

## IDI COVID-19 Science Summary Compiled by Dr Andrew Mujugira (16<sup>th</sup> to 22<sup>nd</sup> August 2020)

16th August 2020

*Water obtained by begging: does not quench thirst ~ Luganda Proverb*

### **COVID-19 in Kenyan Prisons**

- 1) Kenyan health officials are grappling with COVID-19 containment measures in congested prisons across the country.
- 2) Criminal proceedings at Kakamega Law Courts were suspended for 14 days after prosecutors and staff tested positive for COVID-19.
- 3) Prosecutors could have been infected after they came in contact with suspects during criminal proceedings in court. Congested police cells and prisons are an ideal environment for SARS-CoV-2 transmission.

Daily Nation, 6th August 2020

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17th August 2020

*When the nose is blocked by ssennyiga (flu), the mouth breathes for the nose ~ Luganda Proverb*

### **Infectious SARS-CoV-2 in Hospital Air**

- 1) Airborne virus may play a significant role in SARS-CoV-2 transmission. Whether, floating respiratory droplets (aerosols) contain live virus, and not just fragments of genetic material, is unclear.
- 2) Researchers have isolated live virus from aerosols collected 2.0-4.8 meters from patients hospitalized with COVID-19. This is further than the 2 meters recommended in physical distancing guidelines.
- 3) The genome sequence of the SARS-CoV-2 strain isolated from the air and from a patient was identical. Virus isolated from the air infected cells in a lab dish, suggesting it can cause SARS-CoV-2 transmission.

medRxiv 2020.08.03.20167395; awaiting peer review

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18th August 2020

*Death doesn't wait until you come back from the well ~ Runyankore Proverb*

### **Sex Differences in COVID-19 Mortality**

- 1) Men have a higher risk of death from COVID-19. Biological, psychological, behavioral, and social factors may put men at disproportionate risk of death.
- 2) European data suggest an overall male to female mortality sex ratio of 1.4 per 100 000 population. This ratio is not equal at all ages - 0.81 for age 0-9 years, 1.9 for 40-49 years, 2.3 for 50-59 years, 2.6 for 60-69 years, and 1.65 for >80 years - suggesting an age-sex interaction.
- 3) How sex-associated biological factors and gender-associated psychosocial and behavioral factors interact in determining COVID-19 mortality is not fully understood.

19th August 2020

*Put down the meat: is an order a dog cannot obey* ~ Runyankore Proverb

### **SARS-CoV-2 Neutralizing Antibodies Protect Against Reinfection**

1) After a viral infection, the immune system makes neutralizing antibodies that can attack the virus if it invades again.

2) Researchers tested 120 of 122 crew members of a US fishing vessel just before departure. All were negative for SARS-CoV-2 by RT-PCR; 3 had antibodies. Thereafter, a COVID-19 outbreak hit the ship. Post-voyage testing showed that 104 crew (85.2%) were infected. None of those who were infected and had been tested before embarking had SARS-CoV-2 neutralizing antibodies.

3) All three crew members who had neutralizing antibodies before departure escaped infection, suggesting that antibodies acquired during SARS-CoV-2 infection protect against reinfection.

medRxiv 2020.08.13.20173161; awaiting peer review

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20th August 2020

*The water pot is broken at the doorway* ~ Langi Proverb

1) Universal Masking is an effective strategy to flatten the SARS-2-CoV healthcare worker (HCW) epidemiologic curve.

2) Among HCWs who tested positive for SARS-CoV-2 at Duke Health, 38% cases were community-acquired, 22% were healthcare-associated, and 40% did not have a clear source of acquisition. Notably, 80% of HCWs did not work on COVID units.

3) Of the healthcare-associated cases, 70% were related to unmasked exposure to another HCW for more than 10 minutes less than 2 metres apart and 30% were thought to be secondary to direct care of SARS-CoV-2 positive patients.

Infect Control Hosp Epidemiol. 2020 Jun 24;1-5

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21st August 2020

*The fly that follows meat does not starve* ~ Igbo Proverb

### **COVID-19 in Africa**

1) The WHO Africa Region reported a 25% decrease in COVID-19 cases for the period 12-18th August relative to 5-11th August, with lower SARS-CoV-2 incidence in previous hotspots countries (Nigeria, Ghana, Algeria and Kenya).

2) Countries reporting the highest percentage increase include Eritrea (533%), Rwanda (464%), Uganda (164%; 290 vs 110) and Mali (162%).

3) The WHO classifies Rwanda and Uganda as having clusters of cases. The DRC, Kenya, South Sudan and Tanzania have community transmission.

Source: WHO Africa Office

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22nd August 2020

*He who makes the prisoner hurry: makes himself tired* ~ Luganda Proverb

### **SARS-CoV-2 Testing in Prisons**

1) 'SARS-CoV-2 outbreaks in prisons are difficult to contain because of population-dense housing and limited space for medical isolation and quarantine. Testing in these settings has often been limited to symptomatic persons.'

2) 'Mass testing in 16 U.S. prisons and jails found SARS-CoV-2 prevalence ranging from 0%–86.8%, a median 12.1-fold increase over the number of cases identified by earlier symptom-based testing alone. Median prevalence was three times higher in dormitory-based than in cell-based housing'.

3) 'Broad-based SARS-CoV-2 testing provides a more accurate assessment of disease prevalence than does symptom-based testing and generates data that can potentially help control transmission'.

MMWR Morb Mortal Wkly Rep 2020; 69:1139–1143

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