

This update summarizes:

- **ETHIOPIA'S COVID-19 SITUATION UPDATE.**
- **GLOBAL AND REGIONAL BURDEN OF COVID-19.**
- **VACCINATING OLDEST FIRST FOR COVID-19 SAVES THE MOST LIVES.**
- **PUBLIC PREFERENCES FOR ALLOCATING VENTILATORS IN AN INTENSIVE CARE UNIT.**

ETHIOPIA'S COVID-19 SITUATION UPDATES

- As of March 04, 2021, there were a total of 161,974 COVID-19 cases and 2,391 deaths across the country; indicating that there are additional 6,740 new cases and 75 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%. So far 136,443 cases have recovered from COVID-19 which increased by 2% compared to the last week. Of the 23,536 active cases currently, 398 are critical which forms 1% of them. So far, the total number of tests stands at 2,152,739 showing a 1% increase compared to last week. Among the total laboratory tested 44,333 laboratory samples over the last one week duration (February 25/2021 to March 03, 2021), 6,740 of them tested positive yielding a positivity rate of 15.2%. (Fig 1).

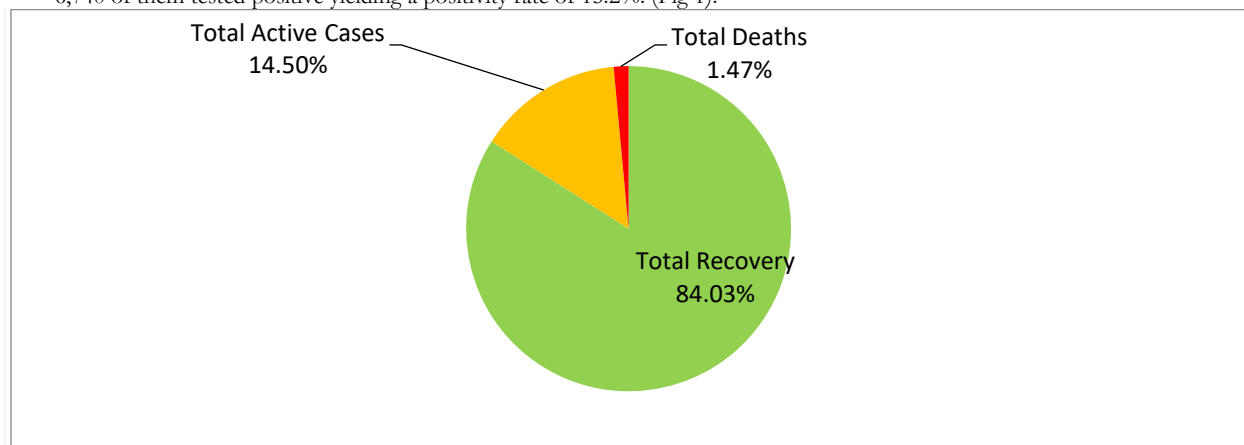


Fig. 1. Proportions of active cases, recoveries and death as of March 04, 2021.

Case Management and Infection Prevention Control (Ipc):

- This week, Feb 26-March to 4, 2021, there are **3005** newly recovered cases bringing the total number of COVID-19 recovered cases to **136, 443**.
- There are **398** patients in severe condition as of March 4, 2021 and all the other patients are on medical care in stable condition.
- This week, Feb 26-March 4, 2021, **72** suspected cases are admitted.
- This week, **13** 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 **98, 553** COVID-19 confirmed cases are followed in the HBIC as of March 4, 2021.
- **90,633** of them have recovered in the HBIC as of March 4, 2021 **8,877** cases are currently on HBIC.
- **15** COVID-19 related deaths have occurred in the HBIC.
- **1402** cases have been transferred from treatment centers to HBIC.
- **438** cases have been transferred from HBIC to treatment centers.

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

- Three days COVID-19 IPC introduction in New Guidance, updates on standard & transmission based precaution and NPI refreshment training for 30 SNNPR, Sidama, Afar region and Addis Ababa Health bureau EOC Health staff completed on Feb 26/2021 at Central Hotel, Hawassa city.
- There is on-going distribution of PPE, Viral Transport Media (VTM), swabs, pharmaceuticals and other medical supplies to isolation and treatment centers.

References

1. Public Health Emergency Operations Centers (PHEOC), Ethiopia
2. 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 115,768,981 as of March 4, 2021. A total of 91,469,174 cases recovered and 2,571,794 people died since the beginning of the outbreak. Globally, in a week time, from February 25 to March 4, 2021, COVID-19 cases increased by 2.4% and deaths by 2.5%. 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).

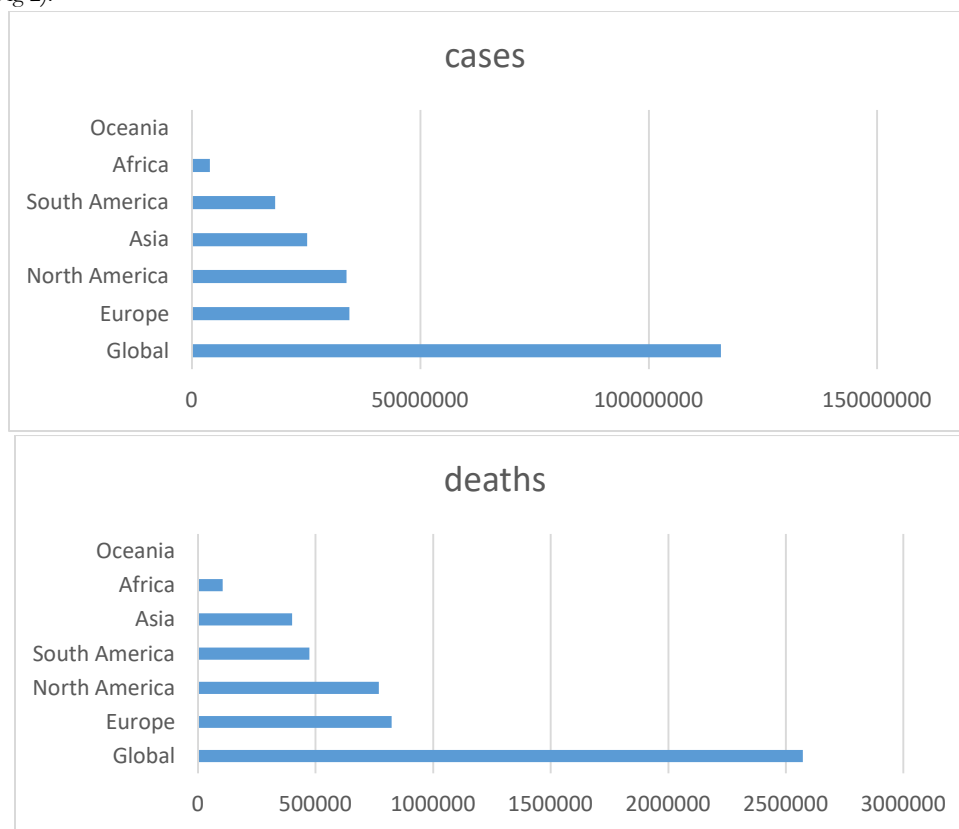


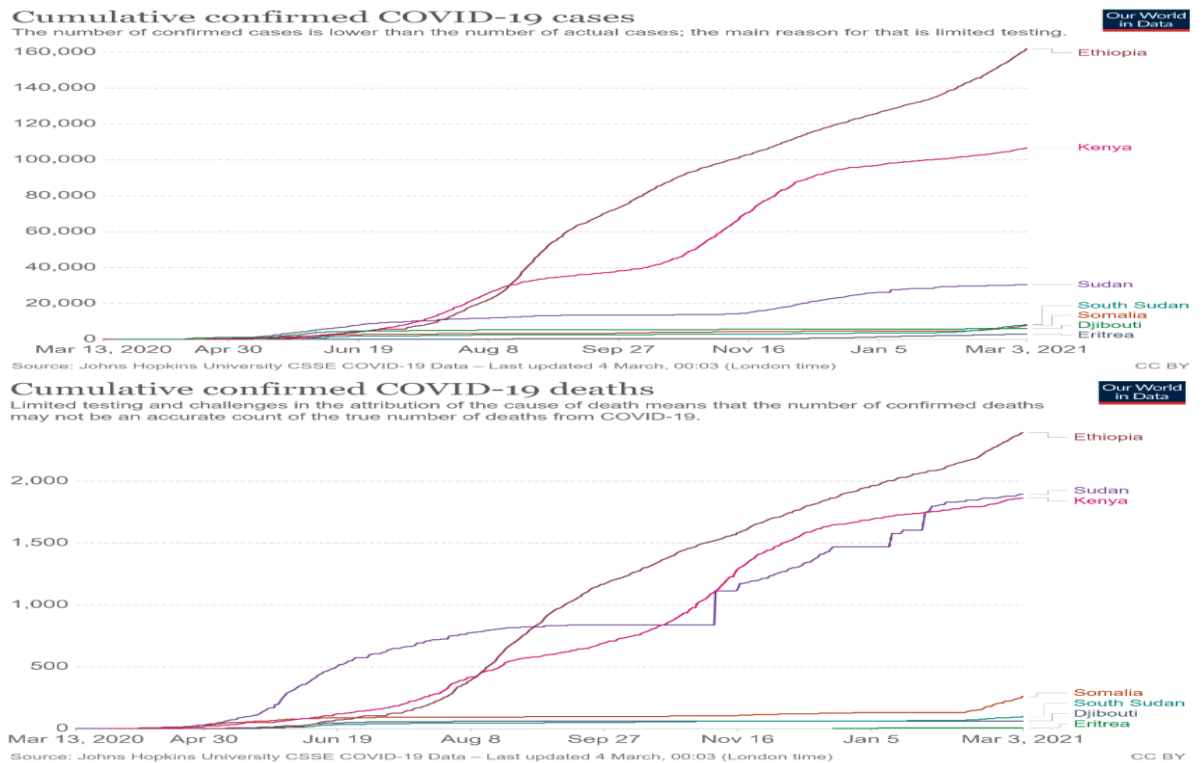
Fig 2. Global cases (top) and deaths (bottom) reported as of March, 2021.

- USA has recorded the highest number of cases 1.7% (28,974,623 to 29,456,377 cases) and 2.6% (518,363 to 531,652 deaths) that accounts 25.4% of the total global cases and carried 20.7% of global deaths as of March 4, 2021.
- India is the 2nd highest in terms of cases in a week time by 1% (11,046,432 to 11,156,923) and deaths by 0.5% (156,742 to 157,471).
- Brazil has increased the number of cases in a week time by 3.8% (10,326,008 to 10,722,221) and deaths by 3.7% (250,079 to 259,402).
- Russia ranked 4th globally with 4,278,750 cases and 87,348 deaths.
- UK ranked 5th globally with 4,194,785 cases and 123,783 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 March 4). The cases in the continent have increased by 1.8% in a week time (3,883,726 to 3,953,557 cases). Similarly, the total number of deaths in Africa has increased from 102,619 to 104,834 showing 2.2%. Total recoveries stand at 3,516,663.
- South Africa is the leading in the continent with 1,516,262 cases and 50,366 deaths. Morocco (484,753 cases, 8,653 deaths), Tunisia (235,008 cases, 8,074 deaths), Egypt (184,168 cases, 10,822 deaths) and Ethiopia (161,974 cases, 2,391 deaths) are the most four leading countries next to South Africa in reporting COVID-19 cases in Africa. (See table below).

Africa	February 25		March 4	
	Cases	Death	Cases	Deaths
South Africa	1,507,448	49,523	1,516,262	50,366
Morocco	482,128	8,592	484,753	8,653
Tunisia	230,443	7,869	235,008	8,074
Egypt	180,051	10,495	184,168	10,822
Ethiopia	155,234	2,316	161,974	2,391

- 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.



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>

VACCINATING OLDEST FIRST FOR COVID-19 SAVES THE MOST LIVES.

- Many competing criteria are under consideration for prioritizing COVID-19 vaccination. Two criteria based on age are demographic: lives saved and years of future life saved. Vaccinating the very old against COVID-19 saves the most lives, but, since older age is accompanied by falling life expectancy, it is widely supposed that these two goals are in conflict.
- The age patterns of COVID-19 mortality are such that vaccinating the oldest first saves the most lives and, surprisingly, also maximizes years of remaining life expectancy. Study finding demonstrates this relationship empirically with mathematical analysis of life tables. Our age-risk results, under usual conditions, also apply to health risks.

- In contexts where vaccine allocation is based on age, prioritizing the very old, who have the highest risk of dying, averts the most deaths. But, from the point of view of saving years of remaining life, it seems that it might be better to target younger people, who are less likely to die quickly of another cause if they can be protected from the coronavirus.
- Common intuition suggests a trade-off between saving the maximum number of lives and saving the most future life. Such a trade-off is central to philosophical and ethical discussions, and epidemiological and public health studies often report both numbers of deaths and numbers of years of life lost (YLL) in quests for balanced health intervention priorities.
- Result showed that this intuition about demographic trade-offs is wrong in the case of COVID-19. While it is true that remaining life expectancy declines with age, this decline is overwhelmed by the exponentially increasing risk of death. For COVID-19, it turns out that vaccinating first the oldest old saves the most lives and also the most life left.
- Allocating scarce COVID-19 vaccine doses involves much complex trade-offs. However, a conflict between minimizing the count of deaths and maximizing remaining life is not one of them. Contrary views are widespread. The World Health Organization, for example, rejected the use of YLL as an allocation criterion in part because “a priority approach relying on YLL could be viewed as disrespectful to older people by failing to address their disproportionately higher risk of death”. Empirical analysis shows it is easier than thought to set such fears aside and to give vaccine priority to the oldest old and those in the most vulnerable states of health.
- The assumptions of the formal investigation can be relaxed somewhat. COVID-19 mortality rates rise slightly faster with age than all-cause mortality rates [about 1% faster (9)], so the current results would continue to hold if it is found that vaccination effectiveness declines slightly with age. Likewise, the period mortality rates presumably rise a little more steeply than the cohort rates driving actual future years lived. In situations where those in long-term care have already been prioritized, a relevant question for further prioritization is the steepness of the mortality age gradient for the remaining population. This is an area of active research.
- The age-based mathematical analysis can be extended, using common assumptions, to other risk factors such as health status. Under the proportional hazards Gompertz model, giving priority to people most at risk due to combinations of age and health status will save both the most lives and life left.
- These findings give further support to announced priority rankings that vaccinate first those most at risk for dying from COVID-19. This analysis is not a replacement for more comprehensive modeling accounting for both the direct and indirect effects of vaccines. Rather, in the case of COVID-19, this study shows that a general property of life tables can be invoked to wipe away the potential conflict between saving lives and maximizing future years of life. Giving COVID-19 vaccines to those facing the highest risk of death from the disease accomplishes both of these goals.

References

1. Prioritizing the oldest for COVID-19 vaccines saves more lives, potential years of life, study shows: ScienceDaily, <https://www.sciencedaily.com/releases/2021/02/210226121322.htm>
2. Goldstein, J. R., Cassidy, T. and Wachter, K. W. (2021) ‘Vaccinating the oldest against COVID-19 saves both the most lives and most years of life’, *Proceedings of the National Academy of Sciences*, 118(11), p. e2026322118. doi: 10.1073/pnas.2026322118.

PUBLIC PREFERENCES FOR ALLOCATING VENTILATORS IN AN INTENSIVE CARE UNIT.

- During the COVID-19 pandemic, resources in intensive care units (ICUs) have the potential to be inadequate to treat all those who might benefit.
- Therefore, it is paramount to identify the views of the community regarding how to allocate such resources. This study aims to quantify Australian community preferences for ventilation allocation.
- A discrete choice experiment was designed and administered to an adult Australian online panel. Each survey respondent answered 12 choice sets from a total design of 120. Each choice set placed the respondent in the role of hypothetical decision maker, prioritising care between two patients.
- A series of attitudinal questions about different methods of making such decisions in practice, focusing on who should be responsible is asked.
- A total of 1050 community members completed the survey and responded to each choice. Dimensions considered most important were age, likely effectiveness, smoking status, whether the person has dependents, whether they are a healthcare worker, and whether they have a disability or not.
- Estimating marginal rates of substitution between patient characteristics and chance of survival if ventilated yielded values of up to 30 percentage points if the patient was 70 years old relative to being 30. However, respondents typically said they would prefer such decisions to be made by medical professionals.

- This study demonstrated the preferences of the community to allocation of ventilators during the COVID-19 pandemic. The use of such information should be treated with some caution as the underlying reason for such preferences are unclear, and respondents themselves preferred the decision to be made by others.

Key Points for Decision Makers

- When considering allocation of ventilators during COVID-19, the Australian general public are willing to prioritise groups based on age, likelihood of treatment success, disability, whether the patient has dependents, smoking status, and whether they work in healthcare.
- However, when asked who should make such decisions, they tend to prefer clinicians to be the final decision makers.
- There are considerable differences in opinion across the population. So, while the general population may prefer decision making to be made by others, this process has to be informed through a broad set of stakeholders.

Reference

1. Norman, R., Robinson, S., Dickinson, H. *et al.* Public Preferences for Allocating Ventilators in an Intensive Care Unit: A Discrete Choice Experiment. *Patient* (2021). <https://doi.org/10.1007/s40271-021-00498-z>