



**Update: 2 & 3 June, 2020**

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

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## Summary

- As of June 03, 10:00 GMT, 6,474,141 cases and 382,914 deaths were reported.
- As of June 3rd, 5:00 PM EAT, a total of 158,318 cases 4,508 deaths and 67,630 recoveries from COVID-19 were reported in Africa.
- Phase 3 trial of Gilead Sciences, Inc. announced results of hospitalized patients with moderate COVID-19 pneumonia (600 patients) and reported that:
  - Remdesivir was generally well-tolerated in both the 5-day and 10-day treatment groups.
  - Nausea, diarrhoea and headache were the adverse events observed.
  - Result from expansion phase of the study is expected in the coming months.
- COVID-19 antibody treatment which can possibly block viral attachment and entry into human cells has begun on the first human being. Result is expected by the end of this month.
- Preparation by strengthening testing capacity, declaring a state of disaster, national lockdown and active house to house case findings are reported to be some of the responses of the pandemic in South Africa.
- Systematic review and meta-analysis showed no one intervention is 100% protective and that combinations of physical distancing, face mask use, and other interventions are needed to mitigate the COVID-19 pandemic until an effective vaccine is discovered.
- UK has introduced today a requirement for 'self-isolation' of two weeks with information on contact details for visitors as a measure. A breach of 'self-isolation' will attract penalty of £1,000
- Survey of 1379 health workers in Italy showed high rates of mental disorders among health professionals: post-traumatic stress 49.3%, depression 19.8%, anxiety symptoms (8.27%), and insomnia (21.9%).

## Recommendations

- As borders begin to open, the capacity for providing quarantine facilities, such as hotels, will become challenging. Establishing procedures for self-isolation and tracking that people are actually adhering to such standards are needed before the need becomes overwhelming.

- Similarly, with the increasing number of infections, admitting everyone with infection may become unrealistic. It seems appropriate to consider developing a standard operating procedure for people with mild symptoms to self-isolate in their homes. If considered appropriate, such procedures need to be developed before the health system is overwhelmed by the need. Additional benefit of this approach is that healthcare resources could be dedicated to look after people with more serious illness.
- Still ongoing public education that no one intervention is 100% protective and that combinations of physical distancing, face mask use, and hygienic practices are needed to mitigate the COVID-19 pandemic
- The approach of South Africa is similar to what Ethiopia is doing. The approach is summarised and would be worth considering potential lessons.

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

### *Global*

- Novel coronavirus affected 213 countries and territories around the world causing 6,474,141 cases and 382,914 deaths as of June 03, 10:00 GMT.
- The percentage of recoveries is slightly increased to 3,083,650 (89 %) while it was 87 % last week and only 85 % at the beginning of the pandemic.
- Comparing the last two days' report, the number of new cases is significantly increased from 103,946 on June 1st to 115,215 on June 2nd. Similarly, the number of new deaths is significantly increased between these two days (from 3,053 to 4,669).
- In the United States of America (USA), more than 1.8 million (1,881,256) people are infected with the virus and 108,062 people have died as of June 3rd, 10:00 GMT.
- Consistently, New York is the most affected state with a total of 381,912 cases and 30,078 deaths followed by New Jersey (163,147 cases & 11,783 deaths) and Illinois (122,848 cases & 5,525 deaths).
- The number of new cases in USA is marginally decreased from 22,153 cases on June 1st to 21,882 cases on June 2nd. In contrast, the number of new deaths is substantially increased from 730 to 1,134 on June 2nd.
- Next to USA, Brazil (558,237 cases), Russia (432,277 cases), Spain (287,012 cases) and United Kingdom (277,985 cases) are other most affected countries with corona virus in the world.

- These countries also reported high number of deaths each accounting for large proportion of total deaths in the world; United Kingdom 39,369 (10.3 %), Italy 33,530 (8.7%), Brazil 31,309 (8.2%), France 28,940 (7.6%) and Spain 27,127 (7.1 %).

### **Africa**

- As of June 3rd, 5:00 PM EAT, a total of 158,318 cases 4,508 deaths and 67,630 recoveries from COVID-19 were reported in Africa.
- Persistently, South Africa is the leading country with a total of 35,812 cases contributing for almost one fourth (22.6%) of total cases in the continent.
- Egypt is the second most affected country (27,536 cases) followed by Nigeria (10,819 cases), Algeria (9,626 cases), Ghana (8,297 cases) and Morocco (7,910 cases).
- More than 1000 (1052) people in Egypt have died due to COVID -19 which is the highest number death reported so far. Other countries with high number of deaths include South Africa (775), Algeria (667), Nigeria (315), Sudan (307), Morocco (206) and Cameroon (200) which in total accounted for more than half (54.8%) of total deaths in the continent.

### **Ethiopia**

- According to the Ministry of Health report, a total of 8,052 laboratory tests were carried out with in 48 hrs and 229 additional COVID-19 cases were identified in the country.
- All of the additional cases are Ethiopians except two cases with Portuguese and Djibouti citizen. The age of these cases ranges from 7 to 78 years and almost two third 143 (62.5%) of them are males.
- Out of the 87 additional cases identified yesterday, only 28 of them have travel history and 18 have contact history with confirmed COVID-19 case while the other 41 of them have no travel or contact history. The source of exposure for 142 new cases identified on June 3rd is not yet notified.
- Majority 193 (84.3%) of these cases were reported from Addis Ababa,13 from Amhara, 13 from Oromia, 2 from Tigray, 5 from Somali, 1 from Hareri, and 2 from Afar region.
- From the total cases reported so far, 65 of them are health professionals who were giving service in different parts of the country.
- The ministry also reported that additional 29 people (6 from Addis Ababa, 6 from Oromia and 17 from Somali region) are fully recovered from the disease raising the total number of recoveries to 246.
- In addition, five people (3 females and 2 males) have passed away on June 2nd and June 3rd raising the total number of deaths in the country to 17.
- Therefore, a total of 120,429 laboratory tests were conducted and 1,486 confirmed cases, 17 deaths and 246 recoveries were reported as of June 3rd, 6:30 PM EAT.

- Out of the total 1,219 active cases, six of them are in critical condition and receiving treatment in the intensive care unit, while the others are having mild form of the disease.

### Update on Diagnosis

- An ongoing study in the United States reported, in a pre-print article, the development and validation of at -home finger-prick dried blood spot collection kit and an analysis method. Eligible participants received a dried blood spot mailer kit that included comprehensive instructions for self-collection of finger-prick spots. The mailer kit contained a pre-printed return label to ship the kit back to the laboratory. A total of 56 specimens were received for the study, where 31 were from COVID-19 patients and 25 were from healthy donors. The preliminary results showed 100% sensitivity and 100% specificity from mailer -based finger-prick dried blood spot specimens. It was indicated this method can greatly facilitate the conduct of unbiased serosurveys within hard to reach populations and help reduce the sample collection burden of serological testing on both health care systems and individuals alike if proven at a large scale (Danh et al., 2020).

### Update on treatment

- Gilead Sciences, Inc., announced results from a Phase 3 trial in hospitalized patients with moderate COVID-19 pneumonia. This open-label study evaluated 5-day and 10-day courses of the investigational antiviral remdesivir plus standard of care, versus standard of care alone. The primary endpoint was the clinical status as assessed by a 7-point ordinal score at Day 11, ranging from hospital discharge to increasing levels of oxygen and ventilator support to death. The secondary study objective was the rate of adverse events in each remdesivir treatment group compared with standard of care. At Day 11, a higher proportion of patients in the 5-day treatment group achieved improvement in clinical status versus the standard of care group, achieving statistical significance for a  $\geq 1$ -point improvement in ordinal scale ( $p=0.026$ ). According to the press release Remdesivir was generally well-tolerated in both the 5-day and 10-day treatment groups. The most common adverse events occurring in more than 5 percent of patients in both treatment groups were nausea, diarrhea and headache. This report was based on the results from 600 patients. An expansion phase of the study was added to enrol up to 1,000 additional patients with moderate disease and additional results from the expansion phase are expected in the coming months(GILEAD Inc 2020).

- Lilly has announced that they begin a study of a potential COVID-19 antibody treatment in Humans. First patients have been dosed in a Phase 1 study of LY-CoV555 which is a potent, neutralizing IgG1 monoclonal antibody (mAb) directed against the spike protein of SARS-CoV-2. It is designed to block viral attachment and entry into human cells, thus neutralizing the virus, potentially preventing and treating COVID-19. The placebo-controlled study will assess safety and tolerability in patients hospitalized with COVID-19 with results anticipated by the end of June. Phase 1 results Should show the antibody can be safely administered, Lilly will initiate a Phase 2 proof of concept study to assess efficacy in vulnerable populations and non-hospitalized COVID-19 patients (LILY 2020).

### Update on Public health control measures

Recent publications have documented South Africa's response to the pandemic. The response involved eight major overlapping stages. Establishing a high-level advisory committee which contains 51 experts with a strong background in Epidemiology, virology, public health and mathematical modelling was among the initial steps.

1. The first stage was preparation, it involved bracing for the looming outbreak in every form and strengthening testing capacity (Karim, S. S. A, 2020).
2. The second stage involved declaring a state of disaster, banning flights, closing schools, and social distancing. This came to effect ten days after the first case was reported and the total number of cases reached 51.
3. Despite declaring a state of disaster, the number of cases kept increasing with a doubling time of only two days. If the number of cases has increased at this rate, soon it would reach the maximum capacity of the health system, warranting a national lockdown. The lockdown has extended the doubling time to 15 days, giving a breathing space for the health system (Karim, S. S. A, 2020). The merit of a lockdown measures in reducing hospitalization from COVID-19 was also reported in another study from the US. The study compared the predicted number of hospitalizations with the actual after an average of four weeks into the lockdown. There was a significant difference between the predicted and actual hospital admissions in all the four study states (i.e. Colorado, Minnesota, Ohio, Virginia) (Sen, S, 2020).

4. As the lockdown eased, active house to house case finding was launched employing 28,000 community health workers. More than 11 million people were screened, with the electronic records on individual patients and the GPS location of each household captured and sent to central server, making it easier to get real time data and locate high risk households using the geolocation (Karim, S. S. A, 2020). The existing community-based surveillance structure for HIV/AIDS was helpful in streamlining the surveillance activities (El-Sader, W. M, 2020).
5. Stage five involved identification of hot spots and deal with the target with intensified testing and isolation.
6. In stage six, preparing field hospitals to accommodate the surge in the number of cases.
7. Preparing for death and mental health impacts of bereavement was the seventh step.
8. The final step was conducting sero surveys and preparing the system for the potential next wave of the pandemic (Karim, S. S. A, 2020).

## **Update on personal protective equipment**

### ***Face mask use***

- Results from a systematic review and meta-analysis from 172 observational studies and 44 comparative studies on SARS, MERS, COVID-19, and the betacoronaviruses that cause severe acute respiratory syndrome showed that masks and respirators reduced the risk of infection by 85%, with greater effectiveness in healthcare settings than in the community. It was noted that the difference attributes to the predominant use of the more effective N95 respirators, in health-care settings. It was also revealed respirators and multilayer masks are more protective than are single layer masks. The results also indicated masks were equally effective in both health-care and community settings when adjusted for type of mask use. The other finding was that eye protection resulted in 78% reduction in infection and also physical distance of 1 meter in both health-care and community settings showed a reduction in risk of 82% and every additional 1 meter of separation increased the relative protection. The authors concluded no one intervention is completely protective and that combinations of

physical distancing, face mask use, and other interventions are needed to mitigate the COVID-19 pandemic until an effective vaccine is discovered. (Chu et al., 2020).

### Psychosocial wellbeing updates

- Internet-based survey of 1379 health workers in Italy reported high prevalence of post-traumatic stress (49.30%), depression 19.8%, anxiety symptoms (8.27%), and insomnia (21.9%) (Rossi et al., 2020).
- The response for COVID 19 should include mental health interventions for health workers and general population (Otu et al., 2020).

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