

## IDI COVID-19 Science Summary Compiled by Dr Andrew Mujugira (25<sup>th</sup> Oct to 7<sup>th</sup> Nov 2020)

23-30th October 2020

*A new broom sweeps clean, but an old broom knows the corners*

- 1) 'COVID antibody therapies derived from blood plasma of people recovering from COVID-19 directly bind to viral proteins and prevent the virus from replicating. Injections of monoclonal antibodies might prevent mild COVID-19 from becoming severe, but the treatments are expensive and difficult to make. Ongoing research may make these antibody therapies cheaper and more potent'.
- 2) 'Data collected globally suggest that schools are not hot spots for coronavirus infections. Despite fears, COVID-19 infections did not surge when schools and day-care centres reopened after pandemic lockdowns eased. Young children (<12 years) are unlikely to spread the virus — but older kids are more at risk. The potential to transmit increases with age, and adolescents are just as likely to transmit the virus as adults'.
- 3) 'Respiratory viruses are transmitted in three main ways: 1) contact transmission through direct contact with an infected person or contaminated surface, 2) droplet transmission of both large and small respiratory droplets, and 3) airborne transmission of smaller droplets and particles that are suspended in the air over longer distances and time than droplet transmission. SARS-CoV-2 transmission is still not fully understood 10 months into the pandemic. As pandemic fatigue sets in, and COVID cases increase, new research is needed to inform infection control guidelines.

Sources: Nature; The Lancet Respiratory Medicine

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2nd November 2020

*If you find no fish, you have to eat bread* ~ Ghanaian Proverb

- 1) COVID-19 kills one American every 107 seconds, according to USA today.
- 2) With the onset of cold winter months and holiday gatherings, COVID incidence in the USA has increased to 70,000 new coronavirus cases each day.
- 3) Much remains unknown about potential coronavirus vaccines, how well they will work and what they will do to stem the pandemic. Initial COVID-19 vaccines will probably prevent symptoms in those who become infected with the coronavirus rather than kill the virus itself, according to Dr AS Fauci. Preventing clinically recognizable disease is a "primary endpoint" in the vaccine development process. Getting rid of the virus altogether is considered a "secondary endpoint."

Source: Medscape Infectious Diseases

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3rd November 2020

*A person who has children does not die* ~ Nigerian Proverb

### **Birth & Infant Outcomes After SARS-CoV-2 Infection in Pregnancy**

- 1) 'Pregnant women with SARS-CoV-2 infection are at increased risk for severe illness compared with nonpregnant women. Adverse pregnancy outcomes such as preterm birth and pregnancy loss have been reported'.
- 2) 'Among 3,912 infants with known gestational age born to women with SARS-CoV-2 infection, 12.9% were preterm (<37 weeks), higher the USA estimate of 10.2%. Among 610 (21.3%) infants with

testing results, 2.6% had positive SARS-CoV-2 results, primarily those born to women with infection at delivery'.

- 3) 'These findings can inform clinical practice, public health practice, and policy. It is important that providers counsel pregnant women on measures to prevent SARS-CoV-2 infection'.

MMWR Morb Mortal Wkly Rep. ePub: 2 November 2020

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4th November 2020

*The house of a person we love is never far* ~ Nigerian Proverb

### Household Transmission of SARS-COV-2

- 1) 'Transmission of SARS-CoV-2 occurs within households; however, transmission estimates vary widely and the data on transmission from children are limited'.
- 2) 'Findings from a prospective household study with intensive daily observation for  $\geq 7$  consecutive days indicate that transmission of SARS-CoV-2 among household members was frequent from either children or adults. Secondary infections occurred rapidly, with  $\sim 75\%$  of infections identified within 5 days of the index patient's illness onset'.
- 3) 'Household transmission of SARS-CoV-2 is common and occurs early after illness onset. Persons should self-isolate immediately at the onset of COVID-like symptoms, at the time of testing as a result of a high-risk exposure, or at time of a positive test result, whichever comes first. All household members, including the index case, should wear masks within shared spaces in the household'.

MMWR Morb Mortal Wkly Rep. ePub: 30 October 2020

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5th November 2020

*Cross the river in a crowd and the crocodile won't eat you* ~ African Proverb

### Herd Immunity: Understanding COVID-19

- 1) 'Acquired immunity is established at individual level, either through natural infection with a pathogen or through immunization with a vaccine'.
- 2) 'Herd immunity refers to indirect protection from infection conferred to susceptible individuals when a sufficiently large proportion of immune individuals exist in a population. It stems from the effects of individual immunity scaled to the level of the population'.
- 3) 'Herd immunity threshold is the point at which the proportion of susceptible individuals in a population falls below the threshold needed for transmission. For SARS-CoV-2, the herd immunity threshold is approximately 67%. This means that the incidence of infection will start to decline once the proportion of individuals with acquired immunity to SARS-CoV-2 in the population exceeds 0.67'.

Immunity. 2020 May 19;52(5):737-741

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