COVID-19: Building on the HIV response to introduce innovation in a pandemic

COVID-19 AND HIV: WEBINAR SERIES

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Innovation in a pandemic: 40 years of HIV to the rescue?

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Objectives

• Understand the role of innovation in science in the COVID19 response

• Where did this innovation come from and how was it mobilized so quickly?

• What role did our experience with HIV play?

• Can the COVID19 response enhance the HIV response in the future?
Vale Professor Gita Ramjee

April 8th, 1956 – March 31st, 2020
The impact of COVID-19 on R&D: including HIV

Estimated loss in Australia alone in the University sector is $2.5 billion in 2020, loss of 14,000 EFT with long term impact on research workforce
The impact of HIV on COVID-19

- Virus detection
- Antibody
- Genomics
- Near care
- Home testing
- Antivirals
- Repurposed HIV drugs
- Combination antivirals
- PEP
- PREP
- Costing
- Vaccines
- Delivery vectors
- Adjuvants
- Trial design
COVID19 treatments: not all about the virus

Antivirals: small molecules, antibodies and interferons

Anti-cytokines, anti-inflammatories, steroids

Saddiqui et al., J Heart Lung Transpl 2020
COVID19 vaccine approaches

HIV vaccines: DNA, RNA, non replicating viral vectors (Ad26, Ad5, ChAd, MVA)

https://www.gavi.org/vaccineswork/covid-19-vaccine-race
Access to new medicines: FDA Emergency Use Authorisation

FDA EUA granted for hydroxychloroquine (March 29th, 2020) and remdesivir (May 1st, 2020)
Human rights at the centre of a pandemic response

Packed With Migrant Workers, Dormitories Fuel Coronavirus in Singapore

By Wahi Cali and K.K. Rebecca Lal, April 28, 2020

Singapore has seen a surge of coronavirus cases among migrant workers, after months of successfully controlling the outbreak. As of Tuesday, coronavirus cases linked to migrant worker dormitories accounted for 88 percent of Singapore’s 14,446 cases, including more than 1,400 new cases in a single day.

African American rates of confirmed cases and death in Southern states

- North Carolina: 22% of total COVID-19 deaths, 38% of total COVID-19 cases
- South Carolina: 27% of total COVID-19 deaths, 36% of total COVID-19 cases
- Alabama: 27% of total COVID-19 deaths, 38% of total COVID-19 cases
- Mississippi: 33% of total COVID-19 deaths, 38% of total COVID-19 cases
- Louisiana*: 33% of total COVID-19 deaths, 56% of total COVID-19 cases

*Note: Data is as of April 27, 2020.
What are the opportunities for HIV in a post COVID world?

- High **global awareness** of viruses and pandemic preparedness

- Health **system strengthening** needed globally to protect everyone

- New **global initiatives** for testing, drugs and vaccines

- Scientific **innovation for COVID-19** will be high and we are likely to see a reciprocal flow to the HIV sector