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COVID-19 Daily Briefing: April 28th

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

HEALTH

- **MENTAL HEALTH:** A study from 2000-2011 using data from 63 countries showed unemployment was associated with a 20%- 30% increased risk of suicide. Using this model, the authors predict mass unemployment resulting from COVID-19 will lead to an additional 2,000-10,000 global deaths by suicide. Psychiatric/suicide helplines must remain fully equipped and staffed.
- **VIRUS STRAINS:** SARS-CoV-2 virus sequences from 5700 samples show a homogeneous viral population, which has not diverged significantly since beginning of the pandemic. Thus, the authors suggest that a single vaccine should be efficacious against all strains if diversity remains minimal.

TESTING

- **SWAB TESTS:** Leading statistician Sheila Bird, has criticised the UK government's daily reporting of COVID-19 swab test results, saying that current reporting could lead to serious misrepresentation. Bird suggests that results should be reported by the date the swabs were taken, not when the lab reported the results; and that results should include age group, sex, and a patient identifier to avoid double-counting.
- **SALIVA TEST:** A new reverse transcription protocol for testing SARS-CoV-2 using saliva would provide results directly from nose/throat swaps or saliva, eliminating the need for RNA extraction and could allow for simple continuous surveillance of communities, with minimal need for reagents. However, the false negative rate is around 20%.
- **RT-PCR:** Mass testing may not be viable due to the large number of RT-PCR kits needed. Instead, the authors suggest group pool testing which can identify individuals with high viral loads and who may be super-spreaders of the virus. *For more details on RT-PCR see SfL's report on testing.*
- **ANTIBODY TESTING** of serum samples showed relevant antibodies in 29% of patients who had shown symptoms for less than one week. For patients who had shown symptoms for 1-2 weeks, 48% had such antibodies. For patients who had shown symptoms for more than two weeks it was 95%. Antibody testing is not useful for detecting infection during the early stages of the disease, but can be used alongside chest CT scans where RT-PCR testing is not an option.

SOCIAL MEDIA

- **MISINFORMATION** related to the COVID-19 pandemic, described by the WHO as an "infodemic", has ranged from fake cures to the origin of the virus. Scientists must join forces to contribute to fact-checking and the creation of science-informed messaging, to engage with the general public using easily accessible forms of dissemination including social media.

3. Quick Summaries

COVID-19: Leading statistician slams UK's reporting of swab tests as "travesty of science"

- **MISREPORTING SWAB TEST:** Patients in hospital are being tested multiple times until they test negative and can be discharged. Outside Scotland, multiple tests of single patients are not readily identified as the same person, seriously misrepresenting the test positivity rates. Furthermore, swab testing results are being grouped in unhelpful ways, being reported on the day they were processed rather than the day the swab was taken, and failing to include the age group and sex of the patient in England, Wales and NI; further degrading the value of the results.

Cancer and COVID-19 – potentially deleterious effects of delaying radiotherapy

- **RADIOTHERAPY** treatment delays increase the risk of cancer reoccurrence and affect the overall survival outcomes of patients. These authors argue that it is possible to safely deliver radiotherapy

treatments during the pandemic without competing for hospital resources or risking cancer patient safety.

Antibody testing will enhance the power and accuracy of COVID-19-prevention trials

- **VACCINE TRIALS:** Results of vaccine trials could be obscured by the inclusion of participants who already have protection antibodies developed during prior asymptomatic infection. Trial participants should be tested before and after to ensure that serologically positive individuals are removed, and that clinical trial results remain unbiased and valid.

Nursing homes or besieged castles: COVID-19 in northern Italy

- **NURSING HOMES:** Nursing homes in northern Italy had no emergency provisions in place prior to COVID-19, because of a lack of money, and the system met with serious difficulties at the peak of the crisis. Replacing visits from relatives with tablet computers (e.g. to allow calls) has limited effectiveness in mitigating isolation for residents with dementia.

Intention to participate in a COVID-19 vaccine clinical trial and to get vaccinated against COVID-19 in France during the pandemic

- **VACCINE TRIALS:** An online survey of 3259 individuals in France (2/3 of whom were women) found that 3/4 of those questioned would 'certainly or probably agree' to vaccination against COVID-19. Of the proportion of vaccine-hesitant responders (1/3 of all surveyed), the proportion who would probably be willing to get vaccinated against COVID-19 was almost 2/3.

4. Longer Reading

Impact of contact tracing on SARS-CoV-2 transmission

- **CONTACT TRACING:** *Comment article on another article.* As some people are more likely to transmit the virus than others, successful post-lockdown strategies should include ample testing and contact tracing, as well as moderate forms of social distancing. Contact tracing on the scale required by COVID-19 response could benefit from new technology-based approaches to assist in person identification. *Note as a caveat to this article that contact tracing is less effective in tracing infections which come from presymptomatic or asymptomatic carriers.*

What policy makers need to know about COVID-19 protective immunity

- **EXIT STRATEGY:** *Comment article.* Strategies in various countries that aim to stagger returns to work based on disease severity risk do not take account of how exposing even lower-risk individuals to the virus can still result in pandemic spread. Strategies should instead focus on increased testing and contact tracing, return-to-work permits based on immune status (if it becomes possible to prove immunity), repurposed or new therapeutics; and a vaccine. *Note that the WHO has cautioned against the use of immunity passports for this reason.*