



COVID-19

Health Evidence Summary No.38

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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 available evidence on COVID-19 but aims to make original documents easily accessible to decision makers which, if relevant to them, they should go to before making decisions.

Clinical characteristics and management

Publication date	Title/URL	Journal/Article type	Summary
14.05.2020	The association of cardiovascular disease and other pre-existing co-morbidities with COVID-19 mortality: A systematic review and meta-analysis	medRxiv preprint (not peer reviewed) Systematic review and meta-analysis	<ul style="list-style-type: none"> Ten chronic conditions from 19 studies were included in the meta-analysis COVID-19 patients with any cardiovascular disease, coronary heart disease, hypertension, congestive heart failure, and cancer have a significantly increased risk of mortality
12.05.2020	Manifestations and prognosis of gastrointestinal and liver involvement in patients with COVID-19: a systematic	The Lancet Gastroenterology & Hepatology Systematic review and meta-analysis	<ul style="list-style-type: none"> Digestive symptoms and liver injury are not uncommon in patients with COVID-19 Approximately 10% of patients with COVID-19 might present with gastrointestinal symptoms only, without respiratory symptoms

	review and meta-analysis		<ul style="list-style-type: none"> • Patients with severe COVID-19 had a higher risk of developing gastrointestinal symptoms and liver injury compared to patients with non-severe disease • Patients with digestive system involvement as initial symptoms have delayed diagnosis of COVID-19, and those with digestive involvement tend to progress to severe or critical disease • Children had a similar prevalence of gastrointestinal symptoms to adults with COVID-19
13.05.2020	An outbreak of severe Kawasaki-like disease at the Italian epicentre of the SARS-CoV-2 epidemic: an observational cohort study	The Lancet Article	<ul style="list-style-type: none"> • In the Bergamo province in Italy, a 30-fold increased incidence of Kawasaki-like disease was found in the past month • Children diagnosed after the SARS-CoV-2 epidemic began showed evidence of immune response to the virus, were older, had a higher rate of cardiac involvement, and features of MAS. • SARS-CoV-2 was associated with high incidence of a severe form of Kawasaki disease

Epidemiology and modelling

Publication date	Title/URL	Journal/Article type	Summary
07.05.2020	Projected early spread of COVID-19 in Africa through 1 June 2020	Euro Surveill. Rapid Communication	<ul style="list-style-type: none"> • Estimates of the date of reporting 1,000 and 10,000 COVID-19 cases for 45 African countries/territories already reporting COVID-19 cases before 23 March 2020 are projected • All 45 countries were likely to exceed 1,000 confirmed cases by the end of April 2020, with most

			<p>exceeding 10,000 a few weeks later, assuming early epidemic trends with reported cases lagging and under-representing actual burden</p> <ul style="list-style-type: none"> • Projections assumed no substantive changes between the initially reported cases and forecast points – whilst some countries have taken drastic actions impacting on these assumptions, others have not or acted slowly
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Testing

Publication date	Title/URL	Journal/Article type	Summary
13.05.2020	Variation in false-negative rate of reverse transcriptase polymerase chain reaction-based SARS-CoV-2 tests by time since exposure	Annals of Internal Medicine Article	<ul style="list-style-type: none"> • This study estimates the false-negative rate of RT-PCR tests for SARS-CoV-2 by day since exposure and symptom onset from 7 studies with a total of 1330 respiratory samples analysed by RT-PCR • Over the 4 days of infection before typical show of symptoms, the probability of a false-negative result in an infected person decreased from 100% on day 1 to 68% on day 4 • On the day of symptom onset the probability of a false-negative result in an infected person was 38% decreasing to 20% on day 8 (3 days after symptom onset) and increasing again from 21% on day 9 to 66% on day 21 • Optimal time for testing may be during a window period of 3 to 5 days after the onset of symptoms to minimise false-negative results • Care must be taken to interpret RT-PCR test results for SARS-CoV-2 in the context of the clinical and epidemiological situation to avoid being falsely reassured by

			<p>negative test results, particularly early in the course of infection</p> <ul style="list-style-type: none"> • This is critical as decisions are made about whether to stop using PPE and HCW return to work
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Therapeutics

Publication date	Title/URL	Journal/Article type	Summary
12.05.2020	Identification of falsified chloroquine tablets in Africa at the time of the COVID-19 pandemic	Am J Trop Med Hyg Article	<ul style="list-style-type: none"> • Five different types of falsified chloroquine tablets were discovered between 31 March and 4 April 2020 in Cameroon and DRC by locally conducted thin layer chromatographic analysis • Absence or reduced amounts of chloroquine and the presence of undeclared active pharmaceutical ingredients, paracetamol and metronidazole, were confirmed by subsequent investigation by liquid chromatography and mass spectrometry in Germany • Highlights the need for timely preparations for the detection of falsified therapeutics against COVID-19, including establishing screening technologies in LMICs

Vaccines

Publication date	Title/URL	Journal/Article type	Summary
13.05.2020	ChAdOx1 nCoV-19 vaccination prevents SARS-CoV-2 pneumonia in rhesus macques	bioRxiv preprint (not peer reviewed) Article	<ul style="list-style-type: none"> • This study shows that the adenovirus-vectored vaccine ChAdOx1 nCoV-19, encoding the spike protein of SARS-CoV-2, induced a humoral and cell-mediated response in mice • Also a single vaccination with ChAdOx1 nCoV-19 induced a humoral and cell-mediated response in rhesus macaques

			<ul style="list-style-type: none"> • A significantly reduced viral load was observed in bronchoalveolar lavage fluid and respiratory tract tissue of vaccinated animals challenged with SARS-CoV-2 compared with control animals and no pneumonia was observed in vaccinated rhesus macaques • No evidence of immune-enhanced disease following viral challenge was observed
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Social Science

Publication date	Title/URL	Journal/Article type	Summary
12.05.2020	Equity in response to the COVID-19 pandemic: an assessment of the direct and indirect impacts on disadvantaged and vulnerable populations in low- and lower-middle-income countries	Imperial College London COVID-19 response team Report 22	<ul style="list-style-type: none"> • A COVID-19 transmission model was used to explore health inequities using large-scale household surveys to quantify the differences in handwashing access, occupation and hospital access with respect to wealth status in low-income settings • Results clearly show a trend that the probability of death from COVID-19 increases with increasing poverty • On average, a 32.0% (2.5th-97.5th centile 8.0-72.5%) estimate increase in the probability of death in the poorest quintile compared to the wealthiest quintile from the three factors listed above alone • Vulnerable and disadvantaged populations are at greater risk of both the direct impact of COVID-19 (e.g. morbidity and mortality) and indirect impact (e.g. food security and loss of livelihoods)

Comments, Editorials, Opinions, Blogs, News

Publication date	Title/URL	Journal Article type	Author(s)
06.05.2020	Simple ideas to mitigate the impacts of the COVID-19 epidemic on refugees with chronic diseases	Conflict and Health Letter to the Editor	Muhammad Fawad Fatima Rawashdeh Parveen K. Parmar Ruwan Ratnayake
12.05.20	The fight to end tuberculosis must not be forgotten in the COVID-19 outbreak	Nature Medicine Correspondence	Tsegahun Manyazewal Yimtubezinash Woldeamanuel Henrey M. Blumberg Abebaw Fekadu Vincent C. Marconi
01.05.2020	Monitoring the COVID-19 pandemic in sub-Saharan Africa: focusing on health facility admissions and deaths	IJTLD Correspondence	A.D. Harries L. Martinez J.M. Chakaya
01.05.2020	Tackling the threat of COVID-19 in Africa: an urgent need for practical planning	IJTLD Correspondence	C-Y Chiang A El Sony

Dashboards & Trackers

Cases & deaths: Global	Cases & deaths: Regional	Cases & deaths: Country	Living evidence & policy maps	Current research including trials	Diagnostics	Treatments	Vaccines
WHO sitreps	WHO Africa	Ghana	COVID-NMA	WHO	FIND SARS-CoV-2 Test Tracker	Global COVID-19 Clinical Trial Tracker	CEPI
WHO dashboard	African Arguments	Indonesia	EPPI Centre	WHO International Clinical Trials Registry Platform (ICTRP)	FIND SARS-CoV-2 Diagnostic tests: performance data	US NIH registered clinical trials	Vaccine Centre LSHTM
Johns Hopkins University	European CDC	Nigeria CDC	Norwegian Institute of Public Health	Cytel	Serology-based tests for COVID-19	Solidarity trial	COVID-19 Oxford Vaccine Trial
WEF		Sierra Leone	Oxford C19 Government Response Tracker (OxCGRT)	US NIH	Our World in Data: C19 Testing	COVID-19 Therapeutics Accelerator	
Our World in Data		Singapore	Our World in Data: C19 Policy responses	COVID-evidence			
Global 5050		UK		Cochrane			

CEBM, University of Oxford		US		Clinicaltrials.gov			
Humanitarian Data Exchange				UKCDR			
Information is Beautiful							
LSHTM							
HealthMap (cases)							
The Commons Project							

C19 Resource Hubs

Global	Regional & Country	Academic journals & Publishers	Global Health Institutes/Centres/Funders/Others	Health Topics	Social Sciences
WHO COVID-19 pandemic	Africa CDC	The Lancet	LSTM	Stop TB Partnership	SSHAP
WHO risk communication	African Union	NEJM	LSHTM		IDA
WHO Q&A	Nigeria CDC	Elsevier	ICL MRC Centre for Global Infectious Disease Analysis	Global Menstrual Collective	Disability and inclusion

WHO Global research	GeoPoll : SSA	BMJ	ODI	SLH: Handwashing in low resource settings	Coregroup IDDC
COVID-19 Solidarity Response Fund	Global Health Network Africa	Cell Press	Johns Hopkins University		Rings HSG Resyst Reach Wellcome
UN	African Academy of Sciences	Cochrane resources	Center for Global Development		Social Development Direct C19 blog series
UN Women	Africa Evidence Network	PLoS	CMMID Repository		
UNOCHA		Annals of Internal Medicine	Norwegian Institute of Public Health		
UNHCR		Wiley Health Economics	Oxford Centre for Evidence-based Medicine		
UNICEF		Pre-prints medRxiv and bioRxiv	HEART		
UNESCO		SAGE journals	UKRI		
UN WFP			Evidence Aid		

GOARN			NIH		
EPI-WIN					
World Bank					
Our World in Data					
COVID-19 Narratives by David Nabarro					
Reliefweb					
Humanitarian OpenStreetMap Team					
Global Partnership for Sustainable Development Data					
WorldPop					
Flowminder					
COVID-END					
Premise COVID-19 Global Impact Study					

Online learning & events

Date	Title/URL	Online learning/event	Duration	Lead
Available now	WHO Academy and WHO Info mobile applications	Mobile app		WHO
Available now	COVID-19: Pandemics, Modelling and Policy	Online learning	2 weeks 2 hours weekly study	FutureLearn UNESCO UNITWIN Complex Systems Digital Campus/Open University
11.5.2020	COVID-19 Contact Tracing course	Online learning	5 hours	Johns Hopkins Bloomberg School of Health
7-28 May 2020	Virtual Evidence Weeks	5 sessions	1h 30	International Initiative for Impact Evaluation (3ie)
Tuesdays at 1700 CEST (Geneva time) & Thursdays 0830 CEST (Geneva time)	COVID-19 Open online brief with Dr David Nabarro	Event	1h	4SD
30.04.2020	Professor Chris Whitty's Gresham lecture on COVID-19	Event	1h 20	Gresham College
Available now	Emerging respiratory viruses, including COVID-19: methods for detection, prevention, response and control	Online learning	3 hours	WHO

Available now	Responding to COVID-19: Real-time training for the coronavirus disease outbreak	Online learning	Multiple self-paced course	WHO
25 May 2020	COVID-19: Tackling the Novel Coronavirus	Online learning	3 weeks 4 hours weekly study	FutureLearn LSHTM/UK PHRST
Available online now without mentors. Updated version will commence early June 2020	COVID-19 Diagnostics and Testing	Online learning	3 weeks 3 hours weekly study	FutureLearn FIND/LSHTM/ASLM
6 April 2020	COVID-19 Critical Care: Understanding and Application	Online learning	5 weeks 1 hour weekly study	FutureLearn University of Edinburgh & Royal College of Physicians of Edinburgh
Available now	COVID-19 supporting online courses	Online learning	Multiple self-paced course	BMJ Learning

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Rapid review methodology

The rapid daily search for peer-reviewed literature is carried out through a PubMed search with the following keywords (“COVID-19” OR “severe acute respiratory syndrome coronavirus 2” OR “2019-nCoV” OR “SARS-CoV-2” OR “2019nCoV” OR “coronavirus”) AND (“Africa”) OR (“equity” OR “equities”) OR (“poverty”), restricted to articles published in the previous 2 to 3 days, in English. This is complemented by a search of the homepage of the following high-impact global health journals: The Lancet journals, New England Journal of Medicine, Nature, JAMA, Annals of Internal Medicine, Cochrane Reviews, BMJ Global Health, the PLoS journals and a Twitter search of their Twitter pages. A search also of preprints from bioRxiv and medRxiv. Please note that papers that have not been peer-reviewed are highlighted in red. All primary research papers that relate to the primary and

secondary impacts of the COVID-19 response in LMICs, and disease control and health system responses are included. Articles related to tackling the secondary impacts on other sectors are not included. Additional commentaries, opinions, and commissioned pieces are selected based on relevance.

The search for dashboards, guidelines, tools, editorials, comments, blogs, opinions and news is through the academic journals listed above, C19 resource hubs and following lead academics and professionals on Twitter.

About this report

This daily COVID-19 health evidence summary (HES) is based on 3 hours of desk-based research. The summary is not intended to be a comprehensive summary of available evidence on COVID-19 but aims to make original documents easily accessible to decision makers which, if relevant to them, they should go to before making decisions. The HES are not intended to replace medical or professional advice and the researcher or the K4D consortium cannot be held responsible for any decisions made about COVID-19 on the basis of the HES alone. 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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