

**This update summarizes:**

- ETHIOPIA'S COVID-19 SITUATION UPDATE.
- GLOBAL AND REGIONAL BURDEN OF COVID-19.
- CLINICAL MANIFESTATION AND MATERNAL COMPLICATIONS AND NEONATAL OUTCOMES IN PREGNANT WOMEN WITH COVID-19.
- ANAPHYLAXIS REACTIONS AFTER RECEIPT OF THE FIRST DOSE OF PFIZER-BIONTECH COVID-19 VACCINE.
- YEARS OF LIFE LOST TO COVID-19 IN 81 COUNTRIES.

**ETHIOPIA'S COVID-19 SITUATION UPDATES**

- As of February 25, 2021, there were a total of 155,234 COVID-19 cases and 2,316 deaths across the country; indicating that there are additional 5,926 new cases and 79 deaths respectively over the last one week. Compared to the cases and deaths reported a week ago, the cumulative case and deaths respectively showed increment by 3% and 2%. Among the total laboratory tested 38,409 laboratory samples over the last one week duration (till February 24, 2021), 5,055 of them tested positive yielding a positivity rate of 13.2%. So far 133,438 cases have recovered from COVID-19 which increased by 2% compared to the last week. Of the 19,864 active cases currently, 386 are critical which forms 1% of them (Fig 1).

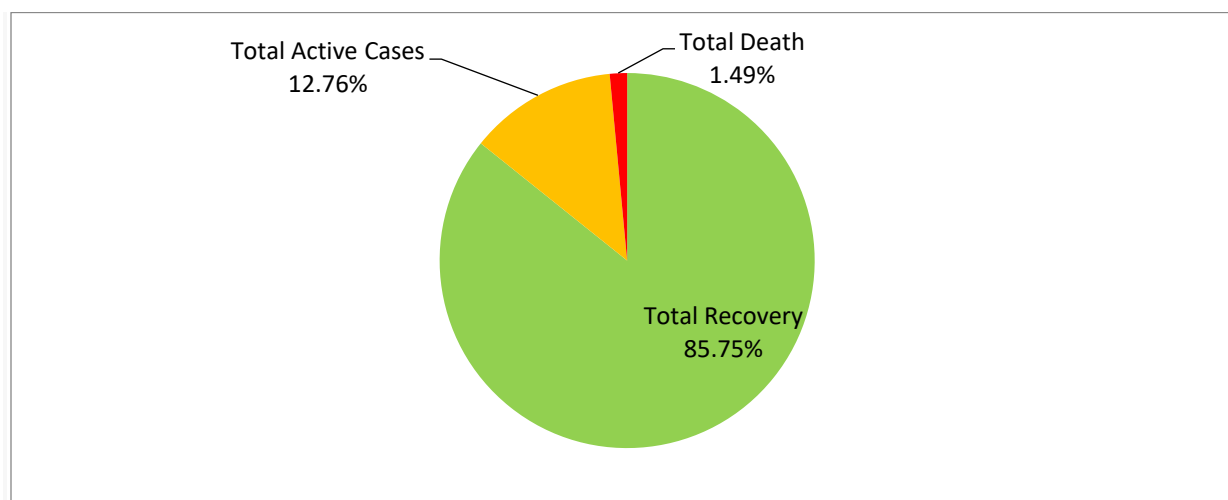


Fig. 1. Showing cumulative COVID-19 cases, recoveries and death as of February 25, 2021.

**Case Management and Infection Prevention Control (Ipc):**

- This week, Feb 19-25, 2021, there are **3314** newly recovered cases bringing the total number of COVID-19 recovered cases to **133,438**.
- There are **386** patients in severe condition as of February 25, 2021 and all the other patients are on medical care in stable condition.
  - This week, Feb 19-25, 2021, **46** suspected cases are admitted and **21** 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 **95,217** COVID-19 confirmed cases are followed in the HBIC as of February 25, 2021
- **88,043** of them have recovered in the HBIC as of February 25, 2021 **8,001** cases are currently on HBIC
- **14** COVID-19 related deaths have occurred in the HBIC
- **1255** cases have been transferred from treatment centers to HBIC
- **422** cases have been transferred from HBIC to treatment centers

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

- Three days COVID-19 Home Based and Isolation Care training for 30 National Defense and Federal police health staffs completed on Feb 18/2021 at Adama city.
- COVID-19 Ethiopia, a mobile platform to train health workers and all others engaged in COVID prevention, has been updated according to the current COVID-19 guideline with additional courses on COVID-19 prevention at school setting and for home based isolation & care.
- 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](https://twitter.com/lia_tadesse)
3. <http://www.covid19.et/covid-19/>

### GLOBAL AND REGIONAL BURDEN OF COVID-19

- Globally the total number of cases is extended to 113,100,215 as of February 25, 2021. A total of 88,711,371 cases recovered and 2,508,913 people died since the beginning of the outbreak. Globally, in a week time, from February 18 to February 25, 2021, COVID-19 cases increased by 2.4% and deaths by 2.8%. 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 (Fig 2).

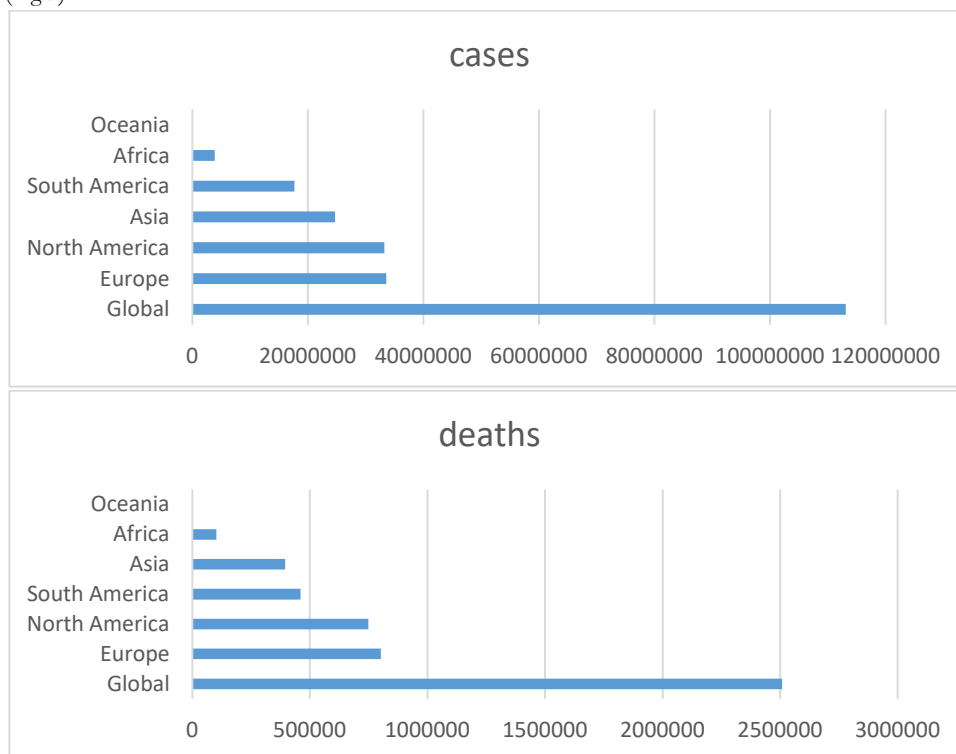
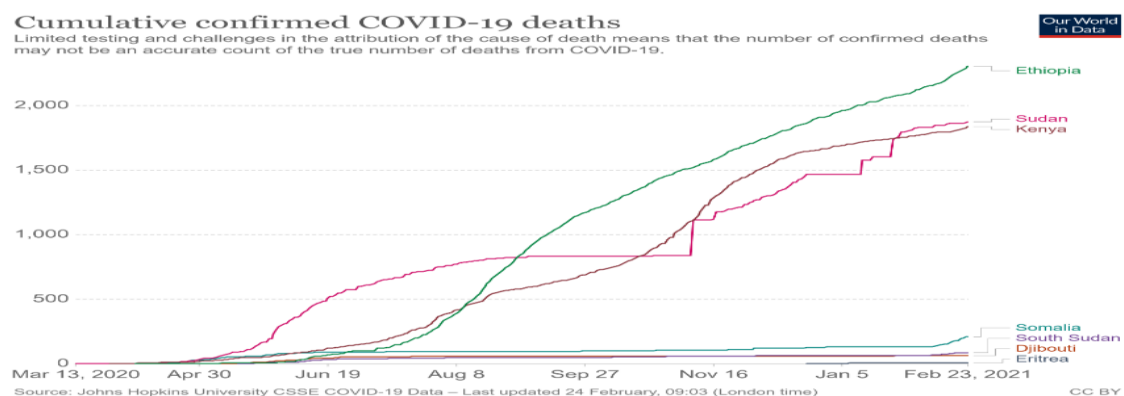
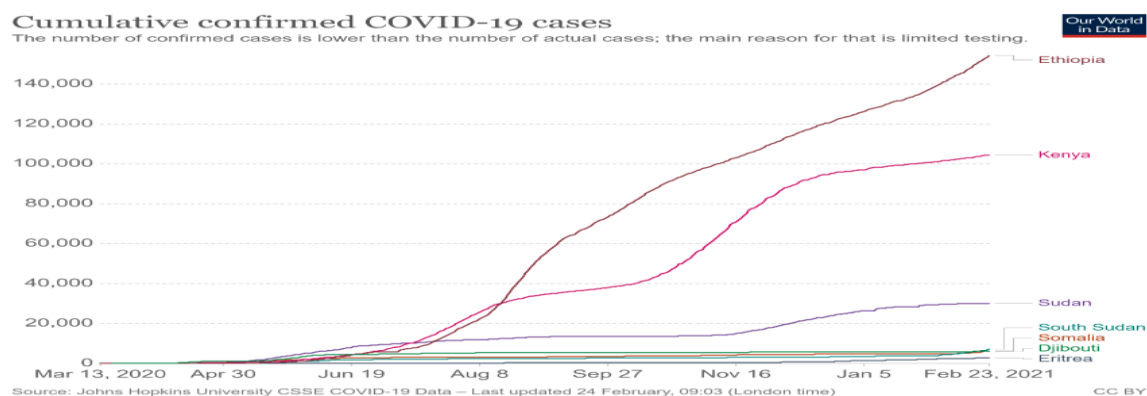


Fig 2. Global cases (top) and deaths (bottom) reported as of February, 2021.

- USA has recorded the highest number of cases 1.8% (28,453,526 to 28,974,623 cases) and 3.1% (502,544 to 518,363 deaths) that accounts 25.6% of the total global cases and carried 20.7% of global deaths as of February 25, 2021.
- India is the 2<sup>nd</sup> highest in terms of cases in a week time by 0.9% (10,950,201 to 11,046,432) and deaths by 0.5% (156,038 to 156,742).
- Brazil has increased the number of cases in a week time by 3.5% (9,979,276 to 10,326,008) and deaths by 3.3% (242,178 to 250,079).
- Russia ranked 4<sup>th</sup> globally with 4,200,902 cases and 84,430 deaths.
- UK ranked 5<sup>th</sup> globally with 4,144,577 cases and 121,747 deaths.
- The line share of Africa to the global COVID-19 pandemic was 3.4% and 4.1% of the global cases and deaths as of February 18). The cases in the continent have increased by 2.0% in a week time (3,809,410 to 3,883,726 cases). Similarly, the total number of deaths in Africa has increased from 99,948 to 102,619 showing 2.7%. Total recoveries stand at 3,434,828.
- South Africa is the leading in the continent with 1,507,448 cases and 49,523 deaths. Morocco (482,128 cases, 8,592 deaths), Tunisia (230,443 cases, 7,869 deaths), Egypt (180,051 cases, 10,495 deaths) and Ethiopia (155,234 cases, 2,316 deaths) are the most four leading countries next to South Africa in reporting COVID-19 cases in Africa. (See table below).

Africa	February 18		February 25	
	Cases	Death	Cases	Deaths
South Africa	1,496,439	48,478	1,507,448	49,523
Morocco	479,579	8,517	482,128	8,592
Tunisia	225,116	7,651	230,443	7,869
Egypt	175,677	10,150	180,051	10,495
Ethiopia	149,308	2,237	155,234	2,316

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



## References

1. John Hopkins, Corona Virus Resources <https://coronavirus.jhu.edu/map.html>
2. Worldometer, Corona Virus <https://www.worldometers.info/coronavirus/>
3. Africa CDC: COVID 19 Surveillance; <https://au.int/covid19>
4. Our World: <https://ourworldindata.org/covid-cases>

### **CLINICAL MANIFESTATION AND MATERNAL COMPLICATIONS AND NEONATAL OUTCOMES IN PREGNANT WOMEN WITH COVID-19.**

- There is little known about pregnancy-related complications and comorbidity in this group of women.
- A systematic review and meta-analysis were performed to find out whether COVID-19 may cause different manifestations and outcomes in the antepartum and postpartum period or not.
- The results show that the pooled prevalence of neonatal mortality, lower birth weight, stillbirth, premature birth, and intrauterine fetal distress in women with COVID-19 was 4%, 21%, 2%, 28%, and 14% respectively.
- Moreover, the pooled prevalence of fever, cough, diarrhea, and dyspnea were 56%, 29%, 9%, and 3% in pregnant women with COVID-19.
- Two studies reported that pregnant women with severe COVID pneumonia have higher levels of d-dimer.
- Also, COVID pneumonia is more common in pregnant women than non-pregnant.

### **Conclusion**

- According to this meta-analysis, pregnant women with COVID-19 with or without pneumonia, are at a higher risk of preeclampsia, preterm birth, miscarriage and cesarean delivery.
- Furthermore, the risk of LBW and intrauterine fetal distress seems to be increased in neonates.
- In addition, these evaluations are investigative of higher risk of COVID-19 in the third trimester in pregnant women comparing to the first and second trimester.
- It can be due to higher BMI in the third trimester causing to increase the likelihood of disease deterioration, which can trigger a cascade of side effects starting with coagulation, pneumonia, hypoxemia affecting the placenta leading to ICU admission, fetal distress, premature birth and higher rates of C-section.

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### **ANAPHYLAXIS REACTIONS AFTER RECEIPT OF THE FIRST DOSE OF PFIZER-BIONTECH COVID-19 VACCINE.**

- The US Food and Drug Administration issued an Emergency Use Authorization for the PfizerBioNTech COVID-19 vaccine on early December 2020, administered as 2 doses separated by 21 days.
- Following implementation of vaccination, reports of anaphylaxis after the first dose of the Pfizer-BioNTech COVID-19 vaccine emerged. Anaphylaxis is a life-threatening extreme allergic reaction that occurs rarely after vaccination, with onset typically within minutes to hours. Notifications and reports of suspected severe allergic reactions and anaphylaxis following vaccination were captured in the Vaccine Adverse Event Reporting System (VAERS), the spontaneous reporting system for adverse events after immunization.
- The Centers for Disease Control and Prevention (CDC) evaluated reports and applied case definition criteria to classify case reports as anaphylaxis or not anaphylaxis. Non allergic adverse events, mostly vasovagal or anxiety-related, were excluded. Anaphylaxis and non-anaphylaxis allergic reaction cases with symptom onset occurring later than the day after vaccination were

excluded as well since it is difficult ascertain allergic reactions with delayed onset after vaccination. During December 14 to 23, 2020, after administration of a reported 1 893 360 first doses of Pfizer-BioNTech COVID-19 vaccine (1 177 527 in women, 648 327 in men, and 67 506 with sex of recipient not reported), CDC identified 21 case reports submitted to VAERS that met case definition criteria for anaphylaxis, corresponding to an estimated rate of 11.1 cases per million doses administered. Four patients were hospitalized (including 3 in intensive care), and 17 were treated in an emergency department; 20 are known to have been discharged home or had recovered at the time of the report to VAERS. No deaths from anaphylaxis were reported.

- Median interval from vaccine receipt to symptom onset was 13 minutes (range, 2-150 minutes); 15 patients had onset within 15 minutes; 18 had onset within 30 minutes.
- The most common symptoms and signs were urticaria, angioedema, rash, and a sense of throat closure. Seventeen of 21 patients with anaphylaxis had a documented history of allergies or allergic reactions, including to drugs or medical products, foods, and insect stings; 7 had experienced an episode of anaphylaxis in the past, including one after receipt of rabies vaccine and another after receipt of influenza A(H1N1) vaccine
- During the same period, VAERS identified 83 cases of non-anaphylaxis allergic reactions after Pfizer-BioNTech COVID-19 vaccination. Commonly reported symptoms in non-anaphylaxis allergic reactions included pruritus, rash, itchy and scratchy sensations in the throat, and mild respiratory symptoms.
- Mortality from COVID-19 in populations at high risk is substantial, and treatment options are limited. Widespread vaccination against COVID 9 with highly effective vaccines represents an important tool in efforts to control the pandemic.
- CDC guidance on use of mRNA COVID-19 vaccines and management of anaphylaxis is available. Specifically, vaccination locations should
  - (1) Ensure that necessary supplies are available to manage anaphylaxis, especially enough epinephrine in prefilled syringes or autoinjectors.
  - (2) Screen potential vaccine recipients to identify persons with contraindications and precautions.
  - (3) Implement recommended post vaccination observation periods, either 15 or 30 minutes depending on each patient's previous history of allergic reactions;
  - (4) Ensure that physicians and other health care professionals can recognize signs and symptoms of anaphylaxis early; and
  - (5) Immediately treat suspected anaphylaxis with intramuscular epinephrine (because of the acute, life threatening nature of anaphylaxis).

## References

1. FDA. Fact sheet for healthcare providers administering vaccine (vaccination providers): Emergency Use Authorization (EUA) of the Pfizer-BioNTech COVID-19 vaccine to prevent coronavirus disease 2019 (COVID-19). Revised January 2021.
2. Oliver SE, Gargano JW, Marin M, et al. The Advisory Committee on Immunization Practices' interim recommendation for use of Pfizer-BioNTech COVID-19 Vaccine—United States, December 2020. *MMWR Morb Mortal Wkly Rep.* 2020;69(50):1922-1924. doi:10.15585/mmwr.mm6950e2
3. CDC. Interim considerations: preparing for the potential management of anaphylaxis after COVID-19 vaccination. Updated December 31, 2020.
4. Vaccine Adverse Event Reporting System: report an adverse event to VAERS. Accessed January 18, 2021

## YEARS OF LIFE LOST TO COVID-19 IN 81 COUNTRIES.

- The large direct and indirect effects of the COVID-19 pandemic have necessitated the delivery of policy responses that, when reasonable, are a balancing act between minimizing the immediate health impact of the pandemic and containing the long-term damage to the society that may arise from the protective policies. A key input parameter in the calculation of how restrictive policies might be justified is the mortality impact of COVID-19.
- Attempts to evaluate the total mortality impact of COVID-19 are proceeding on several fronts. Progress is being made in estimating the infection fatality rate of COVID-19 and how this might vary across sub-populations. Large, coordinated international collaborations have been set up to collect data that records COVID-19 attributable deaths.
- Understanding the full health impact of the COVID-19 pandemic is critical for evaluating the potential policy responses. This study analyzed the mortality impact of COVID-19 by calculating the number of life-years lost across 81 countries covering over 1,279,866 deaths. From a public health standpoint, years of life lost is crucial in that it assesses how much life has been cut short for populations affected by the disease.
- **Comparisons with other causes of mortality**
- To put the impacts of COVID-19 on YLL in perspective, they compare it against the premature mortality impacts of three other global common causes of death: heart conditions (cardiovascular diseases), traffic accidents (transport injuries), and the seasonal “flu” or influenza. Result from this study find that in heavily impacted highly developed countries, COVID-19 is 2–9 times that of the common seasonal influenza (as compared to a median flu year for the same country), between 2 and 8 times traffic-related YLL rates, between a quarter and a half of the YLL rates attributable to heart conditions in countries (with rates as high as parity to twice that of heart conditions in Latin America). Variation across countries is large, as many countries have YLL rates due to COVID-19 still at very low levels.
- **Age-specific years of life lost**
- As has been noted early on in the pandemic, mortality rates for COVID-19 are higher for the elderly, with postulations that this may be due to correlations with the greater likelihood of these individuals suffering from underlying risk factors. This study’s sample presents an average age-at-death of 72.9 years, yet only a fraction of the YLL can be attributed to the individuals in the oldest age brackets. Globally, 44.9% of the total YLL can be attributed to the deaths of individuals between 55 and 75 years old, 30.2% to younger than 55, and 25% to those older than 75. That is, the average figure of 16 YLL includes the years lost from individuals close to the end of their expected lives, but the majority of those years are from individuals with significant remaining life expectancy. In higher-income countries, a larger proportion of the YLL is borne by the oldest group compared to the youngest age groups. The opposite pattern appears in low and mid-income countries, where a large fraction of the YLL are from individuals dying at ages 55 or younger.

### Gender-specific years of life lost

- It has also become apparent that there are gender disparities in the experience of COVID-19; this study finds this to be true not only in mortality rates but in absolute years of life lost as well. In the sample of countries for which death counts by gender are available, men have lost 44% more years than women. Two causes directly affect this disparity: (1) a higher average age-at-death of female COVID-19 deaths (71.3 for males, 75.9 for females), resulting in a relatively lower YLL per death (15.7 and 15.1 for males and females respectively); and (2) more male deaths than female deaths in absolute number (1.39 ratio of male to female deaths).
- To summarize, this results deliver three key insights. First, the total years of life lost (YLL) as of January 06, 2021, is 20,507,518, which is heavily affected countries is between 2 and 9 times the median YLL of seasonal influenza or between a quarter and a half of heart disease. This implies 273,947 “full lives lost” – or over two hundred thousand lives lived from birth to the average life expectancy at birth in our sample (74.85 years). Second, three-quarters of the YLL are borne by people dying in ages below 75. Third, men have lost 45% more years of life than women. The average number of years of life lost per death is 16 years.
- Result of this study revealed that the mortality impact of COVID-19 is large, not only in terms of numbers of death but also in terms of years of life lost. While the majority of deaths are occurring at ages above 75, justifying policy responses aimed at protecting these vulnerable ages, our results on the age pattern call for heightened awareness of devising policies protecting also the young. The gender differential in years of life lost arises from two components: more men are dying from COVID-19, but men are also dying at younger ages with more potential life years lost than women. Holding the current age distribution of deaths constant, eliminating the gender differential in YLL would require on average a 34% reduction in male death counts; this suggests that gender-specific policies might be equally well justified as those based on age.

### References

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