

COVID-19 Scientific and Public Health Policy Update¹ – (02 November 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

- An unbiased, genome-wide screening technology determines the precise peptide sequences in SARS-CoV-2 that are recognized by the memory CD8+ T cells of COVID-19 patients. Results show CD8+ T Cells of COVID-19 Patients recognize shared epitopes in SARS-CoV-2 that largely reside outside the Spike Protein. These findings can inform development of next-generation vaccines that better recapitulate natural CD8+ T cell immunity to SARS-CoV-2.
- This study generated whole genome data to determine the origin and pattern of transmission of SARS-CoV-2 from the first six cases tested in The Gambia. Results indicate that three of the Gambian strains had a European origin (UK and Spain), two strains were of Asian origin (Japan).
- An observational study was conducted in four public hospitals in Madrid to determine the effects of COVID-19 infection on people living with HIV (PLHIV). Results indicate that neither the HIV severity, nor the type of ARV treatment seem to influence the outcome of COVID-19 infection.
- A reverse transcription digital PCR (RT-dPCR) method was established and evaluated to explore the feasibility of RT-dPCR in the diagnosis of SARS-CoV-2 as compared to RT-qPCR. Findings demonstrate that RT-dPCR significantly improves accuracy and reduces the false negative rate of diagnostics of SARS-CoV-2 in pharyngeal swab specimens.
- Public health and social media data, from the PERC initiative, indicate the need for Member States to remain vigilant in their fight against COVID-19 and the importance of understanding the perceptions of their citizens.

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 20 October 2020,

- WHO has published new guidance and resources on:
 - [Return to normal operations: COVID-19 mitigation strategies for workplaces](#)
- FDA has issued press releases on:
 - [FDA authorized 287 tests under Emergency Use Authorizations \(EUAs\); these include 223 molecular tests, 57 antibody tests and 7 antigen tests as of October 30, 2020. The FDA continues to monitor authorized tests and emerging scientific evidence and may revise or revoke an EUA, when appropriate, including when a test's benefits no longer outweigh its risks. The FDA provides continuous updates to make clear which tests have been issued EUAs by the agency, and which tests should not be used](#)
 - [On Oct. 22, the FDA approved the antiviral drug Veklury \(remdesivir\) for use in adult and pediatric patients 12 years of age and older and weighing at least 40 kilograms \(about 88 pounds\) for the treatment of COVID-19 requiring hospitalization. Veklury should only be administered in a hospital or in a health care setting capable of providing acute care comparable to inpatient hospital care.](#)
 - [On Oct. 22, the FDA Vaccines and Related Biological Products Advisory Committee \(VRBPAC\) met to discuss, in general, the development, authorization and/or licensure of vaccines to prevent COVID-19.](#)
 - [On Oct 28, FDA approved two generic drugs indicated to facilitate tracheal intubation and to provide skeletal muscle relaxation during surgery or mechanical ventilation: succinylcholine chloride injection USP 200 mg/10 mL and cisatracurium besylate injection USP 10 mg/5 mL. The FDA recognizes the increased demand for certain products during the novel coronavirus pandemic, and we remain deeply committed to facilitating access to medical products to help address critical needs of the American public.](#)
 - [On Oct 22, the U.S. Food and Drug Administration approved the antiviral drug Veklury \(remdesivir\) for use in adult and pediatric patients 12 years of age and older and weighing at least 40 kilograms \(about 88 pounds\) for the treatment of COVID-19 requiring hospitalization. Veklury should only be administered in a hospital or in a healthcare setting capable of providing acute care comparable to inpatient hospital care. Veklury is the first treatment for COVID-19 to receive FDA approval.](#)
- ECDC has issued new resource on:
 - [Key aspects regarding the introduction and prioritization of COVID-19 vaccination in the EU/EEA and the UK](#)

- [COVID-19 infection prevention and control measures for primary care, including general practitioner practices, dental clinics and pharmacy settings: first update](#)
- PHE has issued new resource on:
 - [COVID-19: background information as of October 30, 2020](#)
 - [COVID-19: infection prevention and control \(IPC\) as of October 20, 2020](#)

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 reports on the nature and durability of the humoral immune response to infection with SARS-CoV-2 in serum samples of people previously diagnosed with COVID-19. [Results indicate that antiviral antibodies against SARS-CoV-2 did not decline within 4 months after diagnosis. Findings suggest that the estimated risk of death from infection was 0.3% and that 44% of persons infected with SARS-CoV-2 in Iceland were not diagnosed by qPCR.](#)
- An unbiased, genome-wide screening technology determines the precise peptide sequences in SARS-CoV-2 that are recognized by the memory CD8+ T cells of COVID-19 patients. [3–8 epitopes for each of the six most prevalent human leukocyte antigen \(HLA\) types were identified and located in regions of the virus that are not subject to mutational variation. Only 3 of the 29 shared epitopes were located in the spike protein, whereas most epitopes were located in ORF1ab or the nucleocapsid protein and the CD8+ T cells generally do not cross-react with epitopes in the four seasonal coronaviruses that cause the common cold. These findings can inform development of next-generation vaccines that better recapitulate natural CD8+ T cell immunity to SARS-CoV-2.](#)
- This study generated whole genome data to determine the origin and pattern of transmission of SARS-CoV-2 from the first six cases tested in The Gambia. Sequencing reads were mapped to the Wuhan reference genome and compared to eleven other SARS-CoV-2 strains of Asian, European and American origins. A phylogenetic tree was constructed with the consensus genomes for local and non-African strains. [Results indicate that three of the Gambian strains had a European origin \(UK and Spain\), two strains were of Asian origin \(Japan\). \(Not peer reviewed\)](#)
This study examined 94,000 SARS-CoV-2 viral sequences to understand SARS-CoV-2 variant evolution and identify any increased mortality associated with these variants. [Results indicate two emergent variants: V1176F in co-occurrence with D614G mutation in the viral Spike protein, and S477N, located in the Receptor Binding Domain \(RBD\) of the Spike protein, are associated with high fatality rates and are increasingly spreading throughout the world. Findings suggest that V1776F and S477N variants occurring in the Spike protein are two novel mutations occurring in SARS-](#)

[CoV-2 and may pose significant public health concerns in the future. \(Not peer reviewed\)](#)

Epidemiology

- This study reports on the relationship between SARS-CoV-2 viral load and the risk of disease progression among participants with a diverse range of COVID-19 disease severity. [Results indicate that a high plasma viral load among hospitalized patients was associated with worse respiratory disease severity and increased risk of mortality. Findings suggest further exploration of the role of SARS-CoV-2 in disease pathogenesis](#)
- An observational study was conducted in four public hospitals in Madrid to determine the effects of COVID-19 infection on people living with HIV (PLHIV). [Results indicate that neither the HIV severity, nor the type of ARV treatment seem to influence the outcome of COVID-19 infection. This study suggests that large prospective cohorts are needed in order to establish the differences between HIV positive and negative patients.](#)
- A prospective cohort study was conducted to assess the characteristics and outcome of 1345 COVID-19 patients and to identify determinants of the disease outcome among patients admitted to Millennium COVID-19 Care Center in Ethiopia. [The average duration of time to clinical improvement was 14 days and 89.4 % of the patients achieved clinical improvement. Having severe COVID-19 disease severity and presenting with cough were found to be associated with delayed clinical improvement of the disease. \(Not peer reviewed\)](#)
- This nationwide observational cohort study describes the dynamics of mortality among patients hospitalised with COVID-19 in Sweden. [Results indicate a gradual decline in mortality from March to June 2020 in Swedish hospitalised COVID-19 patients, which was independent of pre-existing conditions, age, and sex. Findings suggest the need for further research to explain the reasons for this decline. \(Not peer reviewed\)](#)
- Three cross-sectional surveys report on the prevalence and persistence of antibodies following a peak SARS-CoV-2 infection to provide insights into its spread in the community, the likelihood of reinfection and potential for some level of population immunity. [Findings provide evidence of variable waning in antibody positivity over time. Results indicate a decline in antibody prevalence from 6% to 4.8% to 4.4% over 3 months of the cross-sectional surveys. These data suggest the possibility of decreasing population immunity and increasing risk of reinfection as detectable antibodies decline in the population. \(Not peer reviewed\)](#)

Care and Treatment

- This randomized clinical trial reports on whether tocilizumab, an anti-interleukin-6 receptor antibody, improves the outcome of patients hospitalized with moderate-to-severe COVID-19. [Results indicate that Tocilizumab may reduce the need for mechanical and noninvasive ventilation or death by day 14 but not mortality by day 28. Findings suggest that further studies are necessary to confirm these preliminary results.](#)

- This phase II clinical trial evaluated the quantitative virologic end points and clinical outcomes of patients assigned to receive a single intravenous infusion of neutralizing antibody LY-CoV555 in one of three doses (700 mg, 2800 mg, or 7000 mg). The primary outcome was the change from baseline in the viral load at day 11. [In this interim analysis of a phase 2 trial, one of three doses of neutralizing antibody LY-CoV555 appeared to accelerate the natural decline in viral load over time, whereas the other doses had not by day 11.](#)
- This randomized control study on 70 COVID-19 patients reports on the efficiency of Ivermectin used along with doxycycline. [Results indicate that Ivermectin with doxycycline reduced the time to recovery and the percentage of patients who progress to more advanced stage of disease; in addition, Ivermectin with doxycycline reduced mortality rate in severe patients from 22.72% to 0%; however, 18.2% of critically ill patients died with Ivermectin and doxycycline therapy. Findings suggest that the earlier Ivermectin with doxycycline are administered, the higher rate of successful therapy.](#) (Not peer reviewed)
- A multicenter observational retrospective cohort study examined the association between dexamethasone use and mortality among hospitalized patients for COVID-19 in Paris, France. [Findings suggest that dexamethasone use administered either orally or by intravenous injection at a cumulative dose between 60 mg and 150 mg was associated with decreased mortality among those requiring respiratory support.](#) (Not peer reviewed)

Non-pharmaceutical

- This modelling study reports on the association of introducing and lifting non-pharmaceutical interventions with the level of transmission of SARS-CoV-2 in 131 countries. [Findings suggest that individual NPIs, including school closure, workplace closure, public events ban, ban on gatherings of more than ten people, requirements to stay at home, and internal movement limits, are associated with reduced transmission of SARS-CoV-2.](#)

Diagnostics

- This study evaluated the performance of five commercial CE-marked ELISA kits for detecting anti-SARS-CoV-2 IgG antibodies in samples from RT-PCR-confirmed COVID-19 patients. [The sensitivity, positive predictive value, negative predictive value, positive percent agreement and Cohen's kappa were measured for each assay. Results indicate that the Lionex ELISA, which measures antibodies solely to the S1 protein, demonstrated the best performance.](#)
- A reverse transcription digital PCR (RT-dPCR) method was established and evaluated to explore the feasibility of RT-dPCR in the diagnosis of SARS-CoV-2 as compared to RT-qPCR. [Results indicate a significant improvement in the sensitivity of SARS-CoV-2 detection from 28.2% by RT-qPCR to 87.4% by RT-dPCR. The overall sensitivity, specificity and diagnostic accuracy of RT-dPCR were 91%, 100% and 93 %, respectively.](#)

[This work demonstrates that RT-dPCR significantly improves accuracy and reduces the false negative rate of diagnostics of SARS-CoV-2 in pharyngeal swab specimens.](#)

Vaccines

- This study reports on the immunogenicity of the adenoviral vectored vaccine ChAdOx1 nCoV-19 (AZD-1222) in aged mice. [Results indicate that a single dose of this vaccine induces cellular and humoral immunity in aged mice, but at a reduced magnitude than in younger adult mice. Furthermore, findings suggest that a second dose enhances the immune response to this vaccine in aged mice, indicating that a prime-boost strategy may be a rational approach to enhance immunogenicity in older persons. \(Not peer reviewed\)](#)
- A study investigated the impact of BCG vaccination on the frequencies of T cell, B cell, monocyte and dendritic cell subsets as well as total antibody levels in a group of healthy elderly individuals (age 60-80 years) at one month post vaccination to examine the effect of BCG on COVID-19. [Findings indicate that BCG vaccination was associated with enhanced innate and adaptive memory cell subsets, as well as total antibody levels in elderly individuals, suggesting its potential utility in SARS-Cov2 infection by enhancing heterologous immunity. \(Not peer reviewed\)](#)

Other

- Psychological conditions were evaluated by the multiple psychological evaluation scales to investigate the prevalence of posttraumatic stress symptoms (PTSS) of 171 health care workers (HCWs) who were potentially or directly exposed to patients with COVID-19. [The incidence of PTSS was 28.7% in HCW with high risk of exposure, while the incidence of PTSS was 13.0% in HCW with low risk of exposure. Findings indicate that the HCWs who were exposed to COVID-19 patients had more stress and chronic stress-related disorders hence stress management should be provided to the first line HCWs who combat with COVID-19.](#)
- A survey study of 1,971 adults in the US examined the factors associated with survey participants' self-reported likelihood of selecting and receiving a hypothetical COVID-19 vaccine. [In this survey study, vaccine-related attributes and political characteristics were associated with self-reported preferences for choosing a hypothetical COVID-19 vaccine and self-reported willingness to receive vaccination. Findings of this survey may help inform public health campaigns to address vaccine hesitancy when a COVID-19 vaccine becomes available.](#)
- An online cross-sectional survey assessed the knowledge, preventive measures and risk perception of 510 adult Nigerians regarding COVID-19. [Results indicate that most participants demonstrated good knowledge of COVID-19 and its preventive measures, while risk perception was higher among healthcare workers. Findings from this survey could guide information campaigns by public health authorities, clinicians, and the media. \(Not peer reviewed\)](#)

D. Clinical Trials Updates

Key updates:

Vaccine trials:

- On 13th October 2020, Vaxart, a US based biotechnology company, [announced the dosing of the first subject in the Phase I trial of VXA-CoV2-1](#), a COVID-19 vaccine candidate administered orally by a tablet. The trial ([NCT04563702](#)) will examine the safety and immunogenicity of two doses of VXA-CoV2-1 in 48 healthy adult volunteers aged 18 to 54 years old. [Pre-clinical data](#) had indicated that the vaccine, which expresses full length S and N proteins, could induce potent systemic immune response and a strong mucosal immune response in the lungs in animal models. Further, the vaccine formulation as a room temperature stable, easy to administer oral tablet could help address many limitations related to large scale distribution.
- On October 20th 2020, Symvivo, a Canada based biotechnology company, [announced that they had received up to \\$2.8 million funding from Canada National Research Council of Industrial Research Assistance Program \(NRC IRAP\) to support the clinical advancement of bacTRL-Spike](#), COVID-19 DNA vaccine candidate, available in an oral, room temperature-stable, capsule form.
- On 15th October, 2020, the [Russian health authorities have granted regulatory approval and provisional registration for EpiVacCorona](#), a COVID-19 vaccine developed by the Vector State Virology and Biotechnology Center in Siberia. EpiVacCorona, a chemically synthesized SARS-CoV-2 peptide based and carrier protein conjugated vaccine has been evaluated in a Phase I/II trial ([NCT04527575](#)) in 100 adult volunteers aged 18-65 years. Results have yet to be published. After Sputnik V COVID-19 vaccine developed by Gamaleya National Research Institute of Epidemiology and Microbiology, this is the second regulatory approval granted for use of a vaccine in Russia prior to conduction of large scale phase III safety and efficacy trials.
- On 17th October 2020, Dr. Reddy's Laboratories, an Indian pharmaceutical company, and Russian Direct Investment Fund (RDIF) announced that they had received approval from the Drugs Controller General of India (DCGI) for the [phase II/III trial of Gamaleya Institute Sputnik V vaccine in India](#). As part of [a partnership](#) announced in September 2020, RDIF will supply Dr Reddy's with 100 million doses of the vaccine for distribution in the country. Sputnik V is currently also evaluated as part of the RESIST Phase III trial in Russia ([NCT04530396](#)), which aims to enrol a total of 40000 adults and older adult participants. Further, on 27th October, the [Russian Direct Investment Fund \(RDIF\) announced it had applied to the World Health Organization for accelerated registration and prequalification of the Sputnik V COVID-19 vaccine](#).
- On 20th October 2020, Open Orphan, a pharmaceutical services company, [announced the signature of a contract between its subsidiary hVIVO and the UK Government to develop a COVID-19 \(SARS-CoV-2\) human challenge study model](#). [The study](#), which still requires regulatory and ethical approval, will be sponsored by Imperial College London and the Royal Free London NHS Foundation T. It will involve deliberately infecting healthy adult participants with the to evaluate the smallest amount needed to trigger an infection and aims to enable an efficient and faster way to develop a COVID-19 vaccine.

- On 21st October 2020, [Immunity Bio announced it had launched the Phase I trial of hAd5-COVID-19](#) a novel, second-generation adenovirus COVID-19 vaccine candidate, targeting both outer S (spike) protein and inner N (nucleocapsid). This vaccine is engineered to activate both antibodies and memory T-cells against SARS-CoV-2 respectively, presumably leading to long term immunity to the SARS-CoV-2 virus. The trial ([NCT04591717](#)) will be enrolling healthy adult subjects up to age 55 looking at the safety and reactogenicity of two doses of the vaccine candidate.
- On 21st October 2020, the Brazilian National Health Surveillance Agency ([Anvisa](#)) [announced the death of an adult male volunteer](#) who was participating in a Phase III clinical trial of AstraZeneca and Oxford University COVID-19 vaccine candidate. The [company indicated](#) that after careful assessment of the case, no concerns had been raised about safety of the clinical trial and it was allowed to continue. The participant was reportedly in the placebo group of the trial.
- On 23rd October 2020, the [US Food and Drug Administration \(FDA\) has authorised the restart of Phase III clinical trial of the AZD1222 COVID-19 vaccine candidate](#) manufactured by AstraZeneca and Oxford University. The vaccination had been paused by AstraZeneca in all trial sites globally on 6 September to allow standard review process for trial safety events by independent monitoring committees. This follows earlier ones by UK, Brazil, South Africa and Japan regulators, allowing resumption of the trial across all study sites.
- On 23rd October 2020, [Johnson & Johnson announced the planned resumption of the Phase III ENSEMBLE trial of its Janssen COVID-19 vaccine candidate](#) after a temporary pause following the recommendation of the independent Data Safety and Monitoring Board (DSMB). The [trial](#) had been paused across all study sites on October 12th due to an unexplained illness in a study participant. After the safety review Johnson and Johnson declared that no evidence has been found that the vaccine candidate caused the event. In Africa, the candidate vaccine is being evaluated in South Africa ([NCT04505722](#)).
- On 29th October 2020, Regulatory Affairs Professionals Society(RAPS) published that Pfizer and BioNtech [are collaborating BNT162](#), a series of vaccine candidates for COVID-19. BNT162 was initially four vaccine candidates originally developed by BioNTech, two candidates consisting of nucleoside modified mRNA-based (modRNA), one of uridine containing mRNA-based (uRNA), and the fourth candidate of self-amplifying mRNA-based (saRNA). The companies have selected the modRNA candidate BNT162b2 to move forward in a Phase 2/3 trial.
- On 29th October 2020, Regulatory Affairs Professionals Society(RAPS) published that mRNA-1273 was developed by Moderna based on prior studies of related coronaviruses such as those that cause severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS). A Phase 1 trial ([NCT04283461](#)) of 105 healthy participants provided the basis for Moderna's investigational new drug application ([IND](#)), which was successfully reviewed by the FDA and set the stage for Phase 2 testing. A Phase 2 trial of 600 healthy participants evaluating 25 µg, 100 µg, and 250 µg dose levels of the vaccine was completed, and mRNA-1273 has advanced to a Phase 3 trial ([NCT04405076](#)). A Phase 3 trial of 30,000 participants at high risk for SARS-CoV-2 infection who will receive a 100 µg dose of mRNA-1273 or placebo and then followed for up to 2 years (COVE trial; [NCT04470427](#)). Moderna [posted](#) the full trial protocol for COVE on 17 September.
- On 29 October 2020, Regulatory Affairs Professionals Society(RAPS) published that

- Bharat Biotech, an Indian biotechnology company, is partnering with the National Institute of Virology to develop an inactivated vaccine candidate for COVID-19 called Covaxin. A Phase 1/2 trial of about 1,100 healthy participants [is underway](#) after [approval](#) by the Drug Controller General of India. In addition to Covaxin, Bharat Biotech is working on two other vaccine candidates: one with the [University of Wisconsin–Madison](#) and FluGen, and the other with [Thomas Jefferson University](#).

Therapeutics trials:

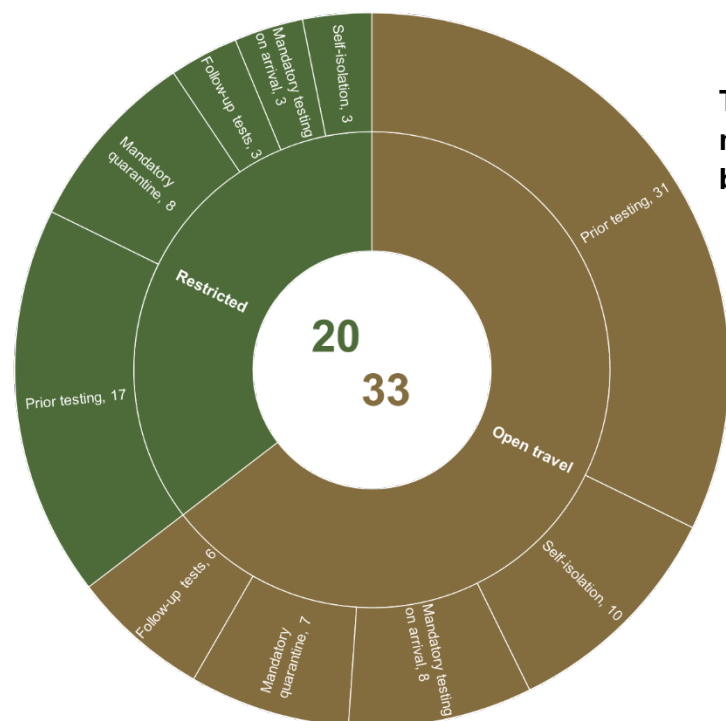
- On 23rd October 2020, Regulatory Affairs Professionals Society(RAPS) published that research [from China](#) has shown that Actemra may be an effective treatment for patients with severe cases of COVID-19. Actemra is indicated to treat autoimmune diseases such as rheumatoid arthritis as well as cytokine release syndrome. Actemra is being evaluated in the following high-profile trials: COVACTA ([NCT04320615](#)) and [EMPACTA \(NCT04372186\)](#). The Hôpitaux de Paris (CORIMUNO-19) is assessing Actemra in a trial for COVID-19 associated pneumonia ([NCT04331808](#)) in a Phase 2 trial. Evidence is beginning to point to Actemra having a beneficial outcome for COVID-19 patients in some, but not all, scenarios.
- On 23rd October 2020, Regulatory Affairs Professionals Society(RAPS) published that announced evidences of benefit and no benefit for Pepcid, Pepcid is mainly used to treat peptic ulcer disease, GERD, and Zollinger-Ellison syndrome. Pepcid was identified by [computer models](#) as having the potential for inhibiting 3-chymotrypsin-like protease, which controls [coronavirus replication](#). The drug is currently being evaluated in the Phase 3 MATCH trial, where up to 1,170 participants will receive hydroxychloroquine either with and without Pepcid ([NCT04370262](#)).
- On 23rd October 2020, Regulatory Affairs Professionals Society(RAPS) published that AstraZeneca is testing AZD7442, a combination of two monoclonal antibodies, AZD8895 and AZD1061, as a prevention and treatment for COVID-19. The monoclonal antibodies were discovered by researchers at Vanderbilt University and licensed to AstraZeneca. The company has launched a Phase 1 randomized, double-blind, placebo-controlled trial evaluating in up to 48 participants in the United Kingdom ([NCT04507256](#)). The company is [advancing](#) AZD7442 to two Phase 3 trials after receiving \$486 million from BARDA: a safety and efficacy trial in up to 5,000 participants, and a trial of up to 1,100 participants that will evaluate post-exposure prophylaxis.
- On 23rd October 2020, Regulatory Affairs Professionals Society(RAPS) published that Veklury, an intravenous drug that inhibits viral replication, has shown [in vitro](#) and in vivo activity against SARS-CoV-2. It was originally developed as a treatment for Ebola. United States: Veklury has been [approved](#) by the FDA for use in adults and adolescents hospitalized for COVID-19. The approval is based on results from the ACTT-1 trial, sponsored by NIAID, and the two SIMPLE trials sponsored by Gilead. FDA had previously allowed the use of Veklury for COVID-19 under an [EUA](#) based on preliminary results of ACTT, and [expanded](#) the EUA to include all hospitalized patients with COVID-19. FDA has [warned](#) Veklury should not be used with hydroxychloroquine or chloroquine phosphate, as it may reduce antiviral activity.

Immunotherapy trials:

- On 26th October 2020, [Eli Lilly announced](#) that it was stopping administration of bamlanivimab (LY-CoV555) in hospitalized COVID-19 patients as part of the National Institute of Allergy and Infectious Diseases (NIAID) [ACTIV-3 clinical trial](#). This decision was based on updated trial data suggesting that bamlanivimab is unlikely to help hospitalized COVID-19 patients recover from advanced COVID-19 disease. Other studies, including the NIH-sponsored [ACTIV-2 phase II/III trial of bamlanivimab](#) in mild to moderate COVID-19 outpatients ([NCT04518410](#)), and the BLAZE-2 Phase 3 trial of bamlanivimab as prophylaxis ([NCT04497987](#)), will continue.
- On 28th October 2020, Regeneron pharmaceuticals [reported the positive prospective results](#) from the ongoing randomised, double-blind Phase II/III trial of its investigational antibody cocktail REGN-COV2 evaluated in the COVID-19 outpatient setting. REGN-COV2 is a combination of two monoclonal antibodies: REGN10933 and REGN10987. Data from 799 participants to the trial showed that REGN-COV2 significantly reduced viral load and patient medical visits.
- On 30th October 2020, [Regeneron Pharmaceuticals however announced it was putting on hold enrolment of COVID-19 patients requiring high-flow oxygen or mechanical ventilation in the hospitalized patient trial of REGN-COV2](#). This is following the recommendation from the independent data monitoring committee due to a potential safety signal and an unfavourable risk/benefit profile in that specific patient cohort and pending the collection and analysis of additional data. Enrolment of hospitalized patients requiring either no or low-flow oxygen, as well as enrolment in the outpatient trial will continue as the risk/benefit profile remains acceptable in these cohorts.

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

E. Public Health and Social Measures Updates



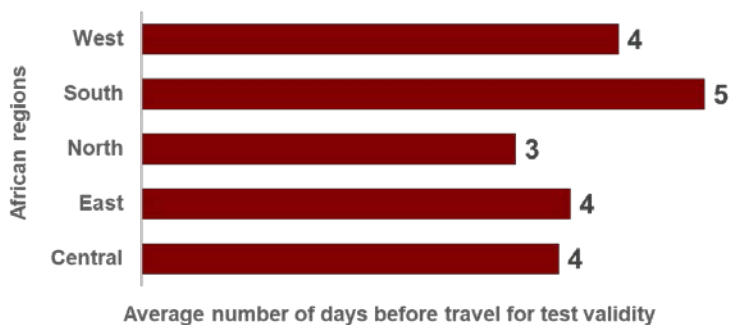
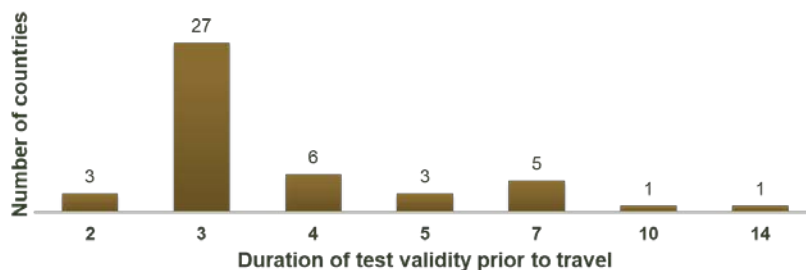
These are the public health and social measures that have been put in place at the borders in most Member States (53).

- Open travel (33 Member States):** All travel and countries allowed entry into the Member State.
- Restricted (20 Member states):** Not all travel allowed and can be restricted to a set number of countries.

Most Member States have implemented **compulsory testing prior to travel** and validity of test. The below graphs indicate a summary of this measure on the continent.



Overall average: 4 Days
Standard Deviation: 2.2 Days
Range: 2 - 14 Days



Updated 30 November 2020, data analysed from official source and media reports.

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Reporting period: 14 - 27 October

Biweekly Report

International media and organizations continue to spotlight Africa as an example of a successful COVID-19 [response](#), particularly as Europe and North America enter large second and third waves. However, the secondary impacts of public health and social measures (PHSMs) have been significant: across the continent, health systems are becoming increasingly overburdened, and food prices and insecurity are rising; public mistrust of government handling of the virus and disbursement of aid is fueling protests. In some African Union (AU) member states, cases have begun to rise again, signaling that a second wave is starting. Strengthening public trust in government and expanding rapid testing and contact tracing will be necessary to control the spread in the coming months.

Disease Situation

- For the continent as a whole, new cases and deaths reported between 14-27 October remained relatively unchanged compared to the previous two weeks (30 September – 13 October). The test per case ratio remains below the recommended range in two-thirds of AU Member States surveyed.²
- New cases are concentrated in the Northern Region, and in parts of the Southern and Eastern Regions. **Morocco** sustained its largest single day increase in new cases and surpassed **South Africa** to report the largest number of new cases from 14-27 October. Cases from **Morocco, Libya, Tunisia** and **Algeria** comprised more than half of total new cases.
- Health officials in **Libya** [report](#) that contact tracing is difficult because of the stigma associated with the virus, highlighting the need for expanded community outreach to communicate accurate, helpful information to dispel misinformation about COVID-19.
- Following loosening of PHSMs in early October, new cases in **Kenya** are approaching the 7-day moving average experienced during its highest peak in August. There are [reports](#) of hospitals being overwhelmed and COVID-19 outbreaks among health care workers, as well as a [health care worker strike](#) at Nairobi's largest hospital, underscoring the need for more investment in the safety and health of frontline workers.

Total Reported Cases	New Cases (14 October – 27 October)	Total Reported Deaths	New deaths (14 October – 27 October)	AU Member states where test per case <10 ²	Total reported cases among health care workers ³
1,729,580	127,843 <i>(.2% increase since 30 September – 13 October)</i>	41,636	2,900 <i>(5% decrease since 30 September – 13 October)</i>	Algeria; CAR; Congo; Cote d'Ivoire; DRC; Egypt; Eswatini; Gambia; Guinea; Libya; Madagascar; SAR; Sao Tome and Principe; Somalia; South Africa; Sudan; Tanzania; Tunisia	58,849

² Countries with a low number of tests per case (<10) may not be testing widely enough to find all cases. Africa CDC recommends 10-30 tests per case, as a benchmark of adequate testing.

³ Data compiled from WHO AFRO where available, as well as reports from Ministries of Health and other government-affiliated organizations. Reporting on health care worker cases is inconsistent across Africa, and the current numbers may be an underestimate.

For more information on the disease situation, PHSM implementation and adherence in Africa, as well as PERC Survey findings, please visit the PERC [dashboard](#) and [website](#).

TOP 5 COUNTRY HIGHLIGHTS⁴

Countries with the largest increase in new cases reported between 14-27 October and 30 September – 13 October	
Botswana	+313% (1,415 new cases reported)
Kenya	+150% (8,896 new cases reported)
Angola	+51% (2,964 new cases reported)
Algeria	+38% (3,020 new cases reported)
Zimbabwe	+34% (267 new cases reported)

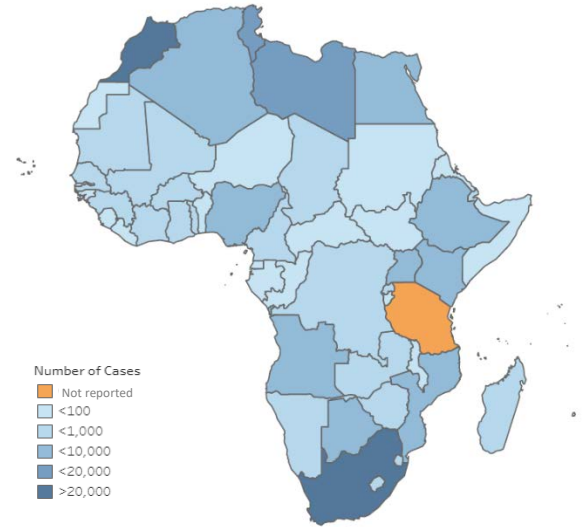


Figure 1. New cases between 14-27 October. Data source: Africa Centres for Disease Control and Prevention

PHSM Implementation

In the month of October, more than half of countries in Africa (53%) loosened their PHSMs, while one third made no policy changes. While the trend toward loosening PHSMs continues, as cases rise in Northern, Southern and parts of the Eastern Region, governments have hinted at reinstating stricter measures.

PHSM HIGHLIGHTS

National lockdowns/curfews

- In early October, **Kenya** [announced](#) bars/restaurants could extend opening hours with proper hygiene measures in place; resumption of religious gatherings at one-third capacity; and, that funerals and weddings could be held with up to 200 people.
- In **South Africa**, the government announced on 15 October a continuation of its national state of disaster until at least 15 November.
- On 28 October, **Zimbabwe** [announced](#) the relaxing of its nightly curfew (from 8pm to 10pm)
- Since mid-October, mosques have been authorized to reopen in **Libya** and **Morocco**.

Mobility (air travel; public transportation)

- In **Zimbabwe**, borders will reopen to private passenger vehicles starting 1 December.
- The Gambia** [reopened](#) its land, air and sea borders (19 Oct)
- Tens of thousands of people [attended](#) **Senegal's** Grand Miagal Pilgrimage in early October; people were required to wear masks but media reported that not all adhered to measures

School reopenings/closures

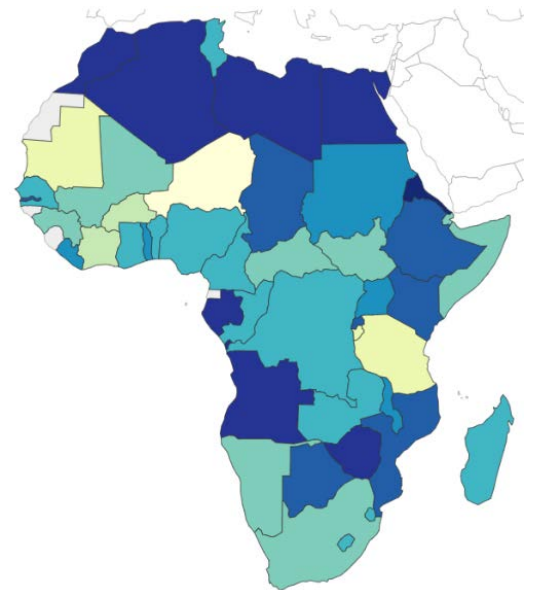


Figure 2. PHSM stringency index as of 25 October. Data Source: The Oxford Stringency Index is a composite measure based on nine indicators, which include school closures, workplace closures, and travel bans, which are rescaled to a value from 0 to 100 (100 = strictest). Countries that are not shaded are missing data.

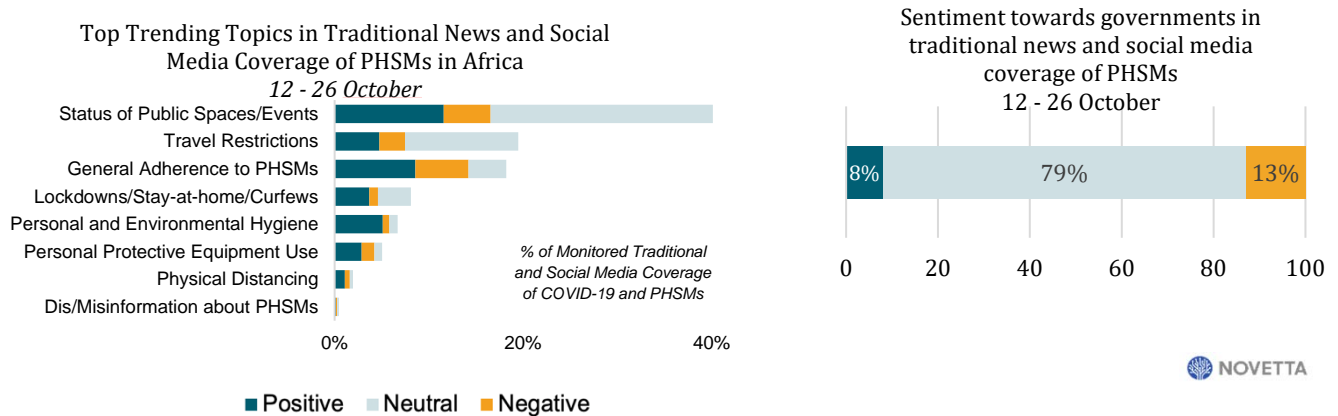
⁴ Countries with greatest % increase in new cases and with cases >200 (to rule out increase of smaller outbreaks)



- On 12 October, Kenya [reopened](#) its schools for students in grade 4, standard 8, and form 4.
- In early October in **Zimbabwe**, students started gradually returning to school for specified grades.
- **Central African Republic** announced partial/gradual resumption of schools on 19 October.

Public sentiment in news articles and on social media (Facebook and Twitter)

1. Sentiment towards PHSMs and government response



Secondary burdens of COVID-19 and PHSMs

1. Essential health services

- More than 70% of women who are refugees in Africa [report](#) an increase in gender-based violence in their communities since the pandemic started. It also found that economic hardship brought on by COVID-19 is placing women and girls at greater risk for sexual exploitation in exchange for food, highlighting the need for targeted social programs and community outreach to identify and help those most at risk.
- Massive flooding is occurring across the Eastern and Central regions, destroying crops and increasing prices of essential goods, which were already elevated due to COVID-19. In **Sudan**, the flooding has destroyed health facilities and led to an [increased](#) risk of cholera and malaria. The United Nations Office for the Coordination of Humanitarian Affairs (OCHA) [reports](#) more funding is needed for water, sanitation and hygiene services, which is also critical in preventing COVID-19 transmission.
- **Morocco** [announced](#) on 21 October that it aims to achieve universal health coverage for an additional 22 million Moroccans by the end of 2022; this comes as the country experiences its largest surge of cases yet. Similarly, **Senegal** [announced](#) plans to expand its health system, with the goal of recruiting 1,500 more health care workers and raising \$893 million in four years.

2. Economic and social burden

- According to the World Food Programme, in **Sierra Leone, Niger, Burkina Faso, and Togo**, food inflation has increased by at least 5 percentage points since January. Internationally, the price of corn, wheat and sugar has increased significantly over the past month.
- The effects of food scarcity are apparent in **Nigeria**, where EndSARS protestors supposedly [seized government food aid](#) that had been sitting in several warehouses across the country, accusing the government of keeping the food from people most in need.



- A [study](#) found that more than three-quarters of women reported their household lost at least partial income since the start of the COVID-19 restrictions in **DRC, Burkina Faso, Kenya** and **Nigeria**. Complete loss of household income ranged from 16% in **Burkina Faso** to 62% in **DRC**.
- Africa is entering its first recession in 25 years, and recent estimates show that COVID-19 could push up to 40 million people in Africa into extreme poverty. The World Bank launched "[Beyond COVID: the Road to Recovery in Africa](#)", highlighting the African response thus far, advancing recommendations on how to rebuild the economy and spotlighting success stories from across the region.

Science update

- The WHO [announced](#) that it is rolling out 120 million COVID-19 rapid tests to low- and middle-income countries. Under the umbrella of the ACT-Accelerator, UNITAID, the Global Fund, FIND and the Africa Centres for Disease Control will distribute the tests in 20 African countries.
- The Biovac Institute in Cape Town, **South Africa** is in [talks](#) with the global COVID-19 vaccine distribution scheme and pharmaceutical companies to potentially produce vaccines for Africa.

Other key themes

- There are [reports](#) from **Zimbabwe** (as well as **Mozambique** and **Uganda**) that hospital staff are issuing falsified, negative COVID-19 tests to people who want to travel internationally.
- [Many countries](#) will be holding presidential elections between October and December, including **Seychelles, Tanzania, Cote d'Ivoire, Guinea, Burkina Faso, Ghana, Central Africa Republic, and Niger**. Violence linked to the elections has already occurred in [Guinea](#) and [Tanzania](#), which could have potentially negative effects on social distancing and COVID-19 transmission.
- Criticism of the violent enforcement of PHSMs continues. In **Kenya**, NGOs [announced](#) a collective lawsuit against the police for the actions during the national lockdown, as well as violent enforcement of other PHSMs. They are calling for compensation from the government and that those responsible for the violence are held accountable.