K4D | Knowledge, evidence and learning for development

# COVID-19
# Health Evidence Summary No.96

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*05 October 2020*

*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 |
|---|---|---|---|---|
| 29.09.2020 | Clinical criteria for COVID-19-associated hyperinflammatory syndrome: a cohort study | The Lancet Rheumatology \| Article | • Some patients with C19 develop a C19-associated hyperinflammatory syndrome that has similarities with other hyperinflammatory disorders<br>• This study is the first to develop and validate classification criteria to define C19-specific hyperinflammation<br>• Authors developed a six-criterion additive scale for C19-specific hyperinflammatory syndrome (cHIS score) by comparing published clinical data for C19 with clinical features of other hyperinflammatory or cytokine storm syndromes | hyperinflammation |

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| | | | • Though independent validation is needed, authors suggest that the cHIS scale may help define target patient populates for clinical trials and potentially for treatment with immunomodulatory therapies | |

## Epidemiology and modelling

| Publication date | Title/URL | Journal/Article type | Summary | Keywords |
|---|---|---|---|---|
| 30.09.2020 | Epidemiology and transmission dynamics of COVID-19 in two Indian states | Science \| Research Article | • Data from the Indian states of Tamil Nadu and Andhra Pradesh show SARS-CoV-2 transmission pathways and mortality in a high-incidence setting<br>• Reported cases and deaths have been concentrated in younger cohorts than expected from observations in HICs, even when taking into account for demographic differences across settings<br>• Same-age contacts were associated with the greatest infection risk<br>• Case-fatality ratios spanned 0.05% at ages 5-17 years to 16.6% at ages >=85 years | Transmission, mortality, high-incidence setting |
| 25.09.2020 | Report 33 – Modelling the allocation and impact of a COVID-19 vaccine | ICL \| Report 33 | • Efficacy and safety results of several SARS-CoV-2 vaccine candidates now in late-stage trials are expected by the end of 2020. Even under optimistic scenarios for manufacture and delivery, doses available in 2021 are likely to be limited<br>• Optimal vaccine allocation strategies within and between countries are identified to maximise | Vaccine, allocation, impact |

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| | | | health (avert deaths) under constraints on dose supply<br>• This report shows that as supply increases, vaccines that reduce or block infection (and therefore transmission) in addition to preventing disease have a greater impact that those that prevent disease alone, due to the indirect protection provided to high-risk groups<br>• The health impact of vaccination will depend on the cumulative infection incidence in the population when vaccination begins, the duration of any naturally acquired immunity, the likely trajectory of the epidemic in 2021 and the level of healthcare available to effectively treat those with disease<br>• Within a country, for a limited supply (doses for <20% of the population), the optimal strategy is to target the elderly and high-risk groups<br>• However, for a larger supply, the optimal strategy switches to targeting key transmitters (i.e. the working age population and potentially children) to indirectly protect the elderly and vulnerable<br>• A strategy in which doses are allocated to countries in proportion to their population size is close to optimal in averting deaths, given the likely global dose supply in 2021 (2 billion doses with a two-dose vaccine) | |
| 01.10.2020 | COVID-19 vaccine predictions: using mathematical | CGD \| Policy paper | • Using inputs generated from expert interviews, this modelling work suggests that here is a 50% chance that by the end of April 2021 there will be a | Vaccine, allocation |

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| | modelling and expert opinions to estimate timelines and probabilities of success of COVID-19 vaccines | | vaccine safe and efficacious to gain regulatory approval; by the end of 2021 this rises to 85%<br>• This modelling also suggests that it will probably take more than a year to produce enough vaccines to inoculate the world's 50 million medical staff and maybe Sept 2023 before there are enough doses for the whole world<br>• Experts predict that first-generation vaccines will not be effective enough to fully prevent infection and end the pandemic | |

## Infection Prevention and Control

| Publication date | Title/URL | Journal/Article type | Summary | Keywords |
|---|---|---|---|---|
| 05.10.2020 | The impact of COVID-19 control measures on social contacts and transmission in Kenyan informal settlements | BMC Medicine \| Research article | • In this study, data is collected from residents of informal settlements around Nairobi, Kenya to assess if control measures have changed contact patterns and the impact of changes on R0 is estimated<br>• Kenyan government restrictions reduced social contacts with an estimate of R0 below 1 but with a trade-off that 86% report total or partial income losses and 74% reported eating less or skipping meals due to having too little money for food<br>• Reductions is R0 are consistent with the comparatively low epidemic growth in Kenya and other SSA countries that implemented similar | Transmission, informal settlements |

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| | | | early control measures, however, these measures may not be sustainable given the negative and inequitable impacts on economic and food security | |

## Testing

| Publication date | Title/URL | Journal/Article type | Summary | Keywords |
|---|---|---|---|---|
| 04.10.2020 | Evaluation of the accuracy, ease of use and limit of detection of novel, rapid, antigen-detecting point-of-care diagnostics for SARS-CoV-2 | medRxiv \| pre-print (not peer reviewed) | • Reliable point-of-care (POC) diagnostics not requiring laboratory infrastructure could be a game changer in the C19 pandemic<br>• This prospective, multi-centre diagnostic accuracy study in Germany and UK assessed the performance, limit of detection (LOD) and ease-of-use of 3 antigen-detecting, rapid POC diagnostics for SARS-CoV-2<br>• One test (SD Biosensor Inc. STANDARD Q) met the predefined target of >=98% specificity and was considered easy to use and suitable for POC and given usability at POC is likely to have impact despite imperfect sensitivity at 86.6% (95% CI 62.8 to 86.4)<br>• Further research and modelling are needed | POC diagnostic |

## Therapeutics

| Publication date | Title/URL | Journal/Article type | Summary | Keywords |
|---|---|---|---|---|
| 02.10.2020 | Prophylactic anticoagulants for people hospitalised with COVID-19 | Cochrane Systematic Review \| Rapid | • The primary manifestation of COVID-19 is respiratory insufficiency but this disease also causes thromboembolic events | Thromboembolism, anticoagulant |

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| | | | • Recent studies have indicated a worse prognosis for people with C19 who developed thromboembolism<br>• Objective: to assess the effects of prophylactic anticoagulants vs active comparator, placebo or no intervention, on mortality and the need for respiratory support in people hospitalised with C19<br>• Currently insufficient evidence to determine the risks and benefits of prophylactic anticoagulants for people hospitalised with C19<br>• More robust evidence will be added to this review in future updates from 22 ongoing studies that plan to evaluate more than 15,000 participants in hospital settings | |
| 30.09.2020 | Efficacy and safety of hydroxychloroquine vs placebo for pre-exposure SARS-CoV-2 prophylaxis among health care workers: a randomized clinical trial | JAMA Internal Medicine \| Original investigation | • In this double-blind, placebo-controlled randomised clinical trial that included 132 participants and was terminated early, there was not a significant difference in PCR-confirmed SARS-CoV-2 incidence between hydroxychloroquine and placebo cohorts<br>• Among hospital-based health care workers, hydroxychloroquine did not prevent SARS-CoV-2 infection | Hydroxychloroquine, prevention |

## Comments, Editorials, Opinions, Blogs, News

| Publication date | Title/URL | Journal \| Article type |
|---|---|---|
| 05.10.2020 | India's new paper COVID-19 test could be a 'game changer' | BBC News |
| 03.10.2020 | Leveraging the advances in HIV for COVID-19 | The Lancet \| Comment |
| 02.10.2020 | Vaccine experts speak out on COVID-19 vaccine and how to prepare | CGD \| Blog |
| 01.10.2020 | When will we have a COVID-19 vaccine? Predictions, analysis and questions answered | CGD \| Blog |
| 01.10.2020 | Leveraging the strengths of a mixed purchasing system for COVID-19: a perspective from Indonesia | P4H \| Blog |
| 01.10.2020 | Symptoms of a broken system: the gender gaps in COVID-19 decision-making | BMJ Global Health \| Commentary |
| 30.09.2020 | COVID-19 and African rheumatology: progress in adversity | The Lancet Rheumatology \| Comment |
| 28.09.2020 | Providing essential TB services during COVID-19 | Health Policy and Planning \| Blog |

## 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 |

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| 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 | | |

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| | 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 | | | |

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| 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 |
|---|---|---|---|---|
| 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 |

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| 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 |

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| 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

Millington, K.A. and Reddin, S. (2020). *COVID-19 Health Evidence Summary No.96.* K4D Evidence Summary. Brighton, UK: Institute of Development Studies.

## 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).