K4D | Knowledge, evidence and learning for development

COVID-19
Health Evidence Summary No.91

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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
01/09/2020	Oxygen targets in the intensive care unit during mechanical ventilation for acute respiratory distress syndrome: a rapid review	Cochrane Systematic Review	• An up-to-date understanding of how oxygen therapy should be targeted in adults with acute respiratory distress syndrome (ARDS), including ARDS secondary to viral illness such as COVID-19, and requiring mechanical ventilation in ICU • It is very uncertain whether a higher or lower oxygen target is more beneficial in patients with ARDS and receiving mechanical ventilation in ICU • Only one RCT was identified with a total of 205 participants with a possible high risk of bias • Further well-conducted studies are needed to increase the certainty of findings	Oxygen, ventilation, ICU

Epidemiology and modelling

Publication date	Title/URL	Journal/Article type	Summary	Keywords
03/09/2020	Revealing the extent of the COVID-19 pandemic in Kenya based on serological and PCR-test data	medRxiv pre-print (not peer-reviewed)	• Using national surveillance PCR test, serological survey and mobility data, authors develop and fit a county-specific transmission model for Kenya • It is estimated that the SARS-CoV-2 pandemic peaked before the end of July 2020 in the major urban counties, with 34-41% of residents infected and will peak elsewhere in the country within 2-3 months. • Analysis suggests the C19 disease burden in Kenya may be far less than initially feared • A similar scenario across SSA would have implications for balancing the consequences of restrictions with those of C19	Kenya, infection

Infection Prevention and Control

Publication date	Title/URL	Journal/Article type	Summary	Keywords
30/08/2020	Transmission risk of respiratory viruses in natural and mechanical ventilation environments: implications for SARS-CoV-2 transmission in Africa	BMJ Global Health | Analysis	• SARS-CoV-2 can become aerosolised during medical procedures and malfunctioning air conditioners • Most resource-limited healthcare settings lack air handling systems to filter infectious contaminants in the air • A hybrid approach of using natural ventilation coupled with affordable mechanical ventilation devices could prove useful in controlling infection transmission in LMIC	Transmission, medical procedures

02/09/2020	Coronavirus (COVID-19): infection control and prevention measures	Cochrane Special Collections | updated	• Updated to include Rapid, point-of-care antigen and molecular-based tests for diagnosis of SARS-CoV-2 infection	IPC

Testing

Publication date	Title/URL	Journal/Article type	Summary	Keywords
28/08/2020	Salivary detection of COVID-19	Annals of Internal Medicine | Letter	• The detection rate of SARS-CoV-2 using a novel, self-administered kit for saliva collection was less when compared with standard swab testing among patients who were asymptomatic but at high risk or who were mildly symptomatic • This study does show the feasibility of a simple, safe collection tool for salivary detection of SARS-CoV-2 in the setting of a COVID-19 testing centre	Saliva, testing

Therapeutics

Publication date	Title/URL	Journal/Article type	Summary	Keywords
02.09.2020	Association between administration of systemic corticosteroids and mortality among critically ill patients with COVDI-19: a meta-analysis	JAMA | Meta-analysis	• The WHO rapid evidence appraisal for COVID-19 therapies (REACT) working group • Prospective meta-analysis of 7 randomised trials that included 1703 patients of whom 647 died • Systemic corticosteroids reduced the risk of dying from severe C19 at 28 days by one-third	corticosteroids

02.09.2020	Effect of hydrocortisone on mortality and organ support in patients with severe COVID-19: the REMAP-CAP Covid-19 corticosteroid domain randomized clinical trial	JAMA | Original Investigation	• An ongoing adaptive platform trial testing multiple interventions within multiple therapeutic domains • Randomised to receive a fixed 7-day course of intravenous hydrocortisone (50 mg or 100 mg every 6 hours), a shock-dependent course (50 mg every 6 hours when shock was clinically evident), or no hydrocortisone • In patients with severe C19, treatment with a 7-day fixed-dose course of hydrocortisone or shock-dependent dosing of hydrocortisone, compared with no hydrocortisone, resulted in 93% and 80% probabilities of superiority with regard to the odds of improvement in organ support-free days within 21 days • Note that the trial was stopped early and no treatment strategy met prespecified criteria for statistical superiority, precluding definitive conclusions	hydrocortisone
02.09.2020	Effect of dexamethasone on days alive and ventilator-free in patients with acute respiratory distress	JAMA | Original Investigation	• Multicentre, randomised, open-label, clinical trial conduced in 41 intensive care units in Brazil • Intended to recruit a sample size of 350 patients but the trial was stopped early	dexamethasone

	syndrome and COVID-19: the CoDEX randomized clinical trial		following publication of a related study • Randomised to receive 20mg dexamethasone intravenously daily for 5 days, 10mg dexamethasone daily for 5 days or until ICU discharge, plus standard of care or standard care alone • Among patients with C19 and moderate or severe acute respiratory distress syndrome (ARDS), use of intravenous dexamethasone plus standard of care compared with standard care along resulted in a significant increase in the number of ventilator-free days over 28 days	
02.09.2020	Effect of hydrocortisone on 21-day mortality or respiratory support among critically ill patients with COVID-19	JAMA | Original Investigation	• Multicentre randomised double-blind sequential trial in France • Interim analyses planned every 50 patients with the intention to enrol 290 patients but was stopped early (after 149 patients) following the recommendation of the DSMB • Randomised to receive low-dose hydrocortisone or placebo • In this study of critically ill patients with C19 and acute respiratory failure, low-dose hydrocortisone, compared with placebo, did not significantly reduce treatment failure	hydrocortisone

			(defined as death or persistent respiratory support) at day 21 • Note though that this study was stopped early and was likely underpowered to find a statistically and clinically importance difference in the primary outcome	

Vaccines

Publication date	Title/URL	Journal/Article type	Summary	Keywords
02/09/2020	Phase 1-2 trial of a SARS-CoV-2 recombinant spike protein nanoparticle vaccine	NEJM | Article	• Randomised, placebo-controlled, phase 1-2 trial of the SARS-CoV-2 recombinant spike protein nanoparticle vaccine • At 35 days, NVX-CoV2373 appeared to be safe, and elicited immune responses that exceeded levels in C19 convalescent serum • The Matrix-M1 adjuvant induced CD4+ T cell responses that were biased toward the Th1 phenotype	Phase 1-2 trial, recombinant vaccine

Comments, Editorials, Opinions, Blogs, News

Publication date	Title/URL	Journal | Article type
Sept 2020	Will the COVID-19 pandemic threaten the SDGs?	The Lancet Public Health | Editorial
03/09/2020	Panelists named to join the Independent Panel for Pandemic Preparedness and Response	Independent Panel for Pandemic Preparedness and Response | News
02/09/2020	Corticosteroids in COVID-19 ARDs: Evidence and Hope During the Pandemic	JAMA | Editorial
01/09/2020	Asymptomatic SARS-CoV-2 infection: the tip or the iceberg?	Thorax | Commentary
01/09/2020	Long-term consequences of COVID-19: research needs	The Lancet Infectious Diseases | Comment
01/09/2020	Towards health market systems changes for migrant workers based on the COVID-19 experience in Singapore	BMJ Global Health | Commentary
29/08/2020	Bangladesh's COVID-19 testing criticised	The Lancet | World Report
28/08/2020	Mental health and the COVID-19 pandemic" what we knew, what we now know, and what we still don't know	CGD | Blog
27/08/2020	COVID-19 vaccine trials should seek worthwhile efficacy	The Lancet | Comment

Guidelines, Statements & Tools

Publication Date	Title/URL	Source	Summary
02.09.2020	Corticosteroids for COVID-19	WHO | Living Guidance	• The guideline panel's recommendations were supported by published meta-analyses and randomised controlled trials and considerations of an individual patient perspective and contextual factors for countries and health care systems • There are two recommendations: (1) a strong recommendation for systemic (intravenous or oral) corticosteroid therapy (e.g. 6 mg of dexamethasone orally or iv daily or 50 mg of hydrocortisone intravenously every 8 hours) for 7 to 10 days in patients with severe and critical C19 and (2) a conditional recommendation not to use corticosteroid therapy in patients with non-severe C19 • A panel warning that indiscriminate use of any therapy for C19 would potentially rapidly deplete global resources and deprive patients who may benefit from it most as potentially life-saving therapy

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 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
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	Health Policy and Planning	Norwegian Institute of Public Health		

	COVID-19 Digest				
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
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	FutureLearn LSHTM/UK PHRST

			weekly study	
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

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