

COVID-19

Health Evidence Summary No.108

Kerry Millington & Samantha Reddin

Liverpool School of Tropical Medicine (LSTM) & Institute of Development Studies

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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
11.01.2021	Development and validation of the ISARIC 4C deterioration model for adults hospitalised with COVID-19: a prospective cohort study	The Lancet Respiratory Medicine Article	<ul style="list-style-type: none"> Prognostic models to predict the risk of clinical deterioration in acute COVID-19 cases are urgently required to inform clinical management decisions Here a 4C Deterioration model was developed and validated, including 11 routinely measured demographic, clinical, and laboratory predictors, for prediction of in-hospital clinical deterioration among 74,944 consecutive adults recruited to the ISARIC4C study across 260 hospitals in England, Scotland and Wales. The 4C Deterioration model has strong potential for clinical utility and generalisability to predict clinical deterioration and inform decision making among 	Prognostic model, clinical deterioration

			<p>adults hospitalised with COVID-19</p> <ul style="list-style-type: none"> • The 4C Deterioration tool offers additional value to the recently reported 4C Mortality Score, by identifying people at high risk of deterioration despite a low risk of mortality, with potential to better target interventions to those with most need and are most likely to benefit. • The 4C Deterioration model will be freely available online for external validation and to facilitate risk stratification for therapeutic intervention 	
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Epidemiology and modelling

Publication date	Title/URL	Journal/Article type	Summary	Keywords
15.01.2021	Characterisation of the first 250 000 hospital admissions for COVID-19 in Brazil: a retrospective analysis of nationwide data	The Lancet Respiratory Medicine Article	<ul style="list-style-type: none"> • Most LMICs have little or no data integrated into a national surveillance system to identify characteristics or outcome of COVID-19 hospital admission and the impact of the COVID-19 pandemic on their national health systems • This retrospective analysis of all hospitalised patients aged 20 years or older with RT-PCR-confirmed COVID-19 and registered in a nationwide surveillance 	Clinical outcome, national health system

			<p>database in Brazil (SIVEP-Gripe). Primary outcome: in-hospital mortality</p> <ul style="list-style-type: none"> • Widespread distribution of COVID-19 across all regions in Brazil was observed, resulting in a high overall disease burden • In-hospital mortality was high, even in patients younger than 60 years, and worsened by existing regional disparities within the health system. COVID-19 disproportionately affects not only the most vulnerable patients but also the most fragile health systems. • Improvement in access to high-quality care for critically ill patients admitted to hospital with COVID-19 is needed, particularly in LMICs 	
12.01.2021	First detection of SARS-CoV-2 spike protein N501 mutation in Italy in August, 2020	The Lancet Infectious Diseases Correspondence	<ul style="list-style-type: none"> • A predecessor to the B.1.1.7 “UK” variant was seen in Italy in August (N501T substitution) in a 59-year-old man with persistent SARS-CoV-2 infection • SARS-CoV-2 strains with a N501T substitution might 	UK variant

			have circulated unnoticed before the end of Sept 2020, when the rapidly emerging B.1.1.7 lineage was first reported	
11.01.2021	Estimates of severity and transmissibility of novel South Africa SARS-CoV-2 variant 501Y.V2	CMMID Github repository pre-print (not yet peer-reviewed)	<ul style="list-style-type: none"> On 18 Dec 2020, researchers reported emergence of a novel SARS-CoV-2 variant , 501Y.V2, in South Africa Using globally available data, an evaluation of the novel variant for potentially increased transmissibility or immune escape is reported here Authors estimate 501Y.V2 is 1.50 (95% CrI 1.20-2.13) times as transmissible as previously circulating variants Some evidence of a change in severity was found, though there is substantial uncertainty Along with the emergence of a novel UK variant with similar estimated increased transmissibility, authors highlight the substantial challenges with global control in early 2021, the need for maintaining control measures and accelerating 	South African variant, disease severity, transmissibility

			vaccination roll-out, and the continued monitoring of vaccine effectiveness against novel variants to detect immune escape promptly	
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Testing

Publication date	Title/URL	Journal/Article type	Summary	Keywords
15.01.2021	Comparison of saliva and nasopharyngeal swab nucleic acid amplification testing for detection of SARS-CoV-2	JAMA Internal Medicine Systematic review and meta-analysis	<ul style="list-style-type: none"> This systematic review and meta-analysis found that saliva NAAT and nasopharyngeal NAAT had a similar sensitivity and specificity Given the ease of use and comparable diagnostic accuracy, saliva NAAT offers an attractive alternative to nasopharyngeal swab NAAT which may help increase mass testing efforts 	Saliva testing, nasopharyngeal testing

Therapeutics

Publication date	Title/URL	Journal/Article type	Summary	Keywords
15.01.2021	RECOVERY trial closes recruitment to convalescent plasma treatment for patients hospitalised	Statement from the RECOVERY trial chief investigators	<ul style="list-style-type: none"> The DMC of the RECOVERY trial reviewed data on patients randomised to convalescent plasma vs usual care. Preliminary analysis of 10,406 randomised patients with 1873 reported deaths shows no significant difference in 	Convalescent plasma

	with COVID-19		<p>the primary endpoint of 28-day mortality</p> <ul style="list-style-type: none"> • 18% convalescent plasma vs 18% usual care alone; RR 1.04 [95% CI 0.95-1.14]; p=0.34 • Follow-up of patients is ongoing and final results will be published as soon as possible • Whilst the overall result is negative, full results are required to determine if there is any benefit in particular patient subgroups • Note RECOVERY continues to study the REGN-CoV2 monoclonal antibody cocktail – shown to have benefit in RCTs in early COVID. In Ebola, convalescent plasma did not work but monoclonal antibodies did. 	
13.01.2021	Convalescent plasma antibody levels and the risk of deaths from Covid-19	NEJM Article	<ul style="list-style-type: none"> • A retrospective study based on a U.S. national registry, of anti-SARS-CoV-2 IgG antibody levels in convalescent plasma used to treat 3082 hospitalised adults with Covid-19. Primary outcome was death within 30 days after plasma transfusion • No effect on the risk of death was observed among patients who had received mechanical ventilation • Among patients who were not receiving mechanical ventilation, transfusion of plasma with higher anti-SARS-CoV-2 IgG antibody levels was associated with a lower risk of death than transfusion 	Convalescent plasma

			of plasma with lower antibody levels	
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Vaccines

Publication date	Title/URL	Journal/Article type	Summary	Keywords
13.01.2021	Interim results of a phase 1-2a trial of Ad26.COV2.S Covid-19 vaccine	NEJM Article	<ul style="list-style-type: none"> • Candidate vaccine, Ad26.COV2.S, is a recombinant, replication-incompetent adenovirus serotype 26 vector encoding a full-length and stabilised SARS-CoV-2 spike protein • Multicentre, placebo-controlled, phase 1-2a trial of two age groups receiving a low or high dose of the vaccine candidate or placebo in a single-dose or two-dose schedule • The safety and immunogenicity profiles support further development of this vaccine candidate 	Vaccine candidate, Ad26.COV2.S

Comments, Editorials, Opinions, Blogs, News

Publication date	Title/URL	Journal Article type
18.01.2021	UK funded research essential to get vaccines to the poorest in the world	Open Access Government Blog
17.01.2021	Equitable recovery from COVID-19: bring global commitments to community level	BMJ Global Health Commentary
15.01.2021	China COVID vaccine reports mixed results – what does that mean for the pandemic?	Nature News
13.01.2021	2021: a new year for the WHO	Nature Medicine Editorial
13.01.2021	Women and children last? Shaking up exclusion criteria for vaccine trials	Nature Medicine World View
13.01.2021	On the origins of SARS-CoV-2	Nature Medicine World View
13.01.2021	Immune determinants of COVID-19 disease presentation and severity	Nature Medicine Perspective

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 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
14.01.2021	Evidence to impact in crisis: how have we measured up during the COVID-19 pandemic?	Webinar	1h 30	CGD
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 role 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	Online event	1h30	CGD

	before we approve efficacious COVID-19 vaccines			
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	COVID-19 Diagnostics and Testing	Online learning	3 weeks 3 hours weekly study	FutureLearn FIND/LSHTM/ASLM

early June 2020				
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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