

This update summarizes:

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ETHIOPIA'S COVID-19 SITUATION UPDATES

- Since the last brief (15 April 2021), 12,079 new confirmed corona virus disease 2019 (COVID-19) cases and 222 new deaths have been reported nationally. To date, a total of 246,484 COVID-19 cases and 3,474 related deaths (case fatality rate (CFR): 1.41) have been reported from 9 regions and 2 city administrations in the country. Compared to the cases and deaths reported a week ago, the national cumulative case and deaths showed increment by 4% and 5% respectively.
- The distribution of cumulative cases by region is top in Addis Ababa (161,226) followed by Oromia (34,165). Over the last seven days, top new case reporting regions were Addis Ababa and Oromia region, each reported more than 8k and 1k new cases respectively. Those two top reporting regions account for 79.5 % of new cases identified over the week (Fig 1).

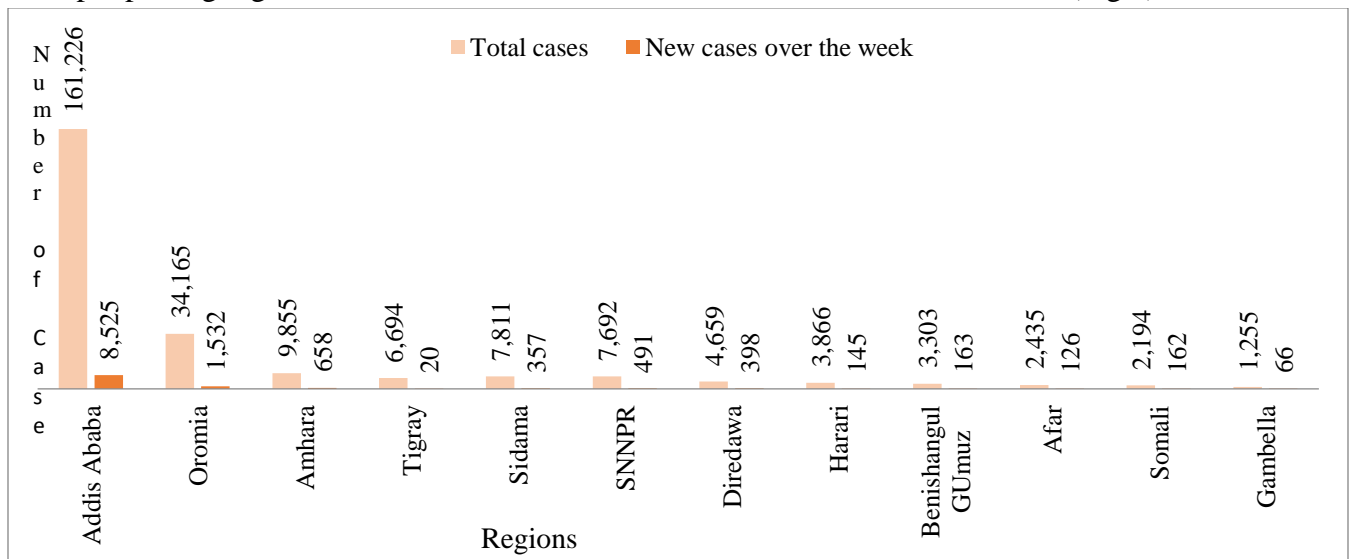


Fig1: Total cases and new cases (over a week time) by region.

- There are 60,135 active cases currently, of which 1,059 (1.76%) of them are critical. So far 183,932 cases have recovered from COVID-19, out of which 9,341 recoveries were over the last one week period which increased by 4% compared to the last week (Fig 2).

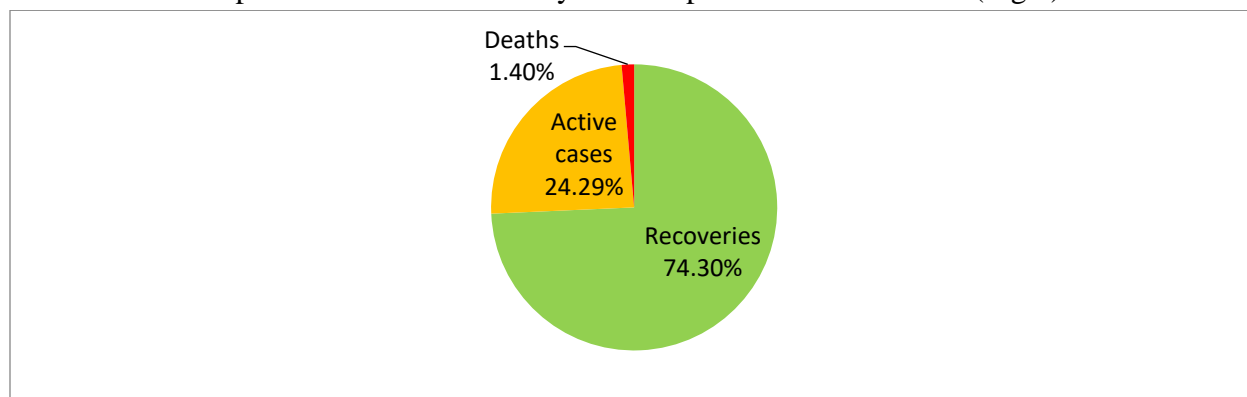


Fig 2: Proportions of active cases, recoveries and death as of April 22, 2021.

- The total number of tests done to date is 2,521,604 showing a 1% increase compared to last week. Among 52,011 laboratory samples tested over the last one week duration, 12,079 of them tested positive for COVID-19, yielding a positivity rate of 23.22%.
- The highest single day positivity rate within the last week was recorded in Somali (80%), Direedawa (70%) and Benishangul-Gumuz (69%) while the least was in Afar (8%), Amhara (15%) and Gambella (21%). In Addis Ababa and Oromia, who were the top new case reporting regions, the highest single day positivity rate was 27% and 45% respectively

Case Management and Infection Prevention Control (Ipc).

- This week, April 15- April 22, 2021, there are 9,564 newly recovered cases bringing the total number of COVID-19 recovered cases to 183, 932.
- There are 1059 patients in severe condition as of April 22, 2021 and all the other patients are on medical care in stable condition.

Home Based Isolation and Care (HBIC).

Since Home Based Isolation and Care (HBIC) is started in Ethiopia:

- A total 153, 505 COVID-19 confirmed cases are followed in the HBIC as of April 22, 2021.
- 131,883 of them have recovered in the HBIC as of April 22, 2021.
- 23,315 cases are currently on HBIC.
- 26 COVID-19 related deaths have occurred in the HBIC.
- 1,903 cases have been transferred from treatment centers to HBIC.
- 679 cases have been transferred from HBIC to treatment centers.

EPHI and FMOH COVID 19 response highlights of the week /trainings and supply.

- There is on-going distribution of PPE, Viral Transport Media (VTM), swabs, pharmaceuticals and other medical supplies to isolation and treatment centers.

References

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2. https://twitter.com/lia_tadesse
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GLOBAL AND REGIONAL BURDEN OF COVID-19.

- Globally the total number of cases is extended to 144,454,214 as of April 22, 2021. A total of 122,932,207 cases recovered and 3,071,791 people died since the beginning of the outbreak. Globally, in a week time, from April 15 to April 22, 2021, COVID-19 cases increased by 4% and deaths by 2.9%. In the past week, Europe was the leading in terms of cases followed by North America and Asia. Europe continued to be became a lead in terms of the number of deaths followed by North and South America (Table 1).

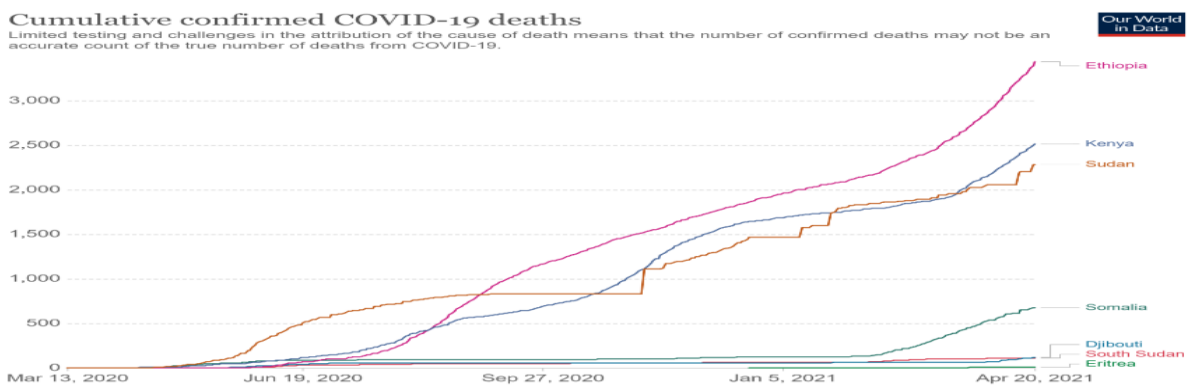
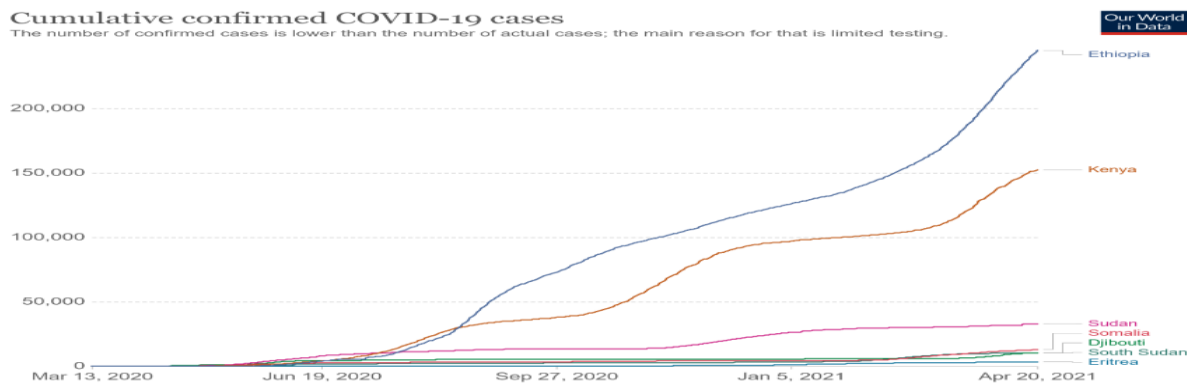
Table 1. Global cases (top) and deaths (bottom) reported as of April, 2021.

| | COVID cases | Weekly % change | deaths | Weekly % change |
|---------------|-------------|-----------------|---------|-----------------|
| Global | 144454214 | 4.0 | 3071791 | 2.9 |
| Europe | 43301292 | 2.7 | 986239 | 2.4 |
| North America | 37673332 | 1.6 | 850898 | 1.1 |
| Asia | 35140565 | 9.0 | 478542 | 5.0 |
| South America | 23775355 | 3.9 | 635683 | 4.7 |
| Africa | 4501027 | 1.8 | 119230 | 1.9 |
| Oceania | 61922 | 2.6 | 1184 | 2.5 |

- USA has recorded the highest number of cases 1.4% (32,149,223 to 32,602,051 cases) and 0.9% (578,092 to 583,330deaths) that accounts 22.6% of the total global cases and carried 19% of global deaths as of April 22, 2021.
- India is the 2nd highest in terms of cases in a week time by 13.2% (14,070,890 to 15,930,965) and deaths by 6.7% (173,152 to 184,672).
- Brazil became the 2^{3d} rand worldwide with increased number of cases in a week time by 3.3% (13,677,564 to 14,122,795) and deaths by 5.4% (362,180 to 381,687).
- France ranked 4th globally with 5,374,288 cases and 101,881 deaths.
- Russia ranked 5th globally replaced France with 4,727,125cases and 106,706 deaths.
- The line share of Africa to the global COVID-19 pandemic was 3.1% and 3.9% of the global cases and deaths as of April 22). The cases in the continent have increased by 1.8% in a week time (4,421,267 to 4,501,027 cases). Similarly, the total number of deaths in Africa has increased from 117,050 to 119,230 showing 1.9%. Total recoveries stand at 4,023,153.
- South Africa is the leading in the continent with 1,569,935 cases and 53,940 deaths. Morocco (507,338 cases, 8,969 deaths), Tunisia (291,833 cases, 9,993 deaths), Ethiopia (246,484 cases, 3,474 deaths) and Egypt (218,902 cases, 12,866 deaths) are the most four leading countries next to South Africa in reporting COVID-19 cases in Africa. (See table below).

| Africa | April 15 | | April 22 | |
|--------------|-----------|--------|-----------|--------|
| | Cases | Deaths | Cases | Deaths |
| South Africa | 1,561,559 | 53,498 | 1,569,935 | 53,940 |
| Morocco | 503,664 | 8,920 | 507,338 | 8,969 |
| Tunisia | 276,727 | 9,480 | 291,833 | 9,993 |
| Ethiopia | 234,405 | 3,252 | 246,484 | 3,474 |
| Egypt | 212,961 | 12,570 | 218,902 | 12,866 |

- In East African, COVID-19 cases and deaths have shown fast progress. As of March, Ethiopia and Kenya continued to be the major drivers of the COVID 19 burden in east African countries.



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NEUROLOGIC AND PSYCHIATRIC CONSEQUENCES AFTER COVID-19.

- Since the COVID-19 pandemic began, it was known that the neurological and neuropsychiatric disorders during acute COVID-19 illness occurs.
- Later there was the evidence that survivors are indeed at increased risk of mood and anxiety disorders in the 3 months after infection.
- Recent retrospective cohort study and time-to-event analysis and data collected from the TriNetX electronic health records network revealed that:-
 - ✓ The neurologic and Psychiatric Consequences after COVID-19 infection are more common than with other respiratory illnesses and influenza.
 - ✓ Most commonly identified neurological or psychiatric disorders were after 6 months of COVID 19 were intracranial haemorrhage, ischaemic stroke, Parkinsonism, dementia, anxiety disorder, psychotic disorder
 - ✓ In the six months after diagnosis, 33.6% of patients with COVID-19 had a subsequent diagnosis of any neurologic or psychiatric illness
 - ✓ The incidence of a neurological or psychiatric illness were higher in patients who had more severe COVID-19, for instance patients admitted to ICU were nearly 2 times higher to be affected by neurological or psychiatric illness.
 - ✓ The incidence for each neurological or psychiatric illness following 6 months of confirmed COVID 19 was 0.56 % for intracranial haemorrhage, 2.1 % for ischaemic stroke, 0.11 % for parkinsonism, 0.67% for dementia,17.39% for anxiety disorder, and 1.40% for psychotic disorder and others.
 - ✓ The incidence was higher if they were admitted to intensive therapy unit (2.66% for intracranial haemorrhage, 6.92% for ischaemic stroke, 0.26% for parkinsonism, 1.7% for dementia, 19.15% for anxiety disorder, and 2.77% for psychotic disorder
 - ✓ Most diagnostic categories were more common in patients who had COVID-19 than in those who had influenza and other respiratory tract infections
 - ✓ Generally, COVID-19 is strongly associated with an increased risk of neurological and psychiatric disorders following the 6 months of infection after a diagnosis.
 - ✓ The findings suggested that the need for enhanced neurological and psychiatric evaluation and follow-up of patients who had COVID 19 specially for patients hospitalized specifically admitted to ICU, had developed encephalopathy during their COVID-19 illness.

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HESITANT TO VACCINE ROLL OUT COULD PUT HERD IMMUNITY AT RISK.

- The likelihoods of dying after getting a COVID-19 vaccine are practically non-existent.
- According to from the Centres for Disease Control and Prevention, its three times more likely to get struck by lightning.
- A new analysis finds that articles connecting vaccines and death have been among the most highly engaged with content online this year, going viral in a way that could hinder people's ability to judge the true risk in getting a shot.
- The findings also illustrate a broader trend in online misinformation: With social media platforms making more of an effort to take down patently false health claims, bad actors are turning to cherry-picked truths to drive misleading narratives.
- Experts say these storylines are much harder for companies to moderate, though they can have the same net effect of creating a distorted and false view of the world. It is a dangerous problem, that the social media companies have taken a hard line against disinformation; they have not taken a similarly hard line against fallacies.
- Though mortality surveillance system has not received evidence linking any deaths directly to vaccines, yet, on almost half of all the days so far in 2021, a story about someone dying after receiving a vaccine shot has been among the most popular vaccine-related articles on social media, according to data from the media intelligence company.
- Among the more than 90 million people in the USA who have received at least one vaccination shot, less than .0018% of shot recipients have died sometime afterward.
- Even that small number includes people who were vaccinated while also suffering from other health conditions.
- Even if they have a vaccine or not, roughly 8,000 people die in the U.S. every day. As more people get vaccinated, more vaccinated people will continue to die from unrelated causes, which the pharmaceutical company Pfizer mentioned.
- It is important to note that serious adverse events, including deaths that are unrelated to the vaccine, are unfortunately likely to occur at a similar rate as they would in the general population.
- Even though millions of people have been vaccinated safely, notable segment of people worries about complications, believing that some people are having "life-threatening

reactions" to the vaccine that the media are not reporting. (Many such reports shared on social media are false or misleading.

- It is hard to know exactly how many people will choose not to get vaccinated. Nonetheless, researchers are increasingly worried that this restraint will be enough to prevent from reaching to herd immunity, the point at which the coronavirus can no longer spread easily through the population and transmission worn out.
- Reaching high levels of vaccination would mean new outbreaks of the coronavirus would die down quickly, as opposed to growing and spreading.

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COVID-19: RISK OF CEREBRAL BLOOD CLOTS FROM DISEASE AND FROM VACCINATION.

- Covid-19 is associated with a far greater risk of cerebral venous thrombosis than the vaccinations that protect against it, early research from the University of Oxford has shown.
- Using data from a large US electronic health records, the researchers compared the incidence of cerebral venous thrombosis in patients two weeks after a covid-19 diagnosis with that in patients two weeks after covid-19 vaccination.
- In the 513,284 patients with a covid-19 diagnosis the incidence of cerebral venous thrombosis was 39 per million people (95% CI: 25.2 to 60.2 million), and in the 489,871 patients who had received covid-19 vaccination the incidence was 4.1 per million (1.1 to 14.9 million). Vaccinated patients received an mRNA vaccine, either the Pfizer-BioNTech one or Moderna's.
- The European Medicines Agency (EMA) has estimated that the risk of cerebral venous thrombosis after the first dose of AstraZeneca vaccine is 5.0 (4.3 to 5.8) per million people.
- The researchers said that compared to the Pfizer or Moderna vaccines, the risk of CVT from COVID-19 was about 10 times greater.

- Thrombocytopenia associated with an immune response has been implicated in cases of cerebral venous thrombosis after the AstraZeneca vaccine. Specifically, an antibody against platelet factor 4, which provokes blood clotting and consumes platelets, has been identified in patients who experienced the clots.
- Mortality after cerebral venous thrombosis in people who had had covid-19 was around 20% in the study, similar to the death rate from cerebral venous thrombosis associated with thrombocytopenia reported by the EMA in patients who received the AstraZeneca vaccine.
- Around 30% of cerebral venous thrombosis events in covid-19 patients were in patients aged under 30.
- However, the UK Joint Committee on Vaccination and Immunization recently recommended that people under 30 should be offered an alternative to the AstraZeneca vaccine. This decision was based on a comparison between intensive care admissions prevented by the vaccine and risk of blood clots relating to the vaccine. In all age and risk groups the potential benefits of vaccination far outstripped the potential harms, except people at low risk who were under 30.
- Recently US regulators paused the rollout of the Janssen (Johnson & Johnson) covid-19 vaccine, which like the AstraZeneca vaccine uses a viral vector platform, after reports of a small number of blood clot cases in people who had received this vaccine.
- A similar pattern was seen in portal vein thrombosis (PVT) blood clots, which occurred in 436.4 per million people who had COVID. That compared to 44.9 per million for the Pfizer-Moderna vaccine group, and 1.6 per million for those receiving the AstraZeneca vaccine.

Reference

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COST ANALYSIS OF COVID-19.

- Prevention and treatment of COVID-19 can be expensive. Years of Life Lost (YLLs) causes most burden of COVID-19 and suggests that decision-makers should make an effort to reduce fatality. It emphasizes the importance of early identification of incidence cases(1).
- Global economic costs of COVID-19 are estimated from \$77 billion to \$2.7 trillion (2). The direct medical cost of an asymptomatic COVID-19 patient was \$3,045 during the infection in the USA(2).
- A single symptomatic COVID-19 case could incur a median direct medical cost of \$3,045 during the course of the infection alone.
- If 20 percent of the US population were to get infected, there could be a median of 11.2 million hospitalizations, 2.7 million ICU admissions, 1.6 million patients requiring a

ventilator, 62.3 million hospital bed days, and \$163.4 billion in direct medical costs over the course of the pandemic(2–4).

- Also study conducted in Kenya revealed that per day per patient unit cost for asymptomatic patients and patients with mild to moderate COVID-19 disease under home based care are USD 18.89 and USD 18.991 respectively(5).
- When these patients are managed in an isolation center of hospital, the same unit costs for asymptomatic patients and patients with mild to moderate disease are USD 70.29 and USD 70.31 respectively(5).
- Per day unit costs for patients with severe COVID-19 disease managed in general hospital wards and those with critical COVID-19 disease admitted in intensive care units are USD 119.16 and USD 562.79(5).
- Kenya will need to mobilise substantial resources and explore service delivery adaptations that will reduce unit costs.

Reference

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EXAMINING UNIT COSTS FOR COVID-19 CASE MANAGEMENT IN KENYA.

- In this study, a unit costs for COVID-19 case management for patients with asymptomatic, mild-to-moderate, severe and critical COVID-19 disease in Kenya was estimated.
- The study estimated per-day unit costs of COVID-19 case management for patients. The study used a bottom-up approach to estimate full economic costs and adopted a health system perspective and patient episode of care as our time horizon.
- The study obtained data on inputs and their quantities from data provided by three public COVID-19 treatment hospitals in Kenya and augmented this with guidelines. The study obtained input prices from a recent costing survey of 20 hospitals in Kenya and from market prices for Kenya.
- Per-day, per-patient unit costs for asymptomatic patients and patients with mild-to-moderate COVID-19 disease under home-based care are 1993.01 Kenyan shilling (KES) (US\$18.89) and 1995.17 KES (US\$18.991), respectively.
- When these patients are managed in an isolation centre or hospital, the same unit costs for asymptomatic patients and patients with mild-to-moderate disease are 6,717.74 KES (US\$63.68) and 6,719.90 KES (US\$63.70), respectively.
- Per-day unit costs for patients with severe COVID-19 disease managed in general hospital wards and those with critical COVID-19 disease admitted in intensive care units are 13 137.07 KES (US\$124.53) and 63 243.11 KES (US\$599.51).
- COVID-19 case management costs are substantial, ranging between two and four times the average claims value reported by Kenya's public health insurer. Kenya will need to mobilise substantial resources and explore service delivery adaptations that will reduce unit costs.

Reference

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