



Update: May 7 and 8, 2020

**UPDATE ON GLOBAL REGIONAL AND NATIONAL DEVELOPMENTS ON
COVID-19**

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Summary

- As of May 8, 13:30 GMT, Worldwide, nearly 4 million (3,946,118) people are now infected with novel coronavirus causing 271,667 deaths and 1,358,054 recoveries.
- The USA still accounting for the highest number of new cases and new deaths.
- Increase in number of infections is also recorded in Russia.
- As of May 08, 2020, 5:00 PM EAT, a total of 54,027 cases, 2,074 deaths and 18,636 recoveries were reported in Africa.
- According to a new modelling study by the World Health Organization Regional Office for Africa, up to 190 000 Africans could die of COVID-19 within the first year of the pandemic if containment measures fail. And up to 44 million Africans, or 26% of the African population, could be infected by the virus.
- A cluster of children with hyperinflammatory shock, showing features similar to atypical Kawasaki disease, Kawasaki disease shock syndrome, or toxic shock syndrome were identified in London.
- This has led World Health Organization experts to suggest that more research is needed to understand all of the clinical presentations of COVID-19 while emphasising that COVID-19 is primarily a respiratory disease.
- Regarding treatment, a randomized controlled trial conducted in china indicated that patients who were given lopinavir–ritonavir treatment did not lead to significant clinical improvement, reduced mortality, or diminish throat viral RNA detectability.
- The long-awaited report of an NIH funded New York study on hydroxychloroquine has been published in the NEJM. Hydroxychloroquine did not improve mortality or probably of intubation. The study recommends randomised controlled trials.
- More studies have showed that there was no significant difference with the use of ACE inhibitors and ARBs and the increased risk of contracting SARS CoV-2 or COVID-19 recommending not to stop or discontinue the use of ACE I or ARB.
- A recent study in China has indicated that most patients recovering from COVID-19 had significant posttraumatic stress symptoms showing that there is a need for compassionate and respectful care for the patients.

Recommendations

- Africa remains at high risk of suffering the worst impact if public health control measures fail. There is a need to innovate and do everything that can be done to implement the control measures as long as needed. Advocacy for global support and mitigation of economic impact is needed.
- Severity of illness in children may be underestimated. Needed precautions have to include children
- New symptoms and presentations of illness continue to emerge. In line with the WHO recommendation, it is important to characterise carefully the clinical features of illness. A robust framework, including carefully implemented research is essential.
- There is accumulating evidence on treatments that are not working. The latest evidence on hydroxychloroquine, based on the largest sample, suggest hydroxychloroquine is unlikely to be effective. Yet, given the lack of clinical trial-based data, further clinical trials are recommended.

Update on Epidemiology (Incidence, mortality, recovery & epidemiologic parameters)

Global

- As of May 8, 13:30 GMT, close to 4 million (3,946,118) people are infected with novel coronavirus worldwide causing 271,667 deaths and 1,358,054 recoveries.
- At the beginning of the pandemic, the percentage of critical or serious conditions were 5% of all active cases and this number was declined to 3% around the end of April. Currently, the percentage of critical or serious condition become 2%.
- A total of 96,262 new cases were reported in the last 24 hours which is massively higher than the last two days' report; 95,325 new cases on May 6th and 81,247 new cases on May 5th. In contrast, the number of new deaths is declined from 6,811 on May 6th to 5,589 on May 7th based on Worldometer data.
- The highest number of cases (1,293,893) and deaths (76,948) were reported from United States of America (USA) which accounted for 32.8% of total cases and 28.3% of total deaths in the world.
- New York, New Jersey and Massachusetts are the three most affected states in USA with a total of 546,248 cases; i.e. 42.2% of corona cases in the country.
- Comparing the last two days' report, the number of new cases in USA is slightly increased from 25,459 on May 6th to 29,531 on May 7th, while the number of new deaths declined from 2,528 to 2,129 deaths.
- In Russia, the number of new cases is persistently increasing in the last few days and the country is included among the five most affected countries in the world with a total of 187,859 cases. However, the total number of deaths reported until now (1,723) is interestingly very low compared to other most affected countries.
- Next to USA, Spain (260,117 cases), Italy (215,858 cases) and United Kingdom (UK) (206,715 cases) are the other countries severely hit by the pandemic.
- The UK's death toll from COVID-19 has exceeded 32,000 after adding deaths in Scotland and Northern Ireland making it the worst affected country in Europe. The UK has overtaken Italy (29,958) in terms of the total confirmed death toll but also in deaths per million population, as the UK now reports 486 deaths per million population, compared with 485 in Italy. According to the Office for National Statistics' latest weekly report on all registered deaths, there is an increment in the total care home deaths in the past two weeks. Sarah Scobie, the Nuffield Trust's deputy director of research, said that the social care sector had now become the epicentre of the COVID-19 pandemic in the country and reporting almost as many deaths in care homes as hospitals [Mahase, E. 2020]

Africa

- As of May 08, 2020 5:00 PM EAT, a total of 54,027 cases, 2,074 deaths and 18,636 recoveries were reported in Africa.
- South Africa is consistently the first country with a total of 8,232 cases and 161 deaths according to Worldometer report. The number of new cases reported within 24 hours (424 new cases) is almost doubled compared to the previous day report (236 new cases). Similarly, the number of new deaths also increased from 5 to 8 deaths on May 7th.
- Egypt is the second most affected country with 7,981 cases, followed by Morocco (5,661), Algeria (5,182) and Nigeria (3,526).
- Almost equal proportion of deaths were reported from Algeria (483) and Egypt (482) each contributing for 23.3% of total deaths in the continent.
- Other countries with high number of deaths include Morocco (185), South Africa (161) and Nigeria (107).
- According to a new modelling study by the World Health Organization Regional Office for Africa, up to 190 000 Africans could die of COVID-19 within the first year of the pandemic *if containment measures fail*.

- And up to 44 million Africans, or 26% of the African population, could be infected by the virus. A proactive approach needs to be taken now, or health systems will not be able to cope with an outbreak that could last for years.
- The number of patients requiring hospitalization and intensive care due to COVID-19 will “severely strain” the health capacities of countries, she added. The study predicts 3.6 million to 5.5 million COVID-19 hospitalizations, of which 82 000–167 000 would be severe cases requiring oxygen treatment, and 52 000–107 000 would be critical cases requiring more advanced breathing support.

Ethiopia

- Among the total 3,789 laboratory tests conducted within the last 48 hours, 32 additional COVID-19 cases were identified as of May 8, 5:30 PM EAT.
- All of the additional cases are Ethiopians, their age ranges from 17 to 65 years and majority (28/32) of them are males.
- Twenty four (24) of these cases were reported from Addis Ababa, 4 from Tigray region, 2 from SNNPR (Hadiya and Kembata Zone) and 2 from Oromia region (Borena quarantine and Addis Ababa Zuria special zone).
- Out of the 32 additional cases, only seven of them have travel history and five of them have contact history with confirmed COVID-19 case while the rest 20 are still under investigation.
- The ministry of health also reported that additional two people (1 from Addis Ababa, 1 from Oromia region) recovered from the disease raising the total number of recoveries to 95.
- Therefore, a total of 30,306 laboratory tests were conducted as of May 08, 2020 and 194 confirmed cases, 4 deaths and 95 recoveries were reported in the country.
- Currently, there are 93 active cases and one of them is in critical condition and admitted to intensive care unit. All of these cases are receiving medical care in the designated treatment centre.

Update on Pathogenesis

- A cluster of 8 children from London, UK, was reported in the Lancet. The children, who were mostly of Afro-caribbean descent, with hyperinflammatory shock, showing features similar to atypical Kawasaki disease, Kawasaki disease shock syndrome, or toxic shock syndrome
- Clinical presentations were similar, with unrelenting fever (38–40°C), variable rash, conjunctivitis, peripheral oedema, and generalised extremity pain with significant gastrointestinal symptoms. All progressed to warm, vasoplegic shock, refractory to volume resuscitation and eventually requiring noradrenaline and milrinone for haemodynamic support. Most of the children had no significant respiratory involvement, although seven of the children required mechanical ventilation for cardiovascular stabilisation. Other notable features (besides persistent fever and rash) included development of small pleural, pericardial, and ascitic effusions, suggestive of a diffuse inflammatory process.

Update on Treatment

A Trial of Lopinavir–Ritonavir in Adults Hospitalized with Severe Covid-19

- This was an open-label, individually randomized, controlled trial that was conducted in china with the aim of evaluating the efficacy and safety of oral lopinavir–ritonavir for adults Hospitalized with Severe COVID-19. Patients were enrolled from 18th January 2020 to 3rd February 2020. patients Enrolled participants were randomized in to two arms where one receives either lopinavir–

ritonavir (400 mg and 100 mg, orally) twice daily, plus standard care, or standard care alone, for 14 days. Of the 199 patients who underwent randomization, 99 patients were assigned to receive lopinavir–ritonavir and 100 patients to standard care alone. The results of the trial found that lopinavir–ritonavir treatment did not significantly accelerate clinical improvement, reduce mortality, or diminish throat viral RNA detectability in patients with serious COVID-19 (Cao et al., 2020).

Hydroxychloroquine

- Results of the long-awaited NIH funded observational study from New York examining the association between hydroxychloroquine use and intubation or death was published in the New England Journal of Medicine.
- The study recruited 1376 patients, during a median follow-up of 22.5 days, 811 (58.9%) received hydroxychloroquine (600 mg twice on day 1, then 400 mg daily for a median of 5 days); 45.8% of the patients were treated within 24 hours after presentation to the emergency department, and 85.9% within 48 hours. Hydroxychloroquine-treated patients were more severely ill at baseline than those who did not receive hydroxychloroquine (median ratio of partial pressure of arterial oxygen to the fraction of inspired oxygen, 223 vs. 360). Overall, 346 patients (25.1%) had a primary end-point event (180 patients were intubated, of whom 66 subsequently died, and 166 died without intubation). In the main analysis, there was no significant association between hydroxychloroquine use and intubation or death (hazard ratio, 1.04, 95% confidence interval, 0.82 to 1.32). Results were similar in multiple sensitivity analyses.

Renin–Angiotensin–Aldosterone System Blockers and the Risk of Covid-19

- Studies in animals have shown that angiotensin-converting enzyme 2 (ACE2), a membrane-bound aminopeptidase that is abundantly expressed in the lungs, the heart, and other tissues, is used by coronaviruses as a functional receptor for their entrance into the cells. Angiotensin-receptor blockers (ARBs) and ACE inhibitors are considered first-choice drugs in hypertension, heart failure, post–myocardial infarction states, and chronic kidney disease and also increase the expression of ACE2. Given these facts and observations, the hypothesis that their use may modify susceptibility to infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in humans has developed. There is, however, no consensus as to whether the risk and severity of SARS-CoV-2 infection might be increased or reduced with the use of such agents (Mancia et al., 2020).
- Recently studies are indicating that there is no significant difference with the use of ACE inhibitors and ARBs and the increased risk of contracting SARS CoV-2. One such study is a population-based case–control study conducted in Italy. The result showed that the use of ACE inhibitors and ARBs was more frequent among patients with COVID-19 than among controls because of higher prevalence of cardiovascular disease. However, there was no evidence that ACE inhibitors or ARBs affected the risk of COVID-19. Another study retrospectively studied the association between the use of ACEIs/ARBs with the likelihood of testing positive for COVID-19. This study found no association between ACE I or ARB use and COVID-19 test positivity. These clinical data support current professional society guidelines to not discontinue ACEIs or ARBs in the setting of the COVID-19 pandemic (Mancia et al., 2020, Mehta et al., 2020).

Update on personal protective equipment

Facemask use

- A study was conducted to explore the importance of respiratory droplet and aerosol routes of transmission focusing on coronaviruses, influenza viruses and rhinoviruses, by quantifying the amount of respiratory virus in exhaled breath of participants with medically attended acute respiratory illnesses and determining the potential efficacy of surgical face masks to prevent respiratory virus transmission. The results presented were

from 111 participants out of which 17 had coronavirus confirmed by RT-PCR and the rest having influenza, rhinovirus and a combination. The findings showed that coronavirus was detected in respiratory droplets and aerosols in 3 of 10 (30%) and 4 of 10 (40%) of the samples collected without face masks, respectively. However, no virus was detected in respiratory droplets or aerosols collected from participants wearing face masks and it was noted this difference was significant in aerosols and showed a trend toward reduced detection in respiratory droplets. This indicates that surgical masks could prevent transmission of human coronaviruses from symptomatic individuals and also show that aerosol transmission is a potential mode of transmission for coronaviruses (Leung et al., 2020).

Update on Psychosocial Wellbeing

- COVID 19 survivors may have increased risk of suicide due to psychological and neurobiological reasons. The psychological factors resulted from being infected, anxiety, distress linked with the disease symptoms, and hospitalisation, especially isolation. The social stigma, isolation and fear of infecting other people may lead to serious psychological trauma. This could be serious for patients with low resilience (Cambridge, 2020).
- A recent study in China has also indicated that 96.2% of patients recovering from COVID-19 had significant posttraumatic stress symptoms (Bo et al., 2020). This implies that there is a need for compassionate and respectful care for the patient. The therapeutic alliance and communication is altered by the air tight PPE and tense working environment. While the increased risk of suicide among COVID 19 patients needs to be noted, reporting on such deaths, particularly by the media, has to be according recommended standards.

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