

# COVID-19 Scientific and Public Health Policy Update – (16 June 2020)

*In addition to our Weekly Outbreak Brief on the spread of COVID-19 and the actions that Africa CDC is taking to help African Union Member States. Africa CDC shares a weekly brief detailing the latest developments in scientific knowledge and public health policy from around the world, as well as updates to the latest guidance from WHO and other public health agencies. Contents of this document are 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

- A study of compiled data for non-pharmaceutical interventions (NPIs) deployed in China, South Korea, Italy, Iran, France, and the United States indicates that without the NPIs, China would have suffered 465 times more confirmed COVID-19 cases, Italy 17 times more and the USA 14 times more.
- Further, a mathematical modelling study evaluated the impact of major interventions across 11 European countries. Findings suggest that major non-pharmaceutical interventions and lockdown, in particular, have had a large effect on reducing transmission.
- An analysis of data from Demographic and Health Surveys (DHS) of 16 countries in Africa, reports that on average, only 33.5% of households had access to clean water and soap, findings showed wide within-country disparities, disproportionately affecting the poorest households and rural residents. Implementation of the current mitigation measures will be a challenge in these settings.
- A study demonstrates that simulated sunlight rapidly inactivates SARS-CoV-2 in small-particle aerosols, with a half-life of less than 6 minutes and 90% of the virus inactivated in less than 20 minutes for all simulated sunlight levels tested.
- A cross-sectional study of 355 COVID-19 patients in an ENT clinic of a University Hospital in Italy reports a 70% prevalence of either a loss of both smell and taste or one of the disorders. This study strongly confirms the high prevalence of olfactory and gustatory disorders in COVID-19 infection.
- A case series report of 17 previously healthy children and adolescents who developed an inflammatory phenotype related to COVID-19, suggests that the features overlapped with, but were distinct from, those of Kawasaki disease or toxic shock syndrome.

## B. New guidelines and resources

- WHO published new and updated guidance and resources: [Medical certification, ICD mortality coding, and reporting mortality associated with COVID-19](#); [Technical specifications for Pressure Swing Adsorption \(PSA\) Oxygen Plants](#); [COVID-19 Parenting -Infographic](#); [Use of chest imaging in COVID-19](#); [Updated country preparedness and response status for COVID-19 as of 9 June 2020](#); [‘Asks’ to the private sector in the response to COVID-19](#);
- US CDC published new and updated guidance and resources: [Research Use Only 2019-Novel Coronavirus \(2019-nCoV\) Real-time RT-PCR Primers and Probes](#); [Guidance for US CDC for the Establishment and Management of Public Health Rapid Response Teams for Disease Outbreaks: COVID-19 Disease Supplement](#); [RRT Composition: COVID-19 Considerations](#); [Taking Care of Sick People with COVID-19 Illness at Home](#); [Frequently Asked Questions and Answers: Coronavirus Disease 2019 \(COVID-19\) and Pregnancy](#); [Care for Breastfeeding Women](#); [Using Telehealth to Expand Access to Essential Health Services during the COVID-19 Pandemic](#); [Reducing Stigma: Considerations for Events and Gatherings](#); [Social Distancing](#); [Checklist for Communities of Faith](#); [Helping Children Cope](#); [Social Distancing](#); [Talking with the Patient – A Case Investigator’s Guide to COVID-19](#);
- ECDC issued new resources:
- [Options for the decontamination and reuse of respirators in the context of the COVID-19 pandemic](#); [COVID-19 infection prevention and control for primary care, including general practitioner practices, dental clinics and pharmacy settings](#); [Mobile applications in support of contact tracing for COVID-19 - A guidance for EU EEA Member States](#); [Considerations relating to passenger locator data, entry and exit screening and health declarations in the context of COVID-19 in the EU/EEA and the UK](#);
- FDA has issued press releases: [FDA Authorizes Next-Generation Sequence Test for Diagnosing COVID-19](#); [FDA Reissues Emergency Use Authorizations Revising Which Types of Respirators Can Be Decontaminated for Reuse](#)
- 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

- Results of a systematic review of 67 articles suggest [encephalitis, demyelination, neuropathy, and stroke may be associated with COVID-19](#). Invasion of the medullary cardiorespiratory centre by SARS-CoV-2 virus may contribute to the refractory respiratory failure observed in critically-ill COVID-19 patients. An increasing number of reports of COVID-19 patients with neurological disorders add to emergent experimental

models with neuro-invasion as a reasonable concern that SARS-CoV-2 is a new neuropathogen.

- This study demonstrates that [simulated sunlight rapidly inactivates SARS-CoV-2 in small-particle aerosols, with half-lives of less than 6 minutes and 90% of the virus inactivated in less than 20 minutes](#) for all simulated sunlight levels tested. These results suggest that the potential for aerosol transmission of SARS-CoV-2 may be dependent on environmental conditions, particularly sunlight and that exposure risk may vary significantly across different environmental conditions.
- A study compared single-cell RNA sequencing (scRNA-seq) of peripheral blood mononuclear cells from seven hospitalized COVID-19 patients and six healthy controls. [Findings suggest that peripheral monocytes and lymphocytes do not express substantial amounts of pro-inflammatory cytokines.](#)

### Epidemiology

- A cross-sectional study of 355 COVID-19 patients in an ENT clinic of a University Hospital in Italy reports a [70% prevalence of loss of both smell and taste or either one of the two disorders, 66% and 65.4% of patients reported a change in smell and taste disorders respectively.](#) The current study strongly confirms the high prevalence of olfactory and gustatory disorders in COVID-19 infection.
- A case series reports on the clinical and laboratory characteristics of 58 hospitalized children in England [compared the characteristics of pediatric inflammatory multisystem syndrome temporally associated with COVID-19 with other pediatric inflammatory disorders.](#) Comparison of PIMS-TS with KD and with KD shock syndrome showed differences in clinical and laboratory features, including older age. Patients with KD and KD shock syndrome provide insights into this syndrome and suggest this disorder differs from other pediatric inflammatory entities.
- A case series report of 17 previously healthy children and adolescents who developed [an inflammatory phenotype related to COVID-19, suggests that the features overlapped with, but were distinct from, those of Kawasaki disease \(KD\) or toxic shock syndrome \(TSS\).](#) Limitations include the small number of patients, short follow-up period, and the inability to establish causality.
- A secondary analysis of international published data reported on the proportion of pre-symptomatic transmission of SARS-CoV-2 infection that can occur and timing of transmission relative to symptom onset. [Findings suggest most pre-symptomatic transmissions highlighted mean transmission times almost three days before symptom onset](#) and this highlights the need for rapid case detection, contact tracing and quarantine. *(Not peer-reviewed)*
- A prospective population-based cohort study of 427 pregnant women admitted to hospital with confirmed SARS-CoV-2 infection. [Findings indicate that most pregnant women admitted to hospital with SARS-CoV-2 infection were in the late second or third trimester,](#) supporting guidance for continued social distancing measures in later pregnancy. Most had good outcomes, and transmission of SARS-CoV-2 to infants was uncommon.

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## Diagnostics

- A study was conducted to validate a self-administrable saliva-based RT-qPCR test for the SARS-CoV2 virus under controlled laboratory conditions. [Results suggest that the data validates a self-collected saliva-based COVID-19 RT-qPCR assay that performs comparably well to third-party laboratory results.](#) Use of the saliva-based assay overcomes barriers to the necessary widespread testing, including strained health care resources, supply chain disruptions of laboratory materials, testing and protective equipment and exposure risks due to close interpersonal contact. *(Not peer-reviewed)*

## Care and Treatment

- A case report of four COVID-19 outpatients treated with [high dose zinc salt oral lozenges, suggests that all four patients experienced significant improvement in objective and symptomatic disease measures after one day of high dose therapy.](#) However, the limited sample size and study design preclude a definitive statement about the effectiveness of zinc as a treatment for COVID-19 but suggest the variables to be addressed to confirm these initial findings in future trials.
- This study investigating the efficacy of remdesivir treatment in two groups of six rhesus macaques inoculated with SARS-CoV-2 virus, reports that animals treated with remdesivir did not show signs of respiratory disease and had reduced pulmonary infiltrates on radiographs and reduced virus titers in broncho-alveolar lavages 12hrs after the first treatment administration. However, [virus shedding from the upper respiratory tract was not reduced by remdesivir treatment.](#) This finding is of great significance for patient management, where a clinical improvement should not be interpreted as a lack of infectiousness.
- REGENERON announced the first [clinical trial of REGN-COV2, its investigational dual antibody cocktail for the prevention and treatment of COVID-19.](#) The REGN-COV2 clinical program will be tested as a therapeutic agent for COVID-19 patients (hospitalized and non-hospitalized symptomatic COVID-19 patients) and as a preventive agent in high-exposure-risk groups.
- The [UK's independent Data Monitoring Committee has announced the suspension of RECOVERY COVID-19 Trial hydroxychloroquine arm.](#) The trial will stop enrolling participants to the hydroxychloroquine arm of the RECOVERY Trial with immediate effect.
- Preliminary results of five COVID-19 patients with severe pneumonia treated with [single low-dose of radiation \(1.5 Gy\) to both lungs, suggests that four of the patients showed rapid improvement in clinical status, encephalopathy, and radiographic infiltrates without acute toxicity or worsening the cytokine storm improvement in oxygenation](#) and were discharged from the hospital 12 days later. These studies indicated that the possible mechanism by which low doses of radiation mitigates inflammation and facilitates healing is via the polarization of macrophages to an anti-inflammatory or M2 phenotype. *(Not peer-reviewed)*
- An [experimental drug developed by Australian researchers will move to Phase 2 trials following the successful Phase 1 trial in 72 healthy patients.](#) The drug could help prevent

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deaths from COVID-19 by controlling the formation of blood clots responsible for breathing difficulties, organ failure, stroke and heart attack in critically ill COVID-19 patients.

- A retrospective study of 807 COVID-19 patients hospitalized infection treated with hydroxychloroquine alone or in combination with azithromycin, [suggests that there is no significant reduction in mortality or in the need for mechanical ventilation with hydroxychloroquine treatment with or without azithromycin.](#)
- A retrospective study was conducted among 238 patients to evaluate the risk factors of prolonged SARS-CoV-2 virus shedding and the impact of arbidol treatment on SARS-CoV-2 virus shedding. [Findings suggest that early initiation of arbidol and arbidol combination with interferon s also significantly associated with shorter virus shedding.](#)  
(Not peer-reviewed)

### Vaccines

- A study on the pilot-scale production of an inactivated SARS-CoV-2 vaccine candidate ([BBIP-CorV](#)) reports that the vaccine candidate induces high levels of neutralizing antibodies titers in mice, rats, guinea pigs, rabbits and non-human primates to provide protection against SARS-CoV-2. Findings suggest that two-dose immunizations using 2 µg/dose of BBIP-CorV provided highly efficient protection against SARS-CoV-2. Results of the study support the further evaluation of BBIP-CorV in a clinical trial.

### Infection Prevention and Control

- An analysis of data from Demographic and Health Surveys (DHS) of 16 countries in sub-Saharan Africa, using the most recent survey since 2015, reports that on [average, only 33.5% of households had access to clean water and soap, findings showed wide within-country disparities, disproportionately affecting the poorest households and rural residents.](#) These results highlight the need to scale up strategies interventions such as mass distribution of soap and ensuring access to clean water such as "tippy taps".

### Non-Pharmaceutical Interventions

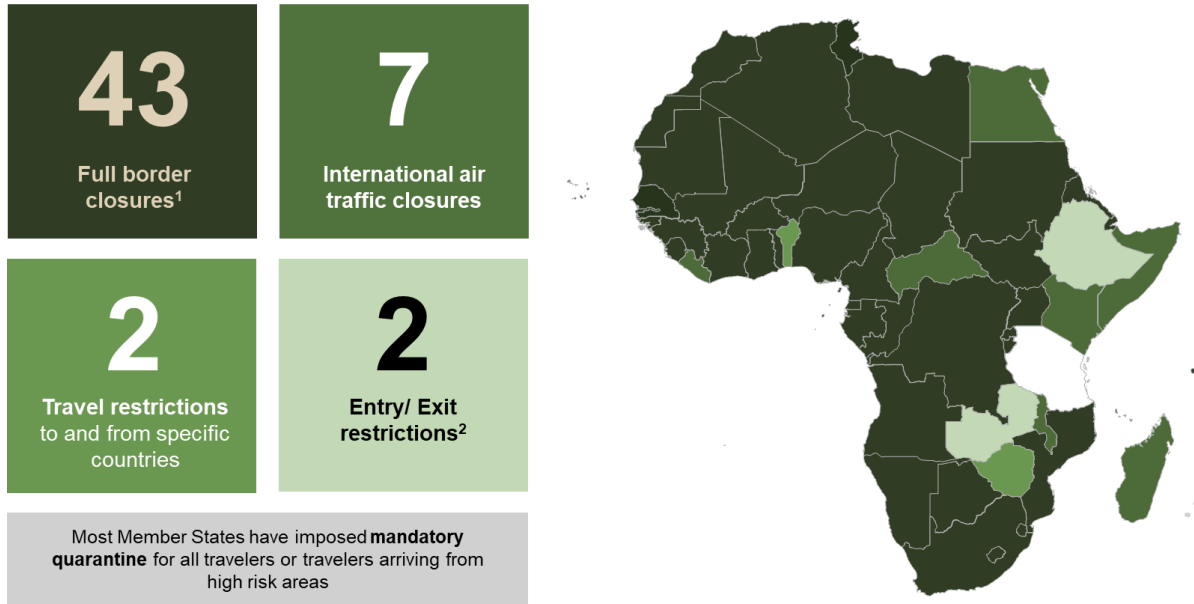
- This study compiled new data on 1,717 local, regional, and national non-pharmaceutical interventions (NPIs) deployed in the ongoing pandemic across localities in China, South Korea, Italy, Iran, France, and the United States (US). [Results suggest that in the absence of policy, early infection rates of COVID-19 grow 43% per day on average across these six countries.](#) And without the NPIs, China would have suffered 465 times more confirmed COVID-19 cases, Italy 17 times more and the USA 14 times more.
- A mathematical modelling study evaluated the impact of major interventions across 11 European countries. [Findings suggest that across all 11 countries, between 12 and 15 million individuals have been infected with SARS-CoV-2 up to 04<sup>th</sup> May, representing between 3.2% and 4.0% of the population.](#) Results show that major non-pharmaceutical interventions and lockdown, in particular, have had a large effect on reducing



transmission. Continued intervention should be considered to keep the transmission of SARS-CoV-2 under control.

## 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 07 June 2020)

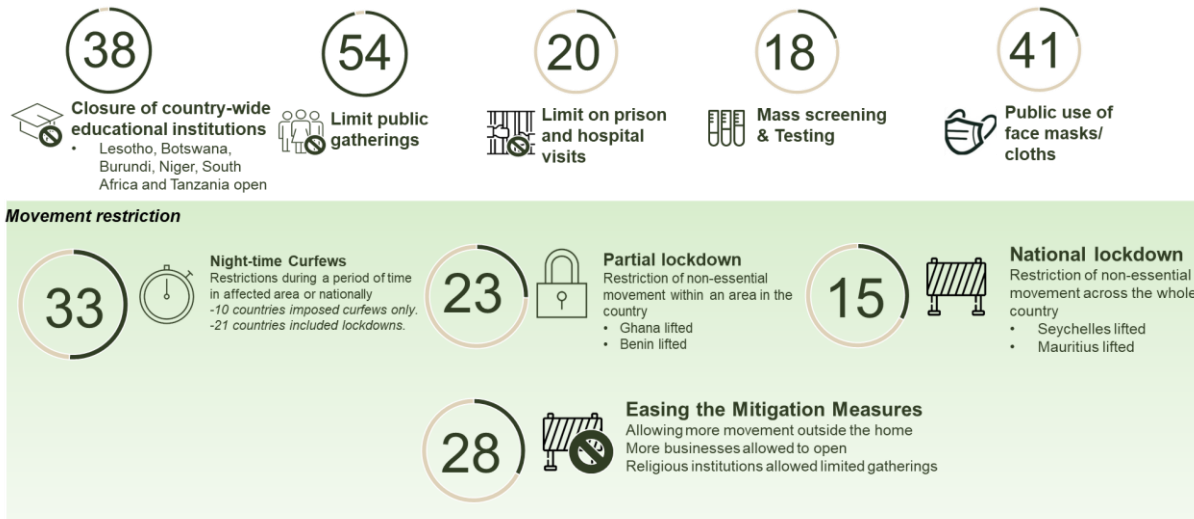


- 1 Some countries still allow cargo, freight and emergency transport into and out of the country; Some MSs will still allow citizens and residents to enter but all borders are essentially closed
- 2 Banning entry or exit of citizens or suspending visa issuance to specific countries

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

## E. Summary of physical distancing measures taken by Member States

Contents of this section include only publicly announced public health policies. Sources of this section include official government communique and press search. (as of 14 June 2020)

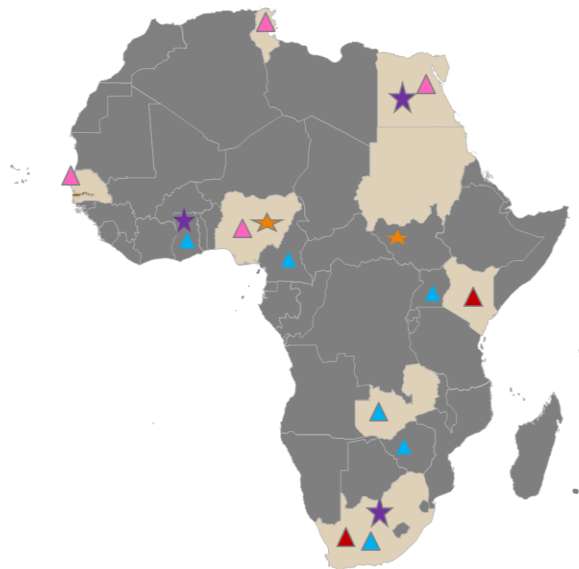


# of Member States that ■ Have implemented ■ Have not implemented

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

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

## F. Registered Clinical Trials in Africa (41)



### Hydroxychloroquine trials in Africa

- ▲ WHO Solidarity trial (Kenya and South Africa): Treatment
- ▲ Crown Coronation trial- Washington University/BMG (South Africa, Zambia, Cameroon, Ghana, Uganda, Zimbabwe): Prophylaxis in HCW
- ▲ Other HCQ trials, treatment: Egypt (4), Tunisia (1), Senegal (1), Nigeria (1),

### Other medications –ARVs, Herbal

- ★ Ghana, Egypt, South Africa,
- ★ Nigeria, S/Sudan

Date: 9 June 2020. Sources: clinicaltrials.gov, ICTRP

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