

COVID-19 Scientific and Public Health Policy Update¹ – (22 September 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 not intended to serve as recommendations 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

- Two studies report on a possibility of in-flight transmission of SARS-CoV-2 over long commercial flights among passengers and flight attendants. The studies suggest that guidelines for preventing SARS-CoV-2 infection among passengers should consider individual passengers' risk for infection, the number of passengers traveling, and flight duration.
- A study reports on an in-depth analysis of the SARS-CoV-2 landscape in Africa and identifying distinguishing mutations in the African SARS-CoV-2 genomes. Results showed a similarity between the African SARS-CoV-2 genomes and genomes in other countries.
- A prospective cohort study assessed outcome of patients with moderate and severe COVID-19 following treatment with convalescent plasma (CP). Findings suggest that treatment with CP with higher levels of IgG against S1 may benefit patients with moderate and severe COVID-19.
- This study aimed to identify what the additional health-care costs of a strategic preparedness and response plan in 73 low-income and middle-income countries. Findings suggest that the total cost estimate for the COVID-19 response in the status quo scenario was US\$52.45 billion over 4 weeks, at \$8.60 per capita. For the decreased or increased transmission scenarios, the totals were \$33.08 billion and \$61.92 billion, respectively.
- A mathematical model for the COVID-19 in Cameroon, incorporates some key epidemiological and biological features of the disease. Findings suggest that isolation has a real impact on limiting COVID-19 transmission.

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.**

B. New guidelines and resources

Since 08 September 2020,

- Africa CDC has published new guidance and resources on:
 - [Strategies for managing acute shortages of personal protective equipment during COVID-19 pandemic](#)
- WHO has published new guidance and resources on:
 - [Estimating mortality from COVID-19;](#)
 - [Status of environmental surveillance for SARS-CoV-2 virus;](#)
 - [Public health considerations while resuming international travel;](#)
 - [Safe Eid al Adha practices in the context of COVID-19: Interim guidance;](#)
 - [Considerations for implementing mass treatment, active case-finding and population-based surveys for neglected tropical diseases in the context of the COVID-19 pandemic;](#)
 - [Water, sanitation, hygiene, and waste management for SARS-CoV-2, the virus that causes COVID-19;](#)
 - [Considerations for the provision of essential oral health services in the context of COVID-19;](#)
 - [WHO COVID-19 Preparedness and Response Progress Report - 1 February to 30 June 2020;](#)
 - [COVAX, the ACT-Accelerator vaccines pillar;](#)
 - [The COVAX facility: Global surveillance of COVID-19: WHO process for reporting aggregated data;](#)
 - [Public health surveillance for COVID-19: interim guidance;](#)
- US CDC has published new and updated guidance and resources on:
 - [Operational Considerations for Schools;](#)
 - [Interim Operational Considerations for Implementing the Shielding Approach to Prevent COVID-19 Infections in Humanitarian Settings;](#)
 - [Isolate If You Are Sick;](#)
 - [Resources for Refugee Resettlement Service Providers;](#)
 - [Operational Considerations for Maintaining Essential Services for and Providing Maternal, Newborn, and Child Healthcare in Low-Resource Countries;](#)
 - [Cleaning and Disinfecting Your Facility;](#)
 - [Operational Considerations for the Identification of Healthcare Workers and Inpatients with Suspected COVID-19 in non-US Healthcare Settings;](#)
 - [What to Know About HIV and COVID-19;](#)
 - [Community Mitigation;](#)
 - [Operational Considerations for Infection Prevention and Control in Outpatient Facilities: non-U.S. Healthcare Settings;](#)
 - [Visiting Parks and Recreational Facilities;](#)
 - [Hiring In-home services or repairs;](#)

- [Doctor Visits and Getting Medicines;](#)
- [Toolkit for Correctional and Detention Facilities;](#)
- [Clinical Mitigation \(Non-US Settings\);](#)
- [Toolkit for People Experiencing Homelessness;](#)
- [Considerations for Retirement Communities and Independent Living Facilities;](#)
- [Managing Investigations During an Outbreak;](#)
- [Returning to Work; Implementing Filtering Facepiece Respirator \(FFR\) Reuse, Including Reuse after Decontamination, When There Are Known Shortages of N95 Respirators;](#)
- [Markets: Operational considerations for COVID-19 mitigation measures in low resource settings;](#)
- [Case Investigation and Contact Tracing in Non-healthcare Workplaces: Information for Employers;](#)
- [COVID-19 Employer Information for Bus Transit Operators;](#)
- [After You Travel; Operational Considerations for Adapting a Contact Tracing Program to Respond to the COVID-19 Pandemic;](#)
- [Road Travel Toolkit for Transportation Partners;](#)
- [Homelessness and COVID-19 FAQs](#)
- FDA has issued press releases on:
 - [FDA Authorizes First Tests that Estimate a Patient's Antibodies from Past SARS-CoV-2 Infection;](#)
 - [FDA Posts New Template for At-Home and Over-the-Counter Diagnostic Tests for Use in Non-Lab Settings, Such as Homes, Offices or Schools](#)
- ECDC has issued new resource on:
 - [COVID-19: EU guidance for cruise ship operations;](#)
 - [COVID-19 in children and the role of school settings in COVID-19 transmission;](#)
 - [Infographic: COVID-19 in children and the role of schools](#)
- PHE has issued new resource on:
 - [COVID-19: guidance for hostel services for people experiencing homelessness and rough sleeping](#)
- Social Sciences in Humanitarian Action has issued resources on:
 - [Key Considerations: Covid-19 RCCE Strategies for Cross-Border Movement in Eastern and Southern Africa](#)
- Frontline AIDS has issued a resource on:
 - [Technical brief on COVID-19 and HIV programming](#)
- WFP has issued a resource on:
 - [Joint WFP and UNICEF Multisectoral Checklist for School Reopening and School based Nutrition in the context of COVID-19](#)
- Global Polio Eradication Initiative has issued a resource on:

- [Interim guidelines for frontline workers on safe implementation of house-to-house vaccination campaigns \(25 June 2020\) - In the context 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

- This study is showing for the first time, an in-depth analysis of the SARS-CoV-2 landscape in Africa and identifying distinguishing mutations in the African SARS-CoV-2 genomes. [Using phylogenetic analysis and amino acid sequence alignments of the spike and replicase \(NSP12\) proteins, results showed a similarity between the African SARS-CoV-2 genomes and genomes in countries including China, Brazil, France, the United Kingdom, Italy, France and the United States of America.](#) (Not peer reviewed)
- A retrospective cohort study of 306 inpatients with COVID-19 pneumonia suggests a high prevalence of hypokalemia among patients with COVID-19 pneumonia. [Hypokalemia is an independent predictor of invasive mechanical ventilation \(IMV\) requirement and seems to be a sensitive biomarker of severe progression of COVID-19.](#)
- This study combines in situ measurements and computational fluid dynamics simulations, to quantify the exhaled particles from normal respiratory behaviors and their transport under elevator, small classroom, and supermarket settings to evaluate the risk of inhaling potentially virus-containing particles. [The results show that the design of ventilation is critical for reducing the risk of particle encounters.](#)
- This study reports a humanized monoclonal antibody, H014, that efficiently neutralizes SARS-CoV-2 and SARS-CoV pseudoviruses as well as authentic SARS-CoV-2 at nanomolar concentrations by engaging the spike (S) receptor binding domain (RBD). H014 administration reduced SARS-CoV-2 titers in infected lungs and prevented pulmonary pathology in a human angiotensin-converting enzyme 2 mouse model. [The study demonstrated that H014 prevents attachment of SARS-CoV-2 to its host cell receptors, highlighting a key role for antibody-based therapeutic interventions in the treatment of COVID-19.](#)
- In this study, authors detected the titer (50% tissue culture infectious dose/mL, TCID50/mL) of viable SARS-CoV-2 attached on salmon or untreated SARS-CoV-2 in culture medium stored at 4°C and 25°C, using end-point titration assay on Vero E6 cells. [Findings suggest that salmon-attached SARS-CoV-2 at 4°C could remain infectious for more than one week, suggesting that fish-attached SARS-CoV-2 may be a source of transmission.](#) (Not peer reviewed)
- This study investigates the in-flight transmission of SARS-COV-2 among passengers on a 10-hour commercial flight. Among 16 people in whom the SARS-COV-2 was detected, 12 were passengers seated in business class along with one symptomatic individual. [Sitting proximity was strongly associated with increased risk of infection. Findings suggest that guidelines for](#)

preventing SARS-CoV-2 infection among air passengers should consider individual passengers' risk for infection, the number of passengers traveling, and flight duration.

- This study examined in-flight transmission of COVID-19 between passengers and flight attendants on an airplane that flew for 15 hours from USA to Hong Kong and carried a maximum of 294 passengers. Patients A and B who were passengers on the flight tested positive for the virus while patients C and D, flight attendants who served patients A and B tested positive for SARS-COV-2 days later. Upon sequencing, the full length viral genomes from all 4 patients were identical and phylogenetically grouped to the same clade (G) and none of the viral sequences deduced from samples in Hong Kong belonged to this clade. Findings of this study suggest in-flight transmission of SARS-COV-2.

Epidemiology

- A cross-sectional cohort study of 96 COVID-19 patients with olfactory complaint and recent onset of anosmia. The sudden olfactory dysfunction was reported as a common symptom in patients with COVID-19. Hyposmia patients recover more rapidly than anosmic ones and the best prognosis in olfactory recovery. Females possess better potentiality in regaining smell after recovery and the association of comorbidities worsen the recovery rate of olfactory dysfunction in patients with COVID19.
- This retrospective study includes 176 healthcare workers (HCWs) with laboratory-confirmed COVID-19 in a teaching hospital in Belgium. HCWs (32.9%) were mainly infected by patient contact. 7.6% required hospitalisation and 1.7% were admitted in intensive care units. Total antibodies were positive in 86.5% of the HCWs. Findings suggest that outcomes were more favourable with a mortality rate lower than that reported in Belgian COVID-19 patients in general (16%), and the main source of infection was the hospital settings.
- This study describes the prevalence of COVID-19 infection in healthcare workers (HCWs) in a national healthcare system in Qatar, and to understand the risk factors for infection. Among 16,912 HCWs tested, 10.6% tested positive. Findings suggest that COVID-19 infection among HCWs often occurs among those not directly working with COVID-19 patients. PPE use is less stringent in such settings. Risk of exposure and need for strict PPE must be stressed upon all HCW in all settings
- A cohort study of 9,149 patients admitted to a large US academic medical centre over a 12-week period reports on the incidence of hospital-acquired COVID-19. Results indicate that only one case was deemed to be hospital acquired. Findings suggest that overall risk of hospital-acquired COVID-19 was low and that rigorous infection control measures may be associated with minimized risk.
- This study compares the frequency of individuals carrying SARS-COV-2 asymptomatically between children and adults in Italy. Results indicate that about 1% of children and 9% of adults without any symptoms or signs of SARS-CoV-2 infection tested positive for the virus. Findings suggest that children without symptoms and signs of SARS-CoV-2 carried the virus less

[frequently than adults, suggesting that their role as facilitators of the spreading of SARS-CoV-2 infection could be reconsidered.](#)

Care and Treatment

- A prospective cohort study assessed outcome of patients with moderate and severe COVID-19 following treatment with convalescent plasma (CP) and the association with IgG levels in transfused CP. [Findings suggest that treatment with CP with higher levels of IgG against S1 may benefit patients with moderate and severe COVID-19. IgG against S1 level in CP predicts neutralization antibodies titers.](#)
- This open-label, randomized clinical trial of 200 Chinese patients with COVID-19, lymphopenia, and no comorbidities reports on whether the recombinant human granulocyte colony-stimulating factor (rhG-CSF) leads to clinical improvement in patients with COVID-19. [Findings indicate that rhG-CSF treatment did not accelerate clinical improvement, but the number of patients progressing to critical illness or death may have been reduced, without an increased risk of serious adverse events. Findings further suggest that rhG-CSF treatment should be studied in larger trials and in a broader range of patients with COVID-19.](#)

Economic Studies

- This study aimed to identify what the additional health-care costs of a strategic preparedness and response plan in 73 low-income and middle-income countries if current transmission levels are maintained in a status quo scenario, or under scenarios where transmission is increased or decreased by 50%. [Findings suggest that the total cost estimate for the COVID-19 response in the status quo scenario was US\\$52.45 billion over 4 weeks, at \\$8.60 per capita. For the decreased or increased transmission scenarios, the totals were \\$33.08 billion and \\$61.92 billion, respectively.](#)

Infection, Prevention and Control

- This study tests the resistance of nitrile gloves to different disinfectant solutions compared to the control group (untreated glove). For the tensile test, the thickness of each test specimen was measured with a micrometer. 100% powder-free nitrile gloves, composed of nitrile Butadiene rubber (NBR) compounds, were used. A bleach solution did decrease breaking load, although to a lesser extent than disinfectants that contain ethanol in their composition. [Findings suggest that products that have ethyl components can weaken nitrile gloves, increasing the risk of breaking, which could increase the self-contamination of healthcare professionals during clinical practice.](#)

Diagnostics

- This study report on the diagnostic accuracy assessment of a novel, rapid point-of-care real time RT-PCR CovidNudge test, in the U.K. The platform achieved high analytic sensitivity and specificity from dry nasopharyngeal swabs within a self-contained cartridge. [Findings suggest that CovidNudge platform is a sensitive, specific, and rapid point of care test for the presence of SARS-CoV-2 without laboratory handling or sample pre-processing.](#)
- This study describes Pooling-Based Efficient SARS-CoV-2 Testing (P-BEST) which identifies all positive subjects within a set of samples using a single round of testing. P-BEST, a novel method for efficient SARS-Cov-2 diagnostic testing based on single-stage non adaptive group testing. Using a pooling scheme designed for a carrier rate of ~1%, [findings show that the method correctly identified all positive carriers in sets of 384 samples pooled into 48 pools, thereby providing an eightfold reduction in the number of required tests.](#)

Non-Pharmaceutical Interventions

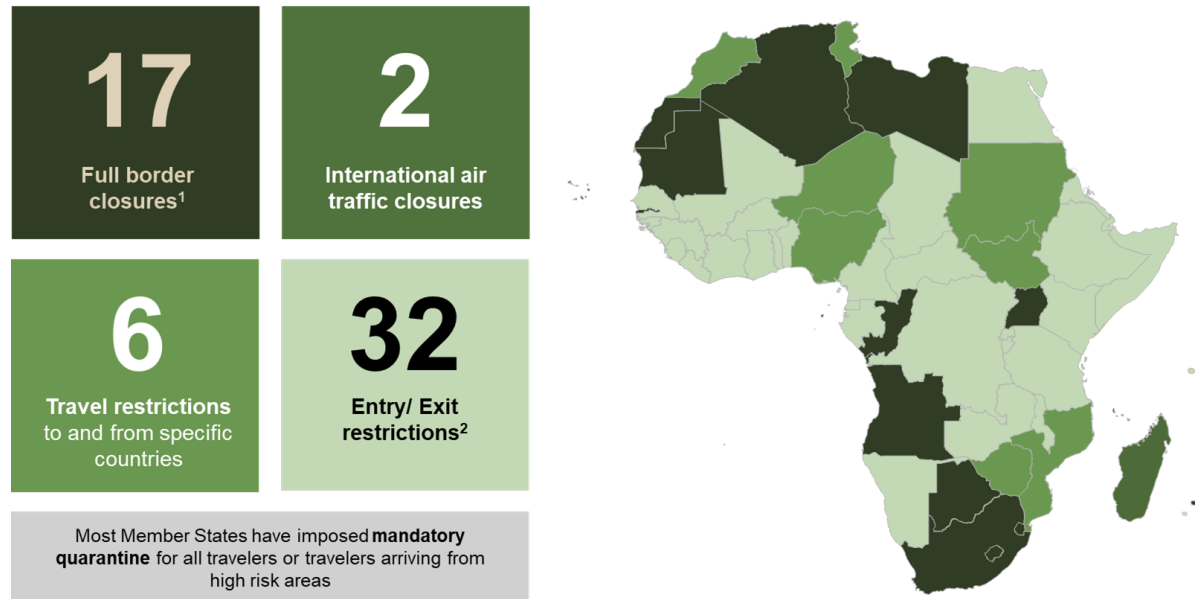
- This mathematical model for the COVID-19 disease in Cameroon, incorporates some key epidemiological and biological features of the disease. Findings suggest that isolation has a real impact on limiting COVID-19 transmission. The strategy of mass testing has also a real impact on the disease. In this model, [authors suggest that when more than 95% of moderate and symptomatic infected people are identified and isolated, the disease is also really controlled after 90 days.](#)

Other

- A cross-sectional study, with 216 adult patients diagnosed with pulmonary TB (pTB) in public facilities in the Greater Banjul Area of The Gambia. [Authors report that 50.9% initiated care-seeking in the formal and informal private sector, and 83.8% had TB diagnostic delay. There is considerable TB diagnostic delay in The Gambia and this is likely to be worsened by the COVID-19 pandemic.](#)
- This longitudinal cohort study investigated psychological symptoms and attempts among a cohort of 1,241 children and adolescents before the outbreak started (wave 1) and 2 weeks after school reopening (wave 2) in an area of China with low risk of COVID-19. Results indicate that the prevalence of mental health outcomes among students in wave 2 increased significantly from levels at wave 1. [Findings highlight mental health effects associated with lengthy school closure owing to the COVID-19 lockdown. This study might help to inform on how to prepare for the potential increase in mental health problems among children and adolescents returning to school](#)

D. 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. (As of 18 September 2020)

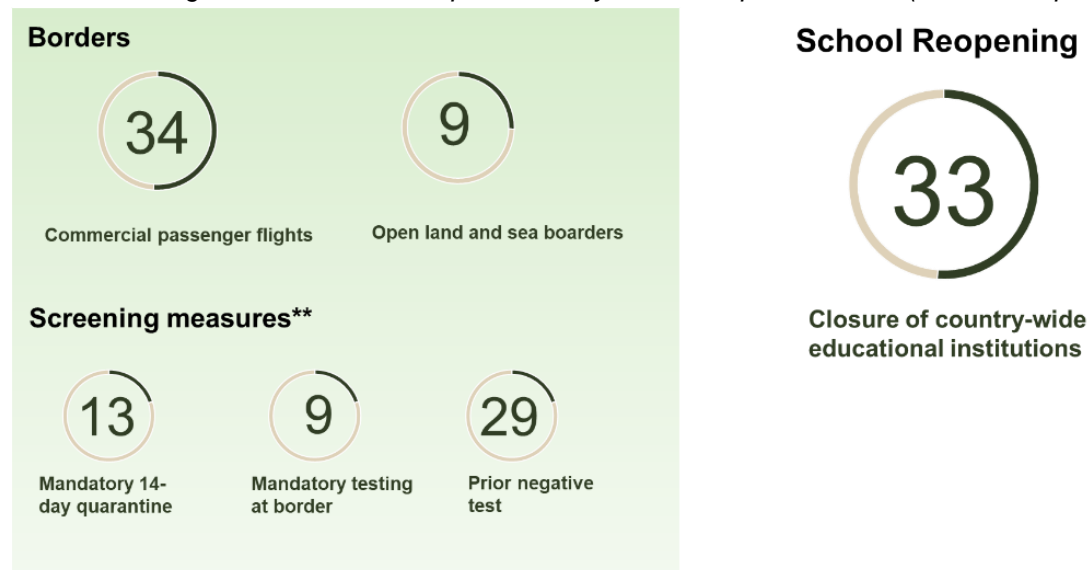


- 1 Some countries still allow cargo, freight and emergency transport into and out of the country; Some MSs will still allow citizens and residents to enter but all borders are essentially closed
- 2 Entry or exit of passengers through COVID-19 screening

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

E. Summary of border control measures and school re-opening

Contents of this section include only publicly announced public health policies. Sources of this section include official government communique, embassy alerts and press search. (As of 18 September 2020)



of Member States that ■ Have implemented ■ Have not implemented

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

**Only countries with open commercial flights included

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

E. Registered Clinical Trials in Africa (84)

Key updates:

Therapeutics trials:

- On 10th September 2020, under the [accelerating covid-19 therapeutic interventions and vaccines \(ACTIV\)](#), researchers from NIH launched NIH ACTIV-4 Outpatient trial, which will evaluate whether anticoagulants or antithrombotic therapy have an effect on reducing cardiovascular or pulmonary complications that develop as a result of COVID-19. In the Phase III [ACTIV-4 Outpatient trial](#), participants will be randomized to receive the anticoagulant apixaban, aspirin, or a placebo. On the same date, researchers from NIH have also launched NIH ACTIV-4 In patient trial, which will evaluate if heparin has an effect on reducing clotting events that develop as a result of COVID-19. In the Phase III [ACTIV-4 Inpatient trial](#), participants will receive various doses of unfractionated or low-molecular-weight heparin.
- On 15th September 2020, [Pfizer presented its COVID-19 drug development pipeline](#) including the PF-07304814 prodrug, a SARS-CoV-2 protease inhibitor, which metabolizes to PF-00835321 and has [shown](#) antiviral activity in vitro against SARS-CoV-2. The company has [started](#) a Phase Ib study of up to 56 participants who will receive the therapeutic or placebo ([NCT04535167](#)).
- On 17th September 2020, [Atossa Therapeutics reported positive interim safety data](#) from the Phase I clinical trial of its Covid-19 drug candidate, AT-301. The primary objective of this trial conducted in Australia is to assess the safety and tolerability of single and multiple doses of AT-301 administered as a symptom reducing nasal spray. AT-301 is intended for use at home in COVID-19 patients that do not yet exhibited symptoms or require hospitalization. It aims to slow the infection rate allowing a person's immune system to more effectively fight SARS-CoV-2. Atossa also plans to evaluate its AT-301 nasal spray as prophylaxis against COVID-19 infection, in high risk communities such as healthcare workers, emergency responders and teachers.

Immunotherapy trials:

- On 9th September, 2020, Makerere University in Uganda registered the COVIDIT randomized open label clinical trial ([NCT04542941](#)) which aims to assess the safety and efficacy of convalescent plasma for treatment of adults with COVID-19 in Uganda. The trial is undertaken in collaboration with Uganda Blood Transfusion Services, the Joint Clinical Research Center (JCRC), Uganda Peoples Defence Forces Medical Services and Mulago Hospital and will enroll 136 participants with RT PCR confirmed SAR-CoV-2 infection.
- On 14th September 2020, [the University of Oxford and Regeneron Pharmaceuticals announced that RECOVERY \(Randomised Evaluation of COVid-19 thERapY\) phase 3 trial was adding REGN-COV2 antibody cocktail](#) to its list of treatments being evaluated for COVID-19. REGN-COV2 is a novel antibody cocktail combining two of Regeneron's

antibodies, REGN10933 and REGN10987 which is currently [under evaluation](#) in collaboration with NIAID and NIH for the treatment and prevention of COVID-19.

- On 16th September 2020, [Eli Lilly reported the positive proof-of-concept data from the interim analysis of the BLAZE-1 clinical trial](#), which assessed the SARS CoV2 neutralizing antibody LY-CoV555 in the COVID-19 outpatient setting. This randomized, double-blind, placebo-controlled Phase 2 trial ([NCT04427501](#)) which evaluates the drug across 3 doses (700 mg, 2800 mg, and 7000 mg) indicated that LY-CoV555 reduced viral clearance by day 11 at the 2800 mg dose. Further, LY-CoV555 was well-tolerated across all doses with no drug-related serious adverse events reported. LY-CoV555 also is also being [evaluated](#) in the Phase 3 BLAZE-2 study of residents with COVID-19 at long-term care facilities, which is being conducted together with NIAID, and in [ACTIV-2](#) for patients with symptoms of COVID-19 but who have not been hospitalized.
- On 16th September 2020, Sorrento received approval from the FDA to proceed with the Phase 1 trial for [COVI-GUARD](#) in 33 patients hospitalized with moderate COVID-19 ([NCT04454398](#)). [COVI-GUARD](#), or STI-1499, is a neutralizing antibody that binds to the S1 subunit of the spike protein in SARS-CoV-2 and aims to decreasing risk of Antibody Dependent Enhancement of SARS-CoV-2 infection. COVI-GUARD is also part of a [neutralizing antibody cocktail](#) of three molecules called [COVI-SHIELD](#), developed in partnership with Mount Sinai Hospital in New York City. The phase 1 trial of COVID-GUARD is expected to enroll rapidly and to be followed by large trials targeting a potential Emergency Use Authorization (EUA) submission before the end of this year..

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

Contributors

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