

COVID-19 Scientific and Public Health Policy Update¹ – (15 December 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

- Wajnberg et al. reported that robust neutralizing antibodies to SARS-CoV-2 infection persist for months. The vast majority of infected individuals with mild-to-moderate COVID-19 experience robust immunoglobulin G antibody responses against the viral spike protein. Authors also showed that titers are relatively stable for at least a period of about 5 months and that anti-spike binding titers significantly correlate with neutralization of authentic SARS-CoV-2.
- Wang et al reported an amplification-free nucleic acid immunoassay, implemented on a lateral flow strip, for the fluorescence detection of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) RNA in less than one hour. The assay uses DNA probes that are designed to bind to the conserved open reading frame 1ab (ORF1ab), envelope protein (E) and the nucleocapsid (N) regions of the SARS-CoV-2 genome, and a fluorescent-nanoparticle-labelled monoclonal antibody that binds to double-stranded DNA–RNA hybrids. In a multi-hospital randomized double-blind trial involving 734 samples (593 throat swabs and 141 sputum) provided by 670 individuals, the assay achieved sensitivities of 100% and specificities of 99% for both types of sample.
- Commercially available SARS-CoV-2 serum-based antibody detection ELISA kits from Gold Standard Diagnostics (GSD) and EuroImmun (EI), which detect the nucleocapsid (N) and spike (S) SARS-CoV-2 structural proteins respectively, were evaluated for their efficacy in detecting IgA and IgG antibodies against SARS-CoV-2 in clinical serum samples. Authors adapted the serum-based enzyme-linked immunosorbent assay (ELISA) for use with saliva samples, achieving 84.2% sensitivity and 100% specificity in a set of 149 clinical samples.
- The interim analysis of clinical trials of AstraZeneca's vaccine presents data from four ongoing blinded, randomised, controlled trials done across the UK, Brazil, and South Africa. Overall vaccine efficacy across was 70.4%, suggesting that ChAdOx1 nCoV-19 has an acceptable safety profile and has been found to be efficacious against symptomatic COVID-19 in this interim analysis of ongoing clinical trials.

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.**

- New strains of SARS-CoV-2 identified in South Africa and UK, found to dominate the second wave. As of 21 December, more than 300 genomes of the 501Y.V2 variant have been identified, all in South Africa. Preliminary analysis in South Africa (501Y.V2) and the UK (501Y) suggests that this variant is significantly more transmissible than previously circulating variants and potentially higher viral load in South Africa.

B. New guidelines and resources

Since 04 December 2020,

- Africa CDC has published new guidance and resources on:
 - [COVID-19 MANAGEMENT: Curriculum for Community Health Workers;](#)
 - [Promoting mask-wearing during the COVID-19 pandemic: A policymaker's guide;](#)
 - [Responding to the Second Wave of COVID-19 in Africa;](#)
 - [Medical PPE production in Africa: Promoting Local Manufacturers to support the COVID-19 Response \(Workshop report\)](#)
 - [Questions and answers on COVID-19 vaccine](#)
- US CDC has published new guidance and resources on:
 - [CDC Guidance for Expanded Screening Testing to Reduce Silent Spread of SARS-CoV-2.](#)
 - [Prioritizing Case Investigations and Contact Tracing for COVID-19 in High Burden Jurisdictions.](#)
- WHO has published new guidance and resources on:
 - [Checklist to support schools re-opening and preparation for COVID-19 resurgences or similar public health crises](#)
 - [COVID-19 vaccine introduction and deployment costing tool.](#)
 - [Evidence to recommendations for COVID-19 vaccines: Evidence framework.](#)
 - [Public health considerations for elections and related activities in the context of the COVID-19 pandemic.](#)
 - [Corrigenda – Maintaining surveillance of influenza and monitoring SARS-CoV-2.](#)
 - [Health workforce policy and management in the context of the COVID-19 pandemic response.](#)
 - [A prospective cohort study investigating maternal, pregnancy and neonatal outcomes for women and neonates infected with SARS-CoV-2.](#)
 - [Mask use in the context of COVID-19.](#)
 - [Evidence to recommendations: COVID-19 mitigation in the aviation sector.](#)
- FDA has issued press releases on:
 - [FDA Takes Key Action in Fight Against COVID-19 By Issuing Emergency Use Authorization for First COVID-19 Vaccine](#)
 - [FDA Statement on Vaccines and Related Biological Products Advisory Committee Meeting](#)

- [FDA Holds Advisory Committee Meeting to Discuss Authorization of COVID-19 Vaccine Candidate as Part of Agency's Review of Safety and Effectiveness Data](#)
- [FDA Authorizes First Direct-to-Consumer COVID-19 Test System](#)
- [FDA Authorizes First COVID-19 and Flu Combination Test for use with home-collected samples](#)
- ECDC has issued new resource on:
 - [Coronavirus disease 2019 \(COVID-19\) and supply of substances of human origin in the EU/EEA - second update.](#)
 - [Rapid Risk Assessment: Risk of COVID-19 transmission related to the end-of-year festive season.](#)
 - [Overview of COVID-19 vaccination strategies and vaccine deployment plans in the EU/EEA and the UK](#)
 - [Guidelines for COVID-19 testing and quarantine of air travelers - Addendum to the Aviation Health Safety Protocol.](#)
- PHE has issued new resource on:
 - [COVID-19: background information.](#)
 - [COVID-19 vaccination: information for healthcare practitioners.](#)
 - [COVID-19: the green book, chapter 14a](#)

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

- SARS-CoV-2 spike glycoprotein (S)–reactive antibodies were detectable using a flow cytometry–based method in SARS-CoV-2–uninfected individuals and were particularly prevalent in children and adolescents. They were predominantly of the immunoglobulin G (IgG) class and targeted the S2 subunit. [By contrast, SARS-CoV-2 infection induced higher titers of SARS-CoV-2 S–reactive IgG antibodies targeting both the S1 and S2 subunits, and concomitant IgM and IgA antibodies, lasting throughout the observation period. SARS-CoV-2–uninfected donor sera exhibited specific neutralizing activity against SARS-CoV-2 and SARS-CoV-2 S pseudotypes.](#)
- 29,452 publicly available coronavirus genomes, including 26,312 genomes of SARS-CoV-2 strains were collected and thoroughly analysed to trace the evolution of coronaviruses and reveal the possible origin of SARS-CoV-2. [Coronavirus recombination events were observed among different hosts including humans, bats and pangolins where the putative recombination region in S protein was highly diverse among strains from bats.](#) Findings suggest bats may provide a pool of genetic diversity for the origin of SARS-CoV-2.
- This study demonstrates that pre-existing T cell immunity induced by circulating human alpha- and beta- human coronaviruses (HCoV) is present in young adult individuals, but virtually absent in older adult subjects. Consequently, the frequency of cross-reactive T cells directed to

the novel pandemic SARS-CoV-2 was minimal in most older adults. [Findings of this study provide at least a partial explanation for the more severe clinical outcome of SARS-CoV-2 infection observed in the elderly. Moreover, this information could help to design efficacious vaccines for this age group, aiming at the induction of cell-mediated immunity.](#)

Epidemiology

- Using a dataset of 30,082 individuals screened at Mount Sinai Health System in New York City, this study reports that the vast majority of infected individuals with mild-to-moderate COVID-19 experience robust immunoglobulin G antibody responses against the viral spike protein. [Findings show that titers are relatively stable for at least a period of about 5 months and that anti-spike binding titers significantly correlate with neutralization of authentic SARS-CoV-2, suggesting that more than 90% of seroconverters make detectable neutralizing antibody responses.](#) These titers remain relatively stable for several months after infection.
- A prospective, cross-sectional analysis, estimated the rate of SARS-CoV-2 infection and outbreaks among staff and students in educational settings during the summer half-term in England. There were 113 single cases of SARS-CoV-2 infection, nine co-primary cases, and 55 outbreaks. [The risk of an outbreak increased by 72% for every five cases per 100 000 population increase in community incidence. Staff had higher incidence than students and most cases linked to outbreaks were in staff members .](#)
- This study evaluates an alternative strategy based on the monitoring of olfactory dysfunction, a symptom identified in 76-83% of SARS-CoV-2 infections including those that are otherwise asymptomatic when a standardized olfaction test is used. [Findings suggest that monitoring olfactory dysfunction could reduce spread via regular screening, and could reduce risk when used at point-of-entry for single-day events.](#) (Not peer reviewed)
- An observational, retrospective study based on Romanian official data about location, age, gender and comorbidities for COVID-19 fatalities reports on the relation between SARS-CoV-2 mortality and underlying medical conditions. [Findings indicate that males, hypertension, diabetes, obesity and chronic kidney disease were most frequent in the COVID-19 fatalities, that the burden of disease was low, and that the prognosis for 1-year survival probability was high in the sample. Evidence shows that age-dependent pairs of comorbidities could be a negative prognosis factor for the severity of disease for the SARS-CoV 2 infection.](#)

Care and Treatment

- A double-blind, randomized, placebo-controlled trial evaluated baricitinib plus remdesivir in 1,033 hospitalized adults with COVID-19. [Findings suggest baricitinib plus remdesivir was superior to remdesivir alone in reducing recovery time and accelerating improvement in clinical status among patients with COVID-19, notably among those receiving high-flow oxygen or noninvasive ventilation.](#) The combination was associated with fewer serious adverse events.

- This study reports on the efficacy of therapeutically administered MK-4482/EIDD-2801, an orally efficacious ribonucleoside analogue inhibitor of influenza viruses, to mitigate SARS-CoV-2 infection and block transmission in the ferret model. [Therapeutic treatment of infected animals with MK-4482/EIDD-2801 twice a day significantly reduced the SARS-CoV-2 load in the upper respiratory tract and completely suppressed spread to untreated contact animals. This study identified oral MK-4482/EIDD-2801 as a promising antiviral countermeasure to break SARS-CoV-2 community transmission chains.](#)

Diagnostics

- The Panbio COVID-19 Ag Rapid Test Device was selected to evaluate the performance for detecting SARS-CoV-2. Analytical sensitivity for the detection of SARS-CoV-2 virus was determined by limit of detection (LOD) using PCR as a reference method. [The LOD results showed that the RAD kit was 100 fold less sensitive than RT-PCR. Clinical sensitivity of the RAD kit was 68.6% for detecting samples from COVID-19 patients.](#)
- This study evaluated the use of dried blood spot (DBS) samples for the detection of severe acute respiratory syndrome coronavirus 2 spike antibodies. [Results indicate that DBS sampling is comparable to matched serum samples with a relative 98.1% sensitivity and 100% specificity. Findings suggest DBS sampling offers an alternative for population-wide serologic testing in the coronavirus pandemic.](#)
- A multi-hospital randomized double-blind trial evaluated an amplification-free nucleic acid immunoassay implemented on a lateral flow strip, for the fluorescence detection of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) RNA in less than one hour. [The assay achieved sensitivities of 100% and specificities of 99% for both throat swab and sputum samples. The assay is an inexpensive amplification-free detection of SARS-CoV-2 RNA that should facilitate the rapid diagnosis of COVID-19 at the point of care.](#)
- A high-throughput targeted proteomics assay was developed to detect SARS-CoV-2 nucleoprotein peptides directly from nasopharyngeal and oropharyngeal swabs. A modified magnetic particle-based proteomics approach implemented on a robotic liquid handler enables fully automated preparation of 96 samples within 4 hours. A TFC-MS system allows multiplexed analysis of 4 samples within 10 min, enabling the processing of more than 500 samples per day. [This assay was validated qualitatively and quantitatively using 985 specimens previously analyzed by real-time RT-PCR, and detected up to 84% of the positive cases with up to 97% specificity. Findings suggest that the presented strategy has high sample stability and should be considered as an option for SARS-CoV-2 testing in large populations.](#)
- In this study, a commercially available, serum-based enzyme-linked immunosorbent assay (ELISA) was adapted for detection of SARS-CoV-2 antibodies in saliva samples for easy, non-invasive antibody testing. [This assay achieved an 84.2% sensitivity and 100% specificity in a set of 149 clinical samples. This strategy will enable widespread, affordable testing for](#)

[patients who experienced this disease, whilst minimizing exposure risk for healthcare workers.](#)

Infection Prevention and Control

- This comparative study evaluated the fitted filtration efficiency (FFE) of various consumer-grade and improvised face masks and several popular modifications of medical procedure masks that are intended to improve mask fit or comfort. [Results indicate that the FFEs of consumer-grade masks and improvised face coverings varied widely, ranging from 26.5% to 79.0% and modifications intended to enhance the fit of medical procedure masks improved FFE measurements from 38.5% \(unmodified mask\) to 80.2%. Findings suggest simple modifications can improve the fit and filtration efficiency of medical procedure masks.](#)

Other

- To inform decisions about international travel restrictions, this mathematical model calculated the ratio of expected COVID-19 cases from international travel (assuming no travel restrictions) to expected cases arising from internal spread. [In May, 2020, imported cases are likely to have accounted for a high proportion of total incidence in many countries, contributing more than 10% of total incidence in 102 of 136 countries. Countries can expect travellers infected with SARS-CoV-2 to arrive in the absence of travel restrictions.](#) Although such restrictions probably contribute to epidemic control in many countries, in others, imported cases are likely to contribute little to local COVID-19 epidemics.

D. Clinical Trials Updates

Key updates:

Vaccine trials:

- On 2 December 2020, the [UK Medicines and Healthcare products Regulatory Agency \(MHRA\) provided approval for the use of the Pfizer-BioNTech BNT162 mRNA COVID-19 Vaccine](#) after having performed a rolling review of all the available data, starting in October 2020.
- On 9 December 2020, the [UK MHRA issued an updated guidance indicating that any person with a history of immediate-onset anaphylaxis to a vaccine, medicine or food should not receive the Pfizer/BioNTech vaccine.](#) This guidance was issued after two reports of anaphylaxis and one report of a possible allergic reaction in HCW who were administered the newly approved vaccine.
- On 9 December 2020, [Public Health Canada also authorized the Pfizer-BioNTech COVID-19 mRNA vaccine for use for the COVID-19 pandemic](#) and issued a market authorization with conditions to support early access in individuals 16 years of age and older.
- On 9 December 2020, [United Arab Emirates' Ministry of Health and Prevention, MOHAP, has announced the official registration of Sinopharm inactivated COVID-19 vaccine](#) developed by Beijing Institute of Biological Product. This was followed by [approval from Bahrain National Health Regulatory Authority \(NHRA\)](#) on 13 December 2020. Approval of the registration was based on company data reporting that Phase III clinical trial of the vaccine had demonstrated an 86% efficacy rate, a 99% seroconversion rate of neutralizing antibody and 100% effectiveness in preventing moderate and severe cases of COVID-19,

following testing on 42,299 volunteers. The [scientific community has however expressed concern](#) due to the lack of public access to trial safety and efficacy data.

- On 10 December 2020, the updated [WHO landscape of COVID-19 vaccines](#) was published. Fifty-two vaccine candidates were at the clinical evaluation stage and 162 candidates at the preclinical stage.
- On 11 December 2020, the [US Food and Drug Administration \(FDA\) issued the first emergency use authorization \(EUA\) for a vaccine for the prevention of COVID-19](#) in individuals aged 16 years and older, allowing the Pfizer-BioNTech BNT162 mRNA COVID-19 Vaccine to be distributed in the U.S. The FDA determined that available data provides clear evidence that Pfizer-BioNTech vaccine may be effective in preventing COVID-19 and supports that the known and potential benefits outweigh the known and potential risks.
- On 11 December 2020, the [University of Queensland and the Australian biotech firm CSL announced they were abandoning future trials for their prototype CSL v451 COVID-19 vaccine](#). Phase I trial of the vaccine showed it elicited a robust response towards the virus and had a strong safety profile. However, the generation of antibodies directed towards fragments of a protein (gp41), used to stabilize the vaccine, also lead to false positive HIV test results in some of the trial participants. It was determined that this would interfere with future roll out the vaccine into broad populations.
- On 11 December 2020, [Sanofi and GSK announced a delay in their adjuvanted recombinant protein-based COVID-19 vaccine program](#) to improve immune response in the elderly. The interim results from Phase I/II trial of the vaccine candidate ([NCT04537208](#)), tested in 441 healthy adults participated, has demonstrated immune responses comparable to patients who recovered from COVID-19 in adults aged 18 to 49 years, but insufficient neutralizing antibody titers in adults aged 50 and older. The companies plan to launch a phase IIb study with an optimized candidate vaccine in February 2021.
- On 11 December 2020, Moderna announced that it [has initiated dosing in a Phase II/III study of its COVID-19 vaccine candidate, mRNA-1273, in healthy adolescent participants aged between 12 and 17](#). Co-developed by Moderna and NIAID Vaccine Research Center investigators, the mRNA vaccine encodes for a prefusion stabilised form of the Spike (S) protein of SARS-CoV-2.
- On 11 December, 2020 AstraZeneca announced that is [set to conduct clinical trials of its Covid-19 vaccine candidate in combination with Russia's Sputnik V vaccine component, human adenoviral vector type Ad26](#). After the Sputnik V vaccine's clinical trial preliminary results showed its efficacy at above 90 percent, the Russian Direct Investment Fund (RDIF, Russia's sovereign wealth fund) and Gamaleya Institute on November 23, 2020 offered AstraZeneca to use one of the two components (human adenoviral vectors1) of the Sputnik V vaccine in AstraZeneca's clinical trials. AstraZeneca accepted RDIF's proposal and will begin clinical trials of its vaccine in combination with Sputnik V's human adenoviral vector type Ad26 by the end of 2020. This research will allow AstraZeneca's scientists to study the possibility of boosting their vaccine's efficacy through the application of this combined approach.
- On 14 December, 2020, [the Sputnik V vaccine's efficacy is confirmed at 91.4% based on data analysis of the final control point of clinical trials](#). The final control point analysis of data was obtained 21 days after administering the first dose. Calculation was based on the analysis of data of volunteers (n = 22, 714) who received both the first and second doses of the Sputnik V vaccine or placebo at the third and final control point of 78 confirmed cases in accordance with the Phase III clinical trials protocol. The advance to

the third and final statistically significant representative control point allowed for the final proof of the efficacy of the vaccine of over 90%.

- On 17 December 2020, the [US Food and Drug Administration \(FDA\) published the report of their data analysis review of Moderna mRNA vaccine](#), indicating that it was safe and describing the recommended two-dose regimen as "highly effective" in preventing infection 14 days after the second dose in adults.

Therapeutics trials:

- On 3 December 2020, the US based [Georgia State University announced](#) that a new oral antiviral drug, MK-4482/EIDD-2801 or Molnupiravir, had been found to completely suppresses SARS-CoV-2 virus transmission within 24 hours in an animal model. If these results translate to human, the drug could contribute to interrupt widespread community transmission of SARS-CoV-2 until mass vaccination is available.
- On 11 December 2020 the National Institute of Allergy and Infectious Diseases (NIAID) in the US announced results from a Phase III study indicating that [baricitinib plus remdesivir reduced recovery time for people hospitalised with Covid-19](#). Results from 1,059 patients in the ACTT study showed Remdesivir improved time to clinical recovery from 15 days to a median of 11 days, which was reaffirmed in a final report published in the [New England Journal of Medicine](#). In ACTT-2, where patients received baricitinib in combination with Remdesivir, the group that received baricitinib had a reduced time to recovery compared with patients who received Remdesivir alone.
- On 11 December 2020 Regulatory Affairs Professional Society announced that Inhaled nitric oxide explored as a treatment for COVID-19 patients due to its success in improving arterial oxygenation in patients with ARDS due to SARS-CoV got FAD approval to proceed to a phase 3 trial. [Results from patients treated with INOpulse under an emergency expanded access program have proved promising, the company said](#).
- On 11 December 2020 Regulatory Affairs Professional Society announced [that M K-4482 \(formerly EIDD-2801\) an oral broad-spectrum antiviral has shown effectiveness against infections such as influenza, chikungunya, Ebola and equine encephalitis](#). It has a similar mechanism of action to remdesivir and prevents replication of the virus. In animal models, MK-4482 inhibited the replication of SARS-CoV-2 and MERS in mice and blocks transmission of SARS-CoV-2 in ferrets, according to recent papers.

Immunotherapy trials:

- Immunotherapy company [ImmunityBio has reported](#) that a challenge study showed its Covid-19 vaccine candidate provided complete protection of nasal and lung airways of non-human primates against the SARS-CoV-2 virus, which causes Covid-19. The study involved a subcutaneous (SC) injection of ImmunityBio's hAd5-COVID-19 vaccine and an oral enteric-coated capsule version of the vaccine.

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

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Reporting period: 24 November–7 December

Biweekly Report

With the prospect of a widely available COVID-19 vaccine for Africa still months away, health officials are concerned that travel for the December holidays will increase cases and overwhelm health system that are already taxed. As many AU Member States—and countries around the world—experience second waves, the lack of availability and high cost of COVID-19 tests continues to be a [problem](#), particularly as countries resume international travel. The Institut Pasteur in Dakar, Senegal [anticipates](#) the rollout in February 2021 of a rapid COVID-19 test that can be taken at home at the cost of US \$1, in hopes that improving the frequency and availability of testing across the continent will save lives while AU Member States await a vaccine.

| Total Reported Cases (7 December) | New Cases (24 November–7 December) | Total Reported Deaths (7 December) | New Deaths (24 November–7 December) | Total Reported Cases Among Health Care Workers ² |
|--------------------------------------|---|--|--|---|
| 2,275,041 | 139,778 <i>(3% increase since 10- 23 November)</i> | 54,215 | 4,221 <i>(3% decrease since 10-23 November)</i> | 68,742 <i>(Largest increase in reported health worker cases: Algeria, Morocco, Kenya, Tunisia, Uganda)</i> |

Disease Situation (24 November–7 December)

- Reported new cases increased by 3% and new deaths fell by 3% in Africa between the current two-week reporting period (24 November–7 December) and the previous two-week reporting period (10–23 November). Although **Morocco** leads in the largest number of new cases reported (53,660), **South Africa** is a close second (48,119). Together, the two countries account for more than half of the new cases reported on the continent. About half (27) of AU Member States reported increases in new cases, however, some hot spot countries have also reported decreases, including **Morocco**, **Kenya**, **Tunisia** and **Libya**.
- Following the record July–August peak in **South Africa**, new cases had stabilized, but have now been trending upward since November, increasing by 54% when comparing this reporting period to the previous one and indicating the start of a second wave. The test per case ratio is below the recommended rate, indicating cases are likely going undetected, and there are reports of hospitals being stretched in the highest burden areas. In an [address](#), the president highlighted that new cases and hospital admissions are highest in Nelson Mandela Bay, the Sarah Baartman District in the Eastern Cape, and the Garden Route District in the Western Cape. In his address, he announced new public health and social measures (PHSMs) in Nelson Mandela Bay, declaring it a hot spot.
 - The recent increase in new cases has been credited to (1) travel between and within provinces, (2) large gatherings held in venues with poor ventilation (including funeral gatherings), and (3) a lack of adherence to mask wearing and social distancing. Health officials have also [warned](#) that end-of-matriculation celebrations (deemed “Rage” events) have contributed to the rise in new cases, urging all those who attended events to get tested and go into a 10-day quarantine.
- Kenya’s** second wave continues to [take a major toll on health care workers](#), with hundreds of new infections and dozens of deaths reported among health care workers in the previous month. Media reports [attribute](#) increasing cases among health care workers to the lack of personal protective equipment (PPE) available to them. On 8 December, health care workers (excluding doctors) at public hospitals went on [strike](#) in Kenya, with the Kenyan National Union of Nurses reporting that its 23,000 members will not be returning to work until their grievances are resolved. Since the strike began, media have reported that patients are being turned away from some hospitals due to staff shortages. Reported new cases and deaths fell by 26% and 46%, respectively, in Kenya when comparing this reporting period to the previous one. However, with the current strike, health officials are worried that mortality may rise not just from COVID-19, but other diseases and conditions. Cases are also [reportedly](#) spreading to more rural areas that have little capacity to treat severe cases.

² Data compiled from the following [source](#), which gathers data 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.

- Since conflict broke out in **Ethiopia** on 4 November, there have been [reports](#) of thousands casualties from the fighting, as well as mass migration among the military and citizens fleeing to safety. An [estimated](#) 45,000 people have fled to neighboring **Sudan** where humanitarian officials have warned refugee camps are overwhelmed and overcrowded, and lacking in their capacity to prevent, test for and treat COVID-19. In **Sudan**, new cases increased by 32% between the current and previous reporting periods, with [reports](#) of hospitals being overwhelmed in Khartoum.
- A [report](#) from **South Africa** attributed nearly 62,056 excess deaths to COVID-19, with the researchers noting that spikes in excess deaths closely match peaks in new infections of the virus. Similarly, a [study](#) from the Imperial College of London estimated that likely about 2% to 5% of deaths due to COVID-19 were reported between April and September 2020 in **Sudan**.

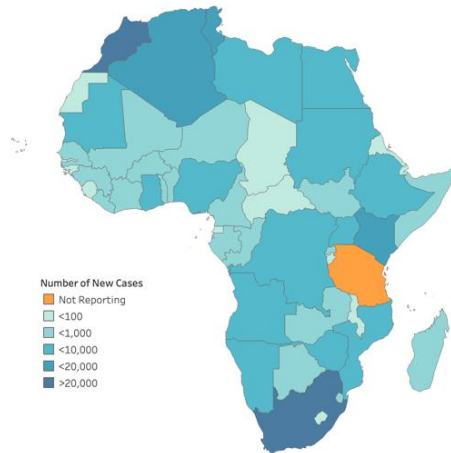


Figure 1. Increase in new cases between 24 November and 7 December (Africa Centres for Disease Control and Prevention).

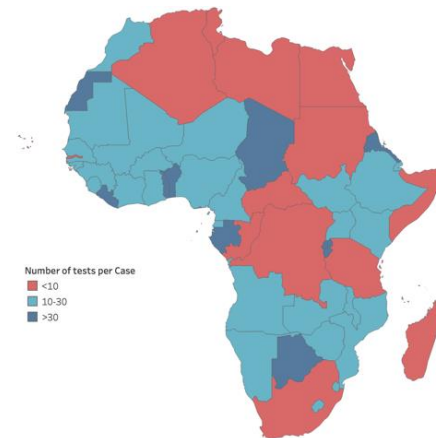


Figure 2. Test per case ratio on 7 December (Africa Centres for Disease Control and Prevention)

COUNTRY **HIGHLIGHTS**

(24 NOVEMBER–7 DECEMBER)

| Largest # of New Cases ³ | Highest % Increase in New Cases ² | Largest # of New Deaths ² | Highest % Increase in New Deaths ² | Test per Case Ratio <10 ⁴ | Case Fatality Rate > 5% ⁵ |
|---|--|---|---|---|--|
| Morocco (53,660), South Africa (48,119), Tunisia (16,249), Algeria (12,712) and Kenya (10,794) | Mauritania (331%), Niger (280%), Senegal (253%), Burkina Faso (224%) and DRC (131%) | South Africa (1,281), Morocco (924), Tunisia (734), Algeria (245), Egypt (230) | Niger (7%), Mauritania (5%), Cameroon (3%), Guinea (3%), Mali (2%) | Algeria, CAR, Cape Verde, Congo, DRC, Egypt, Gambia, Libya, Madagascar, Sao Tome & Principe, Somalia, South Africa, Sudan, Tanzania and Tunisia | Chad, Egypt, Liberia, Sahrawi Arab Democratic Republic and Sudan |

PHSM Implementation

As cases continue to rise across regions, AU Member States have started to reinstate public health and social measures (PHSMs) or continue to extend existing ones. However, pressure to avoid complete economic shutdowns is high, especially as people continue to suffer from loss of income and increased food insecurity.

PHSM HIGHLIGHTS

| | |
|-----------------------------------|-----------------------------------|
| National Lockdowns/Curfews | School Reopenings/Closures |
|-----------------------------------|-----------------------------------|

³ Data compares current reporting period (24 November–7 December) to previous reporting period (10–23 November) to determine top five countries in specified category; for largest % increase, countries excluded if < 200 new cases reported or < 100 new deaths reported.

⁴ Countries with a low number of tests per case (<10) may not be testing widely enough to find all cases. Africa CDC recommends 10 to 30 tests per case, as a benchmark of adequate testing.

⁵ Case fatality rate greater than 5% indicates testing is limited.

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](#).

Tightening

- On 3 December, **South Africa** [announced](#) a curfew and new limits on indoor gatherings in Nelson Mandela Bay, declaring it a hot spot. Alcohol consumption will be limited in public spaces, indoor gatherings must not exceed 100 people and funeral gatherings are prohibited.
- **Morocco** further [extended](#) its emergency decree until 10 January; curfews remain in Casablanca.
- **Mauritania** [announced](#) new capacity limitations in workplaces and the suspension of public ceremonies due to increasing cases.
- A curfew has been [imposed](#) in the greater Conakry area in **Guinea**.

Tightening

- All schools and universities are [closed](#) for two weeks effective 4 December in **Mauritania**.

Loosening

- **Rwanda** has been gradually reopening schools since November, coupled with student [mass testing campaigns](#).

Secondary Burdens of COVID-19 and PHSMs

1. Essential health services

- On 29 November, WHO [stated](#) in a press briefing that deaths from malaria will likely far exceed those from COVID-19 in Africa, estimating an excess of somewhere between 20,000 and 100,000 deaths, mainly among young children.
 - In Uganda, hospital admission for malaria dropped by 31% in May 2020 compared to May 2019. In response, Uganda's unit for maintaining essential health services during COVID-19 [launched](#) a bed net campaign, using mobile phones and radio to reach people with information about how they can prevent malaria alongside COVID-19. To date, the program has led to the distribution of more than 19 million bed nets.
- While routine childhood vaccination campaigns were halted early in the pandemic, AU Members States have made a concentrated effort to reinstate them. In Chad, more than 3.3 million children were [vaccinated](#) for polio since July.
- In Burkina Faso and Nigeria there have been reports of yellow fever outbreaks. In Nigeria, there are a [suspected](#) 530 cases of yellow fever across five states, taxing local and national health officials already consumed by the COVID-19 response. To respond to the new crisis, Nigeria activated its National Emergency Operations Centre for yellow fever and has started statewide vaccination campaigns. There have also been reports of a yellow fever outbreak in Burkina Faso.

2. Economic and social burden

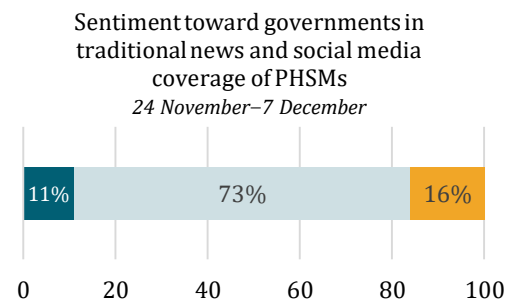
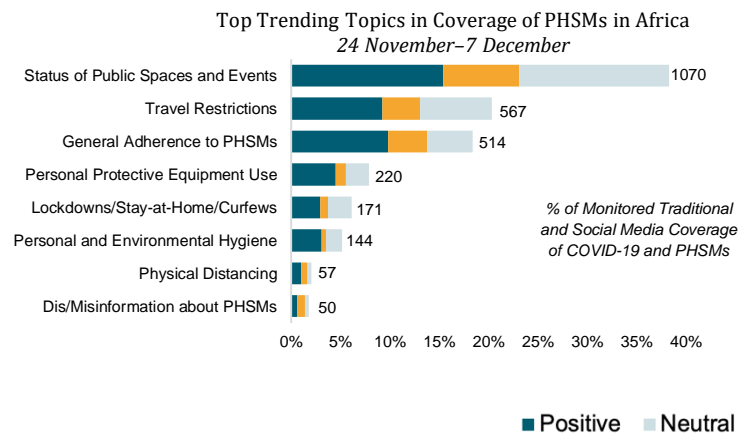
- The Economic Community of West African States and partners published a [report](#) summarizing findings from an online survey conducted to evaluate the economic and social burden of COVID-19. Key findings include:
 - More than 90% of respondents reported COVID-19 has had a negative impact on household income, with 44% reporting the impact has been significant or severe. Female-headed households appear to be most affected.
 - Market access issues due to PHSMs appears to be higher among respondents living in rural areas than those living in urban areas. The fear of contracting COVID-19 as a barrier to economic activity was more commonly reported among urban dwellers, while restrictions on movement as a key barrier was more common among rural respondents. Transportation disruptions appear to be more severe in rural areas where the supply chain is longer and refrigeration capacity is poor for traders and households.
 - More than half of households reported that they were fearful of running out of food, and 60% of households had resorted to applying negative coping strategies such as eating less-preferred foods or eating less food generally.
- Compared to the same time last year, gross domestic product shrank by 6% in **South Africa** and economists estimate that [reaching pre-COVID-19 economic growth could take at least five years](#). On 7 December, the government [announced](#) that it will make \$66 million available to smallholder farmers who have been hit hardest by the pandemic, with women comprising 50% of the beneficiaries. Similarly, on 4 December, the president of Kenya [launched](#) a KSH 123 billion recovery plan (about US \$1.1 million).

Public Sentiment in News Articles and on Social Media (Facebook and Twitter)

1. Sentiment toward PHSMs and government response

The majority of posts on social media and citizen quotes in news articles continue to support PHSMs across Africa, with country and regional differences in tone persisting.

- In **Ghana**, coverage showed strong public support for the government’s COVID-19 response, with social media users amplifying government messaging about PHSMs, praising the efficiency of the COVID-19 testing at Accra International Airport, and reporting of high adherence to face mask use and social distancing at polling stations during the 7 December elections. A reported 17 million people voted during **Ghana’s** elections, and each polling station had a COVID-19 ambassador to encourage PHSM adherence and conduct temperature checks.
- Media continued to highlight African governments’ experience with previous outbreaks and how it has prepared them for COVID-19. One reporter [noted](#) that health officials in the **DRC** were well aware of how to deliver vaccines in need of ultra-cold temperatures, having already distributed the Ebola vaccines, which required a temperature of -80°C.
- Social media users in **Kenya** criticized the government’s partial reopening of schools and expressed concern about the full reopening scheduled for January, highlighting reports of a COVID-19 outbreak among students and teachers at a school in Nakuru.



2. PHSMs: Coverage, adherence and politicization

Reports of adherence (e.g. people wearing face masks and practicing social distancing) to PHSMs in African news and social media continue to be more prominent than reports of non-adherence (e.g. people attending large gatherings without masks).

- Criticism of poor face mask use and a lack of social distancing at the Cairo International Film Festival drove non-adherence coverage in Egypt. In South Africa, Twitter users criticized the government for not shutting down malls prior to holiday shopping to prevent overcrowding.
- Social media users in South Africa and Zimbabwe criticized the COVID-19 testing requirement to cross the border between the two countries. Media warned that COVID-19 tests are too costly (US \$60) for many to obtain and give people no choice but to seek fake tests or illegally cross the border, defeating the purpose of the testing requirement. Police at the Zimbabwe-Zambia border arrested people selling fake COVID-19 test certificates—they were reportedly selling them for US \$20. The issue of fake COVID-19 tests continues to be a problem globally.
 - For information on the latest travel restrictions and entry requirements, reference the Africa Centres for Disease Control and Prevention’s [“Trusted Travel, My COVID Pass”](#) tool.
- Coverage of economic burdens resulting from COVID-19 was highest in Nigeria, South Africa and Kenya. Local Nigerian media and journalists noted growing insecurity in the country’s food infrastructure, especially in rural areas. In South Africa, social media users cited rising unemployment rates.

Science Update

- On 3 December, the Africa Infodemic Response Alliance (AIRA) was [launched](#) with the goal of detecting, disrupting and countering damaging misinformation on public health issues in Africa. While it is difficult to identify how much misinformation is circulating on social media, WHO said that they have debunked more than 1,000 misleading reports since the start of the pandemic.

- According to a WHO analysis, the African region has an average score of 33% readiness for a COVID-19 vaccine rollout—far below the necessary 80% benchmark. Some AU Member States have joined COVAX, while others are signing up for the vaccine from China (despite a lack of data on the vaccine's efficacy).
 - **South Africa** [confirmed](#) that it joined COVAX, but it has not yet announced its vaccination strategy. **Rwanda** [announced](#) it will raise \$15 million for its first batch of vaccines through the COVAX framework. **Botswana** and **Namibia** also announced in early November that they will procure vaccines from COVAX for 20% of their populations; along with South Africa, both countries do not qualify for subsidized vaccines under COVAX because they are classified as upper middle income countries. **Egyptian** officials have been [coordinating](#) with GAVI to procure 20 million doses of a COVID-19 vaccine.

Spotlight: Gender Differences in Risk Perception, PHSM Adherence and Income Loss During the Pandemic

A closer look at gender-disaggregated data from the August 2020 PERC [survey](#) showed minor, but significant and concerning differences in how COVID-19 has affected men and women.

- Reported disruptions to women's health services were alarming. Of households that missed or delayed care during COVID-19, 11% reported their visits were for antenatal care, pregnancy complications or family planning. With recent data emphasizing that pregnancy places women at [risk](#) for more severe cases of COVID-19, ensuring that women maintain regular health visits during pregnancy is even more important. Women were also slightly more likely to report symptoms of mental health distress related to COVID-19 and were more likely to report anxiety when considering resuming normal activities after lockdown compared to men (48% and 44%, respectively). In Liberia, women were 20% more likely to report anxiety about resuming normal activities.
- On average, women were more likely than men to report adherence to PHSMs, particularly for measures that restrict economic activity and public gatherings (e.g. staying home and avoiding the church/mosque). Compared to men, women were also slightly more likely to report that the time they spent on unpaid work (e.g. child care, care for elderly and housework) has increased since the start of the pandemic (39% of women reported an increase compared to 36% of men). With the burden of managing children and the household falling more on women than men, this may partly contribute to more women adhering to stay-at-home orders. However, support for PHSMs was higher among women than men, indicating that women may better understand the importance of PHSMs in preventing the virus' spread.