

# COVID-19

## Health Evidence Summary No.118

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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.*

### Epidemiology and modelling

Publication date	Title/URL	Journal/Article type	Summary	Keywords
26.03.2021	Sudden rise in COVID-19 case fatality among young and middle-aged adults in the south of Brazil after identification of the novel B.1.1.28.1 (P.1) SARS-CoV-2 strain: analysis of data from the state of Parana	medRxiv   preprint (not peer reviewed)	<ul style="list-style-type: none"> <li>The authors analysed public health data from Parana, Brazil between 01.09.2020 and 17.03.2021. During that time period, 8853 deaths from COVID-19 were recorded (from 553,518 cases registered) .</li> <li>Between September 2020 and January 2021, case fatality rates amongst all ages was either declining or stabilised, however, in February 2021 an increase was observed.</li> <li>A P.1 variant of SARS-CoV-2 was officially identified in this region on 16<sup>th</sup> February 2021, and on 3<sup>rd</sup> March 2021, accounted for 70.3% of tested samples.</li> <li>The authors report that preliminary findings</li> </ul>	Case mortality rates, B.1.1.28.1 (P.1), Brazil, variants

			<p>suggest significant increases in case fatality rates for young and middle aged adults (above 20 years of age) in February 2021 compared to January 2021.</p> <ul style="list-style-type: none"> <li>The authors call for further investigations to explore these findings, and increased public health interventions.</li> </ul>	
24.03.2021	The first and second waves of the COVID-19 pandemic in Africa: a cross-sectional study	The Lancet  Article	<ul style="list-style-type: none"> <li>A cross-sectional study explored epidemiological data across all 55 African Union member states. This research analysed incidence rates, case fatality ratios, tests per case ratio and growth rates. It also considered the public health and social measures in place.</li> <li>Two waves of the pandemic during Feb 14<sup>th</sup> 2020 to 31<sup>st</sup> December 2020 were analysed.</li> <li>Regionally, the southern region accounted for the highest number of cases (640/100000) and deaths (46.4%) with South Africa accounting for 38% of cases</li> <li>Six countries (SA, Morocco, Ethiopia, Kenya, Egypt and Nigeria) accounted for 62% of all test performed. All 55 AU member states had COVID-19 testing capacity by July 2020.</li> <li>Six countries (Central African Republic, Cabo Verde, Côte d'Ivoire, Djibouti, Gabon, and</li> </ul>	Africa, epidemiology, case rates, death rates, regional variation

			<p>Ghana) were all reporting COVID-19</p> <p>recovery rates equal to or greater than 98%</p> <ul style="list-style-type: none"> <li>• Peak weekly incidence was reported in mid July for the first wave. The authors report that at time of conducting analysis, the second wave had not yet reached its peak, however, it was already higher than the first (30% increase in weekly reporting) and was described as 'fast evolving'.</li> <li>• The authors report that more stringent public health and social measures (PHSMs) were implemented in the first wave, and discuss about the potential for PHSM adherence fatigue, and the need for sustained efforts to address this.</li> </ul>	
23.03.2021	<p>Excess mortality during the COVID-19 pandemic: a geospatial and statistical analysis in Aden governorate, Yemen</p>	<p>BMJ Global Health  Article</p>	<ul style="list-style-type: none"> <li>• The burden of COVID-19 in Yemen is reportedly unclear. Official reported figures are thought to be underestimated due to low testing capacity, during a prolonged crisis and significant disruption to the health service.</li> <li>• In this article, the authors use a novel approach of geospatial analysis to estimate excess deaths in Aden, Yemen, using satellite imagery and Civil Registry office records. 78 observations were made across 11</li> </ul>	<p>Geospatial analysis, Yemen, satellite imagery, excess deaths</p>

			cemeteries. Around 1500 excess deaths are estimated to have occurred during 1 April to 6 July 2020 and 2120 up to 19 September.	
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## Infection Prevention and Control

Publication date	Title/URL	Journal/Article type	Summary	Keywords
23.03.2021	Magnitude of asymptomatic COVID-19 cases throughout the course of infection: A systematic review and meta-analysis	PLOS One  Article	<ul style="list-style-type: none"> <li>A systematic review and meta-analysis was conducted to strengthen the evidence around asymptomatic COVID-19 throughout the course of infection.</li> <li>28 articles published between 01.01.2020 and 09.12.2020 were included, which found one-fourth (25% (95%CI: 16–38)) of COVID-19 cases were asymptomatic throughout the course of infection</li> </ul>	Systematic review, asymptomatic COVID-19

## Testing

Publication date	Title/URL	Journal/Article type	Summary	Keywords
25.03.2021	Performance and operational feasibility of antigen and antibody rapid diagnostic tests for	The Lancet Infectious Diseases  Article	<ul style="list-style-type: none"> <li>Point of care antigen and antibody diagnostic tests have the benefits of being done outside of centralised laboratories, and can produce results very quickly, however the authors highlight that</li> </ul>	Point-of-care antigen and antibody tests, Cameroon,

COVID-19 in symptomatic and asymptomatic patients in Cameroon: a clinical, prospective, diagnostic accuracy study

there is a need for more evidence on performance of these tests in LMICs. The authors conducted a clinical prospective study to evaluate antigen tests in comparison to PCR and antibody in comparison to ELISA.

- Five rapid tests (Innovita, Wondfo, SD Biosensor, and Runkun tests, and nasopharyngeal swabs for SARS-CoV-2 antigen using the SD Biosensor tests) were evaluated in both symptomatic (n=570) and non-symptomatic (n=625) adults (above 21 years old). 347 (29%) tested SARS-CoV-2 PCR-positive, 223 (19%) rapid diagnostic test antigen-positive, and 478 (40%) rapid diagnostic test antibody-positive.
- Antigen-based rapid diagnostic test sensitivity was 80.0% (95% CI 71.0–88.0) in the first 7 days after symptom onset, but antibody-based rapid diagnostic tests had only 26.8% sensitivity (18.3–36.8). Antibody rapid diagnostic test sensitivity increased to 76.4% (70.1–82.0) 14 days after symptom onset.
- An antigen-based retrospective algorithm designed by public health experts was

			<p>applied to symptomatic patients and showed 94.0% sensitivity and 91.0% specificity in the first 7 days after symptom onset. For asymptomatic participants, the algorithm showed a sensitivity of 34% (95% CI 23.0–44.0) and a specificity of 92.0% (88.0–96.0).</p> <ul style="list-style-type: none"> <li>The authors conclude that rapid diagnostic tests could be incorporated into efficient testing algorithms as an alternative to PCR to decrease diagnostic delays and onward viral transmission</li> </ul>	
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## Therapeutics

Publication date	Title/URL	Journal/Article type	Summary	Keywords
18.03.2021	<a href="#">Interleukin-6 blocking agents for treating COVID-19: a living systematic review</a>	Cochrane Database of Systematic Reviews  Review	<ul style="list-style-type: none"> <li>The objective of this study was to assess the effect of IL-6 blocking agents compared to standard care alone or with placebo on efficacy and safety outcomes in COVID-19. A search was done of World Health Organization (WHO) International Clinical Trials Registry Platform (up to 11 February 2021) and the L-OVE platform, and Cochrane COVID-19 Study Register to identify trials up to 26 February 2021. 10 Randomized</li> </ul>	IL-6 blocking agents, tocilizumab, sarilumab, systematic review

			<p>Control Trial (including 3 pre-prints) were included which analysed tocilizumab (9) and sarilumab (1). In total 6896 people with COVID-19 were included in these RCTs.</p> <ul style="list-style-type: none"> <li>• The authors conclude that tocilizumab reduces all-cause mortality at day 28 (D28) and may slightly reduce serious adverse events compared to standard care alone or placebo (on average, 32 fewer people per 1000 died when treated with tocilizumab plus standard care), however there is uncertainty around the effect on mortality at <math>\geq</math> D60).</li> <li>• For sarilumab, the evidence is uncertain about the effect on all-cause mortality at D28.</li> <li>• A further 39 RCTs of IL-6 blocking agents with no results are currently registered. The authors will continue to update the review as published data becomes available.</li> </ul>	
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## Indirect impact of COVID-19

Publication date	Title/URL	Journal/Article type	Summary	Keywords
24.03.2021	Impact of COVID-19 on tuberculosis notifications in Blantyre Malawi: an interrupted time series	<b>medRxiv   preprint (not peer reviewed)</b>	<ul style="list-style-type: none"> <li>• To better understand the impacts of COVID-19 on TB in high TB burden settings, the authors analysed an electronic TB register in Blantyre, Malawi, with the primary objective to understand impact on TB notifications. The authors secondary</li> </ul>	Tuberculosis, Malawi, TB notifications, qualitative

analysis and qualitative study with healthcare workers

objectives were to understand how this is affected by sex, health facility or HIV status. A qualitative study of 12 interviews with TB officers was then conducted to understand underlying cases for change in notification of TB.

- In April 2020 there was an abrupt decline in TB notification by 35.9% (95% CI 22.1 to 47.3%). However, the authors report this was subsequently followed by an increase in TB notifications at a rate of 4.40% per month (0.59 to 8.36%).
- The authors report that there were 333 fewer TB notifications during April to December 2020, compared to models created which estimates notifications if no pandemic had occurred. This is equivalent to a 23.7% reduction in TB notifications (95% CI 21.4 to 26.0%). Women and girls had a larger proportional decline compared to men and boy.
- Interviews suggest this under-notification of TB could be due to fear of contracting COVID-19, Health Facility closure, impacts on healthcare access, similarity of symptoms between the two conditions, and reduced health worker capacity to support TB testing.



## Social Science

Publication date	Title/URL	Journal/Article type	Summary	Keywords
23.03.2021	Right to health, right to live: domestic workers facing the COVID-19 crisis in Latin America	Gender and Development  Article	<ul style="list-style-type: none"> <li>Domestic workers in Latin American countries are thought to be at increased risk of COVID-19 due to pre-existing health conditions and lack of social protection, increasing their vulnerability.</li> <li>An online survey was done across 14 Latin American countries with 2650 respondents. 96% of all participants were women. The survey found that nearly 25% of respondents had at least one pre-existing condition which is considered a risk factor for COVID-19. An average only 56% reported being given adequate Personal Protective Equipment by their employers, and 5 % reported experiencing violence or mistreatment during the crisis.</li> <li>In conclusion, the authors report that domestic workers during COVID-19 pandemic face many risks (both new and exacerbations of pre-existing risks) which increase their vulnerability to COVID-19.</li> </ul>	Latin America, risk, domestic workers, women, survey
23.03.2021	COVID-19 and gender-based violence (GBV): hard-to-reach women and	Gender and Development  Article	<ul style="list-style-type: none"> <li>During complex emergencies such as epidemics, gender-based violence (GBV) can increase. This has also been found during the COVID-19 pandemic. A study in Kenya explored how government policies during COVID-19 have</li> </ul>	Gender-based Violence, Sexual and Reproductive Health,

	<p>girls, services, and programmes in Kenya</p>		<p>impacted women and girls, with a specific focus on those hard to reach. Interviews were conducted with 37 stakeholders from GBV and sexual reproductive health (SRH) organisations/services.</p> <ul style="list-style-type: none"> <li>• Results suggest that adolescent girls and sex workers are the most vulnerable to GBV. Female Genital Mutilation is also reportedly increasing. Access to supportive services has decreased due to schools and community groups closing, and a lack of prioritisation of essential SRH services at the beginning of the pandemic.</li> </ul>	<p>Qualitative, Kenya</p>
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## Comments, Editorials, Opinions, Blogs, News

Publication date	Title/URL	Journal   Article type
26.03.2021	<a href="#">Why we need to share vaccine doses now and why COVAX is the right way to do it</a>	Wellcome  News
26.03.2021	<a href="#">Operation Warp Speed: implications for global vaccine security</a>	The Lancet Global Health   Viewpoint
26.03.2021	<a href="#">How COVID-19 Affects the Brain</a>	JAMA psychiatry
24.03.2021	<a href="#">Research to ensure continuity of TB care amid COVID-19</a>	TDR  News release
24.03.2021	<a href="#">Human rights and fair access to COVID-19 vaccines: the International AIDS Society–Lancet Commission on Health and Human Rights</a>	The Lancet  Comment
23.03.2021	<a href="#">The Coronavirus Pandemic 1 Year On—What Went Wrong?</a>	JAMA Network  JAMA Forum
21.03.2021	<a href="#">Hypercoagulability in COVID-19: A review of the potential mechanisms underlying clotting disorders</a>	SAGE Open Medicine  Review

## 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	<a href="#">COVID-19 Oxford Vaccine Trial</a>
WEF		Sierra Leone	Oxford C19 Government Response Tracker (OxCGRT)	US NIH	Our World in Data: C19 Testing	COVID-19 Therapeutics Accelerator	<a href="#">COVID-19 Vaccine Tracker</a>

Our World in Data		Singapore	Our World in Data: C19 Policy responses	COVID-evidence			Our World in Data: COVID-19 vaccinations
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	Southern Voice	Covid Collective Research Platform

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	Health systems Global		
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
07.04.2021	Public webinar 'The RECOVERY Trial: one year on'	Webinar	1h	Nuffield Department of Population Health
25 March 2021	UK Public Health Rapid Support Team: Latest research & scientific insights	Webinar	1h	LSHTM
18 March 2021	Africa taking charge of its future: prioritizing gender equality in the path to recovery	Webinar	1h 30	CGD
10 March 2021	Equity and scale in global immunization: new evidence from Nigeria on cash transfers for vaccination	Webinar	1h 15	CGD
9 March 2021	COVID-19 vaccines and Africa: where do we stand in the race for vaccines?	Virtual conference webinar	1h	AHAIC
8 March 2021	Chronic Respiratory Diseases in the COVID era	Webinar		GARD, WHO
February 2021	COVID-19 vaccination training for health workers	Online training	3h	WHO
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 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	<a href="#">Mitigating the Economic and Health Impact of COVID-19 across Africa</a>	Online event	1h30	CGD, GF, AU
June 2020	<a href="#">OpenWHO, the free, open-access learning platform for health emergencies, now offers 10 online courses related to COVID19.</a>	Online courses	Varies	WHO
Available now	<a href="#">Standard precautions: Environmental cleaning and disinfection</a>	Online course	1 hour	WHO
Available now	<a href="#">COVID-19: Effective Nursing in Times of Crisis</a>	Online course	2 weeks – 2 hours per week	Johns Hopkins School of Nursing
Available now	<a href="#">WHO Academy and WHO Info mobile applications</a>	Mobile app		WHO
Available now	<a href="#">COVID-19: Pandemics, Modelling and Policy</a>	Online learning	2 weeks   2 hours weekly study	FutureLearn UNESCO UNITWIN Complex Systems Digital Campus/Open University
11.5.2020	<a href="#">COVID-19 Contact Tracing course</a>	Online learning	5 hours	Johns Hopkins Bloomberg School of Health
7-28 May 2020	<a href="#">Virtual Evidence Weeks</a>	5 sessions	1h 30	International Initiative for Impact Evaluation (3ie)
Tuesdays at 1700 CEST (Geneva time) &	<a href="#">COVID-19 Open online brief with Dr David Nabarro</a>	Event	1h	4SD

Thursdays 0830 CEST (Geneva time)				
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

## Suggested citation

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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).

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