

COVID-19 Daily Briefing: June 10th

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1. Summary

HEALTHCARE FACILITIES

- **LONDON:** In this longitudinal study of 200 healthcare workers (HCWs) at a London hospital, COVID-19 swab tests were performed twice a week alongside monthly antibody tests. Almost half of front-line HCWs in the areas with the highest levels of COVID-19 patients had acquired SARS-CoV-2 by early May. All but one infected HCW developed antibodies, and those antibodies remained detectable for the month of follow-up. There were also high levels of asymptomatic infection, indicating that monitoring asymptomatic healthcare workers is essential, as is the provision of appropriate PPE.
- **COLORADO:** This longitudinal study of 454 asymptomatic employees was carried out across 5 skilled nursing facilities (such as rehabilitation centres and nursing homes) in Colorado. Weekly swab tests taken for a 5 – 6 week period identified up to 22.5% of workers as COVID-19 positive at one facility, but varied substantially between facilities. Results further demonstrate that asymptotically infected workers may be common in nursing facilities.
- **JAPAN:** A preprint study of the concerns of 4,386 healthcare workers (HCW) in Japan during the COVID-19 pandemic found that 79.8% of the respondents to a web-based questionnaire were seriously worried about the pandemic and 87.4% had major concerns of the consequences of becoming infected on their family, work, and society regardless of whether they were frontline HCW or not. As such, 55.5% had restricted social contact, with most reporting there was a shortage of PPE. Because HCWs, especially frontline HCWs, reported that they would not take a leave of absence to avoid infection, they are likely to require effective mental health protection strategies to prevent burnout and depression.

MEDICINE

- **REMDESIVIR:** A peer reviewed study in *Nature* found that rhesus macaques experimentally infected with SARS-CoV-2 virus and then treated with remdesivir (that has broad antiviral activity) in the early phase of infection (12 hours after virus inoculation) showed clinical scores of respiratory disease and lung viral loads lower than control animals, and had minimal damage to the lung. However, infectious viral material could still be detected in the upper respiratory tract (nose and throat) of treated animals. The authors also make clear that the rhesus macaque model is not a good representation of the severe disease observed in COVID-19 patients but that remdesivir treatment initiated in the early stages of infection could prevent progression to pneumonia.
- **ANTI-INFLAMMATORY DRUGS:** A preprint population-based cohort study of 9,236 SARS-CoV-2 PCR positive individuals in Denmark investigated the safety concerns over use of non-steroidal anti-inflammatory drugs (NSAIDs). Treatment with NSAIDs was not found to have any effect on mortality, risk of hospitalisation, ICU-admission, mechanical ventilation, or renal replacement therapy with 30 days of a filled NSAID prescription.

VIROLOGY AND IMMUNOLOGY

- **INFECTIOUS VIRUS:** This preprint study reports that hospitalised patients with COVID-19 could shed viruses for up to 18 days after onset of symptoms. The duration of shedding ranged from 0 – 20 days post onset of symptoms (median 8 days, IQR 5 – 11), and was shortened once serum neutralizing

antibodies were present. Further, patients with severe COVID-19 could shed infectious virus for longer than those with mild symptoms.

- **ANTIBODY RESPONSE:** A preprint study of 177 patients infected with SARS-CoV-2 reported that 2% – 8.5% of the infected individuals tested negative for in an antibody assay and that on average they were younger, had fewer underlying health conditions, and expressed higher inflammatory markers than patients whose developed detectable antibodies. Conversely, patients with higher antibody responses tended to be of non-white ethnicity, and antibody responses did not decline after follow-up 2 months later.

2. Quick Summaries

[More than privacy: Australians' concerns and misconceptions about the COVIDSafe App: a short report](#)

- **APP ISSUES:** *Preprint journal article.* A survey of 1500 Australians concerns about the contact tracing app found that 37% of respondents had downloaded the app. Reasons for not downloading the app were primarily privacy concerns (25%) and phone capabilities (24%). Other reasons included beliefs of limited benefit (16%) and distrust in the Government (11%). However, most participants (75%) agreed that the app would make contact tracing faster and easier.

[Addressing the public mental health challenge of COVID-19](#)

- **MENTAL HEALTH CRISIS:** *Comment article* on the increasing challenges the world faces with mental health during and following the pandemic, with individuals with pre-existing or at higher risk of mental disorders being particularly vulnerable. Access to mental health interventions needs to be improved, for example through training of professionals and digital technology. While the latter can help in multiple ways, it can lead to excessive screen time and is not accessible to all.

3. Longer Reading

[Genomic epidemiology of SARS-CoV-2 spread in Scotland highlights the role of European travel in COVID-19 emergence](#)

- **COVID-19 ENTRY IN SCOTLAND:** *Preprint journal article.* A study investigating the possible sources of SARS-CoV-2 infections in Scotland found that the majority of viral genetic sequences were closely related to virus variants circulating in other European countries, such as Spain, Austria and Italy. The shift from travel-related to community transmission was only 11 days after the initial introductions and the authors suggest that earlier establishment of travel restrictions and quarantine measures could have resulted in fewer introductions and lowered the burden on the health service.

[Association between SARS-CoV-2 infection, exposure risk and mental health among a cohort of essential retail workers in the United States](#)

- **RISKS FOR LOW WAGE WORKERS:** *Preprint journal article.* A study from the US investigated the exposure, infection and mental health of retail workers and found that of the 104 workers tested 21 were positive for SARS-CoV-2 of whom 16 were asymptomatic. Smoking and a lack of direct customer exposure were most strongly associated with reduced risk of being positive. Meanwhile, anxiety and depression were associated with an ability to consistently socially distance at work.