

**EPHI, National Data Management Center for health (NDMC)
Quick update on COVID-19, 021**

This update summarizes	Ethiopia's COVID-19 situation update
	Global and regional burden of COVID 19
	The impacts of COVID-19 Pandemic in Ethiopian Public Health System
	Obesity is linked with higher risk of COVID 19 complications
	Mitigating Wider Impact of Health Effects of COVID 19
	Preparing for future pandemics: Stress Tests and War-games

Ethiopia's COVID-19 situation update

As of September 03, 2020 there were a total of 54,409 COVID-19 cases and 846 deaths across the country. Compared to the cases and deaths reported a week ago, the cumulative cases have increased by 14% and cumulative deaths by 11%. So far 19,903 cases have recovered from COVID-19 (Fig 1). Of the 33,961 active cases, 303 are critical. The critical cases have shown a 2% decrease in a week time. The total number of tests stands at 949,813 showing a 12% increase compared to last week.

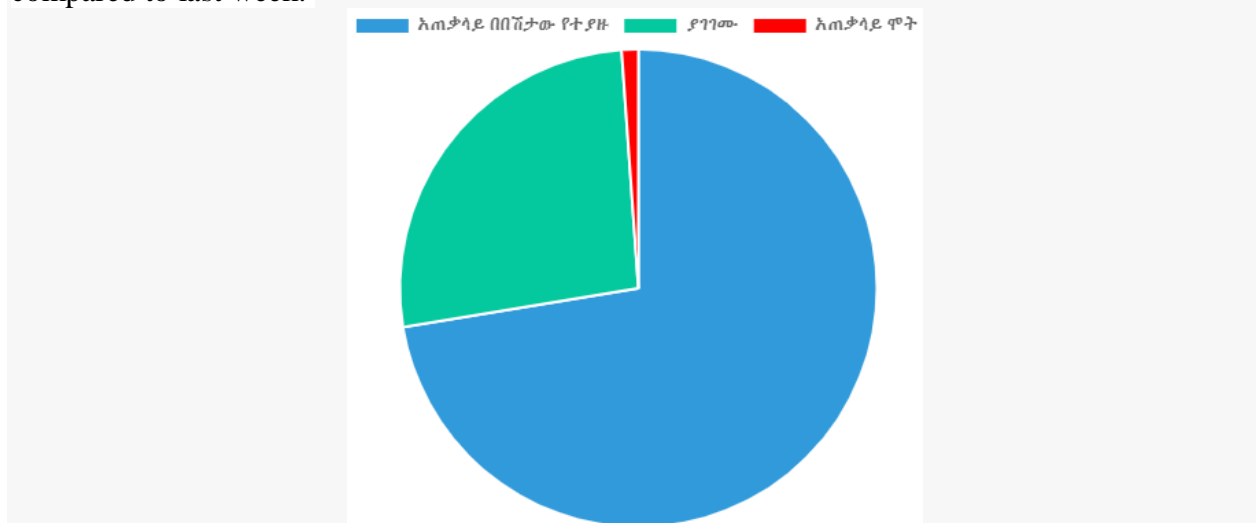


Fig. 1. Showing cumulative cases, recoveries and deaths (Source <https://www.covid19.et/covid-19/>)

EPHI and FMOH COVID 19 response highlights of the week

- Since Home Based Isolation and Care (HBIC) have started in Ethiopia, a total 8,916 COVID-19 confirmed cases have been followed as of September 2, 2020. Of which,

recovered and 6,284 cases are currently on follow up. COVID-19 related deaths have been reported 2,690 have and 67 cases have been transferred to treatment centers while, 75 cases have been transferred from treatment centers to HBIC

- A key message on pulmonary fibrosis, a long-term effect of COVID-19 on the lung of the victim, shared on social media on August 30, 2020
- On September 01, 2020 European commission donated COVID -19 medical supplies & commodities & financial support to Ethiopia for vulnerable groups.
- Since the launching of the mobile based training a total of 12,947 have enrolled and 10,427 have completed the training on August 28, 2020.

References

Public Health Emergency Operations Centers (PHEOC), Ethiopia

https://twitter.com/lia_tadesse

Global and regional burden of COVID-19

- Globally the total number of cases is extended to 26,183,883 as of September 3, 2020. A total of 18,447,826 cases recovered and 867,362 people died since the beginning of the outbreak. Globally, in a week time, from 27 August to 3 September 2020, COVID-19 cases increased by 7.5% and deaths by 4.5%. North America is the leading in terms of cases followed by South America and Asia. North America is also leading with the number of deaths followed by Europe and South America (Fig 2).

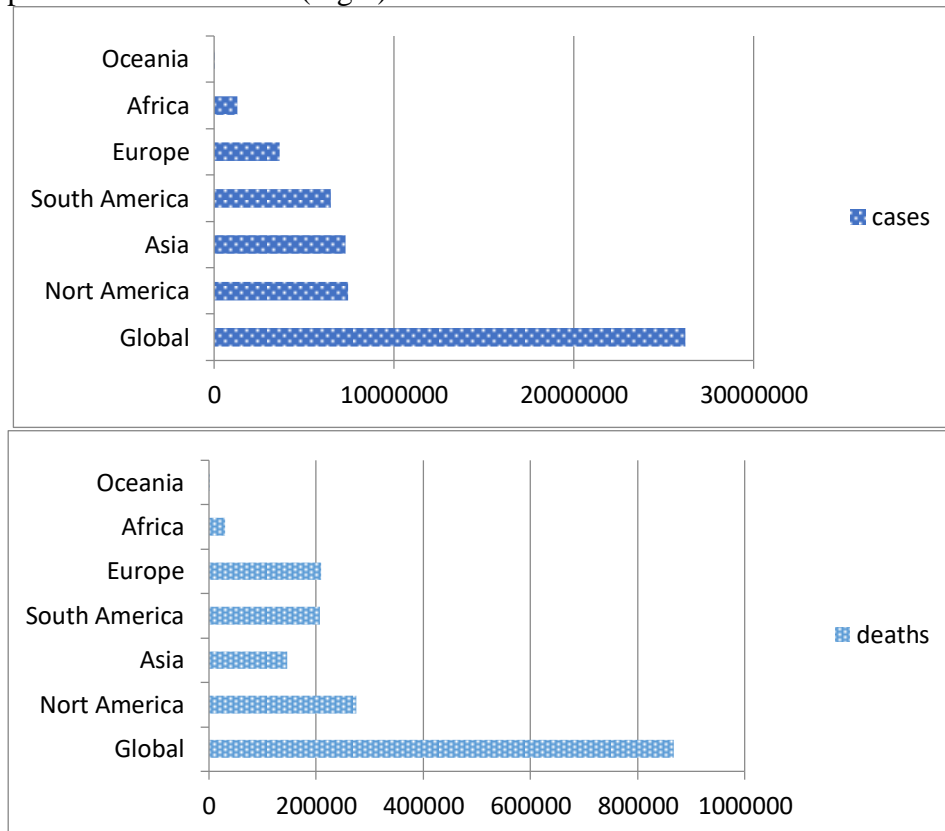
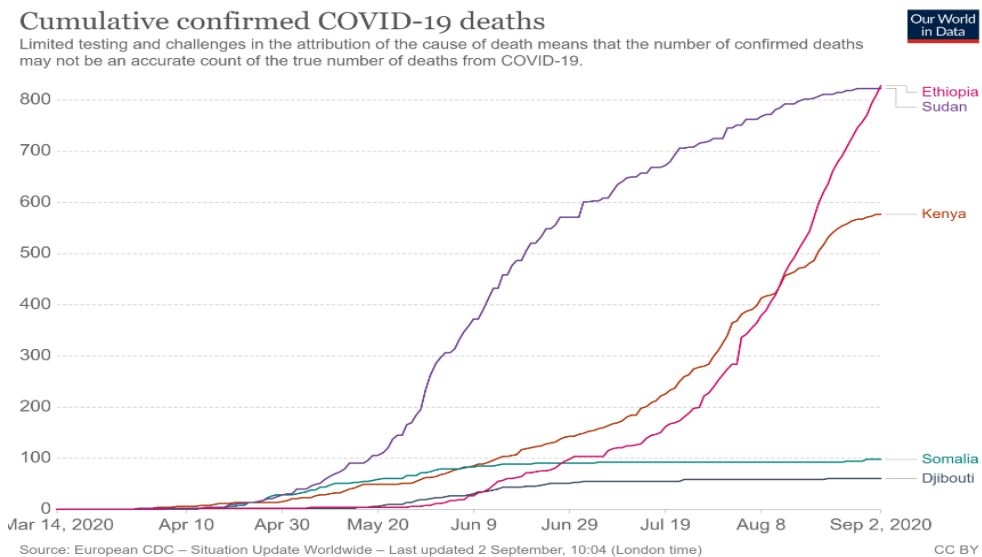
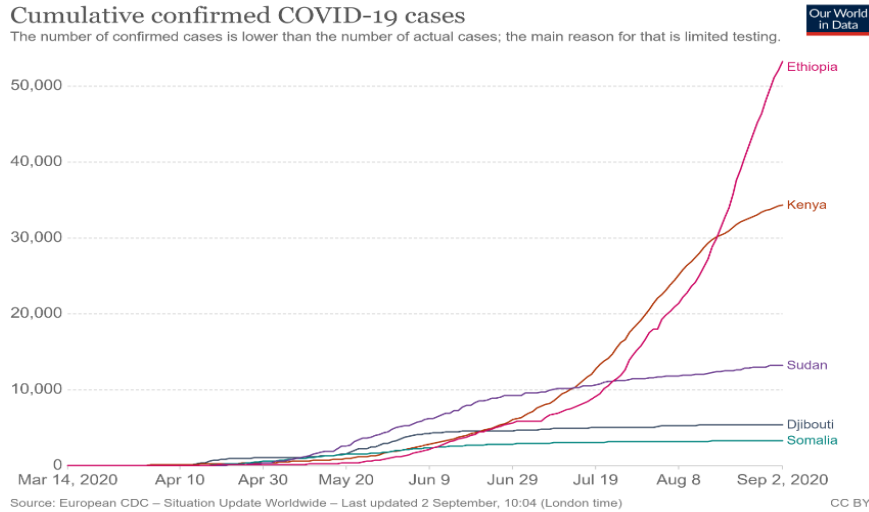


Fig 2. Global cases (top) and deaths (bottom) reported as of September 2020.

- USA has recorded the highest number of cases (6,290,737 cases, 189,964 deaths) that accounts for 24% of the total global cases and carried 21.9% of global deaths as of September 3, 2020.
- Brazil has continued reporting the second COVID-19 case burden in the world following the USA. The number of cases in Brazil has increased in a week time by 7.5% (3,722,004 to 4,001,422) and deaths by 5.2% (117,756 to 123,899). The second on the line in South America is Peru, ranked 5th with 663,437 cases followed by Colombia with 633,339 cases.
- The number of COVID 19 cases in India has increased by 16.2% (3,314,953 to 3,853,406) and the deaths by 11.3% (60,652 to 67,486) in a week time
- Russia has continued reporting the highest number of cases in Europe, with 1,005,000 cases.
- The share of Africa to the global COVID-19 pandemic has still been low (only 4.9% of the global cases and 3.5% of deaths as of September 03. However, within the continent the number of cases has increased by 4.7% in a week time (from 1,216,567 to 1,273,213 cases). Similarly, the total number of deaths in Africa has increased from 28,657 to 30,370 showing a 6% increase in a week time. Total recoveries stands at 1,011,064.
- South Africa ranked 7th worldwide in terms of cases and leading in the continent with 630,595 cases and 14,389 deaths. Egypt (99,280 cases, 5,461 deaths), Morocco (65,453 cases, 1,216 deaths), Nigeria (54,463 cases, 1,027 deaths), (See table below).

Africa	August 27		September 3	
	Cases	Death	Cases	Deaths
South Africa	615,701	13,502	630,595	14,389
Egypt	97,825	5,317	99,280	5,461
Morocco	55,864	984	65,453	1,216
Nigeria	53,021	1,010	54,463	1,027
Algeria	42,619	1,465	45,158	1,523
Ghana	43,769	270	44,658	276

- In East African, COVID-19 cases and deaths have shown fast progress. In a week time, COVID-19 cases and deaths increased by 20.3% and 16.7% in Ethiopia and by 4.5% and 3% in Kenya. Ethiopia and Kenya are the major drivers of the COVID 19 burden in east African countries. The epidemic appears plateauing in Sudan showing only 1.7% cases and 0.5% deaths increase and in Djibouti 0.1% cases and zero deaths. Similarly, 1.1% cases and 3.2% increase in deaths were reported in Somalia in a week time.



References

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The impacts of COVID-19 Pandemic in Ethiopian Public Health System

- The pandemic related crises have caused enormous negative impacts on health and economies globally. The novel corona virus-2 (COVID-19) was slow to reach Ethiopia and grow steadily. Thus, it is still too early to determine the actual development of the epidemics and its impacts in Ethiopia. However, the pandemic has already impacted the Ethiopian health systems even before the cases been reported in the country.

- The country's health system is characterized by inadequate health personnel, meager essential supplies and is already overwhelmed by a high burden of infectious diseases, which left a little space for additional stretching to deal with the pandemic.
- Nevertheless, the pandemic has affected the main WHO pillars of health care delivery that includes service delivery, health work force and access to essential equipment:
 - The provision of essential services such as ANC, EPI, and nutrition is considerably compromised. These services address the need of most vulnerable groups in the society. The continued spread of the COVID-19 is likely to further impact the provisions of these services in Ethiopia for instance the measles preventive mass vaccination campaign was suspended due to COVID-19.
 - The health care facilities capability might be compromised to deliver other essential health care as the numbers of COVID-19 cases continue to surge, the available health care systems are likely to be overwhelmed and reserved for COVID-19. As a result, there would be further disruption to the provision of sufficient and quality health care services especially for those requiring routine visit to health care facilities for chronic conditions such as TB, HIV, and other non-communicable diseases.
 - In addition, the health seeking behavior of the clients for public good may be affected by panic from the misinformation and unwelcoming health care environment that changed after the pandemic.
 - For instance, according to a formative assessment conducted by JSI the first antenatal attendance and under-five pneumonia treatment decreased by 12% and 35%, respectively in Ethiopia.

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Obesity is linked with higher risk of COVID 19 complications

- For persons with COVID-19, caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), there appears to be a strong relationship between being an individual with overweight or obese and the risks of hospitalization and needing treatment in intensive care

units (ICUs). The COVID-19 pandemic has occurred at a time when the prevalence of individuals with overweight/obesity is increasing in virtually all countries globally. In fact, most affluent countries today have a prevalence of individuals with overweight/obesity greater than 20%.

- In addition, policy responses for mitigating COVID-19 are creating major economic hardships. The COVID-19 pandemic has brought to all countries the need to restrict movement, implement social distancing and impede economic activities across a broad spectrum of nonessential occupations. These adjustments have caused food system problems, including changes in food consumption and physical activity patterns, and remote telework environments that may exacerbate current trends in the prevalence of individuals with obesity, while another effect will be to increase the proportion food insecure and also those stunted and malnourished. These changes have long-lasting implications beyond the mitigation of the current SARS-CoV-2 spread and may be detrimental to people's health.

THE GLOBAL PREVALENCE OF INDIVIDUALS WITH OVERWEIGHT AND OBESITY

The prevalence of individuals with overweight/obesity is at an all-time high and is increasing across the globe. Globally more than 1.9 billion adults aged 18 years and older were overweight. Of these over 650 million adults were obese. A large proportion of the populations in higher income countries are overweight or obese. This is true not only in higher income countries but also in low- and middle-income countries especially in urban setting with high levels of undernutrition leading to the double burden of malnutrition.

Study characteristics-1: Being an individual with obesity and the risk of COVID-19

This study identified 20 studies that assessed the association between individuals with obesity and COVID-19, all but two of which showed that individuals with obesity significantly increase the risk of COVID-19. The pooled data analysis showed that the odds of individuals with obesity, who are defined as having a BMI over 30, being COVID-19 positive were 46.0% (OR = 1.46; 95% CI, 1.30–1.65; $p < 0.0001$) higher than those of individuals who were not obese.

Study characteristics-2: Being an individual with obesity and COVID-19 illness severity

Being an individual with obesity increases the odds of COVID-19 patients being hospitalized. Among diagnosed COVID-19 patients, the prevalence of individuals with obesity in hospitalized patients was much higher than that in no hospitalized patients. The pooled data (from 14 studies) showed a 66% increase in intensive mechanical ventilation (IMV) in patients with obesity (OR = 1.66; 95% CI, 1.38–1.99; $p < 0.0001$).

Study characteristics-3: Being an individual with obesity and COVID-19 prognosis

The association between obesity and COVID-19 prognosis is complex, because patients discharged from ICUs may be still hospitalized or deceased later. For example, 4.5% died after they were discharged from ICU; 11.5% remained in the hospital after leaving the ICU in one study. Finding from a few studies showed that individuals with obesity may decrease in-hospital mortality. Some studies showed that obesity may insignificantly decrease or increase the odds of death among individuals with obesity. The majority of studies showed that obesity significantly increased the odds of death among COVID-19 patients with obesity. The pooled data (from 35 studies) showed that patients with obesity were more likely to have unfavourable outcomes with a 48% increase in deaths (OR = 1.48; 95% CI, 1.22–1.80; $p < 0.001$).

WHY ARE INDIVIDUALS WITH OBESITY AT SERIOUS RISK FOR COVID-19?

Being an individual with obesity is associated with numerous underlying risk factors for COVID-19, including hypertension, dyslipidaemia, type 2 diabetes (T2D) and chronic kidney or liver disease. The growing evidence detailed above demonstrates that obesity increases the risks of hospitalization, severity and in some cases death with viral respiratory infections, increasing the likelihood that obesity may also independently increase the risk for COVID-19, another respiratory viral disease.

COVID-19 ECONOMIC EFFECTS: HOW DOES THE PANDEMIC INDIRECTLY AFFECT OUR DIETS AND WEIGHT GAIN?

COVID-19 has led not only to increased unemployment and income insecurity but to many changes in food supplies. Many aspects of food supply chains have been disrupted, and components of the food system focused on restaurants and hotels have lost their demand and are experiencing difficulty redirecting toward home consumption. Other key aspects of food chains, especially in low- and middle-income countries have been completely disrupted with impacts varying by country and region. There is an expectation of a significant rise in stunting and adult thinness is expected, especially in South Asia, a few select other SE Asian countries (e.g., Indonesia) and much of sub-Saharan Africa along with pockets of the poor in all other low- and middle-income countries.

POLICY IMPLICATIONS

- Governments must consider actions to address not only long-term economic issues but also diet quality during this and future pandemics to build resilience.
- Given the expanding prevalence of individuals with overweight/obesity, it is imperative to consider the consequences of the related impaired immune responses during development of therapies and vaccines.
- We need interdisciplinary collaborative efforts to tackle this disease. We also need to develop policies regarding infectious diseases to maintain a sustainable environment and healthy lifestyles.

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Mitigating Wider Impact of Health Effects of COVID 19

- COVID-19 pandemic is exerting its impact on all aspects of life. Analysing and interpreting these impacts and effects requires understanding of the extent and mitigation actions. In Ethiopia the number of cases are rising from day to day. Eventhough the number of deaths appears to be low compared to the number of cases.
- As the impacts are so severe and diverse, mitigation responses are also diverse in kind and scale. Therefore, in this week’s update in relation to health systems response it has been tried to produce a summary general picture of the extent of the impact, health effects and approaches for mitigation responses. Below Figure 1 infographic shows the wider impact of COVID-19 on health.

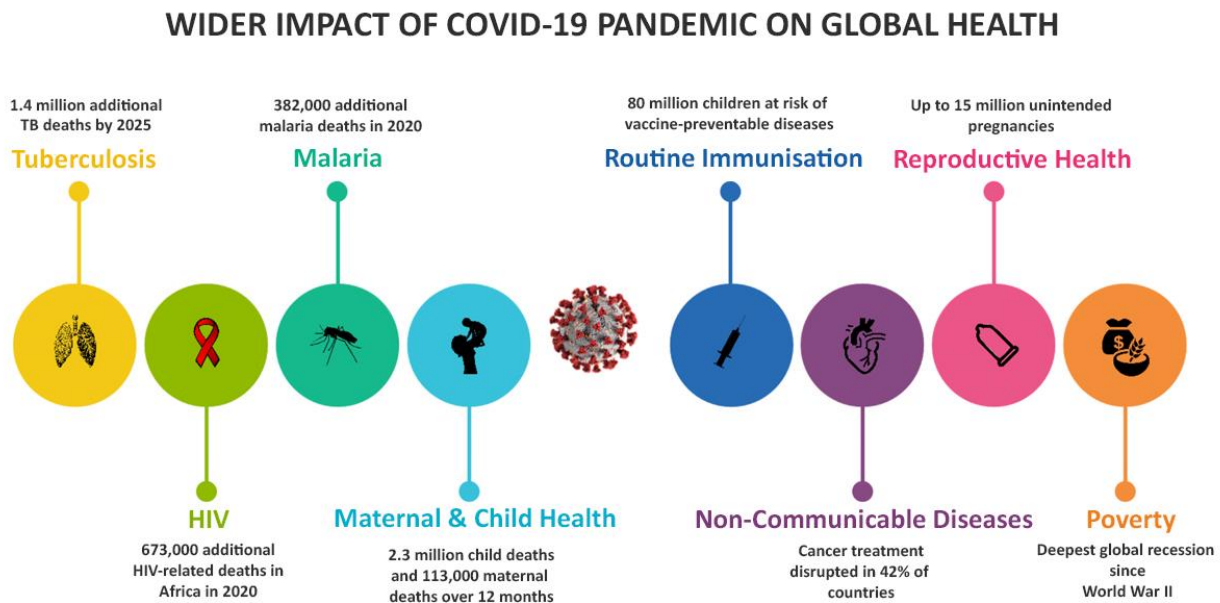


Fig 1. Wider Indirect Impact of COVID-19 on Global Health (source Twitter)

- Other non-health related impacts are also soaring. In the capital city Addis Ababa, people have started feeling the impact in terms of transportation to work and inadequately performing in work places because of being late to arrive at work places. Some others are also losing their income because service industries are not fully operational. Identifying such vulnerable groups is crucial particularly those at low level income strata could be severely affected.
- Unemployed population, children and the young could also be negatively affected both physically and mentally. The pandemic has already downgrading economic forecasts (see figure 2), with many countries facing a downturn. The health consequences of an economic downturn are complex. Economic downturns have been associated with improvements in some health outcomes, especially traffic injuries, but worsening mental health, including increases in homicide and suicide.
- However, these harmful effects can be prevented by proactive social policies; it is the policy response to an economic downturn, rather than the downturn itself, that determines longer term population health. It should be noted that some people may view the crisis as an opportunity. Therefore, there is clear potential for price overcharging on essential goods which make the impact and effect worse.

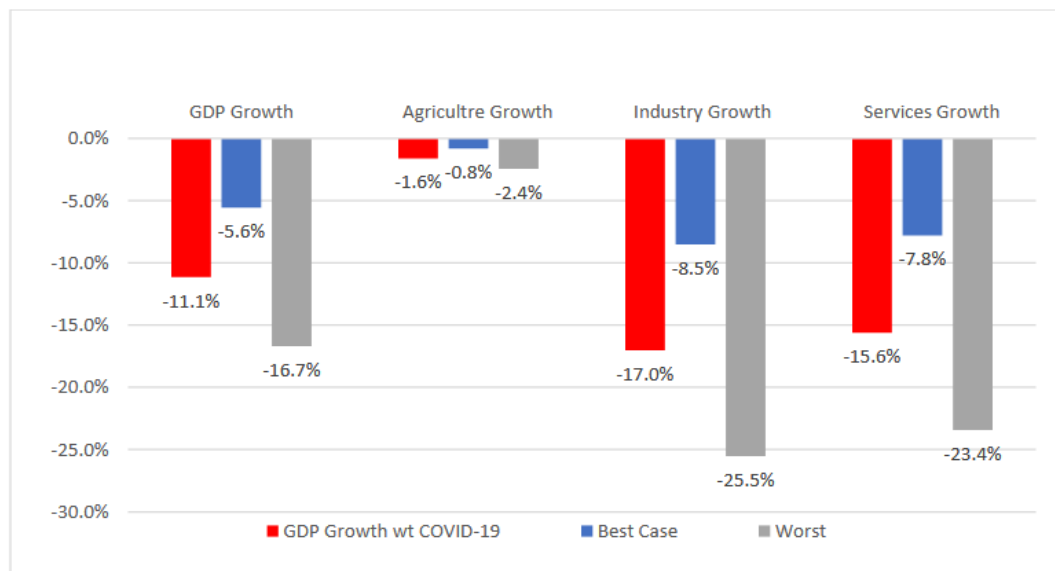
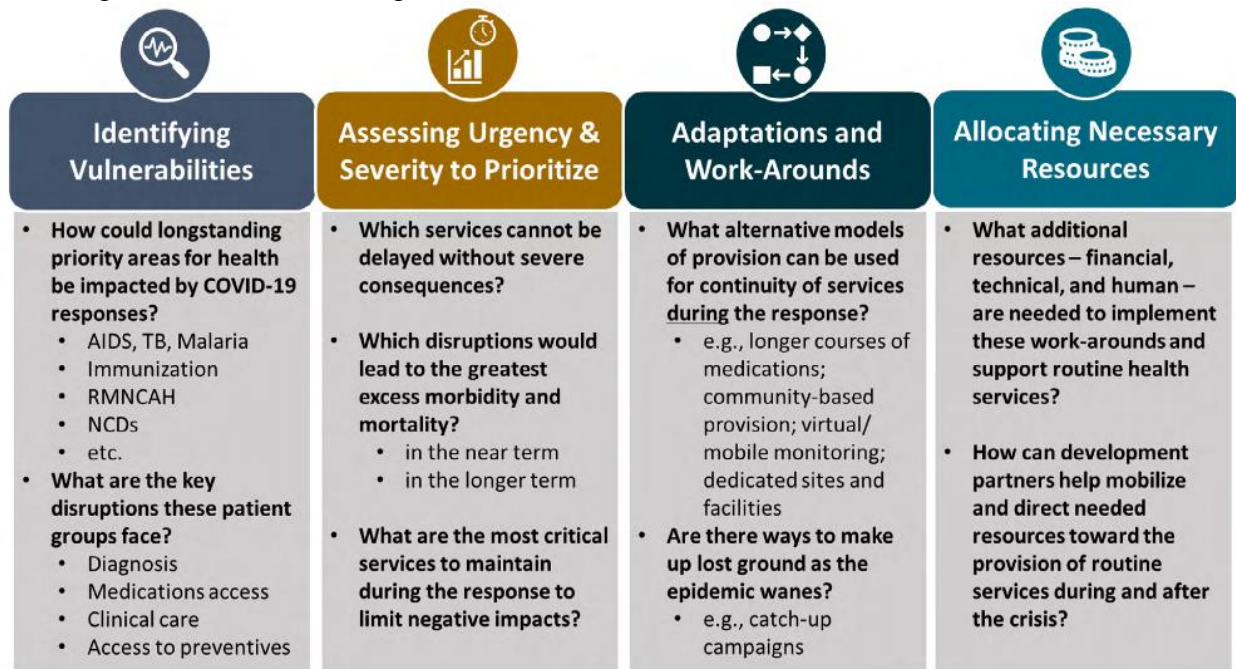


Fig 2: Scenarios for GDP and sectoral growth effect of COVID-19 in Ethiopia (source: Alemayehu, 2020)

- Like the economic effect social isolation has also a negative consequence. Advising people to self-isolate at home, risks serious social and psychological harm. Quarantine of people exposed to an infectious disease is associated with negative psychological effects, including post-traumatic stress syndromes, which may be long lasting. This is especially hard for most communities in Ethiopia who loves to live with extended families.
- In terms of family relationships, social distancing measures will place many people in close proximity with family members all or most of the time, which may cause or exacerbate

tensions. There are possibilities of abuse and violence. Risk factors for partner and child abuse include poverty, substance misuse in the home, and previous history of abuse.

- School closures may also add to stress in families as parents try to home school children, often misrepresenting this with home working. This burden may fall disproportionately on women. Prolonged school closures could cause adverse effects on educational and social outcomes for young people. Some children who are not at school may be at risk of exploitation. In all these conditions advice and community outreach support are necessary mitigation measures (see figure 3).



Note: RMNCAH = Reproductive, maternal, newborn, child, and adolescent health; NCDs = non-communicable diseases.

Figure 3. Key considerations for identifying & mitigating the indirect health effects of COVID-19

- In addition to the direct disease burden from covid-19, the pandemic response is already causing negative indirect effects such as those described above. Therefore, developing mitigation strategies and prioritization are highly required and actions must target to support the most vulnerable groups (see figure 3). For the long term effect policies may be instituted by respective government agencies and development partners.

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Preparing for future pandemics: Stress Tests and War-games

- The COVID-19 virus pandemic has provided graphic examples of uncoordinated risk management and planning failures across medical, social, economic, financial and government fiscal sectors.
- Far too often policies appear to have been developed in specialist medical/pandemic policy silos, with scant understanding or interest in the social, economic and financial consequences.
- When the social, economic and financial costs became apparent, governments responded with subsidy schemes of various types.
- Much has been revealed recently regarding the relative unpreparedness of Public Health Authorities and their governments in many countries.
- A lack of preparedness for the Covid-19 pandemic resulted from four major types of shortcomings.
 - First, even when there were problems noted in previous epidemics, clear plans were not put in place to deal with similar situations.
 - Second, there was a lack of transparency through the years about whether plans had been implemented after they were written.
 - Third, it was not clear that authorities had considered ex ante the effects of pandemic policies on overall health (including mental health).
 - Fourth, governments were largely unprepared to consider the interdependence of health and economic factors in a pandemic and how appropriate a lock down, income transfer, and loan policies could be implemented in practice.
- These shortcomings have increased the economic, health, and social costs of the pandemic. Because pandemics differ significantly, models have a very limited role early in a pandemic.
- To be the most useful later in a pandemic, they need to incorporate important heterogeneities across age groups and types of location. Importantly, to be useful in examining which policies might be best, they need to incorporate not only the way the disease spreads, but the interdependent effects on overall health and the economy.
- There is an important interdependence between economic, financial and health policy actions. The recent Covid-19 crisis has demonstrated that, apart from the direct economic consequences from illness and death from the virus, the main economic and financial costs have been due to the varying degrees of preventative measures taken by the public, firms, and governments that directly impacted economic and financial activity.
 - War-games have been used to prepare for extreme events that will stretch medical, economic and social physical and organizational resources.
 - The use of regular, combined medical, economic and financial stress tests and War-games in preparing for future pandemics and other major environmental shocks is very important.
 - There has been a clear lack of preparation by many countries in dealing with the COVID-19 epidemic. The resultant economic and social costs have been very large.

- The consequences of this uncertainty could have been reduced by playing War-games so that policy makers were better prepared.
- Although pandemic War-games had been played in the past, and reports on previous pandemics written, in most cases there appears to have been little action taken to implement lessons learned, or the creation of effective and cost-efficient responses.

Recommendations

- Preparation for pandemic and other major exogenous events will require regular War-games. Previous exercises have been too limited, and have not taken into account very important social, economic, financial and fiscal factors that have become apparent in the current crisis.
- These games or exercises should include medical, social, political, economic and financial components that prepare various agents in these sectors for a major systemic event. Coordination and cooperation in these sectors are critical in managing a crisis.
- The results of these exercises should be available publicly for critical examination by experts in associated fields. Open debate and analysis are crucial for drawing conclusions especially for preparing realistic, future War-games and analysis.
- The results from War-games should be summarized by an independent group. They or a related group should review actions taken from recommendations in the game summary. That review should take place within a year while the analysis is still fresh in the minds of the participants. Lack of action should be reported publicly. The greatest danger is that bureaucratic lethargy and turnover of experienced players can blunt the lessons and dilute future preparation. As time passes, history is forgotten, and the crises are neglected until another crisis arises with its panicked, costly response.
- One important role of War-games is to train individuals and organizations to prepare them for emergencies. This educative process must be conducted regularly to avoid loss of corporate and organizational memory.
- Authorities should explore appropriate public communication strategies to reduce confusion and panic.

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