K4D | Knowledge, evidence and learning for development

COVID-19
Health Evidence Summary No.106

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This weekly COVID-19 health evidence summary (HES) is based on 3.5 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.

Clinical characteristics and management

Publication date	Title/URL	Journal/Article type	Summary	Keywords
11.12.2020	Genetic mechanisms of critical illness in COVID-19	Nature | article	• Host-mediated lung inflammation can lead to death in critically ill patients with COVID-19 • A study of more than 2,244 critically ill patients from 208 intensive care units in UK hospitals has identified specific host genetic variants associated with key host antiviral defence mechanisms and mediators of inflammatory organ damage resulting in increased susceptibility to severe COVID-19 symptoms • Both mechanisms identified could be treated with existing drugs • To be explored through large-scale randomised clinical trials	Genetics
11.12.2020	Rapid triage for COVID-19 using	The Lancet Digital Health | Article	• Early clinical presentation of COVID-19 can be difficult to distinguish from other illnesses with SARS-CoV-2 PCR test results taking up	Triage

| | routine clinical data for patients attending hospital: development and prospective validation of an artificial intelligence screening test | | to 72h for operational reasons
• Here, this study shows two early-detection models for COVID-19 performing as effectively as a screening test for COVID-19 in patients attending the emergency department, excluding the illness with high-confidence by use of clinical data routinely available within 1h of presentation to hospital
• A rapidly scalable approach, fitting within existing laboratory testing infrastructure and standard of care of hospitals in high-income and middle-income countries | |

Infection Prevention and Control

Publication date	Title/URL	Journal/Article type	Summary	Keywords
10.12.2020	Global mobility and the threat of pandemics: evidence from three centuries	CGD | Working Paper	• Predictions are tested across four global pandemics in three different centuries • In all cases, reduction in pre-pandemic international mobility is associated with later arrival and no detectable reduction in final mortality • The case for permanent limits on international mobility to reduce the harm of future pandemics is weak	International travel restrictions
07.12.2020	Effect of internationally imported cases on internal spread of COVID-19: a mathematic	The Lancet Public Health | Article	• This study considers the risk of case importation across 162 countries, in the context of local epidemic growth rates • Estimates are produced on a global scale to allow the complex relationship between the prevalence of COVID-19, traveller volume, and incidence locally to be combined,	International travel restrictions

| | al modelling study | | producing a simple metric that can be used to inform decisions about international travel restrictions where these make large contributions to slowing local transmission, and where they have little effect
• In any countries, imported cases would make a relatively small contribution to local transmission, so travel restrictions would have very little effect on epidemics
• Countries where travel restrictions would have a large effect on local transmission are those with strong travel links to countries with high COVID-19 prevalence or countries that have successfully managed to control their local outbreaks | |

Therapeutics

Publication date	Title/URL	Journal/Article type	Summary	Keywords
14.12.2020	Azithromycin in hospitalised patients with COVID-19 (RECOVERY): a randomised, controlled, open-label, platform trial	medRxiv | pre-print (not peer reviewed)	• In patients hospitalised with COVID-19, azithromycin did not provide any clinical benefit • 28 mortality 19% vs 19% (rate ratio 1.00 [95% CI 0.90, 1.12]) • No effect on secondary outcomes either • An important negative result for minimising unnecessary antibiotic use to avoid resistance (unless a clear clinical indication to use) • Note results apply to hospitalised patients and await results from other trials to see if there is benefit in use outside of the hosptial	Azithromycin, hospitalised patients

Publication date	Title/URL	Journal/Article type	Summary	Keywords
11.12.2020	Baricitinib plus remdesivir for hospitalized adults with Covid-19	NEJM | article	• A double-blind, randomised, placebo-controlled trial evaluation baricitinib plus remdesivir in hospitalised adults with COVID-19 • Baricitinib plus remdesivir was superior to remdesivir alone reducing recovery time and accelerating improvement in clinical status among patients with Covid-19, notably among those receiving high-flow oxygen or noninvasive ventilation • The combination was associated with fewer serious adverse events	Baricitinib, remdesivir, hospitalised patients
08.12.2020	Hydroxychloroquine as postexposure prophylaxis to prevent severe acute respiratory syndrome coronavirus 2 infection: a randomized trial	Annals of Internal Medicine | Original Research	• Household-randomized, double-blind, controlled trial of hydroxychloroquine postexposure prophylaxis in close contacts recently exposed (<96 hours) to persons with diagnosed SARS-CoV-2 infection • Hydroxychloroquine did not prevent SARS-CoV-2 infection when taken as a postexposure prophylaxis	Hydroxychloroquine, postexposure, prophylaxis

Vaccines

Publication date	Title/URL	Journal/Article type	Summary	Keywords
10.12.2020	Safety and efficacy of the BNT162b2 mRNA Covid-19 vaccine	NEJM | Original research	• Ongoing multinational, placebo-controlled, observer-blinded, pivotal efficacy trial of the BioNTech and Pfizer vaccine candidate • 43, 548 >=16y participants underwent randomisation, of whom 43,448 received	BioNTech/Pfizer vaccine, safety, efficacy

			• two-dose injections 21 days apart of either placebo or the BNT162b2 vaccine candidate • A two-dose regimen of BNT162b2 conferred 95% (95% credible interval 90.3, 97.6; 8 cases of Covid-19 with onset at least 7 days after the second dose in participants assigned to receive BNT162b2 and 162 cases among those who received placebo) protection against Covid-19 in persons 16 years of age or older • Similar vaccine efficacy was observed across subgroups defined by age, sex, race, ethnicity, baseline body-mass index, and the presence of coexisting conditions • Safety over a median of 2 months was similar to that of other viral vaccine	
10.12.2020	Phase 1-2 trial of a SARS-CoV-2 recombinant spike protein nanoparticle vaccine	NEJM | Original Article	• Randomised, placebo-controlled, phase 1-2 trial to evaluate the safety and immunogenicity of the rSARS-CoV-2 vaccine candidate NVX-CoV2373 in two doses, with or without matrix-M1 adjuvant in 131 healthy adults • At 35 days, NVX-CoV2373 appeared to be safe and elicited immune responses that exceeded levels in Covid-19 convalescent serum	NVX-CoV2373, vaccine candidate, phase 1-2 trial
08.12.2020	Safety and efficacy of the ChAdOx1	Lancet | Article	• Pooled interim analysis of four trials on the safety and efficacy of the ChAdOx1 nCoV-19 vaccine	Oxford vaccine, safety, efficacy

| | nCoV-19 vaccine (AZD1222) against SARS-CoV-2: an interim analysis of four randomised controlled trials in Brazil, South African, and the UK | | • ChAdOx1 nCoV-19 has an acceptable safety profile and has been found to be efficacious against symptomatic COVID-19, with no hospital admissions or severe cases reported in the ChAdOx1 nCoV-19 arm
• In participants who received two standard doses, vaccine efficacy was 62.1% (95% CI 41.0, 75.7; 27 [0.6%] of 4440 in the ChAdOx1 nCoV-19 group vs 71 [1.6%] of 4455 in the control group)
• In participants who received a low dose followed by a standard dose, vaccine efficacy was 90.0% (95% CI 67.4, 97.0; 3 [0.2%] of 1367 in the ChAdOx1 nCoV-19 group vs 30 [2.2%] of 1374 in the control group)
• The vaccine can be stored and distributed at 2-8oC, suitable for global distribution
• These positive results support regulatory submissions for conditional or emergency use of ChAdOx1 nCoV-19 | |

Comments, Editorials, Opinions, Blogs, News

Publication date	Title/URL	Journal	Article type
14.12.2020	The ethics of continuing placebo in SARS-CoV-2 vaccine trials	JAMA	Viewpoint

Date	Title	Source
13.12.2020	Nigeria: Where COVID-19 has left Nigeria's heath system	The Conversation Africa| Blog
13.12.2020	Any delay in ending COVID could spur a different pandemic	Scientific American
12.12.2020	Facing up to long COVID	The Lancet | Editorial
11.12.2020	Coronavirus vaccine update with Anthony Fauci	JAMA Q&A
10.12.2020	Reimagining India's health system: a Lancet Citizens' Commission	The Lancet | Comment
10.12.2020	The COVID-19 vaccines rush: participatory community engagement matters more than ever	The Lancet | Comment
10.12.2020	Restricting mobility will not stop the next pandemic	CGD | Blog
10.12.2020	A tale of two crises and the solutions that bind them: wild polio and COVID-19	Forbes
09.12.2020	A step backwards in the fight against global vaccine inequities	The Lancet | Correspondence
09.12.2020	From governance to community surveillance: Assam's 360 degree COVID-19 response	WHO | News
08.12.2020	Oxford-AstraZeneca COVID-19 vaccine efficacy	The Lancet | Comment
07.12.2020	COVID-19 an violence against women and children: a third research round up for the 16 days of activism	CGD | Notes
07.12.2020	The COVID-19 vaccine: do we know enough to end the pandemic?	CGD | Notes

Guidelines, Statements & Tools

Publication Date	Title/URL	Source	Summary
25.06.2020	Support for Rehabilitation: self-management after COVID-19 related illness		• WHO is planning to update this guidance and resources for clinical management of COVID-19 to include long COVID

Dashboards & Trackers[1]

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 Diagnostics: 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

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[1] Listings of Dashboards & Trackers, C19 Resource Hubs and Online learning & Events is cumulative. New additions today are highlighted in green. Where events have happened in the past links are provided to recordings where available.

WEF		Sierra Leone	Oxford C19 Government Response Tracker (OxCGRT)	US NIH	Our World in Data: C19 Testing	COVID-19 Therapeutics Accelerator	COVID-19 Vaccine Tracker
Our World in Data		Singapore	Our World in Data: C19 Policy responses	COVID-evidence			
Global 5050		UK	IFPRI COVID-19 Policy Response Portal	Cochrane			
CEBM, University of Oxford		US	COVID-19 Primer	Clinicaltrials.gov			
Humanitarian Data Exchange			NIH LitCovid	UKCDR			
Information is Beautiful			WHO COVID-19 Database				
LSHTM							

HealthMap (cases)					
The Commons Project					
SeroTracker					

C19 Resource Hubs

Global	Regional & Country	Academic journals & Publishers	Institutes/Centres/Funders/Other	Health Topics	Social Sciences
WHO COVID-19 pandemic	Africa CDC	Annals of Internal Medicine	LSTM	Stop TB Partnership	SSHAP
WHO risk communication	African Union	BMJ	LSHTM		IDA
WHO Q&A	Nigeria CDC	Bulletin of the WHO	ICL MRC Centre for Global Infectious Disease Analysis	Global Menstrual Collective	Disability and inclusion

WHO Global research	GeoPoll: SSA	Cambridge University Press	ODI	SLH: Handwashing in low resource settings	Coregroup IDDC
COVID-19 Solidarity Response Fund	Global Health Network Africa	Cell Press	Johns Hopkins University	RBM Partnership	Ethics, health systems & COVID-19
UN	African Academy of Sciences	Cochrane	Center for Global Development	Epidemic Preparedness Innovations	Social Development Direct C19 blog series
UN Women	Africa Evidence Network	Elsevier	CMMID Repository		
UNOCHA	OCHA Southern and Eastern Africa COVID-19 Digest	Health Policy and Planning	Norwegian Institute of Public Health		
UNHCR	South African Government	JAMA Network	Oxford Centre for Evidence-based Medicine		
UNICEF		The Lancet	HEART		
UNESCO		medRxiv and bioRxiv (Preprints)	UKRI		

UN WFP		NEJM	Evidence Aid		
GOARN		Oxford University Press	NIH		
EPI-WIN		PLoS	IFPRI Resources and Analyses of C19 Impact		
World Bank		SAGE journals	Prevent Epidemics		
Our World in Data		Science			
COVID-19 Narratives by David Nabarro		Springer Nature			
Reliefweb		SSRN (Preprints)			
Humanitarian OpenStreetMap Team		Wiley			
Global Partnership for Sustainable Development Data					

WorldPop					
Flowminder					
COVID-END					
Premise COVID-19 Global Impact Study					
GISAID					

Online learning & events

Date	Title/URL	Online learning/event	Duration	Lead
04.12.2020	COVID-19, supply chain resilience and global trade	Webinar	1h	CGD
03.12.2020	More money for health services: What is the tole of PFM in the "new normal"?	WHO & CGD Health systems Governance & Financing	1h 30	Joe Kutzin

01.12.2020	Solutions and support for the mental wellbeing of community health workers on the COVID-19 frontline	Webinar		HSG TWG on CHWs with The George Institute for Global Health
19.11.2020	Looking at the pandemic with a gender lens	Live Twitter conversation		SSHAP
16.11.2020	HIFA and WHO collaborate to promote sharing of experience and expertise around the maintenance of essential health services during (and after) the pandemic	4-week discussion starting 16 Nov		HIFA
10.11.2020	COVID-19 vaccine predictions part 2: estimating the time before we approve efficacious COVID-19 vaccines	Online event	1h30	CGD
16.10.2020	Financing a Global Public Health Response	Online event	1h30	CGD
02.10.2020	Understanding and Improving COVID-19 Vaccine Portfolio	Online event	1h30	CGD
21.09.2020	Mitigating the Economic and Health Impact of COVID-19 across Africa	Online event	1h30	CGD, GF, AU
June 2020	OpenWHO, the free, open-access learning platform for health emergencies, now offers 10 online courses related to COVID19.	Online courses	Varies	WHO

Available now	Standard precautions: Environmental cleaning and disinfection	Online course	1 hour	WHO
Available now	COVID-19: Effective Nursing in Times of Crisis	Online course	2 weeks – 2 hours per week	Johns Hopkins School of Nursing
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

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 weekly 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 "South Asia" OR "Developing" OR "low-income" OR "low income" OR "lower-middle income" OR "low and middle income" OR "LMIC" OR "LIC" OR "global south") OR ("poverty") OR ("equity" OR "equities"), 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 weekly COVID-19 health evidence summary (HES) is based on 3.5 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).