.P., Altmann, M. and Gutierrez, B., 2020. Preparedness and vulnerability of African countries against importations of COVID-19: a modelling study. *The Lancet*, 395(10227), pp.871-877.

³ Kapata, N., Ihekweazu, C., Ntoumi, F., Raji, T., Chanda-Kapata, P., Mwaba, P., Mukonka, V., Bates, M., Tembo, J., Corman, V. and Mfinanga, S., 2020. Is Africa prepared for tackling the COVID-19 (SARS-CoV-2) epidemic. Lessons from past outbreaks, ongoing pan-African public health efforts, and implications for the future. *International Journal of Infectious Diseases*, 93, pp.233-236.



Discussant: Prof. Johan Dabrosin Söderholm, Dean Faculty of Medicine and Health Sciences, Linköping University-Sweden

Moderator: Prof. Address Mauakowa Malata, Vice Chancellor, Malawi University of Science and Technology, Lumbe-Malawi

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