

COVID-19 Daily Briefing: June 30th

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1. Summary

FACEMASKS

- **GERMANY:** Preprint article discussing the impact of facemasks on the COVID-19 outbreak in Germany, where facemasks became compulsory in all federal states between 20 and 29 April. The study investigates the City of Jena, which first introduced compulsory mask wearing on 6 April, using other German regions as a control group. The study estimates that facemasks reduced the daily growth rate of reported infections by 40%.
- **ITALY:** Preprint on outbreak dynamics in Italy. The authors identified three crucial points, the first two relating to lockdown measures. Using official data, the lockdown appears to have been effective in reducing the spread of the diseases. The third change appears to relate to the mandatory use of masks in the most affected regions and the distribution of masks in many regions.

EPIDEMOLOGY

- **EUROPE:** Preprint study describing the scale and dynamics of the COVID-19 outbreaks across Europe. Numbers of reported deaths in 26 European countries varied 100-fold and nations which acted quickly with lockdown measures reported fewer deaths. As only a small portion of Europeans have been infected (5% – 10%), it is important that interventions are quickly adopted upon the appearance of further waves of infection.
- **IMMUNITY:** Preprint study investigating the impacts of time-limited immunity to SARS-CoV-2 in previously infected individuals. The study models different immunity scenarios, from 1 month to permanent immunity. Even short periods of immunity (1 month) appear to show marked oscillations of infection numbers and permanent immunity results in a single very large peak with the disease eventually disappearing. “Immune fading”, where immunity gradually fades away, does not change the heights of peaks, but makes them more frequent.
- **UK LOCKDOWN:** Preprint paper about the easing of the UK lockdown. The estimate of R after the lockdown was 0.84 in the UK, but in the fortnight since 9 June, R has increased to 0.94. As R is now much closer to 1, this substantial rise, mere weeks after lockdown was eased, raises questions about whether there is any room for easing the lockdown further without restarting the spread of the disease.

CHILDREN

- **MENTAL HEALTH:** Preprint literature review on the effects of the pandemic on paediatric mental health. The paper demonstrates a correlation between increasing anxiety amongst children and the pandemic. Deteriorating mental status is often due to fear of infection, boredom, and lack of productivity, which further children's ability to continue education. The authors list potential strategies to mitigate this: increase physical activity, parents cultivating a positive home environment, enrolling in online courses and pursuing interests, video calling with friends, and fixed routines.
- **MULTIPLE INFLAMMATORY DISEASE IN CHILDREN:** Two peer reviewed studies address ‘Multiple Inflammatory Syndrome in Children’ (MIS-C). [Dufort and colleagues](#) monitored 15,515 confirmed COVID-19 cases in children and adolescents (< 21 years old) within New York State, and found that diagnosis of MIS-C coincided with wide-spread SARS-CoV-2 transmission. The second study, by [Feldstein and colleagues](#) specifically identified 186 cases of MIS-C in the US, and concluded

that although an uncommon complication, MIS-C associated with SARS-CoV-2 can lead to serious and life-threatening disease in previously healthy children. It is not clear why some children are more susceptible to MIS-C than adults, but there is a possible link to ethnicity, which has also been [reported in the UK](#).

3. Quick Summaries

[Comprehensive sexuality education to address gender-based violence](#)

- **GENDER:** *Comment article*. Lockdowns due to COVID-19 have confined many people to unsafe spaces, in addition to impeding access to hospitals, shelters, law enforcement and other essential support structures. Whilst comprehensive sexuality education (CSE) is still perceived as taboo in many parts of the world and remains a contentious topic, it can help young people develop healthy self-identities, challenge societal norms and prevent gender-based violence. UN Women began a [campaign](#) in May to raise awareness of the shadow pandemic of violence against women.

[A race to determine what drives COVID-19 severity](#)

- **SEVERITY OF ILLNESS:** *Journal news article*. Previous literature has identified the presence of two major lineages of COVID-19 incident in the early stages of the pandemic. This finding has been speculated to explain why some people may experience more severe disease than others. However, Zhang et al. find no difference in the clinical outcome between the two strains, with abnormally low number of lymphocytes and abnormally high levels of cytokines (IL-6 and IL-8) associated with severe illness.

4. Longer Reading

[Digital tools against COVID-19: taxonomy, ethical challenges and navigation aid](#)

- **DIGITAL TECHNOLOGIES:** *Viewpoint article*. The use of digital technologies to mitigate the impacts of the pandemic raises a number of ethical and legal questions. Before releasing one of these tools, developing organisations should be clear about the risks to privacy and autonomy, and ensure that these are outweighed by evidenced benefits. A [second article](#) describes the features of successful public health technology implementation in nations such as Singapore and Germany.

[Readability of selected governmental and popular health organisation websites on COVID-19 on public health information: A descriptive analysis](#)

- **ONLINE MATERIALS:** *Preprint journal article*. Many publicly accessible Government and International health websites have reading levels at undergraduate level or above. Online COVID-19 materials will need modification to reach appropriate reading levels for public information purposes.

[COVID-19 severity correlates with airway epithelium-immune cell interactions identified by single-cell analysis](#)

- **IMMUNE RESPONSE:** *Peer-reviewed paper*. Investigation of the cells in the upper respiratory tract of infected individuals, identifying features leading to heightened immune responses, and therefore, more severe disease. The differences observed between the cells in individuals with moderate and critical disease contribute to attempts to find treatments which could suppress immune hyperactivation in critical COVID-19 patients.