



Update: 23 & 24 June, 2020

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

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Summary

- Globally, as of June 24, 14:00 GMT, 9,394,595 cases, 480,602 deaths and 5,079,150 recoveries were reported. Highest number of new cases were reported globally on 24th June (139,607 on June 23rd to 162, 994 on June 24th).
- A total of 324,696 cases, 8,618 deaths and 154,170 recoveries were reported in Africa as of June 24th, 5:00 PM EAT.
- A retrospective cohort study noted that some children with SARS-CoV-2 might have severe disease with requirement for intensive care admission.
- Concerning RT-PCR diagnostic tool performance, a study on 13 commercial assays, revealed all kits included in this study exhibited PCR efficiencies >90% except one which was 80%.
- Gilead pharmaceutical announced that it is about to start trial of remdesivir inhaled version through a nebulizer. The inhaled formulation studies are one means of exploring the use of remdesivir in the earlier stages of COVID-19.
- The University of the Witwatersrand, Johannesburg, announced that the first clinical trial in South Africa and on the continent for a COVID-19 vaccine will begin this week.
- It was noted that individual (psychological preparedness, and self-care) and organisational level resilience and organisational justice enhancing preventive strategies should be employed to bring about psychological wellness.

Recommendations

- As indicated previously, the pandemic remains uncontrolled. The economic impact of the pandemic in an interdependent world is likely to continue in the immediate future. With the lack of global leadership, regional and local innovations on control and economic re-engagement should be pursued.
- Predominantly those with underlying medical conditions should be provided with extra attention.
- Not all commercial RT-PCR assays have optimum performance.
- Research on individual and organisational resilience and organisational justice is needed.

Update on pathogenesis

COVID-19 and children

- Previous studies reported that children with COVID-19 usually present with fewer symptoms and less severe disease compared with adults, with correspondingly lower case-fatality rates. Recently, a retrospective cohort study was done among paediatric patients

who presented at Great Ormond Street Hospital, London, UK (a specialist children's hospital). The study reviewed the medical record of 65 children who tested positive for SARS-CoV2 from March 1 to May 15, 2020. The patients were classified regarding vulnerability group using NHS Digital methodology. The major findings of the study include;

- 31 (48%) of children were classed as vulnerable.
 - 29 (45%) patients were admitted to the intensive care unit. Of this, 14 (48%) were classified as vulnerable.
 - Out of the total admitted, 18 (62%) required mechanical ventilation, of whom ten (56%) were classed as vulnerable.
 - Those patients classed as vulnerable had a significantly longer hospital stay (11 days) compared with patients classed as non-vulnerable (4 days)
 - One patient died because of an underlying medical condition.
- Therefore, the study concluded that some children with SARS-CoV-2 might have severe disease with requirement for intensive care admission. Particularly those with underlying medical conditions require special attention including shielding [Richard et al, 2020].

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

Global

- Novel coronavirus has caused 9,394,595 infections, 480,602 deaths and 5,079,150 recoveries as of June 24, 14:00 GMT.
- Comparing the last two days' report, the number of new cases is vastly increased from 139,607 on June 23rd to 162,994 on June 24th. Similarly, the number of new deaths is significantly increased between these two days (from 3,880 to 5,465).
- Consistently, United States of America (USA) continues to be the leading country with both high number of cases and deaths in the world. As of June 24th, 14:00 GMT, more than 2.4 million (2,425,507) people were infected with the virus and 123,504 deaths were reported in the country contributing for more than one fourth (26%) of total cases and deaths in the world.
- Both the number of new cases and new deaths in USA is substantially increased in the last two days; (from 31,496 new cases & 363 new deaths on June 23rd to 36,015 new cases & 863 new deaths on June 24th). The country has also reported its highest number of new cases.
- Next to the USA, Brazil (1,152,066 cases), Russia (606,881 cases), India (461,828 cases) and United Kingdom (306,210 cases) are other most affected countries with COVID-19.

- These and other European countries also reported high number of deaths, each accounting for large proportion of total deaths in the world; Brazil 52,788 (11.0%), United Kingdom 42,927 (8.9 %), Italy 34,675 (7.2%), France 29,720 (6.2%) and Spain 28,325 (6.0%). However, total number of deaths in India (14,577 deaths) and Russia (8,513) is very low compared to the high number of cases reported in both countries.

Africa

- According to Africa CDC, a total of 324,696 cases, 8,618 deaths and 154,170 recoveries were reported as of June 24th, 5:00 PM EAT.
- South Africa remained the first country with a total of 106,108 cases and 2,102 deaths followed by Egypt (58,141 cases), Nigeria (21,371 cases), Ghana (14,568 cases), Algeria (12,076 cases) and Cameroon (12,270 cases).
- As compared to previous day's report, the number of new cases within the last 24 hours is significantly increased in majority of these countries; South Africa (4,288 to 4,518), Algeria (149 to 1,56), Cameroon (149 to 229), and Ghana (147 to 414), while it's reduced in Egypt (1,576 to 1,332) and Nigeria (675 to 452).
- The highest number of deaths is reported from Egypt (2,365 deaths) which accounted for more than one fourth 27.4% of total deaths in the continent.
- Other African countries with high number COVID-19 deaths include; Algeria 861 (10.0%), Sudan 548 (6.4%), Nigeria 533 (6.2%) and Cameroon 313 (3.6%).

Ethiopia

- According to the Ministry of Health report, a total of 7,809 laboratory tests were carried out within 48 hours and 371 additional COVID-19 cases were identified in the country.
- Three hundred sixty five (365) of these cases are Ethiopians while the rest 5 are citizen of other countries. The age of the additional cases ranges from 3 months to 80 years and more than two third 251 (67.7%) of them are males.
- Majority 307 (82.8%) of these cases were reported from Addis Ababa, 18 from Somali, 14 from Afar, 11 from Oromia, 8 from Dire Dawa, 8 from SNNPR, 2 from Amhara, 1 from Tigray, 1 from Gambella and 1 from Hareri region.
- The ministry also reported that additional 189 people (224 from Addis Ababa, 23 from Amhara, 7 from Tigray, 6 from Oromia, 3 from Hareri, 2 from Gambella, 2 from SNNPR and 2 from Somali) are fully recovered from the disease raising the total number of recoveries to 1,486.
- In addition, three people (2 females and 1 male) have passed away in the last two days raising the total number of deaths in the country to 78.

- Therefore, a total of 227,375 laboratory tests were conducted and 5,034 confirmed cases, 78 deaths and 1,486 recoveries were reported as of June 24th, 6:00 PM EAT.
- Out of the total 3,468 active cases, 38 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

- One article presented results from a direct comparison of key performance characteristics of 13 commercial RT-PCR assays. The assays included were made in USA, Germany, Italy, China and Korea and they were selected based on the criteria that they can be used following generic RNA extraction protocols, on common PCR platforms and availability. The performance was assessed compared to an in house validated assay. The results showed all RT-PCR kits included in this study exhibited PCR efficiencies >90%, except for the Italy made Sentinel Diagnostics B E-gene RUO assay (80%). It was also noted the analytical sensitivity varied between 3.3 RNA copies to 330 RNA copies and that only one assay (Kogene Biotech kit, Korea) cross reacted with another human coronavirus (MERS) (Igloi et al., 2020).

Update on treatment

- Gilead, a pharmaceutical that is behind the trials regarding the investigational antiviral medicine remdesivir, announced on 22 June 2020 that it is about to start trials of an inhaled version of remdesivir. The trial will screen healthy volunteers for Phase 1 trials this week and hope to begin studies in patients with COVID-19 in August. Remdesivir, is currently given to patients intravenously through daily infusions in the hospital. An inhaled formulation would be given through a nebulizer, which could potentially allow for easier administration outside the hospital, at earlier stages of disease. That could have significant implications in helping to stem the tide of the pandemic. The company further explained that, the inhaled formulation studies are one means of exploring the use of remdesivir in the earlier stages of COVID-19(Gilead Inc 2020).
- The University of the Witwatersrand, Johannesburg (Wits) announced that the first clinical trial in South Africa and on the continent for a COVID-19 vaccine will begin this week. The South African Ox1Cov-19 Vaccine VIDA-Trial aims to find a vaccine that will prevent infection by SARS-CoV-2. The technical name of the vaccine is ChAdOx1 nCoV-19, as it is made from a virus called ChAdOx1, which is a weakened and non-replicating version of a common cold virus (adenovirus). The vaccine has been engineered to express the SARS-

CoV-2 spike protein. The vaccine is already being evaluated in a large clinical trial in the UK where more than 4,000 participants have already been enrolled. In addition to the South African study, similar and related studies are about to start in Brazil. An even larger study of the same vaccine of up to 30,000 participants is planned in the US. It was expressed in the announcement that prior to launch, the South African study was subject to rigorous review and has been approved by the South African Health Products Regulatory Authority (SAHPRA) and the Human Research Ethics Committee of the University of the Witwatersrand (Wits University 2020).

Psychosocial wellbeing updates

- A narrative summary of the available individual and organisational level resilience enhancing strategies has indicated that preventive strategies such as psychological preparedness, and self-care were mentioned as individual level strategies. Coming to the organisational level, organisational justice was mentioned as a strategy to promote resilience of health workers. Organisational justice refers to fairness, employees respect and culture in the workplace. Good communication and supportive professional leadership were also mentioned as protective from burnout (Heath et al.).
- A cross sectional study from Iran showed that more than half of health workers (53%) experience high levels burnout. Gender and age were found to be associated with high level of burnout (Jalili et al., 2020).

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