

COVID-19 Daily Briefing: April 29th

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

PUBLIC HEALTH

- **PPE**: A correlative study of health care workers in Wuhan showed no infections amongst those given an adequate supply of PPE, but many infections in the early phases of the outbreak when insufficient PPE was available. These authors suggest that infection of health care workers is entirely preventable with the correct PPE.
- **INCUBATION PERIOD**: A meta-analysis of existing reports suggests that the mean incubation period is 5.8 days, and the median 5.1 days.
- **MINORITIES** in Houston were 50%–80% more likely to test positive for SARS-CoV-2 than the non-Hispanic white population. African Americans have higher rates of underlying health conditions, lower socio-economic status and higher population densities. Residence in such high population density areas partially explains race disparities. However, disparities persist even after adjusting for socio-economic demographics and underlying health conditions.
- **BUILDINGS**: A modelling study predicts that the use of facial masks is paramount to reduce virus spread in enclosed buildings. Together with halving the number of people inside buildings, facial mask usage could allow some public spaces, such as universities and post offices, to re-open.
- **SUPERSPREADERS** are often forgotten in epidemiological models. If individuals with higher viral loads are more infectious, then the 10% most infectious may generate 45% of new cases. Pool testing focussed on the detection of ‘superspreaders’ and their isolation may significantly mitigate deaths.

INTERNATIONAL RESPONSE

- **NON-ADHERENCE**: A study in Israel found that the following factors correlated to increased non-adherence to COVID-19 guidelines: being male, not having children, smoking, high level of past risk taking, psychological distress, low perceived risk of COVID-19, high level of ADHD symptoms, low exposure to instructions, and low perceived efficacy of the instructions.
- **SUB-SAHARAN AFRICA**: Most of the sub-Saharan African population lacks the basic infrastructure, conditions and resources to follow WHO guidelines for slowing COVID-19. This problem is most acute in marginalised communities within cities.
- **SPAIN**: A mathematical model suggests that the number of infections due to COVID-19 is likely be very variable across Spain, with an eight-fold difference across different regions. Infection rates are possibly as high as 20% in Madrid, one of the worst-affected regions.
- **NEW YORK**: A modelling study predicts that lifting lockdowns in a single step would lead to a resurgence of COVID-19 and would only delay overwhelming ICU capacity regardless of the duration of the current lockdown. A simple two-step process where vulnerable populations remain isolated for longer could reduce the cumulative mortality and reduce number of ICU beds required.

ECONOMICS

- **LOCKDOWN** and social distancing are expected to cause a significant negative short-term impact on GDP and consumer spending. A 3-, 6-, or 12-week lockdown is expected to cut consumption by 5%–8%, 9%–16%, or 18%–32%, respectively. A return to normal spending immediately after lifting lockdown would not prevent full year losses.
- **MONTHLY FORECAST**: Immediate fiscal consequences are likely to be more severe than the financial crisis in 2008–09. UK exports will be impeded by social distancing measures. In the near term, household and corporate finance surpluses are expected to rise, alongside an increase in the government deficit.

3. Quick Summaries

[COVID-19: UK's chief scientific officer defends make up of advisory group](#)

- **SAGE:** There are concerns in the scientific community about the secrecy of SAGE; specifically the nature of its membership, and the nature of the data being used to reach conclusions. These make it next to impossible to assess their recommendations. There are also worries stemming from political actors' presence on SAGE and insufficient representation of public health specialists.

[Features of 16,749 hospitalised UK patients with COVID-19 using the ISARIC WHO clinical characterisation protocol](#)

- **CLINICAL FEATURES:** A review of severe cases in the UK shows that on average, patients spent 7 days in hospital, showed symptoms for 4 days before going to hospital, and the most common underlying health condition was chronic cardiac disease. 43% of the patients in the study were discharged alive, while 17% were admitted to ICU. 53% of those on ventilators died.

[The race for coronavirus vaccines: a graphical guide](#)

- **VACCINE:** Over 90 vaccines are in development worldwide, with at least six groups trialling formulations on volunteers. This visual guide explains the design of each type of vaccine currently in development, some of which have never been used in licensed vaccines before.

4. Longer Reading

[Comparison of SARS-CoV-2 exit strategies building blocks](#)

- **MODELLING OF LOCKDOWN EXIT STRATEGIES:** *Pre-print of an academic article.* Herd immunity is ranked the lowest out of possible lockdown exit strategies. In models, partial population release and planned partial quarantines give the most promising results, even allowing for lack of adherence from a portion of the population. There is a lack of global data to make an informed decision on whether schools should be re-opened.

[What are the underlying transmission patterns of COVID-19 outbreak? An age-specific social contact characterization](#)

- **MODELLING LOCKDOWN:** An investigation of transmission patterns and exit strategies in six Chinese cities. Results showed that there is a trade off between the number of cases and GDP decrease, with the fastest return to normality resulting in the largest number of new cases, but smallest fall in year-on-year GDP.