COVID-19
Health Evidence Summary No.7
Kerry Millington
Liverpool School of Tropical Medicine (LSTM)
31 March 2020

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

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

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% Crl 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

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 serves.

**Structural basis of receptor recognition by SARS-CoV-2**


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
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


Johnson & Johnson have announced (1) a lead vaccine candidate for COVID-19 from constructs is 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 it lead vaccine candidate at the latest by September 2020.

**Global humanitarian response plan COVID-19**

United Nation Coordinated Appeal | 25 March 2020 | Response plan


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


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


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?**


   **UK**

   **COVID-19: PHE track coronavirus cases in the UK**

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

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

Global research on COVID-19

WHO R&D Blueprint

WHO: Coronavirus disease (COVID-19) outbreak resources
https://www.who.int/emergencies/diseases/novel-coronavirus-2019

Latest information and advice from the UK Government

CDC COVID-19 Resources

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

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

Suggested citation

About this report
This daily COVID-19 health evidence summary is based on 2 to 2.5 hours of desk-based research. K4D services are provided by a consortium of leading organisations working in international development, led by the Institute of Development Studies (IDS), with Education Development Trust, Itad, University of Leeds Nuffield Centre for International Health and Development, Liverpool School of Tropical Medicine (LSTM), University of Birmingham International Development Department (IDD) and the University of Manchester Humanitarian and Conflict Response Institute (HCRI).

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