K4D | Knowledge, evidence and learning for development

COVID-19
Health Evidence Summary No.21

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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 3 hours of work and is not intended to be a comprehensive summary of evidence.

Preparedness and Response

Impact assessment of non-pharmaceutical interventions against coronavirus diseases 2019 and influenza in Hong Kong: an observational study

Cowling, BJ, Ali, ST, Ng, TWY et al. | The Lancet Public Health | 17 April 2020 | Article

https://doi.org/10.1016/S2468-2667(20)30090-6

This study suggests that non-pharmaceutical interventions (border restrictions, quarantine and isolation, social distancing and behaviour changes) quickly implemented to control the spread of COVID-19 in Hong Kong have been effective with the estimated effective reproduction number remaining at approximately 1 for the past 8 weeks and that these measures were able to avoid the need for complete lockdowns. These interventions also reduced influenza transmission in early February 2020. This study was not able to identify which measure was potentially the most effective in suppressing COVID-19 transmission, but it is likely that each played a part. The associated estimated 44% reduction in influenza transmission in the general community in February 2020, was much greater than reduction in transmission with previous school closures alone during the 2009 pandemic and transmission of influenza B in 2017-18 suggesting that social distancing measures and avoidance behaviours have had a substantial effect on influenza transmission in addition to the effect of school closures. The experience from Hong Kong suggests that COVID-19 transmission can be contained with a combination of testing and isolating cases, along with a level of social distancing to reduce community transmission from unidentified cases. If these measures and population responses are sustained they could help to avoid fatigue among the general population.

Africa in the path of COVID-19

El-Sadr, WM & Justman, J | NEJM | 17 April | Perspective

https://www.nejm.org/doi/full/10.1056/NEJMp2008193

This Perspective calls for countries around the world to assist Africa in staying ahead of the curve, even as they confront their own epidemics. These may include donations of test kits, PPE, ventilators ad other life-support equipment, or at least ensuring that African countries are not priced out of the market for these commodities. Support for real-time COVID-19 surveillance systems and for surveys to determine the scale of the epidemic to inform decisions on how to respond. Support for information campaigns to promote and sustain safe behaviours and counter stigma that can arise. Social and economic support for the vulnerable and poor including those that work in the informal economy. Resources to respond to the COVID-19 pandemic must be additional and ot diverted away from ongoing health threats including TB, HIV and malaria.

How to obtain a nasopharyngeal swab specimen

Marty et al | NEJM | 17 April 2020 | Video

https://www.nejm.org/doi/full/10.1056/NEJMvcm2010260

This video demonstrates the collection of specimens from the surface of the respiratory mucosa with naopharyngeal swabs for the diagnosis of COVID-19 in adults and in children – important as inadequate swab technique could lead to false negative results. Approved PPE and the appropriate technique is important to minimise the possibility of spreading the virus.

Demographic science aids in understanding the spread and fatality rates of COVID-19

Dowd et al. | PNAS | 16 April 2020 | Brief report

https://doi.org/10.1073/pnas.2004911117

Demographically informed projections will better predict the COVID-19 burden and inform governments. The overall burden of serious cases and mortality reflects linkages between the age distribution of early cases, age structure of the population and intergenerational interactions. This study examined the role of age structure in deaths so far in Italy and South Korea and illustrate how the pandemic could develop in populations with similar sizes but different age structures e.g. Brazil vs Nigeria. Currently COVID-19 mortality is higher in countries with older versus younger populations. COVID-19 transmission chains that begin in younger populations may go undetected longer. Once community transmission is established, countries with high intergenerational contacts may see faster transmissions to high-fatality age groups, as seen in Italy and Spain. Reporting of case and fatality data disaggregated by age and sex will help improve real-time targeted forecasting of hospitalisation and critical care needs.

Estimating the maximum capacity of COVID-19 cases manageable per day given a health care system's constrained resources

Giannakeas et al. | Annals of Internal Medicine | 16 April 2020 | Letter & Tool

https://doi.org/10.7326/M20-1169

This letter describes the development of an open access online tool – the COVID-19 Acute and Intensive Care Resource Tool (CAIC-RT) - that can be tailored for use in any region of the world and applied to either a large health care system or to an individual hospital to estimate the maximum number of COVID-19 cases that could be managed per day within the catchment area

serviced by a health facility or system, on the basis of age-based case distribution and severity and acute and critical care resource availability. Assumptions of this tool include that patients with COVID-19 are hospitalised instantaneously and that all beds and ventilators can be adequately staffed; and the application of Canadian, Chinese, Italian and US data may not be generalisations to all health care systems. Default values will be updated as new data emerge.

Predictive mathematical models of the COVID-19 pandemic: underlying principles and value of projections

Jewell et al | JAMA | 16 April 2020 | Viewpoint

https://doi.org/10.1001/jama.2020.6585

A caution that the "primary and most effective use of epidemiological models is to estimate the relative effect of various interventions in reducing disease burden rather than to produce precise quantitative predictions about extent or duration of disease burdens". Estimates from modelling studies are only as good as the validity of the epidemiological or statistical model used; the extent and accuracy of the assumptions made and the quality of data (limited early in an epidemic and by reporting delays and poor documentation) used to calibrate the model. Models need to be dynamic to respond to unanticipated effects; key assumptions should be clearly reported; ranges of estimates should be reported so that the variability and uncertainty of predictions is clear; models should incorporate measures of accuracy as additional or better data becomes available; and models should reflect local data to represent context.

Intersectional approach to COVID-19

The risks posed by COVID-19 are gendered. Our response should be as well

Bourgault S | Center for Global Development | 17 April 2020 | Blog

https://www.cgdev.org/blog/risks-posed-covid-19-are-gendered-our-response-should-be-well

In a recent CGD event, experts discussed the impact of the pandemic on violence against women, care burdens, social norms, economic prospects and more. This blog summaries key messages from this event.

Disability and COVID-19: What did we learn from the Twitter Chat

ARISE Consortium | 20 April 2020 | Blog on Twitter Chat

http://www.ariseconsortium.org/disability-and-covid-19-what-did-we-learn-from-the-twitter-chat/

All blogs summarising key learnings from the ARISE Twitter chat on 6 April are now available. The fourth blog covers structural violence, ableism and COVID-19.

Research and Development

Bacille Calmette-Guérin (BCG) vaccination and COVID-19

WHO | 12 April 2020 | Scientific Brief

https://www.who.int/news-room/commentaries/detail/bacille-calmette-guérin-(bcg)-vaccination-and-covid-19

WHO does not recommend BCG vaccination for the prevention of COVID-19 in the absence of evidence. WHO will evaluate the evidence when available. Two clinical trials are currently underway.

Economic impact

The economic impact of COVID-19 around the world: a round-up of the most recent analysis

Acosta, AM & Evans, D | Center for Global Development | 17 April 2020 | Blog

https://www.cgdev.org/blog/economic-impact-covid-19-around-world-round-most-recent-analysis#evans-economic-africa

A selection of recent coverage on the observed and expected economic impacts across Africa, Asia and Latin America, divided into growth and income, sectors and sub-populations, policy responses, and commentary. Note that the recurring theme in the analysis across Africa and Asia is potential disruptions to the food chain.

Online learning and events

CGD conversations on COVID-19 and development: Mark Lowcock

Tuesday 28 April 2020 1200 ET

https://www.cgdev.org/event/cgd-conversations-covid-19-and-development-mark-lowcock

Under-Secretary General for Humanitarian Affairs and Emergency Relief Coordinator, Mark Lowcock, joins CDG President Masood Ahmed to discuss the impacts of the COVID-19 pandemic in fragile states and refugee communities.

Emerging respiratory viruses, including COVID-19: methods for detection, prevention, response and control

WHO | Free | 3 hours duration

https://openwho.org/courses/introduction-to-ncov

A general introduction to enable you to describe the fundamental principles of emerging respiratory viruses, including novel coronaviruses, and how to effectively respond to an outbreak.

Intended for public health professionals, incident managers and personnel working for the UN, international organisations and NGOs.

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 25 May 2020 | 3 weeks | 4 hours weekly study | Free

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

Unfacilitated access to this course remains. An updated version of this course will though be run from 25 May 2020. 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).

COVID-19 Diagnostics and Testing

FIND, LSHTM & ASLM | FutureLearn course | Starts 20 April 2020 | 3 weeks | 3 hours weekly study | Free

https://www.futurelearn.com/courses/covid-19-diagnostics-and-testing

This course is designed for professionals involved in the testing and diagnosis of COVID-19, with a focus on low- and middle-income settings. You will learn the latest recommendations on COVID-19 testing, get upt0date information on the performance of tests and how best to deploy them.

COVID-19 Critical Care: Understanding and Application

University of Edinburgh & Royal College of Physicians of Edinburgh | FutureLearn course | Starts 6 April 2020 | 5 weeks | 1 hour weekly study | Free

https://www.futurelearn.com/courses/covid-19-critical-care-education-resource

Designed for frontline clinical staff to learn the principles and practice of critical care to treat and care for critically ill patients during the COVID-19 pandemic. You will learn (1) how to apply the current and evolving principles of PPE in the care of COVID-19; (2) apply evidence-based principles of advanced organ support and monitoring to the COVID-19 critically ill patients; (3) apply evidence-based daily practices to care of the critically ill patient; and (4) develop a range of specialised self-caring practices.

Note that this resource has been created in response to the COVID-19 emergency and does not correspond to the classic structure of a FutureLearn course. You do not have to follow the week by week approach and can select the materials most relevant to your work.

Tracking Dashboards

Global	WHO sitreps
	Johns Hopkins University
	WEF
	Vaccine Centre LSHTM
	Our World in Data
	Global 5050
	Humanitarian Data Exchange
	Information is Beautiful
	The Commons Project
Regional	WHO Africa
	African Arguments
	European CDC
Country	Ghana
	Indonesia
	Sierra Leone
	Singapore
	UK
	US

Guidelines

Global	WHO
	IASC
Regional	Africa CDC
Country	Nigeria CDC
	UK Government
	UK ONS
	NICE UK
	US CDC

Resource Hubs

Multilaterals	WHO
	WHO risk communication
	WHO Q&A
	WHO Global research
	COVID-19 Solidarity Response Fund
	UN
	UN Women
	UNOCHA
	UNHCR

	UNICEF
	UNESCO
	UN WFP
	World Bank
Regional & Country	
	Africa CDC
	African Union
Academic journals	The Lancet
	NEJM
	Elsevier
	BMJ
	Cell
	PLoS
	Cochrane reviews
Global Health Institutes	LSTM
	LSHTM
	Johns Hopkins University
	ICL MRC Centre for Global Infectious Disease Analysis
	ODI
	Norwegian Institute of Public Health
Ethics	Rings HSG Resyst Reach Wellcome
Clinical trials	US NIH registered clinical trials
Funding bodies	UKRI
	Wellcome
Demographics	WorldPop
Global Impact Surveys	Premise COVID-19 Global Impact Study
	GeoPoll: SSA
TB	Stop TB Partnership
Disability	IDA
	Disability and inclusion
	Coregroup IDDC
SDGs	Global Partnership for Sustainable Development Data
Humanitarian	Reliefweb
	Humanitarian OpenStreetMap Team
	SSHAP
Narratives	David Nabarro, WHO DG Special Envoy on COVID-19

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