

IDI COVID-19 Science Summary Compiled by Dr Andrew Mujugira (18th Oct to 24th Oct 2020)

18th October 2020

The termite escapes behind the chicken's back ~ African proverb

Are rapid SARS-CoV-2 tests effective?

- 1) 'Rapid antigen tests for SARS-CoV-2 provide results within 30 minutes. But not all of the tests on the market are equally effective at detecting the virus'.
 - 2) 'Dutch researchers used 5 commercially available rapid antigen assays on samples from 1,754 people who had already tested positive for SARS-CoV-2 with the standard polymerase chain reaction test, which is highly sensitive but slow. The 2 most sensitive tests detected the virus more than 97% of the time, whereas the least sensitive test did it in about 75% of cases'.
 - 3) 'Rapid antigen tests might be less effective at detecting SARS-CoV-2 in people with low levels of virus'.
- medRxiv 2020.10.13.20211524
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19th October 2020

The king's mouth once suckled his mother's breast ~ African proverb

Mother-to-newborn transmission of SARS-CoV-2

- 1) A retrospective cohort analysis of 101 neonates born to 100 mothers positive for or with suspected SARS-CoV-2 infection in New York found that only 2 (2.0%) had positive test results for SARS-CoV-2'.
 - 2) 'No clinical evidence of vertical transmission was identified in new-borns born to mothers with SARS-CoV-2 infection, despite most new-borns rooming-in and direct breastfeeding practices'.
 - 3) This study 'suggests that separating mothers positive for SARS-CoV-2 and their new-borns and avoiding direct breastfeeding may not be warranted to prevent SARS-CoV-2 transmission'.
- JAMA Pediatr. 2020 Oct 12
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20th October 2020

One whose seeds have not sprouted does not give up planting ~ Kenyan proverb

Genetic Risk Factors for COVID-19

- 1) Pandemic puzzle: Why do most people infected by SARS-CoV-2 never feel sick, whereas others develop serious symptoms or die?
- 2) Genetic factors may be at play. A genomewide association study of >2200 COVID-19 patients found COVID-19 risk genes - IFNAR2 that codes for a cell receptor for interferon and OAS genes which code for proteins that activate an enzyme that breaks down viral RNA - that double an infected person's odds of developing severe COVID-19.
- 3) Genetic risk factors are likely to have a modest overall effect on COVID-19 risk compared to other factors such as age and obesity.

21st October 2020

Slowly but surely, the earthworm reached the well ~ Ugandan proverb

COVID-19 Antibodies May Persist for Months

1) COVID-19 survivors continue to produce protective antibodies against key parts of the virus for at least 3-4 months after developing their first symptoms.

2) These antibodies are:

- a) immunoglobulin G (IgG) [which may confer sustained immunity],
- b) immunoglobulin A (IgA) [which protects against infection on the body's mucosal surfaces]
- c) immunoglobulin M (IgM) [which the body produces first when fighting an infection].

3) Recent research found that all three types were present by about 12 days after infection. IgA and IgM antibodies were short-lived against the spike protein that crowns SARS-CoV-2, vanishing within about two months. However, longer-lasting IgG antibodies persisted in these same patients for up to 4 months.

Sci Immunol. 2020 Oct 8;5(52): eabe0367; Sci Immunol. 2020 Oct 8;5(52): eabe5511

23rd October 2020

Those who live together must be merciful ~ Kenyan Proverb

Being HIV Positive Increases Risk of Death From COVID-19

1) People with HIV who are hospitalized for COVID-19 have a significantly heightened risk of 28-day mortality compared with people without HIV.

2) A comparison of outcomes of people with HIV vs people without HIV who were hospitalized in the UK with COVID-19 from January 17 to June 4 showed that HIV-positive status was associated with a 63% increased risk of day 28 mortality.

3) Below age 70, the risk of mortality was double in people with HIV. The people with HIV who died often had diabetes and obesity, but the excess mortality due to HIV is not well understood.

HIV Glasgow Virtual Meeting, Abstract O422
