

COVID-19 Daily Briefing: July 6th

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1. Summary

MEDICINE

- **KAWASAKI DISEASE**: An investigation into patients with Kawasaki disease between Dec. 2005 and May 2020 revealed a 479% increase in Kawasaki disease hospitalisations in April 2020, starting two weeks after the peak of the COVID-19 epidemics. SARS-CoV-2 was found in 80% of all Kawasaki cases since April 15. A previous spike in Kawasaki disease was attributed to H1N1 in 2009. Healthcare providers must be prepared to manage Kawasaki disease patients as lockdown measures are eased and children return to school.
- **NEUROLOGY**: An ongoing longitudinal study of COVID-19 patients in Wuhan, China has revealed that 77.8% of non-hospitalised patients exhibited neurologic manifestations such as dizziness, headache, and impaired consciousness as well as peripheral nervous system (PNS) manifestations e.g. taste/smell/vision impairment and nerve pain. Levels of respiratory symptoms were lower with 55% patients exhibiting a dry cough and 23.5% exhibiting shortness of breath.
- **BIOMARKERS**: A preprint study used the UK Biobank of over 100,000 blood samples to identify biomarkers that identify individuals with severe COVID-19 risk. Analysis of metabolites in blood samples revealed that risk for severe COVID-19 is similar to that for severe pneumonia.
- **BLOOD TRANSFUSIONS**: A systematic review of literature addressing the blood transfusion supply chain and providing guidance on practice in times of shortages. During the COVID-19 pandemic, the reduction in the number of blood donors was mostly matched by a reduction in the number of patients requiring transfusion. Authors discuss evidence and provide opinion on best practices for blood transfusion policy to meet demands and counter difficulties associated with the COVID-19 pandemic.

INTERNATIONAL RESPONSE

- **SYRIA**: International sanctions on Syria are contributing to the destruction of its health system, making it difficult for medical supplies to reach areas of need, and humanitarian exceptions to those sanctions have not been sufficient to help the local health infrastructure. The low numbers of COVID-19 infections reported so far are likely to be underestimates.
- **AFRICA**: The African Union has coordinated a continent-wide response to COVID-19, which has included the successful conversion of many labs to testing for COVID-19. However, its response is still hampered by its reliance on foreign imports of most medical and scientific equipment.
- **BRAZIL**: Brazil has been one of the countries worst affected by COVID-19, and the government is exacerbating the pandemic through inaction. This factor has affected rural indigenous communities in the Amazon and urban informal settlement dwellers most.
- **REFUGEE CAMPS**: Although there has not been a COVID-19 outbreak in a refugee camp so far, they remain very vulnerable to the disease, and would likely be devastated by an outbreak. The COVID-19 pandemic, which is still in its early stages in many countries, could lead to a loss of focus on key health issues such as maternal mortality, malaria, and childhood immunisation

IMMUNITY

- **REINFECTION**: Six rhesus macaques re-infected with the identical strain of SARS-CoV-2 during the early recovery phase of infection showed no subsequent signs of viral reinfection. A notable increase of neutralising antibodies was detected, suggesting potentially long-lasting immunity. However, longer intervals between infections are needed to assess how long immunity lasts.

- **VACCINE DEVELOPMENT:** In the UK, the Oxford AZD1222 vaccine has moved on to phase two and three of human efficacy-testing and the Imperial vaccine is in a combined phase 1/2 of human safety testing. The proposed production methods for the vaccines could theoretically lead to 2 billion vaccines by the end of the year.

3. Quick Summaries

[COVID-19: How does local lockdown work, and is it effective?](#)

- **LEICESTER:** *Journal briefing article.* The uptick of cases in Leicester and subsequent localised lockdown was predictable and preventable, and mainly due to premature reopening and lack of coordination between local and national authorities. This will likely only be the first of many local flareups of COVID-19 and represents a test of the government's ability to control such local flare ups.

[Remdesivir: US purchase of world stocks sparks new "hunger games," warn observers](#)

- **DRUG HOARDING:** *Journal news article.* The United States has bought the global supply of remdesivir, a drug which shows promise in treating COVID-19. This is likely a prelude to a larger campaign of governments competing against each other for drugs and, eventually, the vaccine, rather than coordinating. This competition will hamper the global response to COVID-19, especially in developing countries.

[Let's not forget the basics](#)

- **BASICS:** *Editorial.* The fundamentals of the situation, of a deadly virus without a known effective treatment or vaccine, have not changed. Resurgences of cases in countries where the outbreak was perceived to be under control remind us not to be complacent as restrictions are relaxed. Social distancing, test and trace, and hygiene techniques such as hand washing remain crucial.

[After COVID-19, a future for the world's children?](#)

- **CHILDREN:** *Comment article.* Estimates suggest that without international aid, around a million children are likely to die due to disrupted food supply chains caused by this pandemic. There will also be disruptions to education, with many girls unlikely to return to education once schools reopen.

4. Longer Reading

[Comparing SARS-CoV-2 with SARS-CoV and influenza pandemics](#)

- **PANDEMIC HISTORY:** *Viewpoint article.* A historic comparison of SARS-CoV-2 with SARS-CoV, MERS-CoV, 1918, and 2009 influenza outbreaks. SARS-CoV-2 is less deadly but more transmissible than both MERS-CoV or SARS-CoV. The mortality of SARS-CoV-2 is strongly skewed towards people over 70, like SARS-CoV, but unlike the 1918 and 2009 influenzas, and the proportion of symptomatic people requiring hospitalisation is higher for SARS-CoV-2.