

EPHI, National Data Management Center for health (NDMC)  
Quick update on COVID-19, 022

This update summarizes	Ethiopia's COVID-19 situation update
	Global and regional burden of COVID 19
	Mortality Surveillance during Pandemic
	Clinical manifestations, risk factors, and maternal and perinatal outcomes of COVID-19 in pregnancy
	The Potential effects of COVID-19 induced disruption to HIV programmes in high burden settings
	An ethical Framework for global vaccine allocation: A fair priority model

Ethiopia's COVID-19 situation update

As of September 10, 2020 there were a total of 61,700 COVID-19 cases and 966 deaths across the country. Compared to the cases and deaths reported a week ago, the cumulative cases have increased by 10% and cumulative deaths by 11%. So far 23,054 cases have recovered from COVID-19 (Fig 1). Of the 37,997 active cases, 319 are critical. The total number of tests stands at 1,093,830 showing a 12% increase compared to last week.

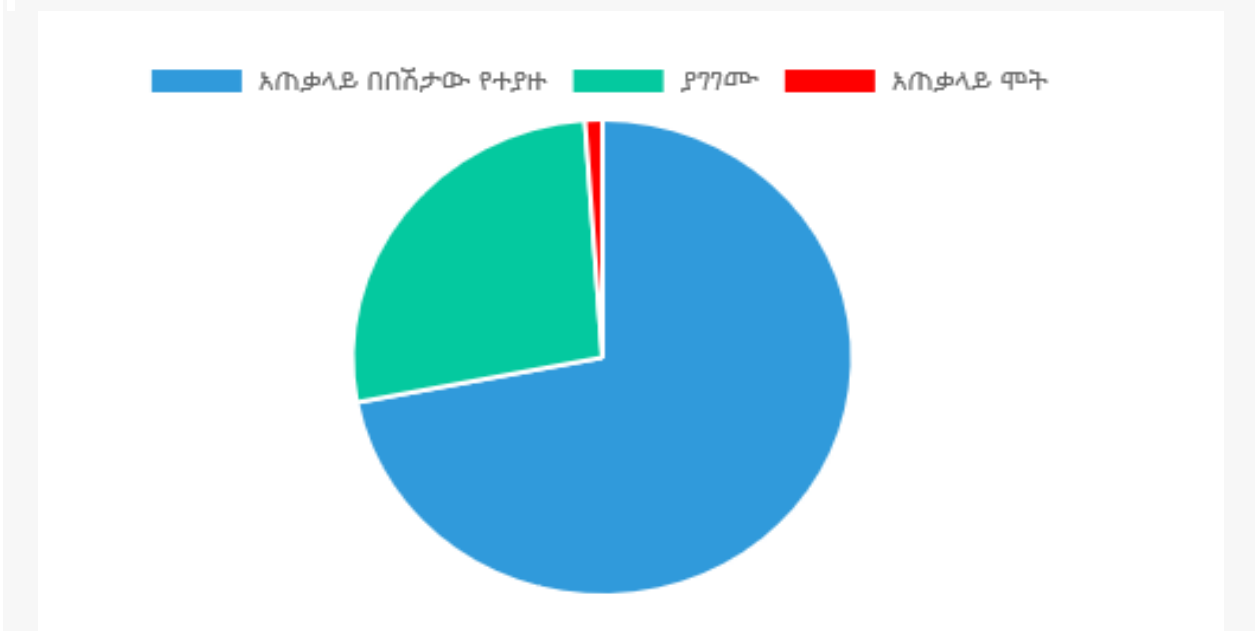


Fig. 1. Showing cumulative cases, recoveries and deaths (Source <https://www.covid19.et/covid-19/>)

## EPHI and FMOH COVID 19 response highlights of the week

- In the previous week, a total 8,916 COVID-19 confirmed cases were followed. Of which 2,690 cases were recovered and 6,284 were on HBIC follow up. Two COVID-19 related deaths were reported among patients under HBIC and 67 cases were transferred to treatment centers. 75 cases were also transferred from treatment centers to HBIC as of September 2, 2020.
- Since Home Based Isolation and Care (HBIC) have started in Ethiopia, a total 12,810 COVID-19 confirmed cases have been followed as of September 9, 2020. Of which, 5,823 recovered and 7,000 cases are currently on follow up. Two COVID-19 related deaths have been reported 116 cases have been transferred to treatment centers while, 79 cases have been transferred from treatment centers to HBIC.
- On September 8, 2020 Social mobilization event conducted in SNNPR region to mobilize the engaging higher officials, health care providers.
- Four days comprehensive COVID-19 training is on the third day on Sep 8, 2020 for 50 health professionals from Sidama Regional State at Hawassa city.
- Mobile based training on COVID-19 for Health Extension workers is on-going. As of September 7, 2020, total of 28,580 HEWs are registered and 13,106 are enrolled to the training out of which 10,627 are completed the training.

### References

Public Health Emergency Operations Centers (PHEOC), Ethiopia  
[https://twitter.com/lia\\_tadesse](https://twitter.com/lia_tadesse)

## Global and regional burden of COVID-19

- Globally the total number of cases is extended to 28,056,120 as of September 10, 2020. A total of 20,122,196 cases recovered and 908,651 people died since the beginning of the outbreak. Globally, in a week time, from September 3 to 10, 2020, COVID-19 cases increased by 7.15% and deaths by 4.76%. Asia is the leading in terms of cases followed by North and South America. North America leads the number of deaths followed by South America and Europe (Fig 2).

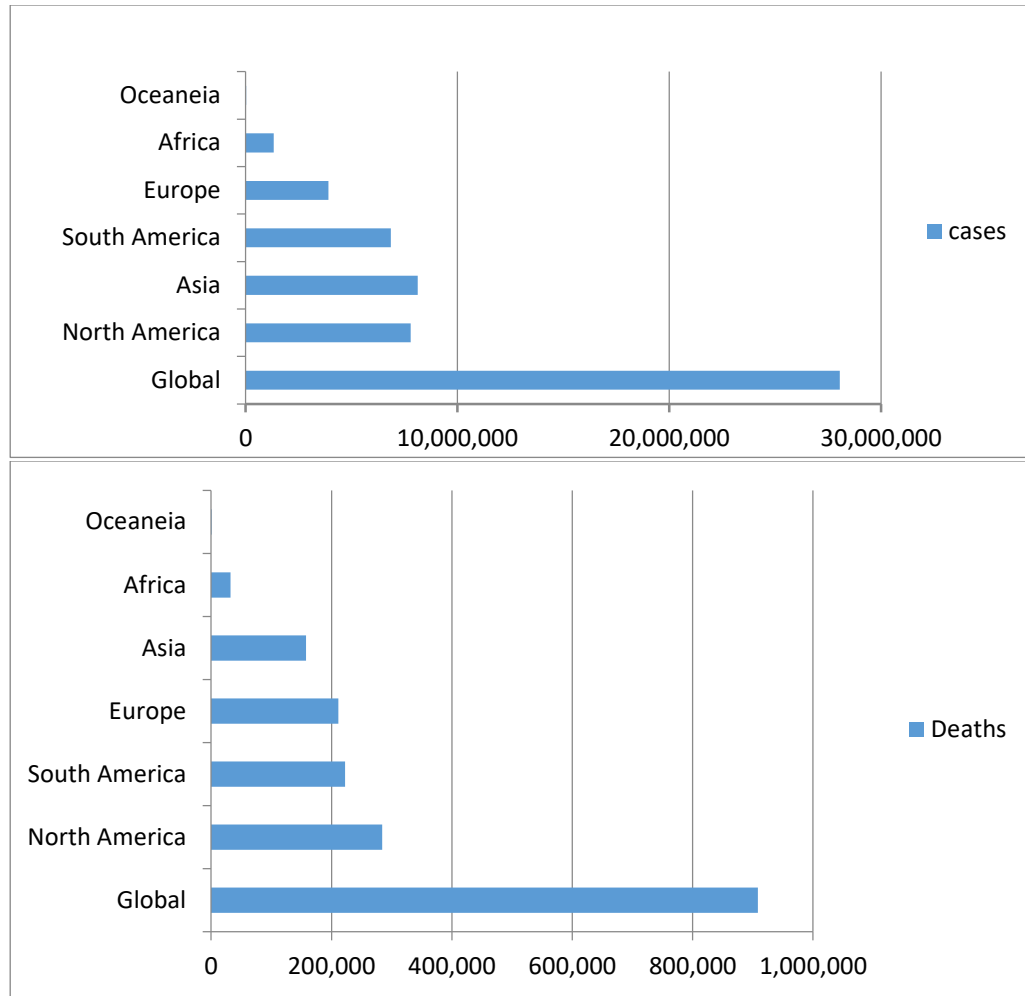


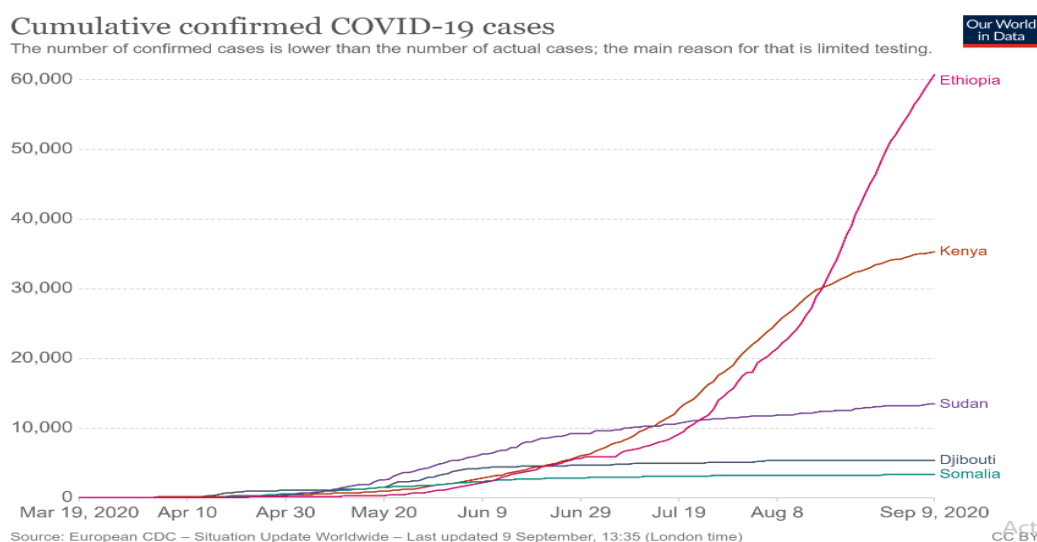
Fig 2. Global cases (top) and deaths (bottom) reported as of September 2020.

- USA has recorded the highest number of cases (6,549,771 cases, 195,245 deaths) that accounts 23.4% of the total global cases and carried 21.5% of global deaths as of September 10, 2020.
- India became the 2<sup>nd</sup> in terms of cases following USA. The number of cases in India has increase in a week time by 16% (3,853,406 to 4,470,166) and deaths by 11.3% (67,486 to 75,119).
- The number of cases in Brazil has increased by 4.9% (4,001,422 to 4,199,332) and deaths by 3.8% (123,899 to 128,653) in a week time.
- Russia has continued reporting the highest number of cases in Europe, with 1,046,370 cases.
- Peru ranked 5<sup>th</sup> in the world with 702,776 cases in a week time.
- The line share of Africa to the global COVID-19 pandemic has still been low (only 4.7% of the global cases and 3.5% of deaths as of September 10). However, within the continent the number of cases has increased by 4.3% in a week time (from 1,273,213 to 1,328,282 cases). Similarly, the total number of deaths in Africa has increased from 30,370 to 31,964 showing a 5.2% increase in a week time. Total recoveries stand at 1,063,663.

- South Africa ranked 8<sup>th</sup> worldwide in terms of cases and leading in the continent with 642,431 cases and 15,168 deaths. Egypt (100,403 cases, 5,577 deaths), Morocco (77,878 cases, 1,453 deaths), Ethiopia (61,700 cases, 966 deaths), and (Nigeria (55,632 cases, 1,070 deaths) are the most four leading countries next to South Africa in reporting COVID-19 cases in Africa. (See table below).

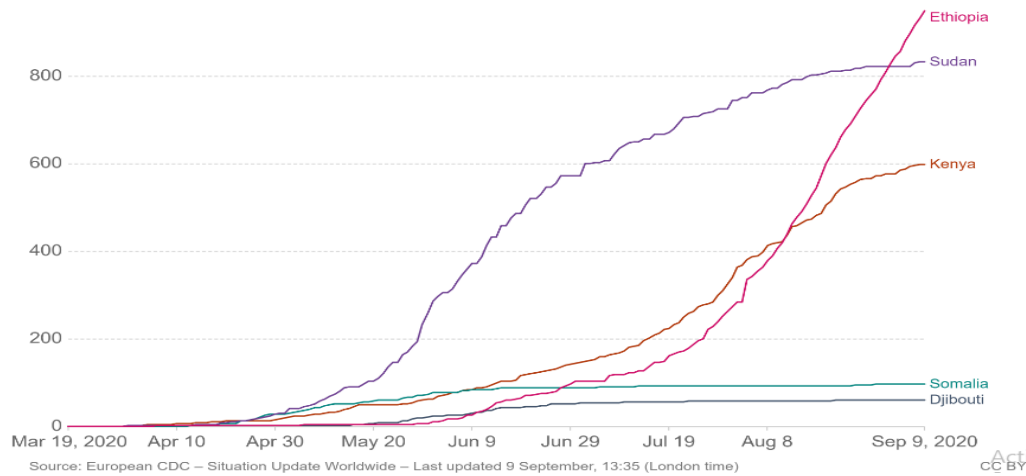
Africa	September 3		September 10	
	Cases	Death	Cases	Deaths
South Africa	630,595	14,389	642,431	15,168
Egypt	99,280	5,461	100,403	5,577
Morocco	65,453	1,216	77,878	1,453
Ethiopia	54,409	846	61,700	966
Nigeria	54,463	1,027	55,632	1,070

- In East African, COVID-19 cases and deaths have shown fast progress. In a week time, COVID-19 cases and deaths increased by 10% and 11% in Ethiopia and by 2.8% and 4.5% in Kenya. As of September 10, 2020, Ethiopia and Kenya are the major drivers of the COVID 19 burden in east African countries. The epidemic appears plateauing in Sudan showing only 1.9% cases and 1.2% deaths and in Djibouti 0.1% cases and 1.7 deaths. Similarly, 1.8 cases and zero deaths reported in Somalia in a week time.



## Cumulative confirmed COVID-19 deaths

Limited testing and challenges in the attribution of the cause of death means that the number of confirmed deaths may not be an accurate count of the true number of deaths from COVID-19.



## 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>

## Mortality Surveillance during Pandemic

- Rapid mortality surveillance during an epidemic is essential to formulate an evidence-based response. It is one critical source of information. A weekly count of deaths is key indicator of overall epidemic impact and trajectory. Such public health intelligence can overcome the ambiguities of just measuring cases and deaths linked to the epidemic.
- Rapid mortality surveillance report provides timely empirical estimates for monitoring health and the performance of health systems. Counting and reporting of all deaths and comparing to expected mortality, produces a picture of excess death, capturing both the direct burden of the epidemic and its indirect mortality burden, caused by disruptions to the access, use and provision of health-care services .
- Rapid mortality surveillance comprises both facility- and community-based components and depends on both data availability and transmissibility. Measuring excess death using both facility- and community-based components is useful in response to COVID-19 pandemic. Networks of community and health facility sites reporting deaths by age, sex and location on a daily or weekly basis provide an essential input to the outbreak response, including tracking the epidemic trajectory.
- Facility-based surveillance may be implemented by medical records staff, observing proper infection control measures to protect themselves, including avoiding patient care areas; observing workplace physical distancing measures; rigorously practicing hand hygiene; and use of personal protective equipment.
- One approach to rapid mortality surveillance is to leverage existing routine health information systems, COVID-19-specific rapid data collection platforms or existing surveillance platforms, such as integrated disease surveillance and response.

- Community-based surveillance may be critical where high numbers of deaths occur outside of health facilities – a situation that may worsen should health systems become overwhelmed.
- Community surveillance can be done by community-based health-care providers or other frontline workers whose existing responsibility includes the notification of vital events, provided that infection prevention measures can be observed to protect those collecting data.
- Community surveillance can capture information on mortality in areas where data collection is weak, but determining causes of death remains challenging. It can also be useful for outbreak detection if timeliness of data collection and reporting facilitate real-time data analysis.
- Rapid mortality surveillance may provide policy-makers with up-to-date status reports, including spread into new areas or previously unaffected populations. This surveillance can also help target, prioritize and monitor the effectiveness of prevention and response strategies.
- Countries need real-time awareness of the distribution and magnitude of all direct and indirect health impacts of the COVID-19 pandemic. Establishing, scaling and improving upon rapid mortality surveillance would contribute to fulfilling this need, as well as preparing for future outbreaks.

#### References:

1. Philip Setel, Mortality surveillance during the COVID-19 pandemic. Bull World Health Organ 2020;98:374 | doi: <http://dx.doi.org/10.2471/BLT.20.263194>
2. Dorrington R, Bradshaw D, Laubscher R, Nannan N. Rapid mortality surveillance report 2017. Cape Town: South African Medical Research Council; 2019
3. Amanda Tiffany, Community-Based Surveillance to Monitor Mortality in a Malaria-Endemic and Ebola-Epidemic Setting in Rural Guinea. Am. J. Trop. Med. Hyg., 95(6), 2016, pp. 1389–1397 doi:10.4269/ajtmh.16-0376

### Clinical manifestations, risk factors, and maternal and perinatal outcomes of COVID-19 in pregnancy

- Since the first report (December 2019) of the novel coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the number of confirmed cases and associated mortality and morbidity have increased rapidly. Pregnant women are considered a high risk group because of concerns about the effect of COVID-19 on them during and after pregnancy, and on their neonates. Quantification of the rates of COVID-19, its risk factors, clinical manifestations, and outcomes is a key to plan maternal care and clinical management in an evolving pandemic scenario.

#### *Rates of COVID-19 in pregnant and recently pregnant women*

In this living systematic review, the overall rate of COVID-19 diagnosis in pregnant and recently pregnant women attending or admitted to hospital for any reason was 10%. One in 20 asymptomatic mothers attending or admitted to hospital had a diagnosis of COVID-19. Three quarters of the pregnant women with COVID-19 in the universal screening population were

asymptomatic. Based on data from a small number of studies, a diagnosis of covid-19 in pregnancy was associated with maternal obesity, pre-existing comorbidities, asthma, history of covid-19 in the support person, and gestational diabetes.

### ***Clinical manifestations of COVID-19 during pregnancy and after delivery***

The most common symptoms reported by pregnant and recently pregnant women with suspected or confirmed covid-19 were fever (40%) and cough (39%); lymphopaenia (35%) and raised C reactive protein levels (49%) were the most common laboratory findings. Compared with non-pregnant women of reproductive age with covid-19, pregnant and recently pregnant women with the disease were less likely to manifest symptoms of fever and myalgia. A history of pre-existing diabetes was more often observed in pregnant women with covid-19 than in non-pregnant women with the disease.

### ***Outcomes related to COVID-19 in pregnant and recently pregnant women***

Overall, 73 pregnant women (26 studies, 11580 women) with confirmed COVID-19 died from any cause. Severe COVID-19 was diagnosed in 13% of pregnant and recently pregnant women with suspected or confirmed COVID-19; 4% of the pregnant women with COVID-19 were admitted to an intensive care unit, 3% of women required invasive ventilation, and about 0.4% women required extracorporeal membrane oxygenation. Compared with non-pregnant women of reproductive age with COVID-19, Pregnant or recently pregnant women with COVID-19 seem to be at increased risk of requiring admission to an intensive care unit or invasive ventilation. Maternal risk factors associated with severe COVID-19 increased maternal age, high body mass index, and pre-existing comorbidities might be associated with severe disease.

### ***Maternal and perinatal outcomes in pregnant and recently pregnant women with COVID-19***

In pregnant and recently pregnant women with COVID-19 the rate of overall preterm birth was 17% and of spontaneous preterm birth was 6%. In pregnant and recently pregnant women with COVID-19 compared with pregnant and recently pregnant women without the disease, the odds of any preterm birth were higher, but no differences were observed in other maternal outcomes. Overall, 25% of neonates born to women with COVID-19 were admitted to the neonatal unit, with a higher risk of admission than those born to mothers without the disease in one study with historical controls.

### **Relevance for clinical practice and research**

Based on existing data, healthcare professionals should be aware that pregnant and recently pregnant women with COVID-19 might manifest fewer symptoms than the general population, with the overall pattern similar to that of the general population. Emerging comparative data indicate the potential for an increase in the rates of admission to intensive care units and invasive ventilation in pregnant women compared with non-pregnant women. Mothers with pre-existing comorbidities will need to be considered as a high risk group for COVID-19, along with those who are obese and of greater maternal age. Clinicians will need to balance the need for regular multidisciplinary antenatal care to manage women with pre-existing comorbidities against

unnecessary exposure to the virus. Pregnant women with COVID-19 before term gestation might need to be managed in a unit with facilities to care for preterm neonates. Further data are needed to assess robustly if pregnancy related maternal and neonatal complications are increased in women with COVID-19 than those without the disease.

#### References:

- Allotey J, Stallings E, Bonet M, Yap M, Chatterjee S, Kew T, et al. Clinical manifestations, risk factors, and maternal and perinatal outcomes of coronavirus disease 2019 in pregnancy: living systematic review and meta-analysis. *BMJ* [Internet]. 2020 Sep 1;370:m3320. Available from: <http://www.bmj.com/content/370/bmj.m3320.abstract>

### **The Potential effects of COVID-19 induced disruption to HIV programmes in high burden settings**

- The COVID-19 pandemic is causing a somber effect on the most vulnerable communities worldwide and threatens progress on HIV, TB, malaria, vaccination and other areas of health care delivery that has been achieved through development goals.
- COVID-19 has the potential to cause disruptions to health services in different ways;
  - Through the health system becoming overwhelmed with COVID-19 patients,
  - Through the intervention used to mitigate and control the spread of COVID-19 impeding access to preventative interventions and services, and
  - Through supplies of essential medicine and equipment being interrupted globally and/or regionally.
- In sub-Saharan Africa alone, an estimated 26 million people are living with HIV and more than 17 million are taking antiretroviral therapy. These people on ART now are at higher risk of having their treatment interrupted either due to comprehensive HIV services are closed or are unable to supply antiretroviral drugs as results of disruptions to the supply chain or because services simply become overwhelmed due to competing needs to support the COVID-19 response.
- According to modeling team from WHO, UNAIDS and academia estimated the extent to which such disruptions in services for HIV in high burden low- and middle-income countries could lead to additional 10% loss of life. The highest impact on HIV is from interruption to ART and reduced prevention activities. Besides, the ART disruptions could have additional impact on HIV incidence in the coming years. Furthermore, the pandemic induced poverty could increase high risk sexual behavior that results in HIV contraction.
- Interruptions of ART would lead to poor adherence to treatment, leading to the spread of HIV drug resistance, with long-term consequences for future treatment success.
- Sustaining the important prevention activities and healthcare services for HIV and other demanding chronic care services could suggestively reduce the overall devastating impact of the COVID-19 epidemic.



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1. Hogan, Alexandra B., et al. "The potential impact of the COVID-19 epidemic on HIV, TB and Malaria in low-and middle-income countries." *London, Imperial College London* (2020).
2. Hogan, Alexandra B., et al. "Potential impact of the COVID-19 pandemic on HIV, tuberculosis, and malaria in low-income and middle-income countries: a modeling study." *The Lancet Global Health* (2020).
3. Jewell, Britta L., et al. "Potential effects of disruption to HIV programmes in sub-Saharan Africa caused by COVID-19: results from multiple mathematical models." *The Lancet HIV* (2020).
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## An ethical Framework for global vaccine allocation: A fair priority model

- Once effective coronavirus disease 2019 (COVID-19) vaccines are developed, they will be scarce.
- This presents the question of how to distribute them fairly across countries. Vaccine allocation among countries raises complex and controversial issues involving public opinion, diplomacy, economics, public health, and other considerations.
- Nevertheless, many national leaders, international organizations, and vaccine producers recognize that one central factor in this decision-making is ethics.
- Yet little progress has been made toward delineating what constitutes fair international distribution of vaccine. Many have endorsed “equitable distribution of COVID-19 vaccine” without describing a framework or recommendations.
- The Fair Priority Model offer a more ethically defensible and practical proposal for the fair distribution of COVID-19 vaccine.
- The Fair Priority Model is primarily addressed to three groups.
  - One is the COVAX facility led by Gavi, the World Health Organization (WHO), and the Coalition for Epidemic Preparedness Innovations (CEPI)—which intends to purchase vaccines for fair distribution across countries.
  - A second group is vaccine producers. Thankfully, many producers have publicly committed to a “broad and equitable” international distribution of vaccine.
  - The last group is national governments, some of whom have also publicly committed to a fair distribution.
- These groups need a clear framework for reconciling competing values, one that they and others will rightly accept as ethical and not just as an assertion of power.
- The Fair Priority Model specifies what a fair distribution of vaccines entails, giving content to their commitments. Moreover, acceptance of this common ethical framework will reduce duplication and waste, easing efforts at a fair distribution.
- That, in turn, will enhance producers’ confidence that vaccines will be fairly allocated to benefit people, thereby motivating an increase in vaccine supply for international distribution.

- Fairly distributing a COVID-19 vaccine among countries is a problem of distributive justice. Although governments will be the initial recipients of vaccine, fair distribution across countries must reflect a moral concern for the ultimate recipients: individuals.
- Three values are particularly relevant:
  - benefiting people and limiting harm,
  - prioritizing the disadvantaged, and
  - Equal moral concern.
- Benefiting people and limiting harm is widely recognized as important across ethical theories. Realizing this value requires defining relevant benefits, measuring them, and assessing the relative urgency, the importance and time sensitivity of countries' needs.
- A successful vaccine produces direct benefits by protecting people against death and morbidity caused by infection.
- It also produces indirect benefits by reducing death and morbidity arising from health systems overstressed by the pandemic, and by reducing poverty and social hardship such as closed schools.
- Prioritizing the disadvantaged is a fundamental value in ethics and global health.
- Realizing this value requires that vaccine distribution reflect special concern for people who are disadvantaged.
- Fairly distributing a COVID-19 vaccine internationally therefore requires assessing different types of disadvantage.
  - Are the worst-off countries those experiencing the greatest poverty? Those where people have the lowest life expectancies?
  - Equal moral concern requires treating similar individuals similarly and not discriminating on the basis of morally irrelevant differences, such as sex, race, and religion.
  - Distributing different quantities of vaccine to different countries is not discriminatory if it effectively benefits people while prioritizing the disadvantaged
- The Fair Priority Model proceeds in three phases, preventing more urgent harms earlier.
  - Phase 1 aims at reducing premature deaths and other irreversible direct and indirect health impacts.
  - Phase 2 continues to address enduring health harms but additionally aims at reducing serious economic and social deprivations such as the closure of nonessential businesses and schools. Restoring these activities will lower unemployment, reduce poverty, and improve health.
  - Finally, phase 3 aims at reducing community transmission, which in turn reduces spread among countries and permits the restoration of pre-pandemic freedoms and economic and social activities.

## References

- Ezekiel J. Emanuel, et al. An ethical framework for global vaccine allocation. DOI: 10.1126/science.abe2803. Published Online 03 Sep 2020.