



COVID-19 Scientific and Public Health Policy Update¹ – (23 June 2020)

In addition to our Weekly Outbreak Brief on the spread of COVID-19 and the actions that Africa CDC is taking to help African Union Member States. Africa CDC shares a weekly brief detailing the latest developments in scientific knowledge and public health policy from around the world, as well as updates to the latest guidance from WHO and other public health agencies. Contents of this document are <u>not</u> <u>intended to serve as recommendations</u> from the Africa CDC; rather, it is a summary of the scientific information available in the public space to 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 provide regular updates to ensure Member States are informed of the most critical developments in these areas.

A. Executive summary

- The UK RECOVERY trial reports that treatment with the corticosteroid dexamethasone reduces the risk of death in patients with COVID-19 requiring respiratory support.
 Findings suggest that treatment with dexamethasone reduced deaths by one-third in ventilated patients and by one fifth in other patients receiving oxygen only.
- WHO announced that the hydroxychloroquine (HCQ) arm of the Solidarity Trial to find an effective COVID-19 treatment was being stopped based on evidence from the Solidarity trial, UK's Recovery trial and a Cochrane review of other evidence on hydroxychloroquine.
- A systematic review and meta-analysis of 23 published reports that approximately 12% of patients with SARS-CoV-2 infection reported gastrointestinal (GI) symptoms. Findings suggest that patients with SARS-CoV-2 infection can present with gastrointestinal symptoms with a possible faecal-oral route of transmission due to the presence of viral RNA in the stool.
- A retrospective cohort study analysed contact tracing dataset of 195 unrelated close contact groups estimates the secondary attack rate of COVID-19 in Guangzhou.
 Findings suggest SARS-CoV-2 may be more transmissible in households than SARS-CoV and Middle East respiratory syndrome coronavirus.
- German biotech firm CureVac received regulatory approval for human trials of a potential COVID-19 vaccine. A clinical trial of 144 healthy volunteers aged between 18 and 60 will be vaccinated, to determine the optimal dose and to evaluate the safety of the vaccine in humans.

¹ This update compiled for use by Africa CDC and African Union Member States and is developed in collaboration with the World Health Organization - Regional Office for Africa. **This is a preliminary summary of information and not considered policy, guidance, or final conclusions of the Africa CDC or the African Union**.







 A cohort study examined climate data from 50 cities worldwide with and without substantial community spread of COVID-19. Findings suggest that the distribution of substantial community outbreaks of COVID-19 along restricted latitude, temperature, and humidity measurements was consistent with the behaviour of a seasonal respiratory virus.

B. New guidelines and resources

Since 13 June 2020,

- Africa CDC has published new guidance on:
 - Interim Guidance on the Use of Rapid Antibody Tests for COVID-19 Response
- WHO has published new guidance and resources on:
 - Criteria for releasing COVID-19 patients from isolation;
 - <u>Addressing violence against children, women and older people during</u> the covid-19 pandemic: Key actions;
 - Emergency Global Supply Chain System (COVID-19) catalogue; Q&A: Serology and COVID-19
- US CDC has published new and updated guidance and resources on:
 - <u>Testing Strategy for Coronavirus (COVID-19) in High-Density Critical</u> Infrastructure Workplaces after a COVID-19 Case Is Identified;
 - Overview of Testing for SARS-CoV-2;
 - Considerations for Community-Based Organizations;
 - Considerations for Public Beaches;
 - Considerations for Casinos and Gaming Operations;
 - Community Mitigation;
 - Food and Coronavirus Disease 2019 (COVID-19)
- ECDC has published new resources on:
 - Infographic:Infection prevention and control in primary care;
 - <u>Guidance on infection prevention and control of COVID-19 in migrant</u> and refugee reception and detention centres in the EU/EEA and the UK;
 - COVID-19 in reception and detention centres for migrants and refugees;
 - Monitoring and evaluation framework for COVID-19 response activities in the EU/EEA and the UK
- FDA has issued press releases and resources on:
 - In Vitro Diagnostics EUAs;
 - Fact Sheet for Patients And Parents/Caregivers Emergency Use Authorization (EUA) Of Remdesivir For Coronavirus Disease 2019 (COVID-19);







- Fact Sheet For Health Care Providers Emergency Use Authorization (EUA) Of Remdesivir (Gs-5734[™]);
- FDA Revokes Emergency Use Authorization for Chloroquine and Hydroxychloroquine;
- FDA Revokes Emergency Use Authorization for Chembio Antibody Test
- The full list of latest guidance and resources from WHO and other public health institutions can be found in this <u>link</u>.

C. Scientific updates

Basic Science

 A genome-wide association study reports on the potential genetic factors associated with the development of COVID-19. Findings indicate a 3p21.31 gene cluster as a genetic susceptibility locus in patients with COVID-19 with respiratory failure and confirmed a potential involvement of the ABO bloodgroup system. <u>The results are consistent with previous findings that associate</u> increased risk of severe COVID-19 with blood group A and reduced risk with blood group O.

Epidemiology

A retrospective cohort study analysed contact tracing dataset of 195 unrelated close contact groups (215 primary cases, 134 secondary or tertiary cases, and 1964 uninfected close contacts) to estimate the secondary attack rate of COVID-19 in Guangzhou. <u>Findings suggest SARS-CoV-2 may be more transmissible in households than SARS-CoV and Middle East respiratory</u> syndrome coronavirus. Older individuals (aged ≥60 years) are the most

susceptible to household transmission of SARS-CoV-2.

- A systematic review and meta-analysis of 23 published and 6 preprint studies with 4,805 patients, found that approximately 12% of patients with SARS-CoV-2 infection reported gastrointestinal (GI) symptoms. <u>Findings suggest</u> that 12% of patients with COVID-19 will manifest GI symptoms, and SAR-CoV-2 shedding was observed in 40.5% of patients with confirmed SARS-CoV-2 infection. This highlights that patients with SARS-CoV-2 infection can present with gastrointestinal symptoms with a possible faecal-oral route of transmission due to the presence of viral RNA in the stool.
- A cohort study examined climate data from 50 cities worldwide with and without substantial community spread of COVID-19. Eight cities with a substantial spread of COVID-19 (Wuhan, China; Tokyo, Japan; Daegu, South Korea; Qom, Iran; Milan, Italy; Paris, France; Seattle, US; and Madrid, Spain)







were compared with 42 cities that have not been affected or did not have substantial community spread. Findings suggest that the distribution of substantial community outbreaks of COVID-19 along restricted latitude, temperature, and humidity measurements was consistent with the behaviour of a seasonal respiratory virus. Using weather modelling, it may be possible to estimate the regions most likely to be at a higher risk of substantial community spread of COVID-19.

- An age-structured mathematical model using epidemic data from China, Italy, Japan, Singapore, Canada and South Korea <u>estimates that susceptibility to</u> <u>infection in individuals under 20 years of age is approximately half that of</u> <u>adults aged over 20 years.</u> Without effective control measures, regions with relatively older populations could see disproportionally more cases of COVID-19, particularly in the latter stages of an unmitigated epidemic.
- A mathematical modelling study using prevalence data from the Global Burden of Diseases, Injuries, and Risk Factors Study (GBD) 2017 and UN population estimates for 2020 for 188 countries. Findings suggest that about one in five individuals worldwide could be at increased risk of severe COVID-19, should they become infected, due to underlying health conditions, but this risk varies considerably by age. The share of the population at increased risk was highest in countries with older populations, African countries with high HIV/AIDS prevalence, and small island nations with high diabetes prevalence.

Care and Treatment

- A study reports on the antiviral abilities of 3 broad-spectrum antiviral compounds <u>gemcitabine</u>, <u>lycorine and oxysophoridine against SARS-CoV-2 in cell culture</u>. Findings indicate that all three tested compounds inhibited viral replication. The antiviral effect of gemcitabine was suppressed efficiently by the cytidine nucleosides. Additionally, a combination of gemcitabine with oxysophoridine had an additive antiviral effect against SARS-CoV-2. The study demonstrates that broad-spectrum antiviral compounds may have a priority for the screening of antiviral compounds against newly emerging viruses to control viral infection.
- A single-centre prospective cohort study of 39 patients with severe COVID-19 pneumonia, hypoxia, and systemic hyperinflammation treated with mavrilimumab, a monoclonal antibody targeting the granulocyte-macrophage colony-stimulating factor (GM-CSF). Findings suggest that mavrilimumab treatment was associated with improved clinical outcomes compared with standard care in non-mechanically ventilated patients with severe COVID-19 pneumonia and systemic hyperinflammation. Treatment was well tolerated and mavrilimumab-treated patients had quicker improvement times. Confirmation of efficacy requires controlled testing.







- The UK RECOVERY trial reports that treatment with the corticosteroid dexamethasone reduces the risk of death in 2,104 patients with COVID-19 requiring respiratory support. Findings suggest that <u>treatment with</u> <u>dexamethasone reduced deaths by one-third in ventilated patients and by one</u> <u>fifth in other patients receiving oxygen only.</u> There was no benefit among those patients who did not require respiratory support. (*Preliminary findings*)
- WHO announced that the <u>hydroxychloroquine (HCQ) arm of the Solidarity</u> <u>Trial to find an effective COVID-19 treatment was being stopped.</u> The trial's Executive Group and principal investigators made the decision based on evidence from the Solidarity trial, UK's Recovery trial and a Cochrane review of other evidence on hydroxychloroquine. Data from Solidarity (including the French Discovery trial data) and the recently announced results from the UK's Recovery trial both showed that hydroxychloroquine does not result in the reduction of mortality of hospitalised COVID-19 patients when compared with standard of care.

Vaccines

- German biotech firm <u>CureVac received regulatory approval for human trials of</u> <u>a potential COVID-19 vaccine. CureVac's mRNA vaccine candidate utilizes</u> <u>nucleotides without chemical modifications in the mRNA and is designed to</u> <u>provide a strong and balanced activation of the immune system.</u> A clinical trial of 144 healthy volunteers aged between 18 and 60 will be vaccinated, to determine the optimal dose and to evaluate the safety of the vaccine in humans.
- <u>Russian Health Ministry announced that clinical trials of a vaccine against the novel coronavirus have begun in the country, joining the global race to develop a safe COVID-19 vaccine</u>. A statement by the ministry said that the two forms of vaccine (liquid and powder) developed by the Moscow-based Gamaleya research institute will be tested on two groups of volunteers involving 38 people each.

Infection Prevention and Control

 A study reports on the seroprevalence of SARS-CoV-2 antibodies in 3,056 Hospital staff in Belgium. Findings indicate that 6.4% of the staff had IgG antibodies for SARS-CoV-2. <u>Results suggest that the high availability of PPE,</u> <u>high standards of infection prevention, and polymerase chain reaction</u> <u>screening in symptomatic staff, coupled with contact tracing and quarantine,</u> <u>might explain a relatively low seroprevalence.</u>







Non-Pharmaceutical Interventions

- <u>A mathematical modelling study using social-contact data from more than</u> 40 000 individuals in the UK, estimates that combined isolation and tracing strategies would reduce transmission more than mass testing or self-isolation alone. The analysis estimated that a high proportion of cases would need to self-isolate and a high proportion of their contacts to be successfully traced to ensure an effective reproduction number lower than 1 in the absence of other measures. If combined with moderate physical distancing measures, selfisolation and contact tracing would be more likely to achieve control of COVID-19 transmissions.
- A study reports on the transmissibility of SARS-CoV-2 and evaluated the effects of combined non-pharmaceutical interventions, including enhanced screening and quarantining of persons with suspected and confirmed cases and social distancing measures, were implemented over time in South Korea. <u>Results suggest that nonpharmaceutical measures reduced transmissibility by</u> a maximum of 33% without resorting to a strict lockdown strategy.

D. Summary of travel restrictions implemented by Member States

Contents of this section include only <u>publicly announced</u> public health policies. Sources of this section include official government communique, embassy alerts and press search. (As of 07 June 2020)



still allow citizens and residents to enter but all borders are essentially closed
 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.







E. Summary of physical distancing measures taken by Member States

Contents of this section include only <u>publicly announced</u> public health policies. Sources of this section include official government communique and press search. (as of 21 June 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 <u>here</u>.

F. Registered Clinical Trials in Africa (43)

Key updates:

- On 28 May 2020, WHO published <u>An international randomized trial of candidate vaccines</u> <u>against COVID-19</u>, to coordinate prompt, efficient, and reliable evaluation of the many preventive candidate SARS-CoV-2 vaccines under development, to assess their safety and efficacy and to identify those that are likely to be appropriate for deployment to influence the course of the pandemic.
- On 03 June 2020, Council for International Organizations of Medical Sciences (CIOMS) published <u>the Statement of its International Expert Working group</u>, underlining that "Medicines assessment during public health emergencies needs good science, best practices and proper communication".
- On 04 June 2020, the Gavi Advance Market Commitment for COVID-19 Vaccines (Gavi Covax AMC) was launched at the Global Vaccine Summit 2020 drawing early commitments from global leaders. This initiative aims incentivise vaccine manufacturers to produce sufficient quantities of eventual COVID-19 vaccines, and to ensure access for developing countries. The initial goal is to raise US\$ 2 billion; enough for Gavi-supported countries to immunise health care workers as well as high-risk individuals. On 7th June, Imperial College in London announced the <u>VacEquity Global Health (VGH)</u>, a social







enterprise which aims to accelerate COVID-19 vaccines development and distribution in the UK and to low- and middle-income countries overseas.

- On 09 June 2020, the mapping of <u>Global animal laboratories capacities to support vaccine</u> and therapeutic evaluation and the proceedings of the <u>COVID-19 Animal Models ad hoc</u> working group were also published.
- On 10 June 2020, the NIH announced the <u>Pharmacokinetics of Understudied Drugs</u> <u>Administered to Children Per Standard of Care</u>, which aims to evaluate drugs prescribed to treat COVID-19 in infants, children and adolescents across the USA.
- On 18 June 2020, <u>WHO vaccine candidates landscape</u> was updated: 13 candidates vaccines are at the clinical evaluation stage (phase I and II) and 128 candidates at the preclinical stage On 13 June, Sinovac announced positive preliminary results of phase I/II clinical trial for the Company's CoronaVac vaccine candidate, which showed favorable immunogenicity and safety profiles and ongoing collaboration with Instituto Butantan in Brazil for an upcoming phase III clinical study.







List of registered interventional clinical trials in Africa

By 12 June 2020, there were 43 clinical trials registered in Africa.

Search strategy: The following clinical trials registers have been scanned: clinicaltrials.gov, covid-trials.org, the <u>Pan African Clinical Trial Registry</u> (<u>PACTR</u>) and <u>WHO international clinical trials registry</u> (ICTRP). The following search terms were used: "COVID" (subject field) AND "interventional" OR "Randomized" (study type). Studies conducted in all 55 African Union member states are listed below after cross checking for duplicates across registries. Multi-centric trials as listed as one entry.

Location	Title	Interventions	Sponsor/Collaborators	Phases	Enrolment target	Start date
Egypt	Efficacy of Faviprevir in COVID- 19 Treatment	Drug: Favipiravir Drug: Placebos	Tanta University	11/111	40	17 April 2020
	Angiotensin Converting Enzyme Inhibitors in Treatment of Covid 19	Drug: ACEIs Drug: Conventional treatment	Tanta University	111	60	15 April 2020
	A Real-life Experience on Treatment of Patients With COVID 19	Drug: Chloroquine Drug: Favipiravir Drug: Nitazoxanide Drug: Ivermectin Drug: Niclosamide	Tanta University	11/111	100	15 April 2020
	The Efficacy of Ivermectin and Nitazoxanide in COVID-19 Treatment	Drug: Chloroquine Drug: Nitazoxanide Drug: Ivermectin	Tanta University	11/111	60	17 April 2020







Efficacy of Natural Honey Treatment in Patients With Novel Coronavirus	Dietary Supplement: Natural Honey Other: Standard Care	Misr University for Science and Technology		1000	25 March 2020
Administration of Chloropromazine as a Treatment for COVID-19	Drug: Chlorpromazine Injection	Cairo University	/	60	01 May 2020
PRA-001 <u>Plasma Rich Antibodies From</u> <u>Recovered Patients From</u> <u>COVID19</u>	Other: 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	Drug: favipiravir Drug: Standard of care therapy	Ain Shams University		100	20 April 2020
Levamisole and Isoprinosine in Immune-prophylaxis of Egyptian Healthcare Workers Facing COVID-19	Drug: Levamisole Drug: Isoprinosine Drug: Levamisole and Isoprinosine	Ain Shams University		100	20 April 2020
Application of BCG Vaccine for Immune-prophylaxis Among Egyptian Healthcare Workers During the Pandemic of COVID- 19	Biological: intradermal injection of BCG Vaccine Other: placebo	Ain Shams University	111	900	20 April 2020
Efficacy of Chloroquine in COVID-19 Treatment	Drug: Chloroquine	Tanta University	11/111	40	17 April 2020







Isotretinoin Assessment the Activity Value of <u>13- Cis-Retinoic Acid(Isotretinoin)</u> in the Treatment of COVID-19	Drug: Isotretinoin (13 cis retinoic acid) capsules+standard treatment Drug: Standard treatment	Kafrelsheikh University		45	01 April 2020
MV-COVID19 Measles Vaccine in HCW	Drug: Measles-Mumps-Rubella Vaccine	Kasr El Aini Hospital	111	200	01 May 2020
Management of Covid-19 Patients During Home Isolation	Device: Oxygen Therapy Procedure: Physical Therapy	Cairo University	NA	60	15 March 2020
COVID-19 Exchange Transfusion Versus Plasma From Convalescent Patients With Methylene Blue in Patients With COVID-19	Biological: exchange blood transfusion from normal donor Biological: plasma from convalescent patients with COVID-19 Drug: Methylene Blue 5 MG/ML	Ain Shams University	II	15	05 May 2020
Inhalable Sodium Bicarbonate: A Possible Adjuvant Treatment of Patients With Novel COVID-19	Drug: Sodium Bicarbonate	Mansoura University	Early I	20	01 April 2020
COVID-19 Unplanned Shifting to Online Distance Learning: Nursing Students' Perception and Achievement	Other: implementing Online Distance Learning	Kasr El Aini Hospital	NA	180	01 Feb 2020







SnPPIX <u>Efficacy of Sn-protoporphyrin IX</u> (SnPPIX) and <u>Sulfonatoporphyrin(TPPS)Against</u> <u>Covid-19</u>	Drug: SnPP Protoporphyrin Drug: Sulfonatoporphyrin(TPPS)	Kafrelsheikh University	1	56	01 May 2020
SCOPE Silymarin in COVID-19 Pneumonia	Drug: Silymarin Drug: Placebo	Cairo University	111	50	01 June 2020
New Antiviral Drugs for Treatment of COVID-19	Drug: Nitazoxanide, Ribavirin and Ivermectin	Mansoura University	111	100	May 2020
Ivermectin and Doxycycine in COVID-19 Treatment	Drug: Ivermectin Drug: Doxycycline Drug: Chloroquine	Tanta University	11/111	40	01 June 2020
Using PRP and Cord Blood in Treatment of Covid -19	Combination Product: stem cells	Aljazeera Hospital	NA	100	25 May 2020
Folic acid: A new suggested prevention and treatment of COVID-19 infection	Drug: folic acid Other: standard care	Faculty of Medicine Cairo university	11	60	20 April 2020
COVID-19_LF <u>Clinical Assessment of Oral</u> <u>Lactoferrin as a Safe Antiviral and</u> <u>Immunoregulatory in Treating</u> COVID-19 Disease	Dietary Supplement: Lactoferrin (Apolactoferrin) Drug: Placebo of excipient(s) will be administered	National Research Center, Egypt Egyptian Military Medical Services	11	516	01 June 2020
Using PRP and Cord Blood in Treatment of Covid -19	Combination Product: stem cells	Aljazeera Hospital	NA	100	25 May 2020







Ghana	PROTECT Sur Preventing Pulmonary Complications in Surgical Patients at Risk of COVID-19	Drug: Hydroxychloroquine Drug: Lopinavir/Ritonavir Drug: Hydroxychloroquine + Lopinavir/Ritonavir Drug: standard of care	National Institute of Health Research, UK University for Development Studies School of Medicine and Health Sciences Tamale Teaching Hospital	111	6,400	25 April 2020
Kenya	A study to determine if a new COVID-19 vaccine safely generates protective immune responses in adults in Kenya	Single dose of ChAdOx1 nCoV- 19 vaccine Vs Verorab (rabies vaccine)	University of Oxford	1/11	400	31 May 2020
	LACCTT Lagos COVID-19 Chloroquine Treatment Trial	Drug : Chloroquine phosphate Drug : Hydroxychloroquine sulphate	Lagos State Governement Nigerian Institute of Medical Research	NA	600	17 April 2020
Nigoria	CRASH-19 Coronavirus Response - Active Support for Hospitalised Covid-19 Patients	Drug: Aspirin Drug: Losartan Drug: Simvastatin	London School of Hygiene and Tropical Medicine	111	10,000	01 April 2020
Nigena	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 (a special blend of Andrographis paniculata, Garcinia kola and Psidium guajava)	Neimeth International Pharmaceuticals Plc	NA	72	01 May 2020
	IVERCOVID Does ivermectin cure and/or prevent COVID-19?	Drug: ivermectin 6 mg Drug: ivermectin 12 mg Drug: placebo	Lagos University Teaching Hospital		45	23 April 2020







Senegal	SEN-CoV-Fadj Efficacy and Safety Evaluation of Treatment Regimens in Adult COVID-19 Patients in Senegal	Drug: Hydroxychloroquine Drug: Hydroxychloroquine + Azithromycin	Institut Pasteur de Dakar Fann Hospital, Senegal Ministry of Health, Senegal Diamniadio Children Hospital, Senegal Dalal Jamm Hospital, Senegal Epicentre, Paris, France	111	258	01 June 2020
	ESHAZ Trial <u>Hydroxychloroquine.</u> <u>Azithromycine and Zinc for the</u> <u>treatment of SARS-Cov2 infection</u> <u>in Senegal. COVID-19</u>	Drug: Hydrochloroquine 600 mg plus Azythromycine Drug: Hydrochloroquine 400 mg plus Azythromycine Drug: Zinc	Faculty of Medicine University Cheikh Anta Diop of Dakar Senegal.	111	384	01 June 2020
South Sudan	GA&COVID19 Potential Role of Gum Arabic as Immunomodulatory Agent Among COVID 19 Patients	Dietary Supplement: Acacia Senegal Dietary Supplement: Pectin	Al-Neelain University University of Khartoum	11/111	110	01 June 2020
South Africa	CQOTE Chloroquine Outpatient Treatment Evaluation for HIV- Covid-19	Drug: Chloroquine or hydroxychloroquine	University of Cape Town	111	560	01 May 2020
	BCG Vaccination for Healthcare Workers in COVID-19 Pandemic	Biological: Bacille Calmette- Guerin (BCG) Other: Placebo Comparator	TASK Applied Science (University of Cape Town)	111	500	04 May 2020







	COVID_2Pro Assessment of the Efficacy and Safety of (HCQ) as a Prophylaxis for COVID19 for Health Professionals	Drug: Hydroxychloroquine (HCQ) Drug: Placebo oral tablet	Abderrahmane Mami Hospital Eshmoun Clinical Research Centre	111	530	15 April 2020
	COVID+PA <u>Assessment of Efficacy and</u> <u>Safety of HCQ and Antibiotics</u> <u>Administrated to Patients</u> <u>COVID19(+)</u>	Drug: Hydroxychloroquine Drug: Azithromycin	Abderrahmane Mami Hospital Eshmoun Clinical Research Centre	IV	400	15 April 2020
Tunisia	TRONCHERAssessment of Efficacy andSafety of Tocilizumab Comparedto DefeROxamine, AssociatedWith Standards Treatments inCOVID-19 (+) PatientsHospitalized In Intensive Care inTunisia	Drug: Tocilizumab Injection Drug: Deferoxamine	Abderrahmane Mami Hospital Eshmoun Clinical Research Centre Datametrix		260	04 May 2020
	COVID-Milit <u>A Study of Hydroxychloroquine</u> <u>and Zinc in the Prevention of</u> <u>COVID-19 Infection in Military</u> <u>Healthcare Workers</u>	Drug: Hydroxychloroquine Drug: Hydroxychloroquine (placebo) Drug: Zinc Drug: Zinc (Placebo)	Military Hospital of Tunis UR17DN02 : Autoimmune Diseases Research Unit Dacima Consulting	111	660	04 May 2020
	Hydroxychloroquine and Nitazoxanide Combination Therapy for COVID-19	Combination Product: Hydroxychloroquine plus Nitazoxanide Other: Standard care	Tanta University	/	100	May 2020







Kenya and South Africa	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 Remdesivir Chloroquine or hydroxychloroquine Lopinavir + ritonavir Lopinavir + ritonavir plus interferon-beta 	WHO	10,000	01 March 2020
Cameroon, Ghana, Uganda, South Africa, Zambia and Zimbabwe	CROWN CORONATION: <u>Chloroquine RepurpOsing to</u> <u>healthWorkers for Novel</u> <u>CORONAvirus mitigaTION</u>	Drug: Low-dose chloroquine/hydroxychloroquine Drug: Mid dose chloroquine or hydroxychloroquine Drug: High does chloroquine or hydroxychloroquine Drug: Placebo	Washington University School of Medicine Bill and Melinda Gates Foundation	55,000	01 April 2020

