



COVID-19

Health Evidence Summary No.7

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This daily COVID-19 Health Evidence Summary is to signpost DFID and other UK government departments to the latest relevant evidence and discourse on COVID-19 to inform and support their response. It is a result of 2-2.5 hours of work and is not intended to be a comprehensive summary of evidence.

Sierra Leone lifts ban on pregnant girls going to school but shutdown expected

Hodal, K. | 31 March 2020 | The Guardian | News

<https://www.theguardian.com/global-development/2020/mar/31/sierra-leone-lifts-ban-on-pregnant-girls-going-to-school-but-shutdown-expected>

Sierra Leone lifted its ban that prohibited pregnant schoolgirls from attending school and sitting exams last Monday, however, Sierra Leone is expected to close schools this week to prevent transmission of coronavirus. Sierra Leone is one of only eight virus-free countries in Africa. Lessons must be learnt from the Ebola outbreak where girls were left vulnerable to pregnancy and forced to fend for themselves after schools were closed for months on end, and which saw more than **18,000 girls fall pregnant**.

Estimates of the severity of coronavirus disease 2019: a model-based analysis

Verity, R., Okell, L.C., Dorigatti, I., Winskill, P. Whittaker, C. et al. | Lancet Infectious Diseases | 30 March 2020 | Article

[https://doi.org/10.1016/S1473-3099\(20\)30243-7](https://doi.org/10.1016/S1473-3099(20)30243-7)

From extensive analysis of data from different regions of the world, these early estimates of the case fatality ratio for COVID-19, although lower than some of the crude estimates to-date and lower than for SARS and MERS are substantially higher than for recent influenza pandemics (e.g. H1N1 influenza in 2009) and increase substantially with age. This study estimates an overall case fatality ratio in China of 1.38% (95% CrI 1.23-2.53). The average time to death from onset of symptoms was around 18 days. Estimates of the proportion of infected individuals likely to be hospitalised also increased with age and the average time to hospital discharge from onset of symptoms was around 25 days. The authors argue that crude case fatality ratios (dividing the number of deaths by the number of cases) can mislead because there can be a period of 2 to 3 weeks between a person developing symptoms and that case being detected and reported, and because surveillance of a novel virus is biased towards detecting severe cases, especially at the

start of an outbreak when testing capacity is low. Although China has succeeded in containing the disease spread for 2 months, this is unlikely to be achievable in most countries and very large community epidemics of COVID-19 over the coming weeks and months will be experienced around the world. Estimates provided here can be applied to help inform forecasting of healthcare requirements and guide appropriate mitigation policies in different countries.

Likelihood of survival of coronavirus disease 2019

Ruan, S | The Lancet Infectious Diseases | 30 March 2020 | Comment

[https://doi.org/10.1016/S1473-3099\(20\)30257-7](https://doi.org/10.1016/S1473-3099(20)30257-7)

This Comment on Verity et al. (see above) discusses the challenges of estimating the case fatality ratio of COVID-19 in real time and how they may vary between countries because of differences in implementation of prevention, control and mitigation policies and is affected by the preparedness and availability of healthcare. Early studies have shown that delay in detection of infected cases increases probability of spread and can increase the case fatality ratio. Includes a comparison Figure of case fatality ratios for SARS, COVID-19 and seasonal influenza. Early detection early diagnosis, early isolation and early treatment are likely to be useful in controlling the outbreak and decreasing the case fatality ratio.

An action plan to engage the private sector in the response to COVID 19

Hanlon B. et al. | WHO | 30 March 2020 | Guidelines

<https://hsgovcollab.org/en/node/4365>

Draft interim guidance to help governments and their efforts to engage the private sector as part of a whole of society approach in responding to COVID-19 and to support governments to engage the private sector to help maintain essential health services.

Structural basis of receptor recognition by SARS-CoV-2

Shang, J., Ye G., Shi, K. Wan Y. et al. | Nature | 30 March 2020 | Article

<https://doi.org/10.1038/s41586-020-2179-y>

This study provides initial suggestions that SARS-CoV-2 is more infectious than SARS-CoV, the coronavirus which caused the 2002 SARS epidemic, both of which bind the same receptor ACE-2 where present on human cells but where SARS-CoV-2 is able to bind more efficiently. Thus when inhaled through the nose or mouth has a higher chance of attaching to cells here, where the levels of ACE-2 are thought to be lower, compared to SARS-CoV which almost always replicated in the lungs. This information will help research for potential anti-viral drugs that that can bind to the virus more strongly and more frequently than human ACE-2 to block viral entry into the cell and replication and will shape work on vaccine development.

Developing Covid-19 vaccines at pandemic speed

Lurie et al. from the Coalition for Epidemic Preparedness Innovation (CEPI) | NEJM | 30 March 2020 | Perspective

<https://doi.org/10.1056/NEJMp2005630>

Discusses the need to continue developing the most promising vaccine candidates beyond the end of a pandemic, should it abruptly end before vaccines are ready. An ideal vaccine platform would support development from viral sequencing to clinical trials in less than 16 weeks, induce consistent immune responses across pathogens, and be suitable for large scale manufacturing. Includes a summary Table of vaccine platforms, their attributes and the status of vaccine candidates and diagram comparing the difference between traditional vaccine development and development using a pandemic paradigm.

Johnson & Johnson announces a lead vaccine candidate for COVID-19

Johnson & Johnson | 30 March 2020 | News

<https://www.jnj.com/johnson-johnson-announces-a-lead-vaccine-candidate-for-covid-19-landmark-new-partnership-with-u-s-department-of-health-human-services-and-commitment-to-supply-one-billion-vaccines-worldwide-for-emergency-pandemic-us>

Johnson & Johnson have announced (1) a lead vaccine candidate for COVID-19 from constructs it has been working on since January 2020; (2) a landmark new partnership with the U.S. Department of Health & Human Services; and (3) a commitment to supply one billion vaccines globally for emergency pandemic use. The Company expects to initiate human clinical studies of its lead vaccine candidate at the latest by September 2020.

Global humanitarian response plan COVID-19

United Nation Coordinated Appeal | 25 March 2020 | Response plan

<https://www.unicef.org/press-releases/global-approach-only-way-fight-covid-19-un-says-it-launches-humanitarian-response>

<https://www.unocha.org/sites/unocha/files/Global-Humanitarian-Response-Plan-COVID-19.pdf>

The \$2 billion global HRP COVID-19 will be coordinated by the UN's Office for the Coordination of Humanitarian Affairs and implemented by UN agencies, with international NGOs and NGO consortia and brings together requirements from WHO, FAO, IOM, UNDP, UNFPA, UNHCR, UNICEF, WFP. A warning is given to member states that any diversion of funding from existing humanitarian operations would create an environment in which other diseases - cholera, measles and meningitis – can thrive, more children become malnourished and in which extremists can take control – a “perfect breeding ground for the coronavirus”.

Rights in the time of COVID-19: Lessons from HIV for an effective, community-led response

UNAIDS | 20 March 2020 | Guidelines

<https://www.unaids.org/en/resources/documents/2020/human-rights-and-covid-19>

https://www.unaids.org/en/resources/infographics/human-rights-and-covid19_infographic

The new guidance (plus link above to the infographic) draws on key lessons from the response to the HIV epidemic to guide governments, communities and other stakeholders in planning and implementing measures to contain the COVID-19 pandemic. Seven takeaways: (1) communities are central; (2) no stigma and discrimination; (3) support the most vulnerable; (4) remove barriers to action; (5) no criminal sanctions; (6) international cooperation; and (7) be kind.

Toward a disability inclusive COVID19 response: 10 recommendations from the International Disability Alliance

IDA | 19 March 2020 | Recommendations

http://www.internationaldisabilityalliance.org/sites/default/files/ida_recommendations_for_disability-inclusive_covid19_response_final.pdf

Includes a list of the main barriers that persons with disabilities face in the COVID-19 emergency situation along with some practical solutions and recommendations.

1. Tracking COVID-19 cases

Global

WHO COVID-19 daily situation reports

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>

An interactive web-based dashboard to track COVID-19 in real time

<https://www.nice.org.uk/covid-19>

Live data tracker: sex-disaggregated COVID-19 data from the 25 most-affected countries

<http://globalhealth5050.org/covid19>

Africa

Coronavirus in Africa Tracker: How many covid-19 cases & where?

<https://africanarguments.org/2020/03/23/coronavirus-in-africa-tracker-how-many-cases-and-where-latest/>

UK

COVID-19: PHE track coronavirus cases in the UK

<https://www.gov.uk/government/publications/covid-19-track-coronavirus-cases>

UK case tracing infographic

<https://www.arcgis.com/apps/opsdashboard/index.html#/f94c3c90da5b4e9f9a0b19484dd4bb14>

2. Online course

Responding to COVID-19: Real-time training for the coronavirus disease outbreak

WHO | Available now | multiple self-paced courses

<https://openwho.org/channels/covid-19>

Note that courses are available in English and other languages including French, Portuguese and Spanish.

COVID-19: Tackling the Novel Coronavirus

LSHTM | FutureLearn course | Starts 23 March 2020 | 3 weeks | 4 hours weekly study | Free

<https://www.futurelearn.com/courses/covid19-novel-coronavirus>

A reminder that this course is currently running. On this course you will learn what is known about the outbreak of COVID-19 (week 1); what the practical implications for responding to COVID-19 are (week 2); and what we need to find out about COVID-19 (week 3).

3. Resource Hubs

International Disability Alliance: COVID 19 and the disability movement

<http://www.internationaldisabilityalliance.org/content/covid-19-and-disability-movement>

Africa Centres for Disease Control and Prevention (Africa CDC)

<https://africacdc.org/covid-19/>

UNICEF: Latest news and updates on coronavirus disease 2019 (COVID-19)

<https://www.unicef.org/coronavirus/covid-19>

Coronavirus: the science explained

<https://coronavirusexplained.ukri.org/en/>

Social Science in Humanitarian Action: Updates on the novel COVID-19 outbreak

<https://www.socialscienceinaction.org/update-novel-covid-19-outbreak/>

Special Collection: Coronavirus (COVID-19): evidence relevant to critical care

<https://www.cochrane.org/news/special-collection-coronavirus-covid-19-evidence-relevant-critical-care>

NICE UK: Rapid guidelines and evidence reviews

<https://www.nice.org.uk/covid-19>

Imperial College London MRC Centre for Global Infectious Disease Analysis COVID-19 reports

<https://www.imperial.ac.uk/mrc-global-infectious-disease-analysis/news--wuhan-coronavirus/>

Global research on COVID-19

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/global-research-on-novel-coronavirus-2019-ncov>

WHO R&D Blueprint

<https://www.who.int/blueprint/priority-diseases/key-action/novel-coronavirus/en/>

WHO: Coronavirus disease (COVID-19) outbreak resources

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019>

Latest information and advice from the UK Government

<https://www.gov.uk/guidance/coronavirus-covid-19-information-for-the-public>

CDC COVID-19 Resources

<https://www.cdc.gov/coronavirus/2019-ncov/index.html>The Global Health Network Coronavirus outbreak knowledge hub

The Lancet COVID-19 Resource Centre

<https://www.thelancet.com/coronavirus>

Elsevier's Novel Coronavirus Information Center

<https://www.elsevier.com/connect/coronavirus-information-center>

Cell Press Coronavirus Resource Hub

<https://www.cell.com/2019-nCoV>

Cochrane Special Collections - COVID-19: infection control and prevention measures

<https://www.cochranelibrary.com/collections/doi/SC000040/full>

The BMJ Coronavirus (covid-19): Latest news and resources

https://www.bmj.com/coronavirus?int_source=wisepops&int_medium=wisepops&int_campaign=DAA_CoronaVirus_Jan24

Johns Hopkins Coronavirus Resource Centre

<https://coronavirus.jhu.edu>

Global Partnership for Sustainable Development – COVID-19 resources

<http://www.data4sdgs.org/resources/covid-19-resources>

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