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Scientists for Labour

COVID-19 Daily Briefing: MAY 13th

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1. Summary

EXIT STRATEGIES

- **REOPENING SCHOOLS IN FRANCE:** Preprint article on the expected impact of different scenarios for reopening schools (progressive or prompt and partial or full) on the outbreak in the Île-de-France region, irrespective of other isolation measures. Regardless of whether they open progressively or promptly, the reopening of only pre-schools and primary schools on 11th May is predicted to result in an increase in COVID cases in the following two months, causing 73% of the ICU capacity to be reached. Full reopening of all schools by 11th June would overwhelm the ICU system with 138% occupation. Reopening all schools on 11th May would likely lead to a second wave (similar to the first) unless if maximum attendance is limited to 50% for both younger children and adolescents.

PHARMACEUTICAL TREATMENTS

- **ANTIVIRALS:** Preprint article describing the use of repurposed antivirals for prophylaxis therapy to block or delay viral infection. Clinical trials are underway on lopinavir/ritonavir, (hydroxy)chloroquine, and remdesivir. While the critical efficacy needed to block viral establishment is typically above 80%, even an efficacy of 60% – 70% in people at high risk could help reduce the health system burden.

- **RETROSPECTIC COMPASSIONATE DRUG USE:** Preprint review article on the use of unapproved drugs during the 2009 influenza epidemic. Only 592 patients out of 33,869 hospitalised and treated for this influenza virus were participants in a registered interventional clinical trial. The overuse of drugs under compassionate circumstances meant there was little high-quality data capture and, therefore, continued uncertainty regarding the potential benefits and harms of anti-viral treatment. These authors suggest that rapid scaling of clinical trials is critical for generating a quality evidence base during pandemics and that testing of novel therapeutics during public health crisis should be as part of large multi-centre, prospective, controlled trials with rapid dissemination of results.

MATERNAL AND INFANT HEALTH

- **COVID-19 IN UK PREGNACY:** Preprint article studying 427 pregnant women admitted to hospital in the UK with COVID-19. Most women hospitalised were symptomatic in the late second or third trimester. Black or other minority ethnicity, underlying health conditions, older maternal age (over 35), and being overweight/obesity were all associated with admission during pregnancy. Amongst infants, 5% tested positive for viral genetic material after birth.

- **PLACENTAL PATHOLOGY:** Preprint article studying the placenta of 16 women who had COVID-19 during pregnancy, compared to a control group. The study found that, compared to the controls, COVID-19 placentas had a pattern of abnormal maternal circulation, potentially compromising oxygenation and leading to negative perinatal outcomes. The authors suggest that antenatal surveillance of women with COVID-19 may be warranted.

- **MATERNAL AND CHILD MORTALITY:** In this comment article, the executive director of UNICEF discusses a report in *The Lancet Global Health*, which projects an additional 1.2 million child deaths and 56,700 maternal deaths in low- and middle-income countries due to COVID-19, resulting from a drop in essential services, disrupted medical supply chains etc. Suggested measures to limit these deaths, include maintaining routine health services, addressing gender-based violence and including refugees and migrants in these measures.

3. Quick Summaries

Avoiding indirect effects of COVID-19 on maternal and child health

- **INFANT MORTALITY:** *Comment article.* The authors discuss the report by Timothy Roberton in *The Lancet Global Health* (mentioned above). A similar report used the same Lives Saved Tool (LiST) to study India, Indonesia, Nigeria, and Pakistan and estimated an extra 31,980 maternal deaths and 734,200 infant deaths due to COVID-19.

Implications of gastrointestinal manifestations of COVID-19

- **GASTROINTESTINAL SYMPTOMS:** *Comment article.* Emerging data suggests that the gastrointestinal tract and liver may be affected by COVID-19, as both systems cells express angiotensin-converting enzyme 2 (ACE2) which is the major receptor for SARS-CoV-2. There is some evidence of faecal-oral transmission and presence of viral RNA in faecal samples. In one study, 41 out of 74 patients had COVID-19 RNA positive faecal samples and remained positive for 27.9 days. One patient tested positive as late as 33 days after their respiratory sample became negative. Faecal positive samples were not correlated with gastrointestinal symptoms or severity of disease.

4. Longer Reading

Predictions of COVID-19 dynamics in the UK: short-term forecasting and analysis of potential exit strategies

- **FORECASTING UK EXIT STRATEGIES:** *Preprint or a journal article.* An analysis of potential UK exit strategies using an age-structured transmission model, investigating the impact of non-compliance, ongoing shielding of the elderly, reapplication of stringent social distancing and asymptomatic transmission. Any significant relaxation of measures in early May is projected to lead to the health service being overwhelmed by a significant second wave of the pandemic. Regional switching and the reintroduction and release of social distancing, based on ICU bed capacity, results in a long epidemic tail until 2021 but protects the health service and reduces the total number of deaths. Total lockdown for the over 60s leads to the lowest mortality in this model, but such measures could be politically and socially undesirable.

The German COVID-19 survey on mental health: primary results

- **MENTAL HEALTH IMPACT ON POPULATION:** *Preprint of a journal article.* This is one of the first (and largest) surveys on mental health during the pandemic in Europe, based on the mental health impact of COVID-19 and subsequent social distancing intervention measures taken in Germany. Despite reflecting a relatively financially secure and stable sample, there was evidence of a substantial mental health burden. Exhibited symptoms included increased levels of stress, anxiety, depressive symptoms, sleep disturbance, and irritability. Over the course of a month, 5% of participants experienced interpersonal violence (around 12 times higher than normal rates).