EPHI, National Data Management Center for health (NDMC)
Quick update on COVID-19, 032

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Ethiopia's COVID-19 situation updates

As of November 19, 2020, there were a total of 103,928 COVID-19 cases and 1,601deaths across the country. Compared to the cases and deaths reported a week ago, the cumulative cases and deaths have increased by 2%. So far 64,593cases have recovered from COVID-19 (Fig 1). Of the 38,037 active cases, 305 are critical. The total number of tests stands at 1,574,870 showing a 1% increase compared to last week.

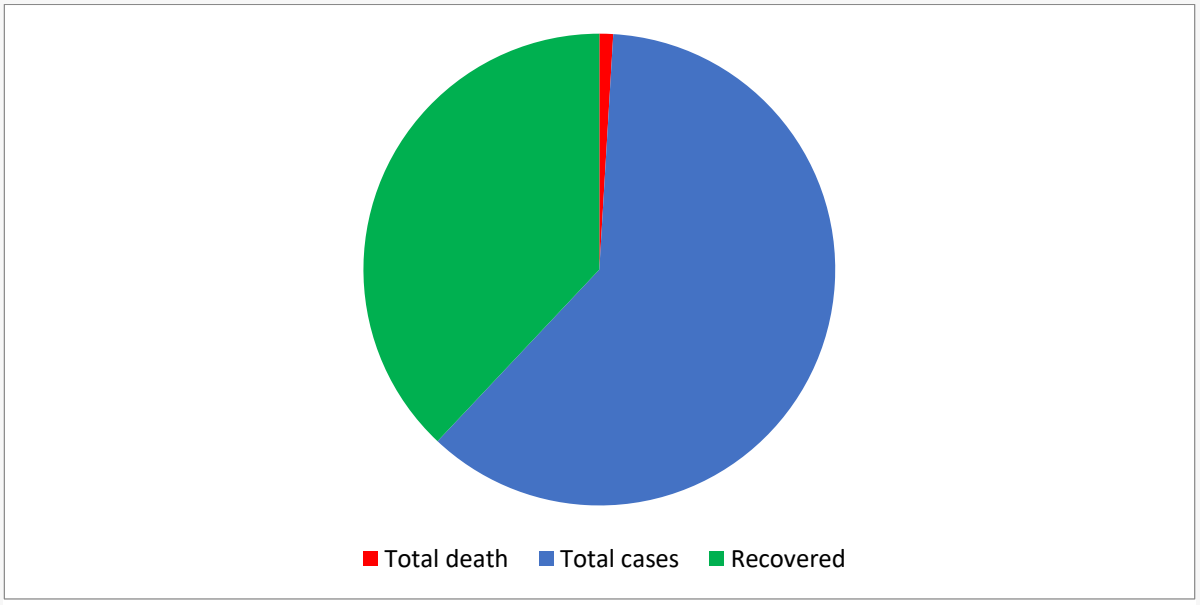

Fig. 1. Showing cumulative COVID-19 cases, recoveries and death as of November 19, 2020.

EPHI and FMOH COVID 19 response highlights of the week

- Since Home Based Isolation and Care (HBIC) have started in Ethiopia, a total 30,205 COVID-19 confirmed cases have been followed as of November 19, 2020. Of which, 26,606 recovered and 5,525 cases are currently on follow up. Five COVID-19 related deaths have been reported 280 cases have been transferred to treatment centers while, 211 cases have been transferred from treatment centers to HBIC.
- On November 12, 2020 three days comprehensive training on COVID-19 is started for health care workers who work in confined settings in SNNPR and Sidama regional states started at Hawassa city
- On November 13, 2020, COVID-19 orientation training given for 50 police officers from Oromia Region Prison Administration at Bishoftu town.
- On Nov, 17, 2020 mental health and psychosocial support training started for 28 regional hospital psychiatrists, psychologists and social workers at Bishoftu town.

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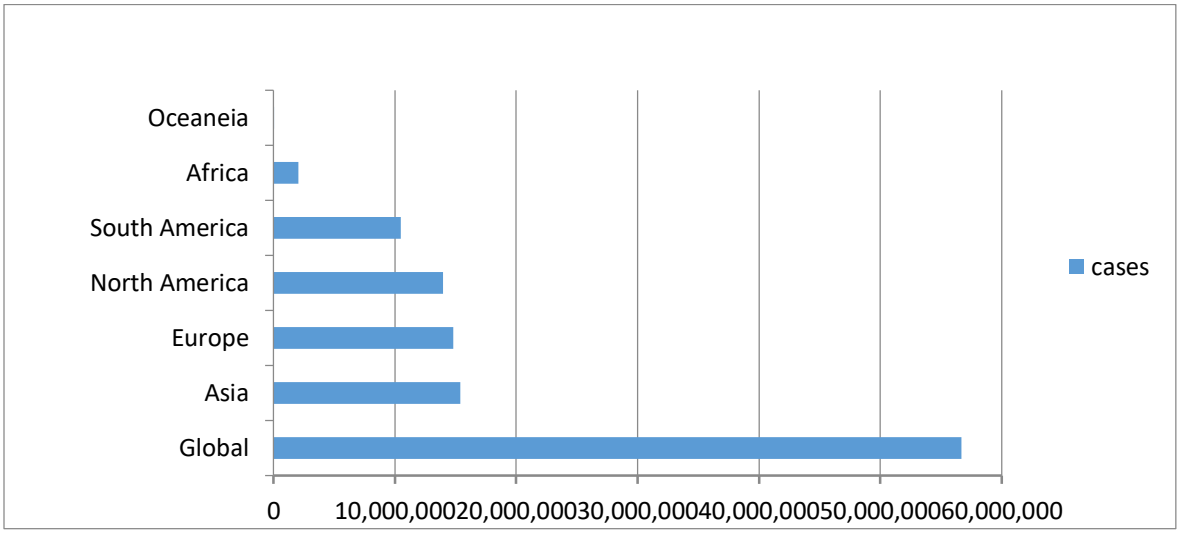
- https://twitter.com/lia_tadesse

Global and regional burden of COVID-19

- Globally the total number of cases extends to 56,707,287 as of November 19, 2020. A total of 39,490,182 cases recovered and 1,357,551 people have died since the beginning of the outbreak. Globally, in a week time, from November 12, 2020 to November 19, 2020, COVID-19 cases increased by 7.93% and deaths by 5.1%. Asia is the leading in terms of cases followed by Europe and North America. North America leads the number of deaths followed by Europe and South America (Fig 2).



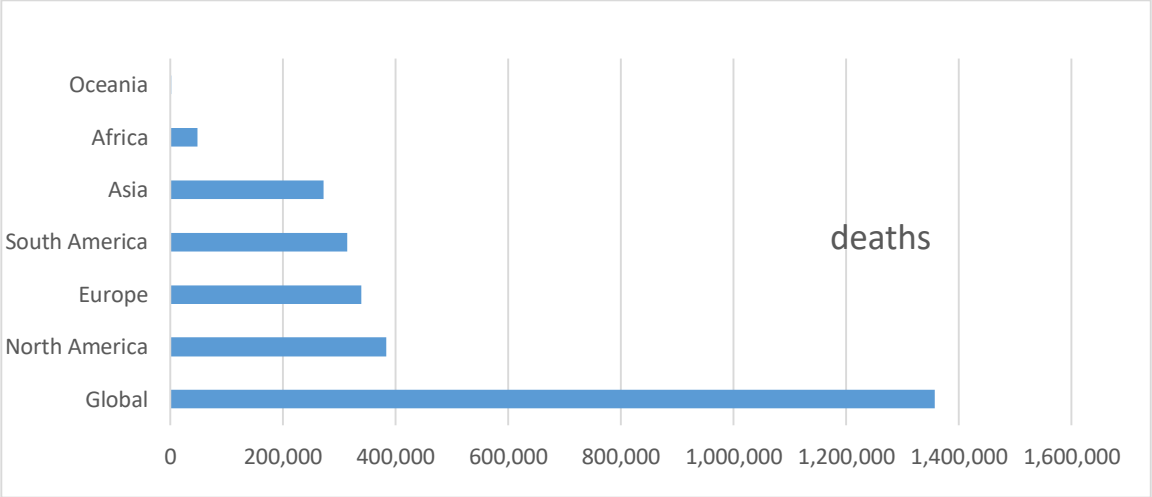
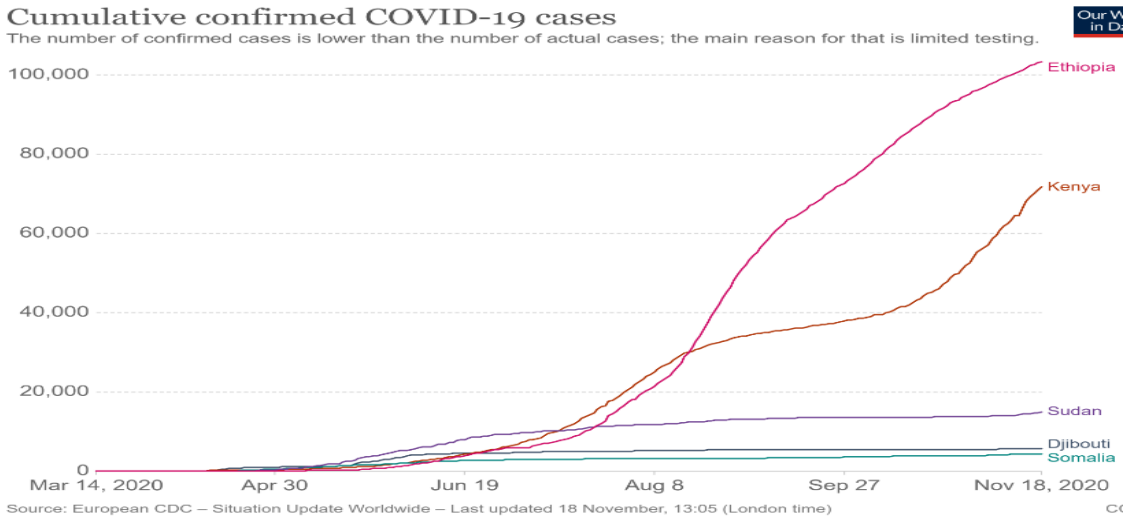


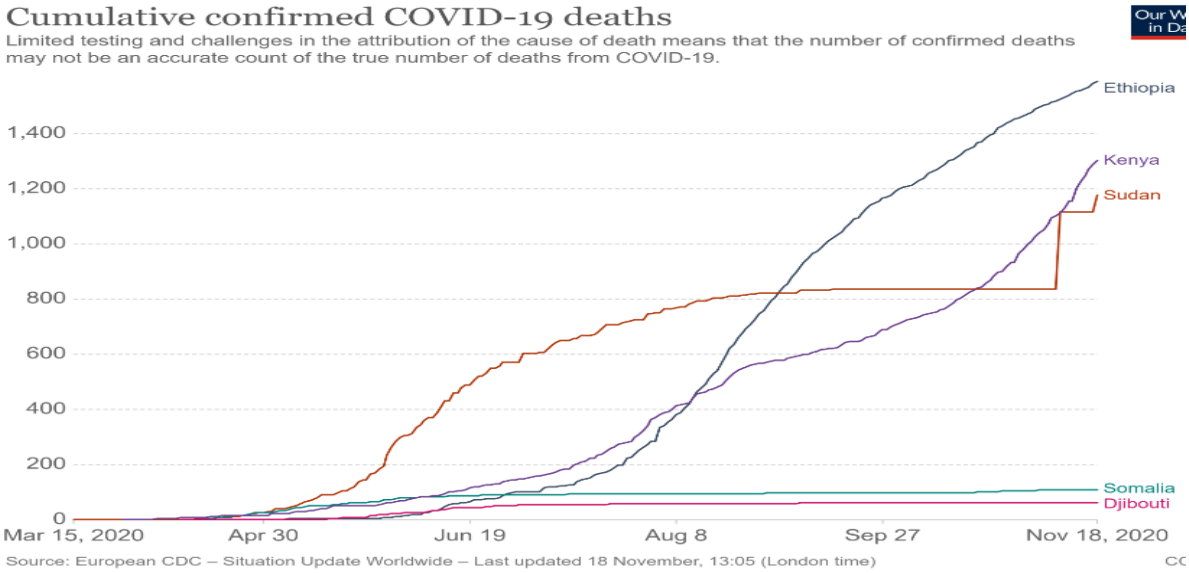
Fig 2. Global cases (top) and deaths (bottom) reported as of November 19, 2020.

- USA has recorded the highest number of cases (11,876,240 cases, 256,311 deaths) that accounts 20.9% of the total global cases and carried 18.9% of global deaths as of November 19, 2020.
- India became the 2nd in terms of cases following USA. The number of cases in India has increased in a week time by 3.17% (8,685,084 to 8,960,098) and deaths by 2.7% (128,179 to 131,639).
- The number of cases in Brazil has increased by 3.45% (5,749,007 to 5,947,403) and deaths by 3.72% (163,406 to 167,497) in a week time.
- France has continued reporting the highest number of cases in Europe, with 2,065,138 cases.
- Russia ranked 5th in the world with 2,015,608 cases.
- The line share of Africa to the global COVID-19 pandemic was 3.57% and 3.57% of the global cases and deaths as of November 19). The number of cases in the continent has increased by 4.8% in a week time (1,931,410 to 2,027,210 cases). Similarly, the total number of deaths in Africa has increased from 46,372 to 48,518 showing a 4.63% increase in a week time. Total recoveries stand at 1,710,048.
- South Africa is the leading in the continent with 757,144 cases and 20,556 deaths. Morocco (306,995 cases, 5,013 deaths), Egypt (111,613 cases, 6,495 deaths), Ethiopia (103,928 cases, 1,601 deaths), and Tunisia (83,772 cases, 2,541 deaths) are the most four leading countries next to South Africa in reporting COVID-19 cases in Africa. (See table below).

	November 12		November 19	
Africa	**Cases**	**Death**	**Cases**	**Deaths**
South Africa	742,394	20,011	757,144	20,556
Morocco	270,626	4,506	306,995	5,013
Egypt	109,881	6,405	111,613	6,495
Ethiopia	100,727	1,545	103,928	1,601
Tunisia	74,522	2102	83,772	2,541

- In East African, COVID-19 cases and deaths have shown fast progress. In a week time, COVID-19 cases and deaths were increased by 2% in Ethiopia and 10.5% and 11.3% in Kenya. As of November, Ethiopia and Kenya continued to be the major drivers of the COVID 19 burden in east African countries. The epidemic appears plateauing in Sudan showing only 4.9% cases and 5.3% deaths and in Djibouti 0.4% cases and zero deaths. Similarly, 1.9% cases and 0.9% deaths reported in Somalia in a week time.





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Moderna's and Pfzer's Covid-19 Vaccines Give Hope for Ending the Pandemic: How the Two Vaccines Compare

- Immunization currently prevents 2-3 million deaths every year from diseases like diphtheria, tetanus, pertussis, influenza and measles. There are now vaccines to prevent more than 20 life-threatening diseases, and work is ongoing at unprecedented speed to also make COVID-19 a vaccine-preventable disease. According to the World Health Organization, more than 150 Covid-19 vaccines are presently in development, with around 44 candidates in clinical trials and 11 undergoing late stage (Phase 3) tasting around the world. In the fight against COVID-19, a vaccine is a critical part of addressing the global health crisis by decreasing rates of infection, disease and death worldwide. But today, there is no vaccine available.
- Drug makers and research centers are scrambling to deliver a safe and effective vaccine to help bring an end to the coronavirus pandemic that has claimed over 1.3 million lives worldwide. Now it appears the two Covid-19 vaccines have been found to be highly effective in late-stage trials in recent days, boosting optimism at a time when health systems in Europe and the U.S. are once again being pushed to breaking point. Not only that, but clinical trials have demonstrated both are over 90% effective in preventing COVID-19 infections. That means at least nine out of 10 people who receive those vaccines will likely not contract COVID-19, even if they're exposed to SARS-CoV-2, the virus that causes the disease, after being inoculated.
- The Moderna vaccine, a US biotech firm, reduced the risk of Covid-19 infection by 94.5%. There were 95 cases of infection among patients who received placebo in the company's 30,000-patient study. There were only five infections in patients who developed Covid-19 after receiving Moderna's vaccine, mRNA-1273. The Moderna results come one week after the US pharmaceutical giant Pfizer-BioNTech collaboration reported that a preliminary analysis of their mRNA vaccine suggested it was strongly protective. The Pfizer analysis, which was conducted after 94 people in the 43,000-person trial had contracted symptomatic Covid disease, showed there were 90% fewer cases among the people who received two doses of vaccine than among those who received two placebo injections. Each vaccine requires an initial dose plus a subsequent "booster" dose several weeks later. Moderna's two doses are administered a month apart, while Pfizer's are given three weeks apart. The data will likely increase confidence that more vaccines will work and that the world may soon find a way to get the coronavirus under control. However, both Moderna's trial and Pfizer's are continuing and efficacy figures could decline by the time the trials are complete. It is often the case that a vaccine performs less well in the real world than it does in the setting of a clinical trial.
- The results also showed that the Moderna's vaccine, mRNA-1273 not only prevented mild COVID-19 among participants, it also appeared to prevent serious illness too. Researchers found 11 cases of severe COVID-19 among the placebo group and zero among those who got the vaccine. Pfizer's vaccine, meanwhile was also found to prevent mild illness, but the company didn't reveal whether its shot prevented serious coronavirus infections, too. Moderna and Pfizer conducted their trials using slightly different protocols. While participants in the Moderna trial needed to display at least two symptoms of disease in addition to a positive test for the virus to be officially counted as a COVID-19 case, the Pfizer trial required only one symptom and a positive test. Pfizer started counting cases seven days after the second injection of the vaccine, and Moderna waited 14 days.

- Concerning how the vaccines work, both Moderna and Pfizer's vaccines rely on messenger RNA, also known as mRNA. It's a genetic molecule that a cell uses to "read" the instructions needed to build proteins. The mRNA in these vaccines contains instructions to build the spike protein (for which the coronavirus gets its name). That protein helps the virus enter human cells. The vaccines allow our cells to make the spike protein. Our immune system can then then make antibodies to latch onto those spike proteins. Those antibodies may later prevent the real virus from infecting us. To date, no vaccine using such mRNA technology has ever been used in people. But now, RNA vaccines are poised to become the first coronavirus shots on the market. Moreover, the benefits of mRNA vaccines is that they are quick to produce, seem to be largely effective, and since they don't include any of the Covid-19 virus, are unlikely to make people sick with the disease.
- After vaccines are approved, the effort to immunize hundreds of millions of people will need to overcome a series of other hurdles. There are also challenges when delivering and storing them: Moderna's vaccine, mRNA-1273, appears to be easier to store as it is expected to remain stable at standard refrigerated conditions of 2°C to 8°C for up to 30 days within the 6-month shelf life. It allows for storage at most pharmacies, hospitals, or physicians' offices. The vaccine can be kept at room temperature conditions for up to 12 hours once it is removed from the refrigerator for administration. On the other hand, Pfizer's vaccine candidate needs ultra-cold storage at around minus 75°C which would require vaccination sites to have deep freezers or dry ice on hand and can be kept in the fridge for five days.
- Global demand for vaccines initially is expected to far exceed supplies despite significant efforts to ramp up production ahead of time. Moderna has already reached agreements to supply 100 million doses to the U.S. and 80 million to the European Union, among others. Pfizer and BioNTech have their own deals for hundreds of millions of shots. Wealthy nations, representing only 13% of the world's population, have already reserved more than half (51%) of the doses promised by leading COVID-19 vaccine candidate manufacturers. This means that most of the world's population may not be vaccinated before 2022.With regard to the cost while the Moderna vaccine mRNA-1273 appears, based on early data, to be the most effective, it's also the most expensive than Pfizer's. Moderna earlier this year estimated it would cost about US$38 a dose. This could come down with bulk orders and as the technology improves. Pfizer has priced its vaccine at about US$20.

What are the big questions that remain?

- There are a number of hurdles that would need to be cleared in immunizing hundreds of millions of people. It is not clear how long the vaccine's protective effects last; whether it can block people from transmitting the virus; or whether the vaccine works as well in higher-risk groups such as older adults. The company reported that, of the 95 cases, 15 were in people over 65, but it didn't indicate which arm of the trial these participants were in. What's more, neither vaccine has been shown to perform as well in older people compared to young adults. That can only be determined over time as large numbers of people are vaccinated. Health advocates worry that increasing doubts about Covid vaccines could hinder the rollout. Ramping up production and distributing the doses also pose challenges.

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Measles and COVID-19

- During 2000-2018, measles vaccination prevented an estimated 23.2 million deaths, making measles vaccine one of the best buys in public health, however, measles surged worldwide in 2019 reaching highest number of reported cases in 23 years.
- Worldwide it has increased to 869, 770 case in 2019, the highest number reported since 1996 with increases in all WHO regions, and global measles deaths climbed nearly 50 percent since 2016, claiming an estimated 207 500 lives in 2019 alone.
- Failure to vaccinate children on time with two doses of measles-containing vaccines (MCV1 and MCV2) is the main driver of these increases in cases and deaths. Immunity gaps resulting from inadequate coverage with measles vaccine exacerbated by the COVID disruption is another fundamental factor.
- Measles is the "equity virus," a tracer that helps to pinpoint where to go to reach zero-dose children, meaning measles infections are not only a sign of poor measles vaccination coverage, but also a known marker, or 'tracer,' that vital health services may not be reaching populations most at-risk.
- Measles is highly contagious—much more so than COVID-19. It is so contagious that if one person has measles, up to 90 percent of the people close to that person who are not immune will also become infected. You can get measles just by being in a room where a person infected with measles has been, even up to two hours after that person has left.
- To control measles and prevent outbreaks and deaths, vaccination coverage rates with the required MCV1 and MCV2 must reach 95 percent and be maintained at national and subnational levels.
- Efforts to control COVID-19 have resulted in disruptions in vaccination and crippled efforts to prevent and minimize measles outbreaks; and WHO has reported that only eight countries with postponed 2020 campaign have resumed their campaign, Ethiopia is one of these countries and it has vaccinated about 15 million children.
- In the immediate future, the most threatening vaccine-preventable disease outbreaks are of measles and polio, as the number of unimmunized children grows. Globally, the polio surveillance network is being used for COVID-19 case detection, contact tracing, laboratory testing and data management.
- Similarly, immunization staff experienced with measles immunization, community engagement and campaign planning is being called upon to underpin the COVID response in many countries.
- These systems and infrastructure will play a critical role during the eventual roll-out of a COVID-19 vaccine. Therefore, current programmatic challenges of these two vaccine preventable diseases have to be tackled as early as possible, such as additional strategies may be needed to strengthen routine immunization systems, identify and close immunity gaps, and improve case-based surveillance.

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The role of social and behavioral sciences to support COVID-19 pandemic response

- The COVID-19 pandemic represents a broad range of global health crisis. Because the crisis requires large-scale behavior change and places significant psychological burdens on individuals, insights from the social and behavioral sciences can be used to help align human behavior with the recommendations of epidemiologists and public health experts. The pandemic has led to a massive global public health campaign to slow the spread of the virus by increasing hand washing, reducing face touching, wearing masks in public and physical distancing.
- While efforts to develop pharmaceutical interventions for COVID-19 are under way, the social and behavioral sciences can provide valuable insights for managing the pandemic and its impacts from topics relevant to pandemics, including social and cultural influences on behavior, communication, moral decision-making, leadership, and stress and coping.
- Potentially relevant to pandemic response topics that are broadly applicable to numerous stages of the current pandemic to help policy-makers, leaders and the public better understand how to manage threats, navigate different social and cultural contexts, improve communication, align individual and collective interests, employ effective leadership and provide social and emotional support
- **Threat perception:** One of the central emotional responses during a pandemic is fear. Humans possess a set of defensive systems for combating threats. Negative emotions resulting from threat can be contagious, and fear can make threats appear more imminent. Targeting fears can be useful in some situations, but not others: appealing to fear leads people to change their behaviour if they feel capable of dealing with the threat, but leads to defensive reactions when they feel helpless to act.
- The results suggest that strong fear appeals produce the greatest behaviour change only when people feel a sense of efficacy, whereas strong fear appeals with low-efficacy messages produce the greatest levels of defensive responses. Another challenge is that people often exhibit an ‘optimism bias’: the belief that bad things are less likely to befall oneself than others.

Although optimism bias may be useful for avoiding negative emotions, it can lead people to underestimate their likelihood of contracting a disease and to therefore ignore public health warnings. Communication strategies must strike a balance between breaking through optimism bias without inducing excessive feelings of anxiety and dread.

- **Emotion and risk perception.** Informed health decisions depend on accurate perceptions of the costs and benefits of certain choices for oneself and for society. Emotions often drive risk perceptions, sometimes more so than factual information. As negative emotions increase, people may rely on negative information about COVID-19 more than other information to make decisions.
- In the case of strong emotional reactions, people may also ignore important numeric information such as probabilities and a problem's scope. Negative framing captures attention, especially for people who are less quantitatively skilled. The media usually report on COVID-19 negatively for example, by reporting the number of people infected and those who die as opposed to those who recover or experience only mild symptoms. This may increase negative emotion and sensitize people to otherwise neglected risks for themselves or others.

Therefore, public health experts, policy makers, and community leaders should consider the following points in their pandemic control response

- Identifying sources (for example, religious or community leaders) that are credible to different audiences to share public health messages can be effective
- Leaders and the media might try to promote cooperative behaviour by emphasizing that cooperating is the right thing to do and that other people are already cooperating.
- Norms of prosocial behaviour are more effective when coupled with the expectation of social approval and modelled by in-group members who are central in social networks.
- Leaders and members of the media should highlight bipartisan support for COVID-related measures, when they exist, as such endorsements in other contexts have reduced polarization and led to less-biased reasoning.
- There is a need for more targeted public health information within marginalized communities and for partnerships between public health authorities and trusted organizations that are internal to these communities.
- Messages that (i) emphasize benefits to the recipient, (ii) focus on protecting others, (iii) align with the recipient's moral values, (iv) appeal to social consensus or scientific norms and/ or (v) highlight the prospect of social group approval tend to be persuasive.
- Given the importance of slowing infections, it may be helpful to make people aware that they benefit from others' access to preventative measures.

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Protecting essential health services in low-income and middle-income countries and humanitarian settings while responding to the COVID-19 pandemic

- COVID-19 creates unprecedented disruptions in delivery of routine healthcare.in health outcomes terms, the poorest countries stand to lose the most from these disruptions.
- Based on ethics and equity principles, it is crucial to ensure that patients not infected by COVID-19 continue to get access to healthcare and that the services they need continue to be resourced.
- We present a list of 120 essential non-COVID-19 health interventions that were adapted from the model health benefit packages developed by the Disease Control Priorities project

Criteria and process for selecting interventions

- These further prioritisation decisions need to be made based on evidence and transparent selection criteria on fair priority setting widely accepted by policy-makers, practitioners and academics, such as impact on mortality and morbidity, urgency (ie, impact on patient health of delaying services), cost-effectiveness, protection of politically sensitive interventions, financial risk protection and public acceptability.
- Standard principles for selection are based on humanitarian and UHC principles.
    - Treating people equally (non-discrimination).
    - Maximising the benefits produced by scarce resources (saving the most individual lives or saving the most life-years by giving priority to patients likely to survive longest after treatment).
    - Giving priority to the worst off (in terms of poverty or in terms of health: the sickest or those who will have lived the shortest lives if they die untreated).

Recommendations

- It is crucial to ensure continued access to essential non-COVID-19 healthcare.
- A concrete list of 120 essential non-COVID-19 health interventions has been developed based on the Disease Control Priorities-3 highest priority package (HPP).
- Adjustments of HPP was made based on level of urgency of interventions and contextual factors.
- The adjusted HPP could be used by governments and donors as input for discussions about disinvestments and continued investments during the COVID-19 pandemic.

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