

COVID-19 and its impacts on childhood malnutrition and nutrition related mortality

Ethiopia, September 23, 2020



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The COVID-19 pandemic poses grave risks to the nutritional status and survival of young children in low- and middle-income countries (LMIC), due in part to steep declines in household incomes, changes in the availability and affordability of nutritious foods, and interruptions to health, nutrition, and social protection services. The International Food Policy Research Institute (IFPRI) conducted recent analysis on economic shocks and child wasting showing an important increase in the prevalence of moderate or severe wasting among children younger than 5 years due to COVID-19-related losses in GNI per capita.

To consider the implications of this analysis for Ethiopia, the **Ethiopian Public Health Institute (EPHI)**, **IFPRI**, the **Ethiopia National Information Platform for Nutrition (NIPN)**¹ and the **Food Security Portal**² (**FSP**) **Project** co-hosted a webinar on “*COVID-19 and its impacts on childhood malnutrition and nutrition related mortality*” on 23rd September. The webinar brought together 88 participants from different sectors, including policymakers, academia, development partners and NGOs, to discuss the evidence and policy implications for Ethiopia.

Derek Headey, IFPRI Senior Research Fellow, presented IFPRI’s analysis on economic shocks and child wasting and included a modeling for Ethiopia. This has the potential to guide decision-making processes during the finalization of the Food and Nutrition Strategy and the

¹ The NIPN is a multisectoral initiative supported by the European Union, the Bill and Melinda Gates Foundation and the Foreign, Commonwealth and Development Office. The NIPN in Ethiopia is housed at EPHI, receives technical assistance from IFPRI under its Compact2025 initiative. The NIPN promotes evidence-based decision making for nutrition and supports the implementation of the National Food and Nutrition Policy.

² The online Food Security Portal (<http://www.foodsecurityportal.org/>), facilitated by IFPRI and funded by the European Commission, provides key data to monitor food security situations and food prices, as well as tools for policy analysis and capacity development – all with the aim of providing policymakers and other stakeholders with the information they need to make appropriate and timely responses to address food insecurity.



implementation of COVID-19 mitigation actions in Ethiopia. The presentation was followed by perspectives from two panelists, Dr. Sisay Sinamo, Senior Program Manager of the Sequota Declaration from the Ministry of Health, and Stanley Chitekwe, Chief Nutrition Officer at UNICEF. Both panelists provided their remarks on the relevance of the findings for Ethiopia. The session ended with a lively question and answer session.

Summary of the webinar

Although macroeconomic volatility is common in LMICs, the COVID-19 crisis is exceptional, largely because of COVID-19 prevention measures. IFPRI studies show that these measures can shrink economies by 20-40% during stringent lockdown periods. As a result, projections of economic growth for 2020 have progressively gotten worse as the pandemic has worn on. In June 2020, the World Bank estimated that 90% of LMICs economies will shrink and in July, IFPRI's global general equilibrium model estimates that 140 million people will fall into \$1.90/day poverty in 2020.

Wasting (low weight-for-height) is usually the result of severe reductions in food intake and/or recent or repeated episodes of infectious diseases. Infants and young children are at greatest risk of wasting – and of mortality due to wasting – because of their immature immune system and their high nutrient requirements for growth and development. Even though wasting is less prevalent than stunting, it is a stronger predictor of child mortality. While LMIC have made progress against stunting, progress in reducing wasting remains uneven. Despite the serious health risks of wasting, the underlying economic causes of wasting are under-researched. Globally, around 50 million children under 5 years were wasted in 2019 with the vast majority residing in South Asia and sub-Saharan Africa, particularly in the Sahel and the Horn of Africa.

This global analysis has shown that wasting is highly sensitive to recent economic growth and found that with a 10% contraction in gross national income in a given year, there could be a 14% increase in the prevalence of moderate or severe wasting. In a Lancet commentary, IFPRI's economic growth projections from April 2020 were used to estimate that COVID-19 would increase the number of wasted children by **6.7 million** compared to a 2020 without COVID-19.

Looking at Ethiopia, an IFPRI study by Aragie et al. 2020 on the macroeconomic impacts of COVID-19 in Ethiopia, found that the gross domestic product is estimated to fall by 14% during 7-week period of COVID-related restrictions. Incomes are expected to decline by 14% (with variations) and by 19% in urban areas, during COVID-19 restrictions.

The elasticities from the full sample of countries were applied to Ethiopia to estimate the additional wasted children due to COVID-19 by comparing to 2020 GNI estimates without COVID-19. Prior to COVID-19, just under one third of under 5 children had any wasting (5.34 million) while just over 10% (1.7 million) had moderate/severe wasting. The predicated percentages changes in wasting for Ethiopia are modest, but because Ethiopia has such a large population of children under 5 years, absolute numbers are large, resulting in 134,000 moderately or severely wasted children relative to what was expected before COVID-19. There are many caveats in these projections for Ethiopia including: urban populations are more economically affected, but have less wasting to begin with, rural populations are



affected by locusts and other agro-climatic shocks which the model does not take into account as the projections are from a global model, not an Ethiopia-specific one. The projections do not factor in additional health service disruptions due to either supply disruptions or demand disruptions, protective or preventative actions such as social safety nets like the PSNP, measures for the prevention and treatment of severe acute malnutrition, nor COVID-19 response measures.

However, health service disruptions could have major impacts on child mortality, and it is therefore imperative to keep health services working, especially for mothers and vulnerable young children. Governments face difficult choices with tradeoffs between COVID-19 prevention measures and economic growth. However, it will be critical to protect children with nutrition-sensitive social protection at an unprecedented scale, to prevent and treat severe acute malnutrition and to continue safe maternal and child health care services. The impact on diets, particularly the reduction in the consumption of micronutrient dense foods, raises the risk of micronutrient deficiencies. Therefore, it is important to expand micronutrient supplementation programs as well.

The panelists provided remarks about the current situation in Ethiopia. Dr. Sisay noted the Government of Ethiopia (GOE)'s predictions in disruptions in primary health services, in the availability and affordability of nutritious foods due to, among others, reduced market access, increased transportation costs, and increased demand for specific foods (citrus, fruits, honey). He mentioned the GOE's response including its issuance of guidelines and measures, such as social distancing, wearing masks and handwashing, large behavior change communications, the provision of personal protective equipment, economic stimulus packages, and directives to ensure that health and nutrition services are provided at all health facilities while respecting COVID-19 prevention measures. Dr. Stanley from UNICEF remarked that projections were made on the expected caseload for moderately and severely wasted children. These projections were not based on a scientific modeling but took into careful consideration COVID-19 and other stress factors such as the desert locust invasion and flooding during the rainy season. With a 24% increase, the new GOE and UNICEF target is 570,000 severely wasted cases. Both panelists agreed that the analysis presented by Dr. Headey is a strong advocacy tool with important policy implications.

The speaker and panelists identified key questions and evidence gaps that remain and stressed the importance of monitoring and evaluation during this COVID-19 crisis. While this is difficult for many governments and NGOs to do in the short run, phone surveys can help a lot in trying to track the impacts of the crisis. This renewed demand for additional information and evidence will support the research agenda of the GOE, NIPN, and the National Nutrition Monitoring Evaluation and Steering Committee.

To access the webinar recording and presentation, please visit the NIPN website (<http://www.nipn.ephi.gov.et/events>). The recording is also posted on IFPRI's YouTube channel [here](#) and Dr. Headey's presentation on IFPRI's SlideShare [here](#).



Question and Answer Session of COVID- 19 and its impact on Childhood Malnutrition and Nutrition-related Mortality

Derek Headey, Senior Research Fellow, IFPRI

Question: Data used in the study is from 1998 to 2018, which is before COVID-19. How does this relate to the effects of COVID-19 on malnutrition?

Answer: COVID-19 is an unusual crisis and a lot of work has been done to quantify its impact on the economy. As the year progresses, we are getting more solid evidence on which economies have been affected and by how much. Two things make the COVID-19 crisis unusual. The first, is how the macroeconomic impacts are trickling down to households. Early in the crisis estimates from global institutions including the IMF and some of the IFPRI models were done but might have underestimated its impacts on poverty. This is because the nature of the disruptions has especially affected the informal sector severely and was felt more in urban areas. However, the result from current household surveys including the recent IFPRI model by Laborde et al (2020) is quite devastating and show that around 150 million people throughout the world might be forced to \$1.9/day poverty. Lockdown measures have also severe short-term impacts on incomes. Even though there might be recovery several months later, there are still many households around the world this year, that are going several months without an income and with often limited coping mechanisms. The second, is the disruption in both health services and the demand for health services. Fear of the disease is prompting many people not to engage in normal health seeking behavior. Due to this, in western countries, for instance, doctors and dentists are going out of business. The analog in developing countries, people not going in for health care, it may not be lifesaving in the short run but in the long run it will have an important effect on maternal and child health services. There are also several disruptions to important maternal and child health services. In previous crises, in the 1990s and 2018, the Demographic Health Surveys show macroeconomic shocks also affect health services but not to the scale that is seen in COVID-19 times.

Question: Maternal education is included as a control variable. Will maternal education impact child wasting in COVID-19? Isn't this a lag indicator?

Answer: Maternal education is used as a control variable in the study. It has some protective effects. Children of mothers who have more education are somewhat less likely to be wasted. The study in this case didn't specifically test its impact during COVID-19. However, testing if there is a resilience aspect to maternal education hasn't been done so far but could be a good idea.

Question: It is obvious that the decline in GNI may increase child wasting, especially when it comes to poor countries like Ethiopia. However, is that the case all the time? Child malnutrition also related to the per capital income of individuals, access to services and mainly awareness and behavior in the individual and community level. So, is GNI a better predictor of wasting status?

Answer: It is not a question of a competition between these indicators. Macroeconomic effects can cause all sorts of disruptions both to household incomes and to health service shocks as well. The project Standing Together for Nutrition consortium is looking at the health service disruption separately. Those account for a pretty large share of the total mortality effects predicted from the COVID-19 crisis. Our study doesn't model just one but multiple mechanisms by which COVID-19 will affect child nutrition. There are also a lot of factors that are not fully understood or easily modelled like social capital, government or non-government programs that are in place to provide resilience to this kind of shocks. Due to this, the model in the study should be interpreted more like what will happen if we don't take action.

Question: Do you think the effects discovered on child nutrition will be sustained even after COVID-19 is (hopefully) controlled?



Answer: Recent studies show the impacts of macroeconomic shocks on stunting. Similarly, the study on wasting proved large effects of macroeconomic shocks on child dietary diversity. These shocks will not only affect stunting but also micronutrient deficiencies and undernutrition in early childhood that can have prolonged effects on schooling, taking attendance on cognitive development and adult earnings and productivity much later. So, there will be a protracted effect of the COVID-19 crisis. Therefore, it will be important to provide not only resilience in the short-term, but also some sort of recovery for children who have been affected, as well as school-aged children whose education have been severely disrupted.

Question: It is mentioned that in the study a separate test was done on the rural and urban population. Did the result show any differences? Was it expected?

The study didn't find significant differences as the model was not powered enough to detect significant differences. However, there was a little bit of a hint in the data that the impacts were a little bit worse in urban areas. It is also quite often that macroeconomic crises have more effect on the urban economy as seen during the COVID-19 crisis. In terms of the different sectors, agriculture sector seems to be quite resilient compared to manufacturing and tourism that suffered a huge decline in demand. There is still quite a lot of food trade going on around the world. Vulnerability of urban population is typically expected but can be country specific. Ethiopia has been dealing with non-COVID-19 problems like locusts and flooding. For this reason, Ethiopia and other countries might see some rising case of wasting in urban areas which was not common in a normal year.

Dr Stanley Chitekwe – Chief Nutrition Officer, UNICEF, Ethiopia

Question: It is good to hear the different contextual aspects that you have considered in the estimates. Is there a report available for the estimates that UNICEF made on the inquiry made on the increase on the number of wasted children considering the various shocks that were mentioned? What magnitude of increase in funding is needed to meet the additional program actions compared to before COVID-19?

Answer: There is a report that mainly focused on the impact of desert locusts, primarily in the six affected regions. The analysis of the report was built on the IPC food security analysis on the impact of the desert locusts done by the Ministry of Agriculture, jointly with the FAO. The analysis basically modeled the food security data and looked at existing smart surveys and admissions to treatment of acute malnutrition in the six regions that were affected by the desert locust invasion. But due to the combined effect of COVID-19, the desert locust and some programmatic reasoning of logistics of having a buffer stock, the initial number of children that need to be treated increase from 480,000 to 570,000 that led to about a 25% increase. Thus, additional funding that is required rose from \$28 million to \$38 million. Since 2020 is coming to an end, fundraising will start again in 2021 for treating another 570,000 to 600,000 children depending on the impact of COVID-19. This study by Drs. Headey and Ruel (2020) will help us to lobby and advocate with government and donors for additional resources.

Dr Sisay Sinamo - Senior Program Manager of the Sequota Declaration Implementation, Federal Program Delivery Unit, Ministry of Health

Question: How do the country work to help hospitals and health systems address maternal and neonatal health during this COVID-19 health crisis?

Answer: When COVID-19 emerged in Ethiopia, the first reaction of the health facilities was to focus on the response at all levels. Not only the SAM management but also the management for maternal, child health, nutrition, and other reproductive health services were disrupted. So, the Ministry made a strategy that made the COVID-19 coordination team focus only on the response and the maternal and child health team to provide a guiding document for sustaining the health facilities of maternal child and neonatal services. In addition to this, several directives were put in place. The first one is to



continue providing all services during the crisis. The second is each thematic area i.e., family planning, maternal and newborn health and nutrition were requested to develop and provide a technical guide that shows the needed adjustment while responding to the crisis. The third is availing all the necessary preventive equipment like mask and hand sanitizer to health workers and hospital to make them provide service without interruption. The fourth is on-site supervision to understand the ground level challenges that the health facilities are facing and come up with practical action plan to respond to their needs. And the last one is engaging with the stakeholders that work on maternal, newborn, child health and nutrition and mobilize additional resources. Furthermore, estimation of excess death /cases in the coming months were done to anticipate and avail the necessary equipment, preposition commodities and supplies that are essential for maternal, child health, and nutrition services. So, that is how the government has managed the impact COVID-19 might have on hospitals.

General Question

Question: What about the current situation of stunting in relation in relation to COVID-19? Are we doing something about stunting the same way we're doing for wasting?

Dr. Derek Headey, Senior Research Fellow, IFPRI

Stunting is a serious risk but doesn't emerge as quickly as wasting. However, the progress result of stunting in the next Ethiopian Demographic Health Survey may not be as fast as it used to be over the past couple of decades due to COVID-19. Recent phone survey evidence, and the multi country econometric model, are showing that diets are quite severely impacted which is a real risk for stunting. However, there are actions that can be taken to prevent both wasting and stunting such as nutrition-sensitive social protection. Solving the food system problem particularly around animal source food is also very important at preventing stunting in Ethiopia.

Dr. Stanley Chitekwe – Chief Nutrition Officer, UNICEF, Ethiopia

Looking at the World Health Organization target by 2025, there is a need to reduce the number of stunted children by 40%. But it is known that the rate at which we have been reducing stunting has been rather slow. In Ethiopia stunting declined from 58% to 38 %. Even though progress has been made we still need to accelerate more. And now with COVID-19, which presents a unique challenge, there is an additional burden to our effort. Nonetheless, we are making all the efforts to sustain the nutrition education throughout the country. Currently UNICEF is working closely with the Ministry of Health by providing radio and TV spots, education on how to sustain nutrition within the context of COVID-19 and how to maintain dietary diversity of children in this context. All these efforts are basically put in place to make sure that any gain made so far in reducing stunting won't be lost.

Dr. Sisay Sinamo - Senior Program Manager of the Sequota Declaration Implementation, Federal Program Delivery Unit, Ministry of Health

It is known that Sequota declaration is one of the commitments of the Ethiopian Government to end stunting by the year 2030. Despite the COVID-19 crisis, the current flooding and other shocks, the government is persistent to accelerate its commitment towards ending stunting. In addition, the new Food and Nutrition Strategy is expected to provide alternatives on how to minimize the impact of COVID-19 through a multisectoral approach and response like the Sequota declaration. COVID-19 will have an impact, but the government will have a policy and strategies that would help to cope with.