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COVID-19 Daily Briefing: July 2nd

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1. Summary

NHS & HOSPITALS

- **NON COVID-19 HEALTHCARE EMERGENCIES:** An observation study from Imperial College examining attendance in emergency departments in the COVID-19 pandemic in two London hospitals. The authors report an overall decrease of 35% at Imperial College NHT, of 50% in London NHS Trusts, and 53% nationally. This decrease was mostly from people below the age of 65, across all disease areas including heart, stroke and cancer emergencies. This trend was echoed nationally, suggesting that people did not seek emergency care during a medical emergency, while non-COVID-19 excess deaths in communities rose. Strategies to reverse this trend are urgently required.

TREATMENT AND VACCINATION

- **RNA VACCINE:** This preprint study reports results from an ongoing phase 1/2 vaccine study of an mRNA vaccine. A phase 1/2 trial is primarily designed to assess safety, side effects, and the best dose of a treatment. More than half of the 36 vaccinated participants had adverse events (AEs), including two severe, but no disabling AEs. Antibodies produced in response to the vaccine increased with vaccination dose, with 'neutralisation titres' reaching 1.8- to 2.8-fold found in blood plasma of recovered COVID-19 patients. These results support further evaluation of this mRNA vaccine candidate.
- **INFLUENZA VACCINATION:** This preprint analysis of over 90,000 confirmed COVID-19 cases from Brazil showed that patients who received the inactivated trivalent influenza vaccine in 2020 had 8% lower odds of requiring intensive care treatment, 18% lower odds of requiring invasive respiratory support, and 17% lower odds of death. The rate of influenza vaccination among patients was 31.1%. Benefits of influenza vaccination remained even if administered after the onset of SARS-CoV-2 infection related symptoms. Similar effects were not found in patients who received the influenza vaccination in previous years.

TESTING

- **RT-LAMP:** Two preprint studies on reverse-transcription loop-mediated isothermal amplification (RT-LAMP) tests in UK hospitals found that these tests could be used to replace traditional, slower tests to increase testing throughput. The first study from Hampshire Hospitals NHS Trust investigated the quality of two methods of RT-LAMP, one performed on extracted RNA (RNA-RT-LAMP) and another performed directly on swabs (Direct-RT-LAMP). The diagnostic sensitivity and specificity were 97% and 99% respectively for the RNA-RT-LAMP and 67% and 97% for the Direct-RT-LAMP, which was even faster and so could be used as an initial screen during times of high prevalence. A second study by the Francis Crick Institute clinically validated their similar assay.

3. Quick Summaries

COVID-19: Lopinavir-ritonavir does not benefit hospitalised patients, UK trial finds

- **RECOVERY TRIAL:** *Journal news article.* The results from the UK's RECOVERY trial show that the anti-HIV drug Lopinavir-ritonavir does not benefit patients hospitalised with COVID-19. These yet to be peer-reviewed results indicate that at 28 days, the death rate was not significantly different in patients randomly allocated lopinavir-ritonavir compared with those randomly allocated usual hospital care only (22.1% versus 21.3% (95% CI 0.98 to 1.26)). These findings follow their findings about Hydroxychloroquine and Dexamethasone which have resulted in global policy changes in the last 100 days. Further investigations are being carried out into azithromycin, the anti-inflammatory tocilizumab, and convalescent plasma.

Early lessons from a second COVID-19 lockdown in Leicester, UK

- **SECOND LOCKDOWN LESSONS:** *Correspondence article* about the early second lockdown in Leicester. New cases were concentrated in ten wards in Leicester, which have BAME populations of 72.5% who are disproportionately impacted by COVID-19. Lockdown measures will, therefore, disproportionately impact these communities, commonly in areas of high social deprivation and who work in care, health, and transport sectors. Information sharing was inadequate with Pillar Two data not given quickly enough to local authorities, and data lacked key demographic information. The imposition of these lockdowns is a blunt tool indicating a failure of timely intervention, and may not generate the desired result if community-engagement is not ensured.

4. Longer Reading

Intersecting household level health and socio-economic vulnerabilities and the COVID-19 crisis: an analysis from the UK

- **HOUSEHOLD VULNERABILITY:** *Peer-reviewed journal article.* Analysis from a cross-sectional study of UK households found that the effects of COVID-19 are likely to be socially stratified, with household characteristics being an important determinant of well-being. Although COVID-19 related health risks are concentrated in retirement-age households, a substantial proportion of working age households, especially multigenerational households, also face these risks. Different types of households exhibit different vulnerabilities – working-age households are more likely to face financial and housing precarities, whilst retirement-age households face health and digital vulnerabilities. There are area-level differences in distribution of household-level vulnerabilities across the UK, highlighting the importance of considering the clustering of poor health and socio-economic conditions in the impact of COVID-19.

Biogeopolitics of COVID-19: asylum-related migrants at the European Union borderlands

- **MIGRANTS ON THE TURKEY-GREECE BORDER**: *Peer-reviewed journal article.* An empirical case study from the EU border between Turkey and Greece during the COVID-19 pandemic, illustrating inequalities around asylum-related migrants in times of social, economic, political, and public health distress. There was evidence for bottom-up agency through initiatives by the migrants themselves to create solidarity.

Social distancing causally impacts the spread of SARS-CoV-2: a U.S. nationwide event study

- **SOCIAL DISTANCING**: *Preprint journal article.* This study examines the effect of mass protests following the killing of George Floyd on May 25 2020 on the spread of COVID-19 in the USA. Authors identified a country-wide increase of 3.06 COVID-19 cases per day per 100,000 people, following the onset of the protests. A further increase of 1.73 cases per day per 100,000 people was identified in the counties in which protests took place. Relative to the week prior to protests, this finding represents a 61.2% country-wide increase in COVID-19 cases, and a further 34.6% increase in the protest counties.