

# COVID-19 Daily Briefing: June 11<sup>th</sup>

*DISCLAIMER: Scientists for Labour are a voluntary organisation, and collating this research takes a significant amount of time. We cannot claim that this document is comprehensive, necessarily accurate in all regards, or that it covers all developments. Expert fact checking has been performed by the Boyd Orr Centre for Population and Ecosystem Health at the University of Glasgow.*

## 1. Summary

### MEDICINE

- **SARS/MERS**: This systematic review and meta-analysis looks at long-term (> 3 months) clinical outcomes in survivors of SARS and MERS after hospitalisation and intensive care admission. Lung function abnormalities and reduced exercise capacity were common up to six months after discharge. Psychological impairment (including post-traumatic stress disorder, anxiety and depression) was still prevalent beyond six months, while the quality of life was low even after 12 months. Long-lasting mental health issues are caused not only by serious illness, but also by factors such as stigma, fear; and the challenging psychological impact of the quarantine experience. Clinicians should anticipate and investigate similar long-term outcomes in COVID-19 survivors, and potential implications for rehabilitation services and healthcare.
- **TRANSMISSION**: This narrative review analysed data from 16 SARS-CoV-2 cohorts and identified that asymptomatic persons may account for approximately 40% to 45% of SARS-CoV-2 infections. Furthermore, authors suggest that asymptomatic individuals may transmit virus for longer than 14 days. Asymptomatic infection may be associated with subclinical lung abnormalities, as detected in 54% of the 76 asymptomatic cases on the Diamond Princess cruise ship. Because of this high prevalence of asymptomatic, yet infectious, individuals, testing programmes should also include this group. Given the high costs this endeavour might entail, alternative mechanisms should be explored, for example crowdsourcing digital wearable data capture technology and monitoring sewage for viral genetic material.

### TESTING

- **TRADITIONAL SWABBING**: A recent pre-print article discusses the effects of physically transporting samples for PCR assay results for the detection of RNA of SARS-CoV-2. The authors found that the viral RNA was rapidly destroyed in commercial viral transport media. The authors believe that the use of commercial viral transport media could limit the effectiveness of testing.
- **NANOPLASMONIC SENSORS**: Recent research suggests that nanoplasmonic sensors could be used as a one-step rapid quantification of SARS-CoV-2 particles without sample preparation. The final detection system was able to detect SARS-CoV-2 in a sample of 4,000 virus particles within 20 minutes. Authors suggest this rapid detection method, which the authors claim is low cost, could be adopted quickly under both regular clinical environment and resource-limited settings.

### EPIDEMIOLOGY

- **CONTACT TRACING**: A theoretical, simulation-based analysis of contact networks to examine alternative strategies to limit spread of infection through the network is presented. The authors assert that prioritising the removal of “super-links”, links between communities who would otherwise not contact each other, could be effective in slowing down or stopping epidemics, and could be more effective than traditional contact tracing.

## 2. Quick Summaries

### [Hydroxychloroquine side-effects raise concerns for rheumatology patients](#)

- **HYDROXYCHLOROQUINE:** *Journal news article* discussing the detrimental effect that the “hype” surrounding hydroxychloroquine (HCQ) has had on rheumatology patients (e.g. patients suffering from lupus), who often take HCQ to control their condition. A 2,000% increase in the number of HCQ prescriptions led to a temporary shortage of the drug for these patients. They have been further negatively affected by reports of side effects of the drug in the press, causing increased anxiety about their treatment.

### [NIH-funded study to evaluate drugs prescribed to children with COVID-19](#)

- **CHILDREN IN THE US:** *US Government news article* discussing a new trial that has been set up to evaluate anti-viral and anti-inflammatory drugs in treating children who have severe COVID-19 infection. The trial involves 40 centres across the US. While the study is not designed to evaluate which drug is the best treatment for COVID-19, it aims to analyse drug dosage and safety, and will include special populations, including premature infants, critically ill children, children with Down’s syndrome and obese children. Researchers have emphasised that this is an important area which has been neglected thus far.

## 3. Longer Reading

### [Potent synthetic nanobodies against SARS-CoV-2 and molecular basis for 2 neutralization](#)

- **NEUTRALISING ANTIBODIES:** *Preprint journal article* reporting the development of synthetic nanobodies that can block the interaction between SARS-CoV-2 and the ACE2 receptor in vitro, thereby potentially mimicking the action of neutralising antibodies.