

COVID-19 Scientific and Public Health Policy Update – (12 May 2020)

In addition to our weekly brief on the spread of COVID-19 and the actions that Africa CDC is taking to help member states, Africa CDC has begun to share a weekly brief detailing the latest changes in scientific knowledge and public health policy changes, as well as updates to the latest guidance from WHO and others. Contents of this document are not intended to serve as recommendations from the Africa CDC; rather, it is a summary of the fact base to help inform member states. It is important to note that the outbreak is evolving rapidly and that the nature of this information will continue to change. We will continue to provide regular updates to ensure member states are informed of the most critical developments in these areas.

A. Executive summary

- A cohort study of 38 COVID-19 patients in China suggests that SARS-CoV-2 can be present in the semen of patients with COVID-19, and SARS-CoV-2 may still be detected in the semen of recovering patient.
- A case report of a cluster of eight children suggest that the clinical picture represents a new phenomenon affecting previously asymptomatic children with SARS-CoV-2 infection manifesting as a hyper inflammatory syndrome with multi-organ involvement similar to Kawasaki disease shock syndrome.
- A retrospective cohort suggests patients with well-controlled blood glucose (BG) had markedly lower mortality compared to individuals with poorly controlled BG.
- Findings of a study suggests that Euroimmun ELISA IgG/IgA tests showed higher overall sensitivity than Maglumi CLIA IgG/IgM tests and both tests showed similar specificities of IgG.
- A randomized trial of 199 hospitalized adult COVID-19 patients treated with lopinavir–ritonavir group or standard-care, reports that treatment with lopinavir–ritonavir was not associated with a difference from standard care in the time to clinical improvement. A similar randomized controlled trial of 86 mild/ moderate COVID-19 patients, suggest lopinavir/ritonavir (LPV/r) or arbidol monotherapy present little benefit for improving the clinical outcome of patients hospitalized with mild/moderate COVID-19 over supportive care.
- A cross-sectional study in Tanzania suggest health worker infection prevention and control compliance, particularly for hand hygiene and disinfection, was inadequate in these outpatient settings.
- Gurgoan-based biotech Premas Biotech is the latest entrant into the COVID-19 vaccine race, the company will develop the scale up designs and is applying for animal trial.
- A transmission model based on contact survey data suggests that social distancing alone, as implemented in China during the outbreak, was sufficient to control COVID-19.
- A modelling study using epidemiological and anonymised human movement data suggests that early detection and contact tracing combined non pharmaceutical interventions achieved the strongest and most rapid effect for COVID-19 outbreak control in mainland China.

B. New guidelines and resources

- WHO has published new and updated guidance and resources on: [Community-based health care, including outreach and campaigns, in the context of the COVID-19 pandemic; COVID-19 and the use of angiotensin-converting enzyme inhibitors and receptor blockers](#)
- ECDC has issued new/updated guidance and resources on: [Contact tracing for COVID-19: current evidence, options for scale-up and an assessment of resources needed;](#)
- US Food and Drug Administration (FDA) has released new or updated guidance and resources on: [Coronavirus \(COVID-19\) Update: FDA Authorizes First Diagnostic Test Using At-Home Collection of Saliva Specimens](#)
- Interagency Standing Committee (IASC) has issued new/updated guidance and resources on: [Interim guidance on public health and social measures for COVID-19 preparedness and response in low capacity and humanitarian settings](#)
- IDSA has issued new/updated guidance and resources on: [Infectious Diseases Society of America Guidelines on the Diagnosis of COVID-19](#)
- The full list of latest guidance and resources from WHO and other public health institutions can be found in this [link](#).

C. Scientific updates

Basic science (virology, immunology, pathogenesis)

Epidemiology

- A cohort study of 38 COVID-19 patients in China suggests that SARS-CoV-2 can be present in the semen of patients with COVID-19, and SARS-CoV-2 may still be detected in the semen of recovering patient. [Results of semen testing found that over 15% of the patients had results positive for SARS-CoV-2 and 8.7% who were recovering](#), which is particularly noteworthy. Findings suggest that sexual transmission might be a critical part of the prevention of transmission. However, this study is limited by the small sample size and the short subsequent follow-up.
- A case report of a cluster of eight children with hyperinflammatory shock, showing features similar to atypical Kawasaki disease, in South East England. Most of the children had no significant respiratory involvement, although seven of the children required mechanical ventilation for cardiovascular stabilisation. All of the children were discharged after 4–6 days, two of the children tested positive for SARS-CoV-2. Authors suggest that this clinical picture represents a new phenomenon affecting previously [asymptomatic children with SARS-CoV-2 infection manifesting as a hyperinflammatory syndrome with multiorgan involvement similar to Kawasaki disease shock syndrome](#).
- A retrospective cohort study of 7,337 COVID-19 patients with or without diabetes in China suggests that patients with Type 2 diabetes (T2D) needed more medical interventions and had a significantly higher mortality and multiple organ injury than the non-diabetic individuals. However, patients with well-controlled blood glucose (BG) had markedly lower mortality compared to individuals with poorly controlled BG. [Findings suggest improved glycemic control with better outcomes in patients with COVID-19 and pre-existing T2D](#).
- Autopsy report of 12 COVID-19 patients who died in Hamburg, Germany reports deep venous thrombosis in 58% of the cases and pulmonary embolism was the direct cause of death in four cases. [SARS-CoV-2 RNA was detected in the lungs of all patients, five had high viral RNA titers in the liver, kidney or heart](#).

- A prospective study of 100 cases of confirmed COVID-19 and 2761 close contacts in Taiwan reports an overall secondary clinical attack rate was 0.7%. [The attack rate was higher among contacts whose exposure to the index case started within 5 days of symptom onset than those who were exposed later.](#) In this study, high transmissibility of COVID-19 before and immediately after symptom onset suggests that finding and isolating symptomatic patients alone may not suffice to contain the epidemic, and more generalized measures may be required, such as social distancing.
- A retrospective study reviewed the medical records of 44 patients who were infected with COVID-19 to explore the dynamic COVID-19 Dynamic CT manifestations of COVID-19 at different times. Results suggest that the [dynamic changes of CT images of lungs of COVID-19 patients, combined with the clinical manifestations and laboratory indicators of patients, can help guide clinical diagnosis and treatment.](#)
- A case report on the [cystic chest CT findings of 2 patients admitted to the intensive care unit confirmed to have COVID-19-related pneumonia showed multiple cysts in ground-glass opacities \(bilaterally\) with/without pneumothorax.](#) The patients continued to be given oxygen by mask and received antitussive, phlegm-dispelling treatment. At follow up, there was a reduction in the number of multiple cystic lesions on CT. The results suggest COVID-19 may independently result in pulmonary cyst formation and pneumothorax; the application of a ventilator may be another causative factor.

Diagnostocs

- This study evaluates the performances of a [newly designed real-time RT-PCR \(Simplexa™ COVID-19 Direct assay\), an all-in-one reagent mix and no separate extraction required assay.](#) 278 nasopharyngeal swabs were tested in parallel with Corman's method, findings suggest an "almost perfect" agreement in SARS-CoV-2 RNA detection between the two assays. The high sensitivity and specificity of this new assay indicate that it is promising for laboratory diagnosis, enabling highspeed detection in just over one hour, thus allowing prompt decision making regarding isolation of infected patients.
- A retrospective study included 128 serum samples from COVID-19 patients shows accurate and equivalent performance of the five serological antibody assays (ELISA, CLIA and three lateral flow tests) in detecting SARS-CoV-2 antibodies 14 days after the onset of COVID-19 symptoms. [Findings suggests that Euroimmun ELISA IgG/IgA tests showed higher overall sensitivity than Maglumi CLIA IgG/IgM tests](#) and both tests showed similar specificities of IgG.
- The US Food and Drug Administration (FDA) has issued an [Emergency Use Authorization \(EUA\) for EUROIMMUN US Inc. qualitative test for the detection of IgG antibodies against SARS-CoV-2 in human serum and plasma.](#) The product is intended for use as an aid in identifying individuals with an adaptive immune response to SARS-CoV-2, indicating recent or prior infection.
- The US Food and Drug Administration (FDA) has issued an [Emergency Use Authorization \(EUA\) for Roche's COVID-19 antibody test.](#) The company claims its test has 100% sensitivity and over 99.8% specificity at day 14 post-PCR confirmation of SARS-CoV-2 infection.
- The US Food and Drug Administration (FDA) has issued an [Emergency Use Authorization \(EUA\) to Sherlock BioSciences, Inc.'s Sherlock CRISPR SARS-CoV-2 Kit.](#) The Sherlock CRISPR SARS-CoV-2 Kit is a CRISPR-based SHERLOCK (Specific High sensitivity Enzymatic Reporter unLOCKing) diagnostic test that looks for the specific target RNA or DNA sequences of the SARS-CoV-2 virus in upper respiratory specimens, such as nasal swabs, and bronchoalveolar lavage specimens, such as from fluid in the lungs, from individuals suspected of COVID-19 by their healthcare provider. Use of the test is limited to laboratories certified under CLIA to perform high-complexity tests.

- The US Food and Drug Administration (FDA) has issued an [Emergency Use Authorization \(EUA\) for Rutgers Clinical Genomics Laboratory TaqPath SARS-CoV-2 Assay](#). This test is also for use with saliva specimens that are self-collected at home or in a healthcare setting by individuals using the Spectrum Solutions LLC SDNA-1000 Saliva Collection Device when determined to be appropriate by a healthcare provider.

Care and Treatment

- A cohort study of 90 hospitalized COVID-19 patients treated with hydroxychloroquine with or without azithromycin found that [patients who received hydroxychloroquine for the treatment of pneumonia associated with COVID-19 were at high risk of QTc prolongation, and concurrent treatment with azithromycin was associated with greater changes in QTc](#). Findings suggest a need for close monitoring of QTc and concomitant medication usage.
- A case series of 40 COVID-19 patients treated with hydroxychloroquine with or without azithromycin in France, [reports a prolonged QT observed in 36% of the patients and the drugs were discontinued for 42.5% of the patients to avert further complications, including drug-induced torsades de pointes](#). The study reports that QTc intervals increased in more than 90% of patients, raising concerns about the widespread use of hydroxychloroquine, with or without azithromycin, to treat COVID-19 in settings where patients cannot be adequately monitored.
- An observational study of 1376 severely ill COVID-19 patients treated with hydroxychloroquine [suggests that hydroxychloroquine administration was not associated with either a greatly lowered or an increased risk of the composite end point of intubation or death](#). The results do not support the use of hydroxychloroquine outside randomized clinical trials testing its efficacy.
- A retrospective study of 1,061 COVID-19 positive patients treated with hydroxychloroquine and azithromycin for at least three days [suggests good clinical outcome and virological cure in 91.7% of the patients within 10 days](#). A poor clinical outcome was observed for 46 patients and 8 died between the age of 74-95 years old. Findings suggest administration of the HCQ+AZ combination before COVID-19 complications occur is safe and associated with very low fatality rate in patients.
- A randomized, controlled, open-label trial of 199 hospitalized adult COVID-19 patients treated with lopinavir–ritonavir group or standard-care, [reports that treatment with lopinavir–ritonavir was not associated with a difference from standard care in the time to clinical improvement](#). Mortality at 28 days was similar in the lopinavir–ritonavir group and the standard-care group and the percentages of patients with detectable viral RNA at various time points were similar. In hospitalized adult patients with severe COVID-19, no benefit was observed with lopinavir–ritonavir treatment beyond standard care.
- An exploratory randomized controlled trial of 86 mild/ moderate COVID-19 patients, compared the efficacy and safety of lopinavir/ritonavir (LPV/r) or arbidol monotherapy. [Findings suggest LPV/r or arbidol monotherapy present little benefit for improving the clinical outcome of patients hospitalized with mild/moderate COVID-19 over supportive care](#), as the rate of positive-to-negative conversion of SARS-CoV-2 nucleic acid, was similar between groups. There is need for further studies with larger sample size
- A systematic review of 59 studies highlights the risk factors for [psychological distress experienced by health care workers, findings suggest that risk factors were being younger, more junior in rank, parents of dependent children, or having an infected family member, and lack of practical support](#). Clear communication, access to adequate personal protection, adequate rest, and both practical and psychological support were associated with reduced morbidity. There is a need for effective interventions to help mitigate the psychological distress experienced by staff caring for patients in an emerging disease outbreak.

Infection Prevention and Control

- A cross-sectional study of 220 outpatient health facilities in Tanzania, reported 6.9% compliance for hand hygiene, 74.8% for glove use, 4.8% for disinfection of reusable equipment and 43.3% for waste management. Findings [suggest health worker infection prevention and control compliance, particularly for hand hygiene and disinfection, was inadequate in these outpatient settings](#). Improvements in provision of supplies and health worker behaviours are urgently needed in the face of the current pandemic.
- This study compared the hermetically-sealed standard eye mask (SEM) and a novel filtered eye mask (FEM), both were examined at 1-minute, 5-minute and 60-minute periods for performance metrics relating to fog. The study [suggests that the FEM was clear at 1 minute, 5 minutes and showed minimal fog at 60 minutes](#). An FEM may play an important role in preventing novel coronavirus (COVID-19) exposure by protecting the eyes from airborne particles and preventing fog, rendering it usable.

Vaccines

- Pfizer and BioNTech have the [first participants have been dosed in the U.S. in the Phase 1/2 clinical trial for the BNT162 vaccine program](#). The mRNA-based vaccine, partnered with has already started phase 1/2 testing in Germany, the company says it could have it ready for emergency use as early as the autumn if the FDA signs off the study quickly.
- Boston biopharma company [Moderna announced that its vaccine candidate, mRNA-1273, had been cleared by the FDA to move into a Phase II trial](#). The study, which will begin enrolling 600 participants in the coming weeks, is designed to begin assessing whether or not the potential vaccine can induce a person's immune system to produce antibodies that recognize SARS-CoV-2.
- European Union (EU) research commissioner Mariya Gabriel [suggests the world should see a COVID-19 vaccine by the end of the year](#), and the EU's revamped coronavirus recovery budget will include more money for research,
- Gurgoan-based [biotech Premas Biotech is the latest entrant into the COVID-19 vaccine race, the company will develop the scale up designs and is applying for animal trial](#). The vaccine is a multi sub-unit vaccine with three antigens unlike single-protein vaccines currently under trials across the world.

Non-pharmaceutical interventions: social distancing

- A study using epidemiological and anonymised human movement data [suggests that early detection and contact tracing combined non pharmaceutical interventions achieved the strongest and most rapid effect for COVID-19 outbreak control in mainland China](#). Findings suggest that early and integrated NPI strategies should be prepared, deployed and adjusted to maximise benefits of these interventions and minimize health, social and economic impact of COVID-19.
- This study using contact surveys data for Wuhan and Shanghai reports that daily contacts were reduced 7-8-fold during the COVID-19 social distancing period, with most interactions restricted to the household. A transmission model based on this data [suggests that social distancing alone, as implemented in China during the outbreak, is sufficient to control COVID-19](#). While proactive school closures cannot interrupt transmission on their own, they can reduce peak incidence by 40-60% and delay the epidemic.

D. Related Public Health Policy

Contents of this section include only publicly announced public health policies. Sources of this section include official government communique, embassy alerts and press search.

Africa

- Over the past week, as cases in the continent continue to rise, Member States have **continued to extend imposed public health measures**:
 - **Lockdown**: [Senegal](#), [Sierra Leone](#), [Zimbabwe](#),
 - **Mandatory wearing of masks in public**: [Botswana](#),
- While, some Member States allow **partial reopening of the economy and/or schools** including [Benin](#), [Botswana](#), [Cameroon](#), [Lesotho](#), [Djibouti](#) and [Nigeria](#). But, precautionary measures, such as wearing face masks and gloves while maintaining social distancing remain in place.
- [Burkina Faso](#) government to give schoolchildren masks before resumption of classes.
- [Côte d'Ivoire](#) has been equipped with a call center costing close US\$500,000 and a daily processing capacity of 5,000 non-stop free calls to help it fight fake news and rumors related to the Covid-19 pandemic.
- [Malawi](#) has introduced a US \$51M emergency cash programme to mitigate the impact of the COVID-19 pandemic on vulnerable groups for the six months from May to October. [The country has planned to release more than 1,000 inmates](#) over the next two months as part of measures to decongest prisons countrywide.
- [Nigerian](#) bourse commits US\$263,157 to fight COVID-19. Out of this US\$100,000 would be devoted to the “Masks For All Nigerians” campaign.
- [Ugandan President Yoweri Museveni said while there was no specific medicine so far for the coronavirus, patients are supported with several measures to increase their immunity](#) and attend to their other ailments to help them to combat the virus. Anti-malaria drug hydroxychloroquine has been used to treat patients under strict monitoring.
- Member States get financial support from The World Bank, IMF and Other developed countries :- [Benin \(\\$10.4 M\)](#), [Botswana \(\\$4.7 M\)](#), Cameroon ([\\$226 M](#)) and ([\\$5 M](#)), [Cote d'Ivoire \(\\$35 M\)](#),
- [The world's foremost food and beverage giant Nestlé has released \\$3.4 million in aid](#) to cushion the deleterious effects of COVID-19 on 850,000 vulnerable people in countries across West and Central Africa. It is providing nutritious food and beverages to 170,000 families spread in Angola, Burkina Faso, Cameroon, Gabon, Mali, Niger and Nigeria. [It has donated for Cote d'Ivoire](#) medical and protective equipment.

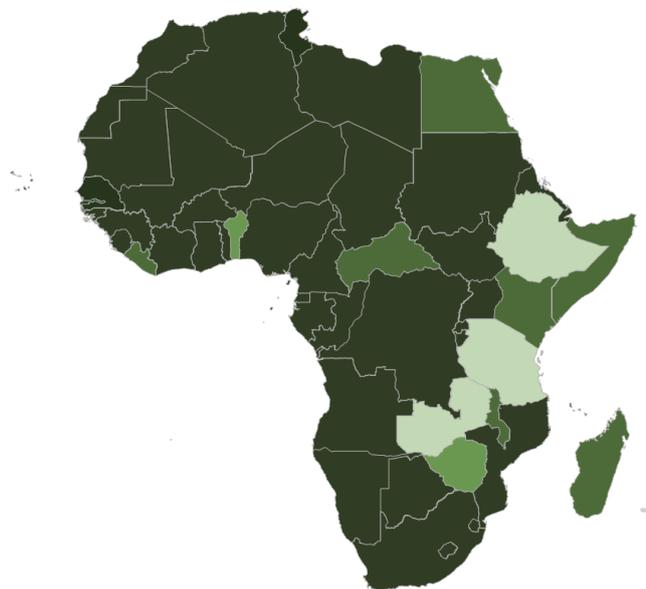
Rest of World

- [US](#) Airlines is mandating facial coverings for all passengers. The country States have also started reopening of economies e.g. New York, Ohio, Texas etc.
- [China's](#) Hubei province eases lockdown and more than 120 schools reopened in the City.
- [France](#) will extend a health emergency for another two months until 24 July. [The country is hoping to deploy its state-supported "StopCOVID"](#) contact-tracing app by 02 June.
- Countries have started [easing of lockdown and opening of business/schools](#) e.g. Armenia, Bahrain, Finland, German, Iran, Israel, Jordan, Lebanon, Philippines, Romania, Saudi Arabia, Singapore, Turkey, UAE, Ukraine.
- [Italy](#) is easing lockdown measures after seven weeks of extraordinary restrictive measures.

- [Spain](#) makes masks mandatory in public transportation, while the country has eased strict lockdown conditions.
- [South Korea](#) has eased physical distancing rules starting from 06 May. The country will allow businesses to resume, gatherings and events to take place assuming they follow disinfection guidelines.
- Countries have extended [lockdown, closing of schools or state emergency](#) e.g. Hungary, India, Japan.
- While others, [impose a daily night curfew but allowing businesses to reopen and more movement](#) e.g. Jordan, Palestine etc.
- Country has lifted export restrictions on medical equipment e.g. [Turkey](#)
- While other countries have continued implementing additional measures such as;
 - ✓ [Austria](#) will make available on-site coronavirus testing at airport aimed at enabling inbound passengers to avoid having to be quarantined for 14 days.
 - ✓ [Israel](#) has extended using mobile phone data to track people infected by the coronavirus until 26 May.
- New coronavirus infections are accelerating again in [Germany](#) just days after its leaders loosened social restrictions.
- South Korea reports biggest single-day jump in a month, the [Korea Centers for Disease Control and Prevention](#) said a tentative assessment showed 26 of the 34 new patients were locally transmitted cases, while the rest were imported.
- [China reported its first double-digit rise in new rises cases](#) in 10 days on Sunday, saying 14 new cases had been detected, 12 of them domestic infections and two brought from abroad.
- The [Japanese government approved Thursday the use of the anti-viral drug remdesivir](#) for novel coronavirus patients. Remdesivir, originally developed as a possible treatment for Ebola, is the first therapeutic drug approved in Japan to treat COVID-19,
- Johns Hopkins begins [trials of blood plasma for COVID-19 treatment and prophylaxis in a randomized, placebo-controlled clinical trials](#) to determine whether blood plasma will be effective as prophylaxis against COVID-19.
- Fujifilm is ramping up production of its antiviral treatment [favipiravir, one of many approved drugs being tested as a possible treatment for COVID-19](#). Phase III clinical trials are ongoing in Japan.
- [Switzerland](#) gives food parcels in Geneva. Over 1,000 individuals queued for food parcels.
- [World leaders](#) have pledged \$8 billion for vaccine, diagnostics and treatment against COVID-19.

E. Summary of travel restrictions implemented by Member States

Contents of this section include only publicly announced public health policies. Sources of this section include official government communique, embassy alerts and press search.



- 1 Some countries still allow cargo, freight and emergency transport into and out of the country; Some MSs will still allow citizens and residents to enter but all borders are essentially closed
- 2 Banning entry or exit of citizens or suspending visa issuance to specific countries

For further detailed information for each country, refer to the full table [here](#).

F. Summary of physical distancing measures implemented by Member States

Contents of this section include only publicly announced public health policies. Sources of this section include official government communique and press search. (as of 11 May 2020)



*Source of information based on official reports, embassy alerts and press scanning

For further detailed information for each country, refer to the full table [here](#).

G. Modelling Studies for Africa

Africa CDC has enlisted the support of a group of modelling experts, with various backgrounds, to support the efforts to estimate the impact of the pandemic in the African continent. This section presents new models and dynamic tools with capacity for country-level forecasting as they become available. As the epidemic evolves in Africa, the potential to improve and refine forecasts for the countries of the continent increases. Member states are encouraged to share updated case, intervention, and risk factor data with Africa CDC, and with the groups mentioned in this section who are members of the Africa CDC modelling working group. For further support kindly [email](#) for more information.

Adaptable tool demonstrates effect of multiple COVID-19 interventions by country.

- This interactive [tool](#) allows policymakers to adjust key parameters including start date and observed intensity of COVID-19 interventions such as physical distancing, shielding and school closures. The estimated effect of each intervention on daily, peak and total case and death counts, and on hospital and critical care bed needs is shown in dynamic epicurves. Interventions can be assessed individually or cumulatively. The tool builds on the individual member state reports (available [here](#)) which estimate the size and timing of peak cases and deaths, daily demand for hospital beds and the effects of five intervention scenarios. The model uses country-specific age structures and simulated contact patterns for Africa. It takes into account symptomatic and sub-clinical infection rates and lower infection/symptomatic illness in children. Limitations of the model are the assumption that contact patterns do not change during the epidemic except through the noted interventions, and simulating the whole country as one epidemic rather than separate epidemics in different part of the country. Only one single model trajectory is shown for each set of parameters so uncertainty is not visible.
 - COVID-19 Working Group, London School of Hygiene & Tropical Medicine Centre for the Mathematical Modelling of Infectious Diseases

Africa-specific estimates for COVID-19 hospitalised care: lower need in some contexts.

- This [model](#) adapts US estimates of expected rates of hospital-based care for COVID-19 cases for the context in low- and middle-income countries (LMICs). Researchers take Ethiopia, Kenya, Nigeria, Senegal and South Africa as African examples, integrating country specific data on TB, HIV hypertension and diabetes, and an assessment of the proportion of treatment and control of these conditions in each country. Results suggest in LMICs where populations skew to younger age groups such as Senegal and Nigeria, a lower proportion of COVID-19 cases might need hospital care than in high income countries (HIC). But in countries where age structures are more similar to high income countries, and rates of non-communicable disease, HIV, and TB are high, there may be higher need for hospital care. Limitations of the model include use of US data, where cases tend to present earlier, potentially leading to underestimated needs in LMIC countries where cases present later with more severe disease due to limited detection activity. Underestimates may also result from lower diagnosis of underlying conditions, particularly hypertension and diabetes, in LMICs.
 - Institute for Disease Modelling, Global Good Fund, Washington, USA

COVID-19 impact on non-COVID-19 disease burden: HIV, TB, Malaria.

- This work estimates that disruption due to COVID-19 response may increase HIV, TB and malaria-related deaths by 10%, 20% and 36%, respectively over the next 5 years. The group models four COVID-19 scenarios: no action (Rt reduced by 20% due to spontaneous physical distancing), mitigation (Rt reduced by 45% for 6 months), suppression (Rt reduced by 75% for 12 months) and suppression lift (Rt reduced by 75% for 2 months). Impact is assessed using assumptions about capacity remaining for non-

COVID-19 health and prevention services in high or low burden settings. The models suggest greatest impact on HIV mortality will come from interruption of ART, on TB mortality from reductions in timely diagnosis and treatment of new cases; and on malaria from reduced prevention activities particularly interruption of planned net distribution campaigns. In high burden settings the loss of life-years over five years is estimated to be similar to the direct impact from COVID-19.

— *Imperial College London COVID-19 Response Team/MRC Centre for Global Infectious Disease Analysis/J-IDEA*

Data Sources

- The Oxford COVID-19 Government Response Tracker (OxCGRT) systematically collects and maps information on 17 forms of policy response to COVID-19 from containment and closure policies (such as school closures and restrictions in movement) to economic; and health system policies (such as testing regimes). How rigorously each measure is implemented is rated and scores are aggregated into a Stringency Index. Data is collected from publicly available sources and updated continuously.
 - *Blavatnik School of Government, University of Oxford, Our World in Data*
- This tool brings together country-level (and for some countries sub-national) demographics, health system information, implementation of public health and social measures, prevalence of HIV and diabetes, COVID-19 statistics and estimates based on the three level Imperial [model](#).

H. Clinical Trials for COVID-19

- In Africa, there has been at least 25 registered clinical trials.

List of registered interventional clinical trials in Africa

Location	Name	Interventions	Sponsor/Collaborators	Phase	Enrolment Target	Start date
Egypt	Administration of Chlorpromazine as a Treatment for COVID-19	<i>Drug:</i> Chlorpromazine Injection	Cairo University	I/II	60	May 2020
	Efficacy of Faviprevir in COVID-19 Treatment	<i>Drug:</i> Favipiravir <i>Drug:</i> Placebos	Tanta University	II/ III	40	17 April 2020
	Angiotensin Converting Enzyme Inhibitors in Treatment of Covid 19	<i>Drug:</i> ACEIs <i>Drug:</i> Conventional treatment	Tanta University	III	60	15 April 2020
	A Real-life Experience on Treatment of Patients With COVID 19	<i>Drug:</i> Chloroquine <i>Drug:</i> Favipiravir <i>Drug:</i> Nitazoxanide <i>Drug:</i> Ivermectin <i>Drug:</i> Niclosamide	Tanta University	II/ III	100	15 April 2020
	The Efficacy of Ivermectin and Nitazoxanide in COVID-19 Treatment	<i>Drug:</i> Chloroquine <i>Drug:</i> Nitazoxanide <i>Drug:</i> Ivermectin	Tanta University	II/ III	60	17 April 2020

Efficacy of Natural Honey Treatment in Patients With Novel Coronavirus	<i>Dietary Supplement:</i> Natural Honey <i>Other:</i> Standard Care	Misr University for Science and Technology	III	1,000	25 March 2020
PRA-001: Plasma Rich Antibodies From Recovered Patients From COVID19	<i>Other:</i> Antibody-Rich Plasma from COVID-19 recovered patients	Ain Shams University	NA	20	20 April 2020
FAV-001: Efficacy and Safety of Favipiravir in Management of COVID-19	<i>Drug:</i> Favipiravir <i>Drug:</i> Standard of care therapy	Ain Shams University	III	100	20 April 2020
Levamisole and Isoprinosine in Immune-prophylaxis of Egyptian Healthcare Workers Facing COVID-19	<i>Drug:</i> Levamisole <i>Drug:</i> Isoprinosine <i>Drug:</i> Levamisole and Isoprinosine	Ain Shams University	III	100	20 April 2020
Application of BCG Vaccine for Immune-prophylaxis Among Egyptian Healthcare Workers During the Pandemic of COVID-19	<i>Biological:</i> intradermal injection of BCG vaccine. <i>Other:</i> Placebo	Ain Shams University	III	900	20 April 2020

	Efficacy of Chloroquine in COVID-19 Treatment	<i>Drug:</i> Chloroquine	Tanta University	II/III	40	17 April 2020
	Assessment the Activity Value of 13-Cis-Retinoic Acid(Isotretinoin) in the Treatment of COVID-19	<i>Drug:</i> Isotretinoin (13 cis retinoic acid) capsules + standard treatment. <i>Drug:</i> Isotretinoin (Aerosolized 13 cis retinoic acid) + standard treatment. <i>Drug:</i> Standard treatment	Kafrelsheikh University	III	45	April 2020
	MV-COVID19: Measles Vaccine in HCW	<i>Drug:</i> Measles-Mumps-Rubella Vaccine	Kasr El Aini Hospital	III	200	01 May 2020
	Management of Covid-19 Patients During Home Isolation	<i>Device:</i> Oxygen Therapy <i>Procedure:</i> Physical Therapy	Cairo University	N/A	60	15 March 2020
Nigeria	CRASH-19: Coronavirus Response - Active Support for Hospitalised Covid-19 Patients	<i>Drug:</i> Aspirin <i>Drug:</i> Losartan <i>Drug:</i> Simvastatin	London School of Hygiene and Tropical Medicine	III	10,000	April 2020
	LACCTT Lagos COVID-19 Chloroquine Treatment Trial	<i>Drug:</i> Chloroquine phosphate <i>Drug:</i> Hydroxychloroquine sulphate	Lagos State Government Nigerian Institute of Medical Research	N/A	600	17 April 2020

	IHP Detox tea trial: Efficacy and safety of IHP Detox Tea for treatment of Corona virus disease 2019: a pilot placebo-controlled randomized trial	IHP Detox tea	Neimeth International Pharmaceuticals Plc.	N/A	72	01 May 2020
South Africa	CQOTE Chloroquine Outpatient Treatment Evaluation for HIV-Covid-19	<i>Drug:</i> Chloroquine or hydroxychloroquine	University of Cape Town	III	560	01 May 2020
	SOLIDARITY: Public health emergency SOLIDARITY trial of treatments for COVID-19 infection in hospitalized patients	Local standard of care alone OR Local standard of care plus one of: 1. Remdesivir 2. Chloroquine or hydroxychloroquine 3. Lopinavir + ritonavir 4. Lopinavir + ritonavir plus interferon-beta	WHO	III	10,000	01 March 2020
South Africa, Zambia and 11 other countries outside Africa	CROWN CORONA : CROWN CORONATION: Chloroquine Repurposing to healthWorkers for Novel	<i>Drug:</i> Low-dose chloroquine/hydroxychloroquine <i>Drug:</i> Mid dose chloroquine or hydroxychloroquine <i>Drug:</i> High does chloroquine or hydroxychloroquine	Washington University School of Medicine Bill and Melinda Gates Foundation	III	55,000	April 2020

	CORONAVirus mitigaTION	<i>Drug: Placebo</i>				
Tunisia	Assessment of the Efficacy and Safety of (HCQ) as a Prophylaxis or COVID19 for Health Professionals	<i>Drug: Hydroxychloroquine Drug: Placebo oral tablet</i>	Abderrahmane Mami Hospital	III	530	15 April 2020
	COVID+PA: Assessment of Efficacy and Safety of HCQ and Antibiotics Administrated to Patients COVID19(+)	<i>Drug: Hydroxychloroquine Drug: Azithromycin</i>	Abderrahmane Mami Hospital Eshmoun Clinical Research Centre	IV	400	15 April 2020
	TRONCHER: Assessment of Efficacy and Safety of Tocilizumab Compared to DeferOxamine, Associated With Standards Treatments in COVID-19 (+) Patients Hospitalized In Intensive Care in Tunisia	<i>Drug: Tocilizumab Injection Drug: Deferoxamine</i>	Abderrahmane Mami Hospital Eshmoun Clinical Research Centre Datametrix	III	260	04 May 2020

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