EPHI, National Data Management Center for health (NDMC):- Quick update on COVID-19, 038

This update summarizes:

- **ETHIOPIA'S COVID-19 SITUATION UPDATE.**
- **GLOBAL AND REGIONAL BURDEN OF COVID-19.**
- **VACCINATION IS THE ONLY ACCEPTABLE PATH TO HERD IMMUNITY.**
- **AN OBSESSION WITH COVID-19 PANDEMIC COULD ABANDON OTHER EPIDEMIC PRONE DISEASES**

ETHIOPIA'S COVID-19 SITUATION UPDATES

- As of December 31, 2020, there were a total of 123,856 COVID-19 cases and 1,918 deaths across the country. Compared to the cases and deaths reported a week ago, both the cumulative case and deaths respectively showed increment by 1%. So far 111,870 cases have recovered from COVID-19 which increased by 4% compared to the last week. Of the 10,309 active cases currently, 243 are critical which forms 2% of them (Fig 1). The total number of tests stands at 1 79,468 showing a 1% increase compared to last week.

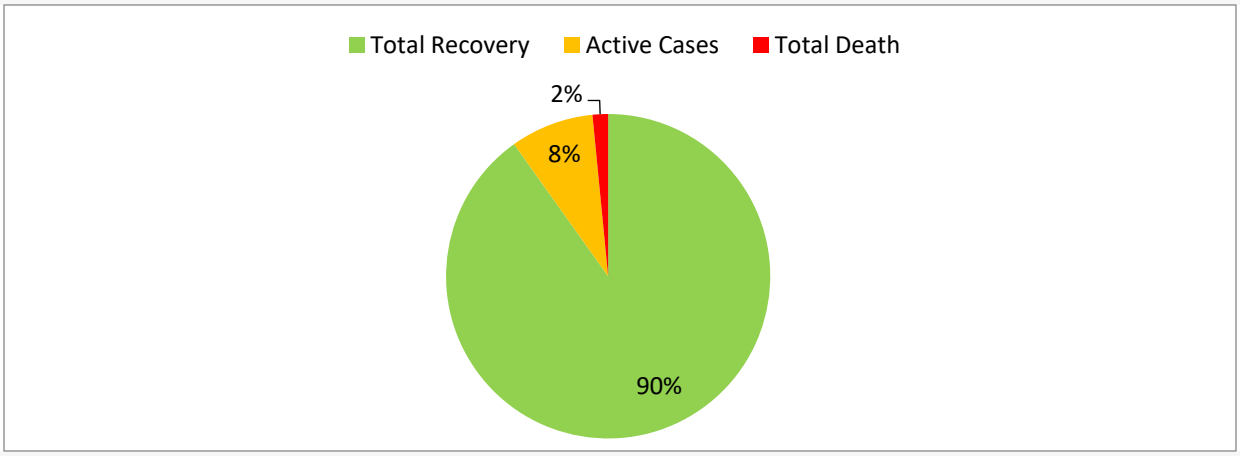

Fig. 1. Showing cumulative COVID-19 cases, recoveries and death as of Dec 31, 2020.

Case Management and Infection Prevention Control (Ipc):

- This week, Dec 25– Dec 31, 2020, there are **5, 469** newly recovered cases bringing the total number of COVID-19 recovered cases to **111, 870**
- This week, Dec 25– Dec 31, 2020, **279** suspected cases are admitted
- This week, **43** initially suspected cases are discharged after laboratory test became negative

Home Based Isolation and Care (HBIC):

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

- A total **74, 339** COVID-19 confirmed cases are followed in the HBIC as of December 31, 2020
- **68,115** of them have recovered in the HBIC as of December 31, 2020 **6,399** cases are currently on HBIC

- **8** COVID-19 related deaths have occurred in the HBIC
- **542** cases have been transferred from treatment centers to HBIC
- **326** cases have been transferred from HBIC to treatment centers

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

- Three days Basic Covid-19 Infection Prevention and control training conducted from Dec 26-28/2020 for 28 Federal Police Health Professionals working in federal and regional health facility at Jima city.
- Two days Covid-19 Basic RCCE orientation training conducted from Dec. 26-27/2020 for 150 Disability Association Members from different region at Bahir Dar City.
- There is on-going distribution of PPE, Viral Transport Media (VTM), swabs, pharmaceuticals and other medical supplies isolation and treatment centers.

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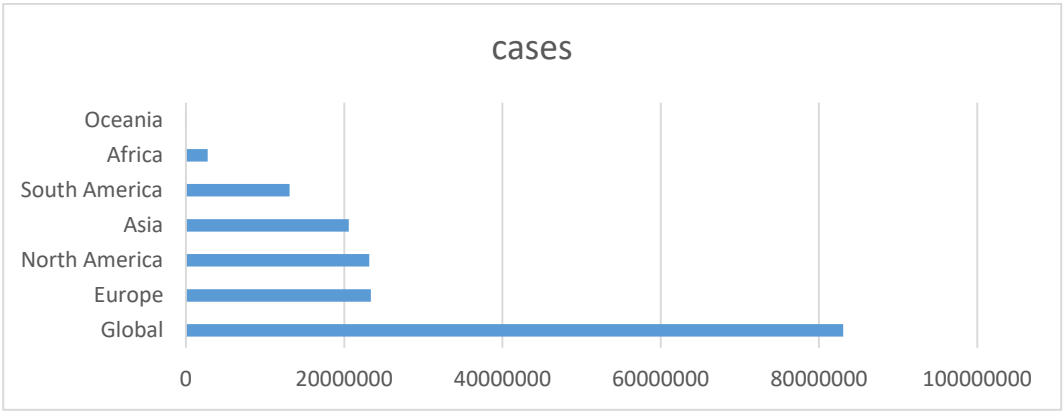
GLOBAL AND REGIONAL BURDEN OF COVID_19

- Globally the total number of cases is extended to 83,063,031 as of December 31, 2020. A total of 58,867,005 cases recovered and 1,812,108 people died since the beginning of the outbreak. Globally, in a week time, from December 24 to December 31, 2020, COVID-19 cases increased by 5.1% and deaths by 4.3%. Europe continued to become the leading in terms of cases followed by North America and Asia. Europe became a lead in terms of the number of deaths followed by North and South America (Fig 2).



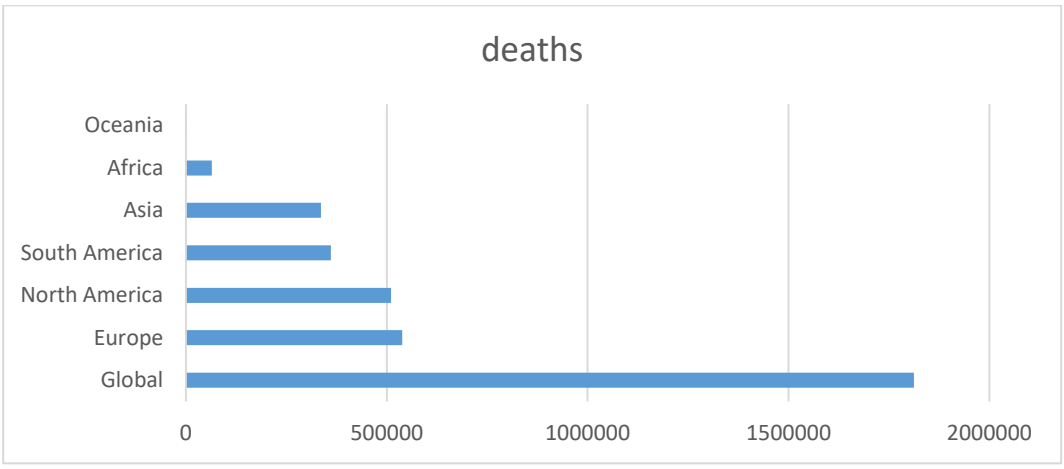


Fig 2. Global cases (top) and deaths (bottom) reported as of December 31, 2020.

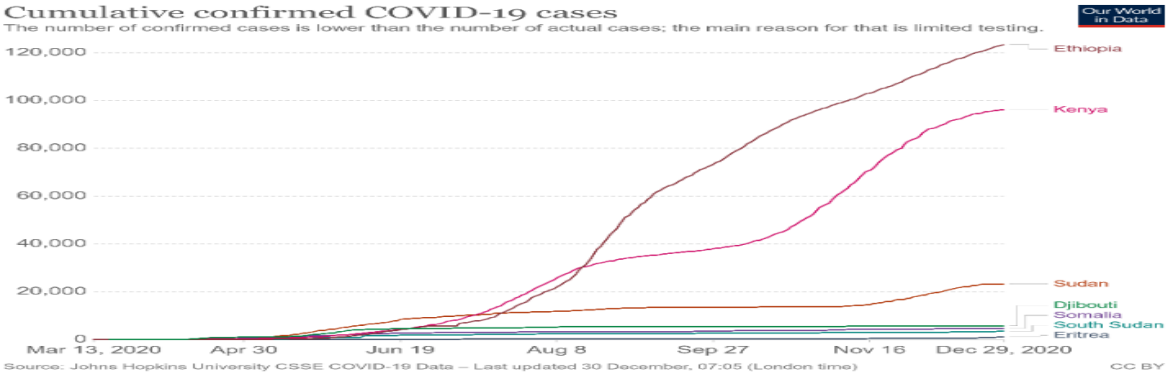
- USA has recorded the highest number of cases (20,216,991 cases, 350,778 deaths) that accounts 24.3% of the total global cases and carried 19.4% of global deaths as of December 31, 2020.
- India is the 2nd highest in terms of cases in a week time by 1.4% (10,123,544 to 10,267,283) and deaths by 1.4% (146,778 to 148,774).
- Brazil has increased the number of cases in a week time by 3.4% (7,366,677 to 7,619,970) and deaths by 2.5% (189,264 to 193,940).
- Russia ranked 4th globally with 3,131,550 cases and 56,426 deaths.
- France ranked 5th globally with 2,600,498 cases and 64,381 deaths.

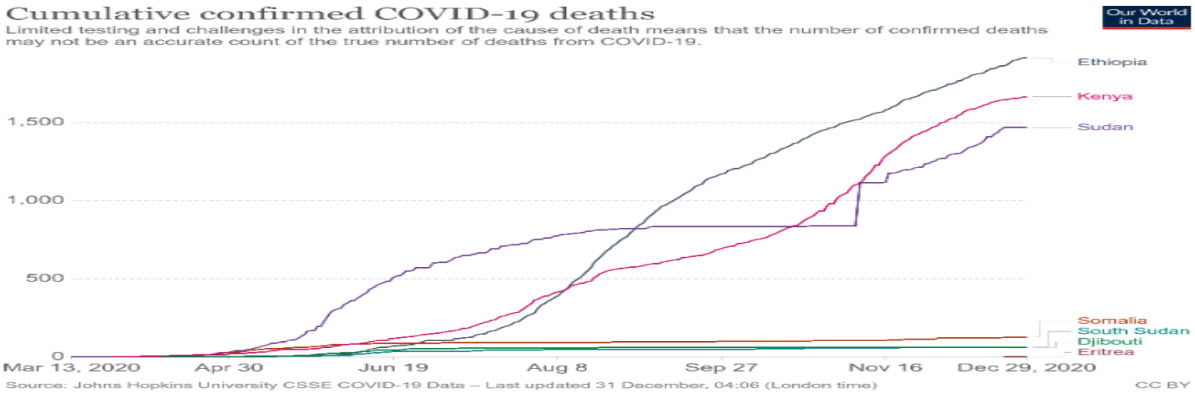
➢ The line share of Africa to the global COVID-19 pandemic was 3.3% and 3.6% of the global cases and deaths as of December 31). The cases in the continent has increased by 6.1% in a week time (2,585,922 to 2,743,620 cases). Similarly, the total number of deaths in Africa has increased from 60,974 to 64,867 showing a 6.4%. Total recoveries stand at 2,289,691.

- South Africa is the leading in the continent with 1,039,161 cases and 28,033 deaths. Morocco (437,332 cases, 7,355 deaths), Tunisia (137,216 cases, 4,620 deaths), Egypt (136,644 cases, 7,576 deaths) and Ethiopia (123,856 cases, 1,918deaths) are the most four leading countries next to South Africa in reporting COVID-19 cases in Africa. (See table below).

Africa	December 24		December 31	
	Cases	Death	Cases	Deaths
South Africa	954,258	25,657	1,039,161	28,033
Morocco	423,214	7,086	437,332	7,355
Tunisia	125,000	4,275	137,216	4,620
Egypt	127,972	7,209	136,644	7,576
Ethiopia	120,989	1,870	123,856	1,918

- In East African, COVID-19 cases and deaths have shown fast progress. In a week time, COVID-19 cases and deaths were 2.4% and 2.6% in Ethiopia and 1.1% and 1.2% in Kenya. As of December, Ethiopia and Kenya continued to be the major drivers of the COVID 19 burden in east African countries. The epidemic continued increasing in South Sudan with 2.5% cases and 1.6% deaths. Eirtera showed a 42.8% increase in number of cases. Similarly, in Somalia 0.5% cases and 2.4% deaths reported in a week time. However, in Djibouti ad Sudan 0.6% ad zero cases and zero deaths were reported respectively which is low compared to others.





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4. Our World: https://ourworldindata.org/covid-cases

VACCINATION IS THE ONLY ACCEPTABLE PATH TO HERD IMMUNITY

- Of the many strategies that have been proposed for controlling the global coronavirus disease 2019 (COVID-19) pandemic caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), herd immunity through natural infection may be the most deeply flawed and outright dangerous. The justification given for this approach is that the whole community would benefit from the protection conferred upon the more vulnerable by others that have built up herd immunity. In practice, this has resulted in minimal federal guidance to encourage essential interventions, such as face masks and distancing, intended to reduce transmission. These unfortunate developments in the pandemic response are based on a fundamental misunderstanding of herd immunity and how it is achieved. Herd immunity has never been achieved through naturally acquired infections and is only possible at global population scale through mass immunization.
- Herd immunity is based on our understanding of viral pathogens as obligate intracellular parasites that require a host for replication. If enough people are immune to infection, then the virus cannot be transmitted to new susceptible hosts and will be eliminated from circulation within the population. When sufficient proportions of the population are immune and thus thwart the pathogen's ability to circulate, that population has reached the herd immunity threshold.
- Herd immunity is a relatively recent concept, and some have taken umbrage at the term as it equates human populations with animals. However, this reflects the origin of the term, which was originally coined by livestock veterinarians in the early 20th century referring to epidemics of "contagious abortion," or pathogens that caused spontaneous miscarriages in herds of cattle and sheep. By the 1950s, the term was applied to newly developed vaccines and their potential for preventing widespread viral diseases such as polio at population scale. As herd immunity as a concept became more broadly associated with immunization campaigns, it gained that specific meaning. Until recently, herd immunity generally referred to population immunity acquired through vaccination.
- The recent reversion of the term to its original context—immunity acquired through infection or immunization—has created a host of misconceptions about how the herd immunity threshold might be reached for SARS-CoV-2. The prospect of reaching herd immunity through natural infection is not an expeditious process, in part because of the relationship between the herd immunity threshold and the basic reproduction number (R0). R0 measures the average number of secondary infections caused by one infected person in a population of completely susceptible individuals. In the most basic terms, the herd immunity threshold

is defined mathematically as 1-1/R03. Given that estimates of R0 throughout the SARS-CoV-2 pandemic around the world have ranged from 2 to 3 in the absence of interventions to reduce transmission, the herd immunity threshold is estimated to be in the range of 50%–67%.

- However, R0 is not a static number, making the herd immunity threshold difficult to estimate. R0 is not solely determined by viral infectivity and virulence and rarely reflects the variables present in the real world. Interventions intended to reduce transmission can reduce R0 substantially, as can many variables that influence susceptibility, including genetic traits, receptor distribution, and immune status of the host. Furthermore, even in populations that are completely susceptible, they do not remain completely susceptible over time as a pathogen spreads through the population. For SARS-CoV-2, R0 has varied by country and region, depending on the intervention measures applied in those locations.
- While seropositivity alone is not proof of protective immunity, the low overall seroprevalence suggests that the majority of people have not been exposed. Reaching herd immunity through naturally acquired infection will at minimum require doubling or tripling the number of cases and require at least 2–3 years, and possibly longer should community transmission decrease. As more than 270,000 people in the United States have died of COVID-19 and millions report persistent long-haul symptoms after recovery, attempting to reach herd immunity in this way would be catastrophic.
- Furthermore, relying on natural infection rather than vaccination to reach the herd immunity threshold assumes that infection and vaccination induce comparable immune responses with similar durability. There is growing evidence that this is not the case. Many pathogenic viruses, including SARS-CoV-2, inhibit the activity of type I interferons, which drive innate antiviral responses that are critical to both initial suppression of virus replication and subsequent induction of robust adaptive immunity. Although most COVID-19 patients do develop detectable antibody responses, multiple studies have observed that serum antibody titers may rapidly decline within months, for SARS-CoV-2 as well as other coronaviruses. While the significance to functional immune protection is unknown, it does suggest that SARS-CoV-2 infection may result in atypical long-term immune responses.
- Immunity induced by vaccination is likely to produce very different responses. The current vaccine candidates in late-stage clinical trials do not cause SARS-CoV-2 infection, therefore will not interfere with or evade either innate or adaptive immune responses. Data from pre-clinical and phase 1/2 trials support this finding: while infection results in a wide spectrum of antibody titers, immunization consistently produces neutralizing titers comparable to the highest titers seen in convalescent patients. While there is not yet data on how this impacts durability, it suggests that immune responses elicited by vaccines are fundamentally distinct from those produced by naturally acquired infection. Thus, reaching herd immunity through immunization rather than infection will not only occur more quickly and with vastly less morbidity and mortality, it will likely result in greater functional immune protection for a longer duration of time.
- Many questions remain about how herd immunity will contribute to the ultimate control of the SARS-CoV-2 pandemic and the long-term prospects for preventing future outbreaks. However, several facts are abundantly clear. Although vaccines, when available, will require months to distribute and tremendous efforts to overcome vaccine hesitancy, they still will reach the herd immunity threshold, whatever that may be; in far less time than natural infection would permit. They may produce more robust, longer-lasting, and more protective immune responses than infection. Most importantly, decades of reliable research demonstrate that vaccines are a safe and highly effective means of preventing widespread infectious diseases and are the only morally and scientifically acceptable approach for achieving herd immunity at national or global scale. Attempting to reach herd immunity through natural infection will result in devastating losses of both life and qualities of life for those infected and are completely insupportable as a public health strategy for controlling a generational pandemic.

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AN OBSESSION WITH COVID-19 PANDEMIC COULD ABANDON OTHER EPIDEMIC PRONE DISEASES

- Since the first identification of HIV/AIDS, in 1981, approximately 35 million people have died of AIDS. Tuberculosis kills 1.5 million people each year. Malaria caused an estimated 216 million clinical episodes and 445,000 deaths every year.
- However, this year, the deadly coronavirus (COVID-19) has thus far infected over 82 million and killed over 1.8 million people around the world.
- The entire year, the whole world focused on how the pandemics affect people's lives and livelihoods, and how health is interlinked with other critical issues, such as reducing inequality, human rights, social and economic inequalities.
- COVID-19 has not only sedated the world to everything else that happens around it but also affects HIV, TB, Malaria and other epidemics and diseases that kill millions of people.
- Therefore, in this difficult time, it was most appropriate to reconsider that the threatening of COVID-19 on the progress that the world has made in health and development over the past 20 years, including the gains made against HIV, TB, malaria, and other infectious disease, instead of prioritising over.
- According to UNAIDS, every week about 5,500 young women aged 15–24 years become infected with HIV, and that in sub-Saharan Africa, five in six new infections among adolescents aged 15–19 years are among girls.
- At the 2016 United Nations High-Level Meeting on "Ending AIDS" countries pledged to increase the number of people living with HIV on treatment to 30 million by the end of 2020.
- As a result, treatment scale-up has been impressive with more than twice the number of people on treatment than in 2010. However, as of June 2020 there were only 26 million people accessing antiretroviral therapy — that is 4 million shorts of the target for the end of 2020.
- Apart from its power to indiscriminately kill people, coronavirus severely affects the provision of health services for other diseases such as HIV/AIDS, tuberculosis and malaria that kill millions of people all over the world.
- Containing an outbreak requires contact tracing, as well as isolation and treatment of the sick for weeks or months. This insidious disease has touched every part of the globe. It is tuberculosis, the biggest infectious-disease killer worldwide, claiming 1.5 million lives each year".
- For example, HIV/AIDS kills nearly a million people and tuberculosis claims 1.5 million lives each year. Malaria still kills several hundred thousand people yearly, two-thirds of whom are children under five.
- The COVID-19 pandemic has resulted in sharp drops in diagnosis and treatment of other perilous diseases as many essential services (clinics and laboratories) are being diverted to fight COVID-19.
- In almost all countries, activities related to HIV, tuberculosis and malaria are being disrupted due to COVID-19 lockdowns, restrictions on gatherings of people, transport stoppages, resources diverted to the new virus, reluctance of health workers to attend to people suspected of having TB or malaria that often display similar symptoms as COVID-19.
- And most importantly, almost all countries have been severely affected by its economic consequences – thereby limiting the vital human and monetary resources indispensable to maintain crucial healthcare services.
- These are insurmountable barriers to HIV, TB and malaria patients who need to constantly gain access to medical attention, care, and treatments.

- At the current rate, COVID-19 is killing about the same number of people every month as HIV, tuberculosis and malaria combined".
- Though the immense advancements in scientific research and treatment have thus far failed to find a vaccine to prevent HIV/AIDS, we finally have a ray of hope to eradicate COVID-19 thanks to the promising vaccines from Pfizer, Moderna, AstraZeneca, and a dozen others in the making.
- As in the case of HIV/AIDS, the guiding aphorism for all pandemics has been "only if we end the pandemic everywhere can we end the pandemic anywhere". The entire world has the same goal: the number of cases of HIV/AIDS, COVID-19, and all other diseases all over the world needs to go to zero.
- The COVID-19 pandemic must not be an excuse to divert investment from HIV, and that there is a risk that the hard-earned gains of the AIDS response will be sacrificed to the fight against COVID-19, but the right to health means that no one disease should be fought at the expense of the other.

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