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Determining the impact of COVID-19 on nutrition: Projection of the possible malnutrition burden in post COVID-19 period in Bangladesh.

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Bangladesh National Nutrition Council (BNNC)

Prepared by:

Expert Committee on Food Security and Nutrition

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Preface

Bangladesh has made immense achievements in economy, food security, health and nutrition, and its progress is steady since 2010. The Country is on track for achieving its child nutrition status as set under NPAN2 by 2025. Country is also self-sufficient in rice and fish production. Now the country drives to achieve quality and variety of diet, however it is still a thrive and is below global recommendations.

The advent of the COVID-19 pandemic and its rapid spread has disrupted the life and livelihood of the population, but more damaging effects is pronounced to poor and the most vulnerable. Like in many countries, the current COVID-19 crisis has deeply impacted all known underlying and proximate drivers of malnutrition in Bangladesh. Now it is beyond doubt, unless proper mitigation measures are taken on time, the COVID will jeopardize nutrition status of the under 5 children and women in the reproductive age group in short, medium and long term. This will result in increased hunger and malnutrition. And consequently will reverse the gains made till date in the country.

In order to addressing the mammoth issue of impending malnutrition, the Bangladesh National Nutrition Council (BNNC) with support from its high level Expert Committee on Food Security and Nutrition has undertaken an initial exercise to assess to anticipate post COVID-19 malnutrition case burden based on three probable scenarios. Three scenarios were considered aligning with the WHO threshold for cut off of Global Acute Malnutrition (GAM). Based on the projected alarming situation with interplay of several detrimental factors, there is a dire need for a well-coordinated and harmonized preventive and mitigating approach. Assessment has recommend a multi sectoral response plan encompassing food and nutrition security, following a multisectoral approach, and establishing a monitoring, evaluation, and surveillance system.

This is a living document which will be updated as deemed necessary. I would like to take the opportunity to thank each member of the Expert Committee, development partners and individuals who have contributed from afar through their valuable advice & intellectual thinking, and sharing documents. I would also like to offer my heartfelt thanks to my colleagues who really worked hard to make it a success. I am confident that this document will help effective decision making by policy makers, implementing agencies of the government, development partners and civil society organizations alike towards improved and sustained nutrition and food security during this COVID-19 situation in Bangladesh.



Dr. Khalilur Rahman
Director General
Bangladesh National Nutrition Council (BNNC)

Executive Summary

Bangladesh has made tremendous achievements in food security and nutrition and is exhibiting a steady growth post 2010. In terms of child nutrition, Bangladesh has reported considerable progress during the past 10 years in the nutrition status of children under the age of 5 years which can be attributed to the nutrition-sensitive drivers within a wider enabling environment. Currently, the efforts are underway through a multi-sectoral approach to achieve the nutrition targets as set under NPA2.

In terms of production and availability of food, the country has achieved self-sufficiency in production of rice and fish, and has made progress towards achieving the same for wheat, beans, major vegetables, leafy vegetables and fruits; however yet a long way to go for pulses. With the increased availability of food, there has been a considerable shift in quality and variety of diet consumed by the population, however it is still below global recommendations, particularly related to consumption of fruits, vegetables, animal source foods and pulses.

The advent of the COVID-19 pandemic and its rapid spread has disrupted the life of the population in general, however with its profound detrimental effects on the poor and the most vulnerable. The negative impact of COVID on the economic growth with loss of jobs, reduction in individual earnings will result in addition of new-poor groups leading to upsurge in poverty, hunger and malnutrition. It is anticipated that the COVID would create havoc in the nutrition status of the under 5 children and women in the reproductive age group which would reverse the gains made till date in the country.

To enable the Government of Bangladesh to respond to this crisis in a swift and effective manner, the Bangladesh National Nutrition Council (BNNC) along with a high level Expert Committee on Food Security and Nutrition has undertaken an exercise to assess the anticipated malnutrition case burden post COVID and develop workable solutions. With COVID-19 and the resulting conditions exacerbating the direct and indirect determinants of malnutrition, the assessment comprehensively focused on the same.

With curtailment of the employment opportunities coupled with increasing prices of food products due to disruptions in production and supply, and panic buying, there has been a significant reduction in the expenditure on food by the poor and vulnerable. To add fuel to the fire, the derangement in provision and access to various services related to food, health, nutrition, WASH, education, school feeding programs, social safety-net programs, etc. which were aimed at poor have further deteriorated the situation.

Considering the above fragile and vulnerable scenario, the assessment aimed at projecting the burden of malnutrition- Severe Acute Malnutrition, Moderate Acute Malnutrition and Stunting in the country post COVID. Three scenarios were considered aligning with the WHO threshold for cut off of Global Acute Malnutrition (GAM).

The scenario one assumed that the lockdown would end soon with all the services being resumed and current status quo of nutrition status would be maintained with the GAM cases remaining below 10%. The second scenario anticipated that the lockdown to extend till end of May 2020 which would cause modest deterioration of underlying factors of malnutrition leading to increase in GAM cases to 14%. The third and the critical scenario is the possibility of lockdown being extended beyond May 2020 causing substantial deterioration of underlying factors of malnutrition leading to increase in GAM cases to 16% which is an emergency as per the WHO GAM threshold.

Based on the projected alarming situation with interplay of several detrimental factors, there is a dire need for a well-coordinated and harmonized preventive and mitigating approach. Therefore, a three-

pronged recommendation strategy is adopted focusing on - development of a comprehensive multisectoral food and nutrition security response plan, following a multisectoral approach, and establishing a monitoring, evaluation, and surveillance system.

The multisectoral plan encompasses several key components such as protection and strengthening of the existing health and nutrition programs and services, and prevention of hunger and malnutrition with focus on women and children by utilization of all possible platforms working together in congruence. Special emphasis is laid on provision of right relief commodities to the poor, new poor, gender and other vulnerable groups, through strengthening the partnerships between Government, NGOs, civil societies, local clusters and private sector. Supporting farmers, Small Medium Enterprises (SMEs), food systems and food supplies through strengthening the market regulation system and offering financial stimulus packages is also proposed.

A multisectoral and well-coordinated approach is required to onboard all possible sectors starting from designing, implementation, support and monitoring progress of the above plan. Importantly, focus should be on further strengthening intersectoral coordination mechanisms which have already been established at central, district and sub-district levels by BNNC, to make them functional.

The regular monitoring of the impact of COVID to ensure timely and appropriate actions, calls for ready availability of information on nutrition and food insecurity status of households through an established nutrition surveillance system.

It is envisioned that the above recommendations would combat the implications anticipated in the three scenarios effectively and would also serve as reference guide for nutrition response during any future public health emergency situations.

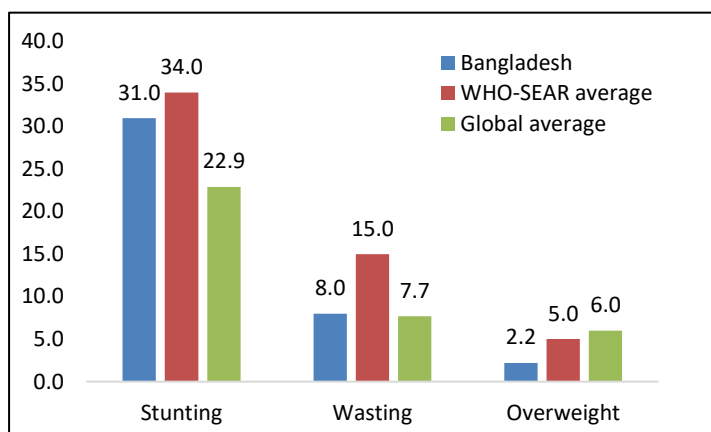
This document is anticipated to form the foundation for a short policy brief to advocate for mainstreaming nutrition in any response plan, and mobilization of resources for developing, implementing and monitoring of the costed response plan for food and nutrition security encompassing the short, medium and long-term horizons for Bangladesh.

1. Background

1.1 Pre-COVID-19 nutrition status among under five children

Trends on under 5 nutrition status shows that Bangladesh has done well in the last 10 years and these parameters are comparatively better than the South-East Asia regional average.

Figure-1: Comparison of proportion of children under five years of age who are malnourished in Bangladesh.



Source: BDHS 2017-18, WHO-SEAR, and Global averages (Ref: WHO 2017).

Much of this improvement can be explained by the combination of nutrition-sensitive and specific drivers within a wider enabling environment of pro-poor economic growth of which key factors are improving incomes, smaller family sizes and greater gaps between births, parental and particularly women's education and wider health access.¹ In Bangladesh, 31% of under 5 children are stunted, 22% are underweight and 8% are wasted². An inverse association between level of household wealth and nutrition indicators is evident whereas regional and

geographical differences also exist, slum children are more malnourished than the non-slum.³

1.2 Agriculture and food security pre-COVID-19 trends

1.2.1 Food Production and Availability

The performance of the agricultural sector has been improving in Bangladesh as shown by the continued annual growth of agricultural GDP. The country has been self-sufficient in rice production since 2012. In 2018/19, annual change in production of wheat, pulse is declined while beans, major vegetables, leafy vegetables and fruits increased. Bangladesh has achieved self-sufficiency in fish production in 2016/17. Despite a decrease in the annual growth in 2018/19, absolute fish production increased. Production of meat, egg and milk is increasing but still low with a gap between production and demand (Source: Monitoring Report 2019 of the Bangladesh Second Country Investment Plan).

1.2.2 Food Consumption and Utilization

The diet quality is an important determinant of nutrient adequacy. There is a falling trend for rice intake towards the desirable norms. Consumption of cereals has decreased to 64% of daily energy intake/capita nationally in 2016 from 70% in 2010 which is close to the desired dietary target of <60%. While urban areas have already reached this target, rural populations still consume 65%. From 1995/96 to 2016, pulses, vegetables and fruits consumption are roughly steady whereas fish and egg consumption are increased.⁴ There are significant gap between consumption and desired level for fruits, vegetables, animal source foods (milk and eggs) and pulses.⁵ Fruits and vegetables intake is around half of the WHO/FAO recommendation also, egg consumption is still below the recommended amount. The dietary diversity score, a proxy of

¹ Nicholas Nisbett, Peter Davis, Sivan Yosef & Nazneen Akhtar, *Bangladesh's story of change in nutrition: Strong improvements in basic and underlying determinants with an unfinished agenda for direct community level support (2017)*, available at <https://doi.org/10.1016/j.gfs.2017.01.005>, last seen on 29/04/2020

² National Institute of Population Research and Training (NIPORT), and ICF. 2019. *Bangladesh Demographic and Health Survey 2017-18: Key Indicators*. Dhaka, Bangladesh, and Rockville, Maryland, USA: NIPORT and ICF.

³ Bangladesh Bureau of Statistics (BBS) and UNICEF Bangladesh. 2016. *Child Well-Being Survey 2016*. Dhaka, Bangladesh.

⁴ Bangladesh Bureau of Statistics (BBS), Statics and Informatics Division (SID), Ministry of Planning. June 2019. *Report on the Household Income and Expenditure Survey 2016*. Dhaka, Bangladesh.

⁵ Nahar, Quamrun, et al. (2013) "Desirable Dietary Pattern for Bangladesh: Final Research Results", Ministry of Food, GoB.

minimum micronutrient adequacy is unsatisfactory in the women of reproductive age. (Source: Monitoring Report 2019, CIP2).

2. Objectives

The objectives of the document are to:

- i. assess and review the current situation of underlying determinants/drivers of malnutrition (e.g. low income, unemployment, poor health and illness, food insecurity, gender violence, etc.) resulting from COVID-19 lockdown.
- ii. determine the causality pathways between the COVID-19 and malnutrition due to current COVID-19 status.
- iii. estimate the extent of burden of malnutrition {(Severe Acute Malnutrition (SAM) and Moderate Acute malnutrition (MAM)}, Stunting during the post COVID-19 situation.
- iv. develop an outline of a comprehensive multi-sectoral response plan for lowering/ reducing the number of malnourished cases and mitigating the negative impact of poor nutrition conditions/status on vulnerable population groups.
- v. prepare a policy brief founded on analysis for advocacy with higher level policy/decision makers.

3. Methodology

Desk review of available related documents (published, unpublished), international and national guidelines. In addition, communication with expert professionals working in different disciplines including food security, nutrition and health was a major source of information.

4. Introduction of the Changing Context

4.1 COVID-19 and Food and Nutrition Security Situation

In Bangladesh, the first case of COVID-19 was detected on 8 March 2020 since then there has been steady rise of cases and worsening condition continuing till date. In order to contain the situation, the government has undertaken several remedial measures including imposing lockdown to ensure social distancing since 26 March 2020 till 30 May 2020 (so far). During the lockdown period a substantial number of poor people have migrated to rural villages to their root/communities, while some stayed back in Dhaka. To mitigate the negative impact of lockdown on livelihood, the government has initiated a number of measures, which include cash and food distribution through the local administrative structures; Open Market Sale (OMS) of foods at subsidized price; increased number of beneficiaries through existing Social Safety Net programs, etc. The government has also initiated several stimulus packages to prevent the economic meltdown resulting from lockdown. At local level, individuals, private, philanthropic, and civil society organizations have been extending their help to support poor and vulnerable people.

All these palliative measures are important and necessary, however may not be adequate in response to the real needs. The lockdown has put poor people at the crossroad of life and livelihood. Both lives and livelihood are at risk because of the current devastating situation of COVID-19 and its short and long-term impact on poor and vulnerable population. It is assumed that the impact would be deep and long lasting. Therefore, it would be wise to be careful not to repeat the same mistake made globally during the 2007-2008 food crisis and turn this health crisis into a food and nutrition crisis again.

In Bangladesh between 2010-2016, about 8 million people were lifted out of poverty and 5.6 million from extreme poverty (WB, 2019)⁶. Despite this impressive gain, still over 24.5% (about 39 million) of the total 163 million people are poor of which half (about 20 million) are extremely poor who cannot afford the cost of minimum food consumption basket. They will be hit hardest by the consequence as most of them are casual laborers, daily wages earners and engaged in informal sectors. Furthermore, it is understood that a

⁶ *Bangladesh Poverty Assessment; Facing the old and new frontiers in poverty reduction, World Bank Group*

substantial number of economically vulnerable people-new poor- who also have lost their source of earning will add to these existing poor groups as well in this current situation. The negative impact of COVID-19 on economic growth and jobs/individual earning, and the resultant upsurge in poverty will be significant in a country like Bangladesh.

In view of the status of prevailing underlying determinants vis a vis the responses by the government, civil society organizations and individuals, it is assumed that situation will be contained to a certain extent and eventually subside by sometime, however the timeline is unknown. Indications are there that existing measures have had substantive positive impact on the food security and nutrition outcomes but may not be sufficient and sustain for long. Considering these issues, the BNNC has decided to determine the impact of COVID-19 on nutrition. The Director General of BNNC has established an Expert Committee on Food Security and Nutrition to undertake this assessment (Annex 1 and 2). This should be considered as a living document which may be updated by BNNC if deemed necessary.

5. Causality Pathways between COVID-19 and Nutrition:

Impact of COVID-19 on Underlying Determinants of Malnutrition

Malnutrition increases the vulnerability to diseases. There seems to be a bi-directional relationship between COVID-19 and those suffering from chronic disease conditions affecting immune system. For example, where there are already high rates of malnutrition, diarrhoea, malaria, HIV AIDS and TB, people would be more susceptible to the virus. Malnourished children because of their poor immune system may not mount up the usual obvious reactions to the viral threats, such as fever. This can lead to infections being unnoticed and missed early on of the COVID-19. There is a high probability that most of them would likely to remain undiagnosed and would die silently.

Like in many countries, the current COVID-19 pandemic situation has pushed and deepened further all known underlying and proximate drivers of malnutrition instigated by negative impact of COVID-19 in Bangladesh. COVID-19's impact on malnutrition will likely be through multiple pathways in short, medium and long term, and in the process the social inequalities will contribute to differential impacts (IFPRI) (Figure-2). As explained further below all underlying determinants of malnutrition (e.g. increased morbidity, inadequate access to various services and their low-uptake, food insecurity, low income and employment opportunities, etc.) have already deteriorated substantially.

Figure- 2: COVID-19 and Malnutrition Causality Pathways (Adapted from IFPRI)



The poor from urban slum, rural areas and low wage earner groups from informal sectors alike are disproportionately affected by the negative consequences of the lockdown. It is assumed that the gain made so far in poverty reduction, social sectors (non-monetary dimensions of well beings, e.g. health, nutrition, education and WASH, etc.) over the last two decades have largely been battered by the lockdown, the most important measure to contain the virus epidemiologically.

The projected GDP growth of 8.2% for FY20 is now expected to contract by 2-3%. Prior to the shutdown, almost half of the respondents' average monthly family income was reported to be less than BDT 10,000.

This limited income was barely sufficient to keep their families afloat and now that too has been severely interrupted (Source: WB⁷, JPG-BRAC⁸).

The negative impact on income, employment, food value chain, access to various services, migration (from urban to rural areas, and reverse migration from diasporas), closing of garment factories, because of the lockdown imposed to ensure social distancing will have direct or indirect negative impact on nutrition outcomes among all spectrum of the population groups, women and children from poor and vulnerable population in particular. Unless they are managed and prevented proficiently, it will result into possible food and nutrition crisis in the coming months.

6. Review of the current situation and impact of COVID-19 on different sectors

The details of the negative impact of COVID on each of the underlying determinants on access to food and nutrition has been explained below.

6.1 Impact of COVID-19 Lockdown on Employment & Income

The employment opportunities for most poor workers in informal sectors during the lockdown have been slashed/curtailed. For example, on average 63% of wage earners rendered inactive. This was more for the slum population (71%) compared to rural population (55%). About 65% people from lower poverty line, 66% from upper poverty line and 58% from vulnerable⁹ (non-poor) were affected. Though poor from urban slums (82%) were worst affected compared to rural poor, but poor from lower poverty line (78%), upper poverty line (79%) and vulnerable-non poor (71%) were all affected equally. The income of the poor has been dropped by more than 70%; and about one fourth to one third of the poor have reduced their expenditure on food.¹⁰

6.2 The impact of COVID19 on Small and Medium Enterprises (SMEs) and the Availability of Nutritious food

Food producing SMEs across Bangladesh have been badly impacted by COVID-19. The poultry industry alone has seen an estimated loss of 11.5 billion taka (USD 135 million) and the production of poultry and fish feed fell by 75%. The dairy sector is losing around 570 million taka (USD 6.7 million) each day, with 12 to 15 million litres of milk being left to spoil. The estimated loss of the agricultural sector could be about USD 630 million, and the hotels and restaurant related services could lose USD 510 million. The seafood industries have almost been wiped out as losses in the crab industry alone have reached USD 46.9 million. SMEs make up almost 70% of these industries, and this poses a great risk to the food system of Bangladesh as SMEs struggle to navigate the impact of COVID-19 on their businesses.¹¹

6.3 Impact of COVID-19 Lockdown on Food Security

6.3.1 Food Markets and Food price

As a result of COVID-19 lockdown and disruptions in supply chain, vendor businesses are way down — by as much as 80-90%, which has created confusion, panic among the population. In between January and April 2020, price of all varieties of rice (per kg) has gone up ranging from 7%-46% increase. The highest increase was seen in coarse Aman (41%) and coarse Boro (33%) varieties of rice. The second highest increase was in coarse medium Aman (29%) and coarse medium of Boro (24%) as well. Price of pulse (Musur dal local) and local sugar has increased by 24% and about 5% respectively. As both the coarse varieties and dal (dal-bhat) are mostly eaten by poor and lower middle-class population, therefore, any increase in price of these items would have devastating effect on food consumption of the poor. In addition, the price of all types of meat, for example, mutton, beef and chicken broiler has increased by 3%, 4% and 56% respectively. Price of

⁷ World bank to be given by IK

⁸ JPG reference given by IK

⁹ Notes: The international poverty line has a value of US\$1.90 purchasing power parity (PPP). Vulnerable denotes the population living between the national poverty line and twice the national poverty line. Middle class and above denotes the population living above twice the national poverty line.

¹⁰ Livelihoods, Coping, and Support during COVID-19 crisis, Dr. Hossain Zillur Rahman, Dr, Imran Matin, PPRC and BIGD 16 April 2020).

¹¹ GAIN, Thoughts on Strategic Bailout of SMEs in Bangladesh

vegetable oil both soya bean and mustard has also increased. On the other hand, wheat price has gone down by about 9%. Price of fishes and eggs has also reduced. Price of tomato has gone down substantially to about 56%. Price of iodized salt remain unchanged¹².

6.3.2 Access to Food and Consumption

The findings of Needs Assessment Working Group, Bangladesh, April 2020 have highlighted that lockdown restrictions are already impacting on food security and nutrition, with prices of essential items showing an increase. About 75% respondents mentioned without sufficient access to food at home, 91% don't have sufficient money to buy food. 70% indicated they could not provide a varied/diversified diet to children between 6 and 23 months. About 66% reported that main challenge was to access the food with markets being closed.¹³

There has been a substantial drop in per capita food expenditure across the board, which was about one in three among urban slum poor (32%), and about one in four among rural poor (24%). It was 29% among people from both lower and upper poverty line and 36% in vulnerable (non-poor) people. Consequently, the consumption of food has been reduced as well. Households having three meals a day prior to COVID-19, of them 23% from urban slums and 15% from rural areas have reduced their food consumption during the lockdown period. The reduction was highest among households from lower poverty line (25%), compared to 19% in upper poverty line and 11% from vulnerable non-poor households. In addition, people are adopting numerous coping/survival means to manage household food insecurity, for example, by selling assets, borrowing from neighbors, friends, etc. (Source: PPRC, April 2020)

Predicted Impact

- Consumption will largely depend on the access to food. Both quantity and quality food (diversified and nutrient dense foods) by poor will be limited due to less earning opportunities, reduced income and rise in food price, etc. resulting from COVID-19 lockdown.
- Significant impacts observed and further anticipated on food value chains (especially those relying on import and export), and prolonged impacts can include limited access and distribution, reduced food diversity, impact on upcoming planting seasons, and even potential collapse of some sectors.
- Limited livelihood options due to disruption to food value chains (where most vulnerable groups rely on for daily or seasonal work), compounded by limited access to food, will lead to increased indebtedness and negative coping mechanisms.

Box 1: Rapid Assessment of Food and Nutrition Security in the Context of COVID-19 in Bangladesh

Summary of the findings of the rapid assessment by FAO in the context of COVID -19 Bangladesh points to the following:

- Food grain availability in private and public stocks could be sufficient for up to one month of consumption—and there is potentially another 6 months' worth of consumption ready to be harvested, although this may be threatened partially by flash floods and shortages of labour and machinery.
- Most food commodity supply chains have been disrupted. In particular, poultry, dairy and fisheries are under severe stress. This can impact the access to good quality protein and bioavailable micronutrient rich foods. The prices of rice, lentils, and beef increased, while that of wheat-flour, eggs and broiler chickens decreased. There is need to consider the inclusion of eggs in the food baskets and food based interventions being rolled out in the current emergency situation.
- Overall, the COVID -19 situation which has severely affected food access and prices, will have marked long implications for protein and micronutrient adequacy of diets, access to healthy diets which can affect nutrition outcomes.
- There is a major challenge to deliver the raft of new policies in response to COVID-19, and to coordinate interventions across ministries and across development partners.¹⁴

¹² http://www.dam.gov.bd/price_graphical_report; Dr.Shafiun N Shimul, Institute of Health Economics (IHE), University of Dhaka.

¹³ COVID-19: Bangladesh, Multi-Sectoral Anticipatory Impact and Needs Analysis, HCTT, 2020

¹⁴ DRAFT Report as of 27 April 2020, FAO Situation Report #2, FAO; Impact of COVID-19 on Dhaka's food markets and food price.

6.3.3 Actions Taken by the Government

In order to improve the access to food by poor, the government along with private sectors, civil society organizations have initiated several programs. These include food and cash relief, open market sale of essential food items with subsidized price, expansion of the safety Net programs, etc. Coverage of social protection has been promised to expand greatly to include the “new poor”. However, the impact of these initiatives will largely depend on right targeting of the poor who need them most, type and amount of food distributed and how efficiently and timely they are distributed to the intended beneficiaries.

6.4 Impact of COVID-19 Lockdown on Access and Uptake of Services

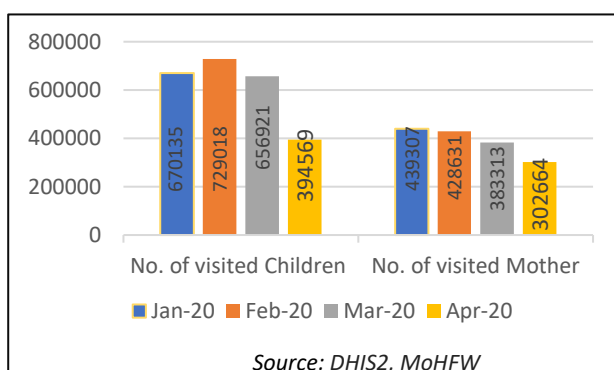
In general, the impact of COVID-19 on access to various services (e.g. food, health, nutrition, WASH, education, social safety-net programs, etc.) have been compromised in all areas by many population groups.

6.4.1 Continuity of Health Services

Women and children seeking health services will be at risk of COVID-19 unless health service providers are able to take up proper precautions such as Triage, Personal Protective Equipment (PPE) and Infection Prevention and Control (IPC). All types and levels of Front Line Workers (FLWs) did not get the needed standard training on COVID-19 management and prevention which is largely lacking. Concerns for spreading the infection to family members is precipitating mental health problems for the FLWs which needs to be addressed urgently.¹⁵

There is an indication that overall drop in use and access to health services due to the fear of COVID-19 and government restrictions on movement (UNICEF Weekly Reports #5). For example, there is a substantial reduction of 41% in the institutional deliveries in March 2020 (46,491) compared to March 2019 (78,154).¹⁶

Figure 3: Number and trend of visits by mother & children in Community Clinics between Jan-Apr 2020.

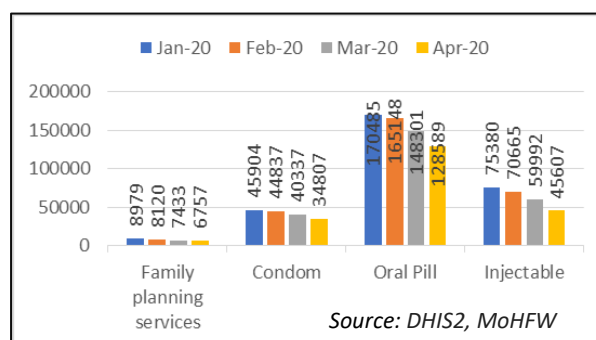


There has been a downward trend in the number of visits in Community Clinics by children and mothers between February and April. The visits of children and mothers have been reduced by 46% and 29% respectively (Figure-3). Routine immunization activities though continued but at a limited scale and the number of drop-in sessions held have reduced. Only 25-30% of planned immunization activities conducted. Many children have missed their vaccinations. The measles and rubella campaign targets 34 million children aged from 9 months to 9

years has been postponed. Sporadic outbreaks of vaccine-preventable diseases, including measles and diphtheria, have already been seen in parts of Bangladesh (UNICEF Weekly Report #6).

Figure- 4. Trends of visits by mothers for various family planning services from FWCs between January and April, 2020

Similar downward trends are also observed for the family planning services at Family Welfare Centres (FWCs) during the same period. As a consequence there is high possibility of a baby boom during the lockdown period.



¹⁵ Front Line health Workers’ (FLWs) perceptions and opinions on their personal safety while attending suspected or confirmed COVID-19 patients in Bangladesh, RAPID MINI-RESEARCH REPORT, BRAC, School of Public Health

¹⁶ UNCF Report #5; DHIS2, MoHFW, April 2020

Any further outbreak of vaccine preventable diseases, especially measles because of the interruption in vaccination, and discontinuation/disruption Ante Natal Care (ANC) and Post Natal Care (PNC) services will have profound negative impact on child and maternal nutrition.

In addition, most vulnerable communities are likely to have insufficient information on symptoms of COVID19 and procedures to be followed. About 61% of respondents know where to contact if experiencing COVID19 symptoms and 83% of respondents reported experiencing mental stress; 49% reported that health facilities are inaccessible.¹⁷

Predicted Impact

Between 2011 and 2017, the proportion of women who made four or more ANC visits during pregnancy increased from 26% to 47%. During the same period percentage delivered in a health facility increased from 29% to 50%, and percentage of women 15-49 years received PNC within 42 days of delivery increased from 30% to 53% (Table 1).

Table-1: Ante Natal Care (ANC) and Post Natal Care (PNC) services

Indicator	BDHS 2011	BDHS 2014	BDHS 2017-18
Percentage of women 15-49 years received any ANC	67.7%	78.4%	92.0%
Percentage of women 15-49 years received 4+ ANC	25.5%	31.2%	47.0%
Percentage delivered in a health facility	28.8%	37.4%	49.6%
Percentage of women 15-49 years received PNC within 42 days of delivery	30.1%	39.4%	52.5%

- During post COVID-19 period all these gains may be lost as indicated above and will reverse to earlier periods putting million women at risk of high malnutrition, morbidity and mortality in coming months.
- COVID-19 has increased strain on existing health care workers and system, compounded by shortage of healthcare workers, resource and PPE. People are concerned of attending to health facilities due to fears of getting infected, which may lead to low hospital delivery, increased complications during and post-delivery and maternal deaths. About 43% health care workers mentioned hearing about the pregnant women dying in their area and 25% of health workers noted women are not coming to healthcare facilities.¹⁸
- Since many children have missed their essential vaccinations, there may be an outbreak of vaccine preventable diseases which might have negative impact on nutrition outcomes and increased childhood deaths.
- There might be a post COVID-19 baby boom due to low utilization of family planning services. Importantly, this would happen at a time where the health systems would be coping up with the disruptions that have happened in the services during COVID-19, and hence would add to more burden on the health systems.

6.4.1.1 Actions taken by the Government

The Directorate General of Health Services has issued guidelines to continue routine immunization during COVID-19 pandemic inline with UNICEF and WHO global and regional advisories. The routine immunization sessions are continuing both in fixed and outreach sites as an essential service that combats disease outbreaks. However, the number of immunization sessions performed has been substantially reduced due to the COVID-19 pandemic.

6.4.2 Continuity of Nutrition Services

¹⁷ COVID-19: Bangladesh, Multi-Sectoral Anticipatory Impact and Needs Analysis, HCTT, 2020.

¹⁸ COVID-19: Bangladesh, Multi-Sectoral Anticipatory Impact and Needs Analysis, HCTT, 2020.

Fear of highly transmission of COVID-19 could lead to a decrease in breastfeeding and or increase in the use of infant formula or other substitutes. Economic disruption and lockdown procedures have increased the price of nutritious foods. The health systems are at risk of overloading and its capacity to provide nutrition services (e.g. counselling, supplementation, identification and management of malnutrition cases, etc.) will be further weakened in coming months. Uptake of outpatient and inpatient for management of SAM children will be interrupted and utilization of preventive nutrition services which is already low will be lower due to restricted movement. About 49% respondents indicated that women and children could not access to health and nutrition services (UNICEF Weekly Reports).

Consequently, access to nutrition service has decreased. Coverage of infant and young child feeding counselling decreased from 95% to 91% and weighing of pregnant women from 65% to 59% during the COVID-19. The screening of children for SAM continues to be low at 35% and requires urgent attention. The number of children received treatment for SAM from Community Clinics (CCs) reduced from 15,971 in February to 9,772 in April which is about a 39% drop (DHIS2, MoHFW).

A country-wide rapid assessment of nutrition facilities regarding their preparedness and functionality reveals that of all 366 units offering treatment for children with SAM, about 73% are nonfunctional. Of the functional facilities, only 2% are considered fully functional and only 5% of units have a sufficient supply of therapeutic milk. About 20% of health care providers noted of not having adequate stock of Iron Folic Acid (IFA) for the next three months (UNICEF weekly reports).

Predicted Impact

- Due to COVID-19 child nutrition will be affected through deterioration of various underlying factors including child feeding practices resulting from spillover effects. For example, separation of babies from the COVID-19 infected mothers due to increased fear and social stigma, limited access and refusal to go to health facilities/community clinics, diversion of health care staff away from routine maternal and child health services including breastfeeding promotion, and increased promotion of breast-milk substitutes (intentional and unintentional, etc.) by relief organizations. Consequently, gain made since 2011 in several indicators may slide back again to their earlier level in 2014 or even in 2011 (Table 2).
- In addition, due to increased food insecurity, minimum dietary diversity (MDD) and minimum acceptable diet (MAD) from 38% and 34% respectively in 2017-2018 (pre-COVID) may deteriorate to the rates at 26% and 23% in 2014 or further down to 24% and 21% in 2011 (Table 2).

Table 2. Child Nutrition: Rates of IYCF indicators in 2011, 2014 and 2017-18 (BDHS-Surveys)

Indicator	BDHS 2011	BDHS 2014	BDHS 2017-18
Early Initiation of Breastfeeding (EIBF)	47.1%	50.8%	Na
Exclusive breastfeeding (EBF) (0-5 months)	64.1%	55.0%	65.0%
Minimum Dietary Diversity (MDD)	24.2%	26.4%	37.5%
Minimum Acceptable Diet (MAD)	21.2%	23.0%	34.1%

- Women will be double hit by both undernutrition and micronutrient deficiencies. The proportion of underweight among women has had decreased from 33% in 2004 to 18% in 2014. Despite this gain, nearly one-third of women are still undernourished, with a body mass index of <18.5 kg/m². The prevalence of anemia among adolescent girls, and pregnant women is still at unacceptable levels. It is already evident that with the incidence of COVID-19, the access to health services has been reduced due to closure of facilities and in some instances refusal to go to health facilities/community clinics because of fear. Due to mothers’ malnutrition as well as poor ANC services due to COVID-19, it also may create impact on birth outcome and so LBW rate might increase.
- Consequently, all gains made in reduction of all forms of malnutrition (e.g. stunting, underweight, acute malnutrition, and micronutrient deficiencies, etc.) during last decade will probably be eroded, and is most likely that child malnutrition level will slide back to its earlier situation.

6.4.3 Continuity of Children Education in Schools and Access to Nutrition Sensitive Services

The goal of universal education in Bangladesh cannot be achieved unless nutrition and health needs of children and adolescents are met. Findings from a study in 2013 showed that among school aged children, 21% are too short for their age and 22% are too thin, while 15% were severely underweight (Akhtaruzzaman, 2013). Children also lack key micronutrients, for example, among school aged children (6-14 years) about 21% were deficient in vitamin A, 40% in Zinc and 40% suffering from iodine deficiency. Prevalence of vitamin D and calcium deficiency is 46%.¹⁹

As part of the measures implemented by the Bangladesh government to control the COVID-19 pandemic, all schools and education institutions have been closed, resulting in over 42 million children (including those who were already out-of-school) without access to education. The impact of closer of schools will have multiple consequences beyond the education sector itself. For example, over three million pupils will miss their regular school feeding (fortified biscuits). 75g packet and 50g packet of biscuits are given to primary and preprimary school children respectively six days per week. The biscuits provide 338 kcal/day to primary school children and 225 Kcal/day to pre-primary school children and meet 67% of their daily micronutrient requirements. School feeding offers children a regular source of nutrients for their mental and physical development and help to reduce the prevalence of anaemia by up to 20% in girls. In addition, school meals programs serve as one of the Social Safety Net programs. The monetized value of school feeding is estimated on average an equivalent to about 10% of a household's income. Secondly, the stipend scheme of students accounts for 55% of the total Social Safety Net beneficiaries-the highest provider (HIES²⁰ 2016).

Predicted Impact

Therefore, any pause in monetary support and food through school feeding to the children from poor families during this economic hardship conditions will further deepen their poverty and worsen their nutritional status. It is also anticipated that, without this support boys from poor families may dropout from education and join the child labour to support their families and the girls may end up in childhood marriage. Continuity of both school feeding and school stipend programs can help to halt this catastrophic situation and further reduce poverty among the poor and vulnerable families. In addition, some of the school based nutrition programs, for example, Iron Folic Acid supplementation to adolescent girls, and nutrition education program have already been discontinued.

6.4.5 Continuity of Water, Sanitation and Hygiene (WASH) Services

About 48% of respondents use safely managed drinking water services, 75% practice hand washing with water and soap and 64% use basic sanitation services. About 42% respondents implied hygiene materials are not easily accessible. Only 70% of health care facilities have a functional basic water source.²¹

Predicted Impact

- Lack of maintenance of water and sanitation services specially in climate vulnerable areas and urban slums which could lead to water borne diseases
- Community level solid waste management workers could fall into high health risk
- Increase in prices of the hygiene Products (Soap, hand Sanitizer etc.)

¹⁹ *Impact Study of School Feeding Program in Bangladesh, Commissioned by the United Nations University in 2004, Published by IFPRI*

²⁰ *Household Income and Expenditure Survey 2016, Bangladesh Bureau of Statistics (BBS)*

²¹ *COVID-19: Bangladesh, Multi-Sectoral Anticipatory Impact and Needs Analysis, HCTT, 2020.*

7. Projection of Possible Malnutrition Burden in Post COVID-19 in Bangladesh

The child nutrition indicators (e.g. early initiation of breast feeding, exclusive breastfeeding, minimum dietary diversity and minimum acceptable diet, etc.) have also been looked into during the course of this exercise. Malnutrition (e.g. wasting, stunting, micronutrient deficiencies, etc.) among all age groups, in women and children in particular, may increase during the post COVID-19 period in the medium and long term. The acute malnutrition among young children will be more pronounced due to acute shortage of food, and access to essential health and other services. It is assumed that, stunting (chronic malnutrition) may fall back from current level of 31% in 2017-18 (pre-COVID-19) to 36% in 2014 or even at 41% in 2011. Wasting (acute malnutrition) will deteriorate from current level of 8% in 2017-18 (pre-COVID-19) to 14% in 2014 or even at 16% in 2011 (Table 3).

Table-3: Child Malnutrition: Status of under-five child nutrition indicators (stunting, wasting and under-weight) in 2011, 2014 and 2017-18 (BDHS-surveys).

Indicator	BDHS 2011		BDHS 2014		BDHS 2017-18	
	Overall (<-2SD)	Severe (<-3SD)	Overall (<-2SD)	Severe (<-3SD)	Overall (<-2SD)	Severe (<-3SD)
Stunting	41.3%	15.3%	36.1%	11.6%	30.8%	8.9%
Wasting	15.6%	4.0%	14.3%	3.1%	8.4%	1.5%
Underweight	36.4%	10.4%	32.6%	7.7%	21.9%	4.1%

Following assumptions are used for determining the burden of the malnutrition and its consequences in coming months:

- i.** It is estimated that poverty will be increased by about 20%, which means additional about 4.8-5.0 million new poor will add to the current total of about 40 million poor, making it a total of approximately 45 million. The economic recovery will take a longer time in the post COVID-19 scenario. Likely reverse migration from the Middle- East would add to the number.
- ii.** Food security level have already been deteriorated and will further deteriorate substantially in coming months.
- iii.** Access to services (health, nutrition, water sanitation, education, etc.) have already deteriorated and will be reduced further substantially.
- iv.** All gains made so far in nutrition status among under five children could be eroded and slide back closer to the level in 2014 and in extreme cases closer to year 2011, the two analog years. In calculation of the burden of SAM and MAM, cases the WHO cutoff level for Global Acute Malnutrition (GAM) threshold have been used (Table: 4).

Table 4: Global Acute Malnutrition (GAM) prevalence threshold

Classification	GAM prevalence
Acceptable	<5%
Poor	5-10%
Serious	10-15%
Critical/Emergency	>15%

- v.** In the calculation, initially 12 month period is considered for estimating the incidence correction factor (for SAM and MAM cases)²².
- vi.** For calculation of estimated number of stunting, the prevalence rate of the stunting cases in respective years has been considered.
- vii.** Case burden for SAM with medical complications -a subset of SAM cases needing hospital admission for management of associated medical complications which is about 15%-(global

²² How do we estimate case load for SAM/or MAM in children 5-59 months in a given time period? Mark Myatt, Consultant Epidemiologist, Brixton Health.

recommendation) and about 9-10% in Bangladesh (data from ACF, Bangladesh) have been considered.

- viii. Calculation of burden of SAM and MAM is done for whole country and also for 25 priority districts (identified based on Composite Indicators)²³.

7.1 7.1 Projected Case Burden of SAM and MAM and Prevalence of Stunting

In calculating the case burden of Severe Acute Malnutrition (SAM) and Moderate Acute Malnutrition (MAM), three possible scenarios have been considered in coming months aligning with the WHO threshold for cutoff of GAM. For creating these scenarios, three analog years 2017-18, 2014 and 2011 have been used as they neatly meet the three WHO cutoff level for GAM threshold. For instance, in 2017-2018 where GAM rate in Bangladesh is 8% i.e. at poor malnutrition level, in 2014 where GAM rate was 14%, i.e. at serious threshold malnutrition level and in 2011 where GAM rate was 16% i.e. at critical/emergency threshold level.

In addition, same three time periods have been used to predict likelihood nutrition situation including stunting (chronic) malnutrition that might emerge during the post COVID period. These include nutrition situation of women of reproductive age, YCF conditions among under five children. The estimated number of stunting is based on the point prevalence of stunting rate in respective year.

7.1.1 Three possible scenarios of malnutrition

7.1.1.1 Scenario one (best case scenario, maintaining current status):

Under this scenario it is anticipated that the lockdown will be lifted soon hence the underlying drivers will not deteriorate further. At present the prevalence of GAM rate is 8% (6.5% MAM and 1.5% SAM) which is at poor level according to WHO cutoff threshold. This may remain unchanged. This is partly because of various preventive measures taken by the government and other partners which might have positive impact on nutrition, and also partly because of the overall resilience generated by the various socio economic well-being initiatives including safety net programs undertaken for the poor over the last two decades. Though there is a possibility that there might be a small rise in overall GAM level during this period, nonetheless, the total GAM rate will remain below 10%.

Table 5: Burden of Acute Malnutrition²⁴ for 12 months period

Area		Children aged 0-59 months	Estimated burden based on BDHS ²⁵ 2017-18 statistics			Estimated burden based on BDHS 2014 statistics			Estimated burden based on BDHS 2011 statistics		
			GAM	MAM	SAM	GAM	MAM	SAM	GAM	MAM	SAM
HCTT 25 Priority Districts	²⁶ Based EPI projected population for 2020	7,390,915	1,627,276	1,331,106	296,169	2,884,429	2,234,327	650,102	2,988,258	2,250,534	737,724
Bangladesh	²⁴ Based EPI projected population for 2020	16,261,595	3,551,532	2,917,330	634,202	6,046,061	4,735,376	1,310,685	6,595,703	4,777,657	1,818,046
	²⁷ Based BBS projected population for 2021	16,311,000	3,562,322	2,926,193	636,129	6,064,430	4,749,763	1,314,667	6,615,742	4,792,172	1,823,570

²³ i) Exposure, risks and Urban focused unsustainable livelihood, ii) Demographic and Social Vulnerability, iii) Economic and Physical Vulnerability, iv) Recurrent Disaster Vulnerability

²⁴ Burden (acute malnutrition) = N*P*K, Where N = Population, P = Prevalence, K - Incidence Correction Factor (2.6)

²⁵ Divisional data

²⁶ Population projection for 2020 (from EPI Population Projection 2014-2021)

²⁷ Population Projection of Bangladesh for 2021, BBS, November 2015

- a) The total number of under-five children in whole country are 16,311,000 (Table 5). Under scenario one, the GAM burden for the whole country would be 3,562,322 for 12 month period of which MAM and SAM would be 2,926,193 and 636,129 respectively. Of the total 636,129 SAM cases about 63,420 (@ of 10 %) would require hospital based management and treatment for medical complications. Using the international guideline (@of 15%) estimated total burden of SAM cases who will be needing hospitalization in SAM management centre would be 95,130 (Table 6).

Table 6: Need for inpatient care for complicated SAM cases

Area	Proportion among total SAM identified	Based on burden for 2020 (according to BDHS 2017-18)	Based on burden for 2020 (according to BDHS 2014)	Based on burden for 2020 (according to BDHS 2011)
HCTT 25 Priority Districts	8.5%	25,174	55,259	62,707
	10.0%	29,617	65,010	73,772
	15.0%	44,425	97,515	110,659
Bangladesh	8.5%	53,907	111,408	154,534
	10.0%	63,420	131,068	181,805
	15.0%	95,130	196,603	272,707

- b) The total number of under-five children in 25 high priority districts are 7,390,915. The estimated total burden of GAM cases would be 1,627,276 of which 1,331,106 and 296,169 MAM and SAM cases respectively (Table 5). About 29,617 (@ of 10%) would require hospital based management and treatment for medical complications. Using the international guideline (@ of 15%) estimated total burden of SAM cases who will be needing hospitalization in SAM management centre would be 44,425 (Table 6).
- c) Estimated number of stunting prevalence: It is estimated that a total of about 5,023,788 children would be stunted under this scenario in the whole country (Table 7). On the other hand, in 25 high priority districts, there would be about 2,472,261 stunted children (based on 31% prevalence rate in 2017-18).

Table 7: Estimated number of children aged 0-59 months with stunting (prevalence)

Area		Children aged 0-59 months	Estimated number of stunted children at any point of time in 2020 (based on three reference BDHS years)		
			BDHS 2017-18	BDHS 2014	BDHS 2011
HCTT 25 Priority Districts	¹ Based EPI projected population for 2020	7,390,915	2,472,261	2,732,283	3,077,263
Bangladesh	¹ Based EPI projected population for 2020	16,261,595	5,008,571	5,870,436	6,716,039
	³ Based BBS projected population for 2021	16,311,000	5,023,788	5,888,271	6,736,443

7.1.1.2. Scenario two (Serious situation):

The initial lockdown will continue for a certain period till end of May 2020, till Eid-UI-Fitar. There will be modest deterioration of underlying factors, and various preventive measures will have limited impact. Consequently, the level of malnutrition will increase to a WHO serious cutoff threshold (GAM=10-<15%) level. It is assumed that the level of GAM cases may reach to the level of 2014 (BDHS) which was 14%.

- a) The total number of under-five children in whole country are 16,311,000. Under scenario two, the GAM burden for the whole country would be 6,064,430 for 12 month period of which MAM and SAM would be 4,749,763 and 1,314,667 respectively (Table 5). Of the total 1,314,667 SAM cases about 131,068 (@ of 10%) would require hospital based management and treatment for medical complications. Using the

international guideline (@ of 15%) estimated total burden of SAM cases who will be needing hospitalization in SAM management centre would be 197,201 (Table 6).

- b) The total number of under-five children in 25 high priority districts are 7,390,915. The estimated total burden of GAM cases would be 2,884,430 of which 2,234,327 and 650,100 MAM and SAM cases respectively (Table 5). Of the total 650,100 SAM cases about 65,010 (@ of 10%) would require hospital based management and treatment for medical complications. Using the international guideline (@ of 15%) estimated total burden of SAM cases who will be needing hospitalization in SAM management centre would be 97,515 (Table 6).
- c) Estimated number of stunting prevalence: It is estimated that a total of about 5,888,271 would be stunted under this scenario in the whole country (Table 7). On the other hand, in 25 high priority districts, there would be about 2,732,283 stunted children (based on 36% prevalence rate in 2014).

7.1.1.3 Scenario three (Critical/Emergency):

The lockdown will continue for a certain period till end of May 2020, till Ramadan Eid. The second lockdown may be required sometime in the future if the COVID-19 situation deteriorates further. There will be further substantial deterioration of underlying factors, as various preventive measures taken by government and partners will not have substantive positive impact. Food value chain will breakdown and deteriorate significantly. Consequently, the level of GAM will increase to critical/emergency WHO cutoff threshold (15% and above). It is assumed that the level of GAM cases may reach to the level of 2011 (BDHS) which was 16%.

- a) The total number of under-five children in whole country are 16,311,000. Under scenario three, the GAM burden for the whole country would be 6,615,742 for 12 months period of which MAM and SAM would be 4,792,172 and 1,823,570 respectively (Table 5). Of the total 1,823,570 SAM cases about 181,805 (@ of 10%) would require hospital based management and treatment for medical complications. Using the international guideline (@ of 15%) estimated total burden of SAM cases who will be needing hospitalization in SAM management centre would be 272,707 (Table 6).
- b) The Estimated total burden of GAM cases in 25 high priority districts would be 2,988,258 of which 2,250,534 and 737,724 MAM and SAM cases respectively (Table 5). Of the total 737,724 SAM cases about 73,772 (@ of 10%) would require hospital based management and treatment for medical complications. Using the international guideline (@ of 15%) estimated total burden of SAM cases who will be needing hospitalization in SAM management centre would be 110,660 in a year (Table 6).
- c) Estimated number of stunting prevalence: It is estimated that under this scenario a total of about 7,736,443 would be stunted in the whole country (Table 7). On the other hand, in 25 high priority districts, there would be about 3,077,263 stunted children (based on 41% prevalence rate in 2011).

8. Recommendations

8.1 Developing a Comprehensive Food and Nutrition Security Response Plan

This review exhibits a profound damaging impact of COVID-19 on life and livelihood of millions across all spectrums of population groups, especially more on poor and vulnerable population. The economic and non-economic costs of COVID-19 across all sectors on a short, medium and long term basis is inevitable. The burden of acute and chronic malnutrition amid under-five children and women is expected to be enormous. Failure to respond in a timely manner may lead to unnecessary human distress and deaths. Therefore, this necessitates a comprehensive multi-sectoral food and nutrition security response plan in order to prevent and manage efficiently the negative impact it might be having on nutrition in future. Country would need a well-coordinated and harmonized preventive and mitigating approach to contain the possible impact on food and nutrition security. The response plan will address the following key issues:

8.1.1 Protection and strengthening of on-going programs/services

In many places, people are avoiding visiting the health facilities and other service outlets/platforms due to fear, social stigma, lack of confidence, movement restriction, and closure of health facilities. There has been

an overall reduction in utilization and access to health services in terms of fewer women seeking facility care for their ANC/PNC services, deliveries, nutrition interventions, vaccination of children and family planning services.

Recommendations

- a) Protection, continuity and further strengthening of existing nutrition specific and sensitive programs would be the prime target respecting the social distancing and safety concerns during and post COVID-19 situation as appropriate.
- b) It is strongly recommended that, where immunization campaigns are suspended, governments begin rigorous planning now to intensify immunization activities once the COVID-19 pandemic is under control.
- c) Ensure rational allocation of resources amongst COVID-19 programs and essential health and nutrition services and protect syphoning out of existing resources to mitigate further disruption and deterioration in service delivery.
- d) Identify challenges for delivering nutrition specific services, and develop strategies to reopen facilities/ services/programmes (e.g. EPI, Vitamin A supplementation, ANC/PNC, Family planning services etc.) which have been either fully or partially closed down thereby making them operational.
- e) Identify and rectify supply chain disruptions of nutrition supplies including micronutrients, nutrition treatment, anthropometric equipment, BCC materials etc.
- f) Innovative/alternative approaches (e.g. mobile messaging to deliver nutrition relevant messages, counselling/follow up over phone, help desk services etc.) may be explored to deliver general (e.g. counselling services)/essential (e.g. IFA supplementation) nutrition services during COVID-19 situation.
- g) Efforts should be made to institute appropriate social behaviour change communication (SBCC) activities to overcome barriers in utilization of health facilities due to fear, social stigma and lack of confidence among population so that they start accessing, utilizing and availing facilities and services as before.
- h) Build capacity of the staff including psychosocial support in all facilities.

8.1.2 Prevention of Hunger and malnutrition

Due to closure of markets and increase in prices of essential items many poor households do not have sufficient money to buy foods. They are left with insufficient access to food at home and unable to provide a varied diet to their children. Consequently, the consumption of food has been reduced. The poor from urban slums, villages and vulnerable-new poor are the hardest hit. People are adopting numerous coping/survival means to manage household food insecurity either by reducing number of meals or borrowing money. Since 2000, all Global Hunger Indices (GHI) (e.g. undernourishment, child stunting, and child mortality) have improved. Despite good progress, in 2019 Bangladesh is still at serious hunger level and COVID-19 situation has further added to the damage.

Recommendations

- a) In order to prevent any forthcoming erosion in all gains made in GHI, both NPAN2 and CIP2 should jointly focus on priority food and nutrition security interventions using common implementation platforms.
- b) Efforts should be made to expand multiple social protection programs to prevent hunger and malnutrition, targeting urban, rural and new poor cohesively by various government sectors, development partners, civil society organizations and private sector.
- c) Push for continuity of nutrition specific and sensitive interventions by using/establishing all possible platforms (e.g. safety net programs with health/nutrition delivery platforms) working together in congruence/ coordinated manner.

8.1.3. Focus on poor and new poor (vulnerable) and gender

The employment opportunities for most poor workers in informal sectors during the lockdown have been slashed/curtailed. The income of the poor from below poverty lines and new poor from urban slums, villages has been dropped by more than 70%. About one third to one fourth of the poor have reduced their expenditure on food. An estimated additional 4-5million new poor will be added to the existing pool of 40 million poor. Under the forthcoming livelihood and social protection programs by the government additional 50 lac including the “new poor” will be covered.

Recommendations

- a) The poor should be diligently focused upon as they will be hit hardest by multiple sequelae resulting from COVID-19 lockdown. Prioritization should focus on women headed households, floating population, slum dwellers, differently able people, and marginal farmers, and new poor.
- b) Proper targeting, type and amount of relief commodities, duration of support and timely distribution to the intended beneficiaries should be monitored by the government and partners.
- c) A good partnership with NGOs, private sectors and civil society organizations is required for efficient management and coordination of the programs. Relevant clusters and their local chapters should play their active role in support of government initiatives.
- d) Governments should ensure that all measures and policies are gender-sensitive and do not further widen the gender gap. Increased emphasis need to be put on in addressing the division of role both men and women should play in food production as well as transformation and food preparation. Men, boys and other non-binary gender people should be sensitized to consider splitting responsibility at home. Social protection services should continue to operate and ensure sensitization against gender-based violence.

8.1.4 Geographical coverage and focus on more affected geographical locations (based on the composite indicators)

Scale of a follow-on food and nutrition security responses would largely depend on the capacity and available resources.

Recommendation

While to cover the entire country is desirable, in case if that is not feasible because of capacity and resource constraints, a phase approach may be applied for implementing the responses. The immediate responses may start in 25 priority districts identified by the HCCT 2020²⁸, further expanding them progressively in other districts in phases based on needs, capacity and available resources.

8.1.5 Focus on children and women-for promotion of nutrition

Though all population age groups will be affected, but global and local data suggest that women and young children are less susceptible to the direct corona virus infections compared to men and elderly population. However, malnourished children and women may be at a higher risk of getting and fighting the infection which is likely to worsen in the pandemic period. Further, young children and women of reproductive age are affected more from the indirect impact of COVID-19. They are victims of collateral damages and spillover effects caused by COVID-19.

Recommendations

- a. Measures should be taken to avoid unintended actions by service providers and care givers which may cause damages to children and women such as, separation of babies from the COVID infected mothers due to increased fear and social stigma. This will hamper breastfeeding practices and thus increasing the promotion of breast-milk substitutes (intentionally and unintentionally).
- b. Any diversion of health care staff away from routine essential services for mother and children should be avoided. Continue community-based services including home visit, access to valid information and

²⁸ COVID-19: Bangladesh, Multi-Sectoral Anticipatory Impact and Needs Analysis, HCTT, 2020

counseling services, provision of essential nutrition supplies and services (IFA, Calcium, Nutrition treatment, anthropometric equipment etc.).

- c. Find out innovative means to resume payment of student stipend and school feeding programs respecting the social isolation.
- d. Promote measures to protect children from abuse & neglect at home, and increased violence against women and sexual harassment, etc.

8.1.6 Support farmers, food system and food supplies

Marketing of agriculture food products produced by small farmers, minimizing the price difference between farm gate and retailer price has been a challenge during the lockdown period. "Panic buying" in food markets has resulted in significant increase in the price of certain foods. Rising domestic food prices (especially staples) can have devastating impact on the food security of the poorest segments of the population. The quality of grain storage facilities has been an important variable so far in Bangladesh, with significant amounts being stored under very poor conditions resulting in increased spoilage and wastage.

Recommendations

- a. Ensure continued good production of foods and fruits in future, uninterrupted supply of agriculture inputs including subsidy and protective stimulus package on time to keep the food value chain lifeline open. This will protect and support the life and livelihoods of small farmers.
- b. The government needs to take appropriate and timely measures to assure that harvests are efficiently and safely stored at the place where they are produced/grown to minimize the wastage.
- c. The market regulation system should be strengthened and an efficient system needs to be established to closely monitor food prices and markets. Transparent dissemination of information will strengthen government management over the food market and prevent people from panicking.
- d. Strengthening the supply chain management system of food from producer to consumer by government initiatives through private support.

8.1.7 Support Small and Medium Enterprises (SMEs) for food and nutrition security:

Accessibility is a huge problem for consumers and SMEs producing food. In urban areas there has been less supply of food from rural during lockdown. In rural areas food supplies are constrained by the closing of key markets. SMEs are not being able to source raw materials and perishable food due, as a result they have to operate at minimum capacity. Furthermore, the price of fruits and imported food has increased significantly in urban areas. The prices of vegetables and local fruits have reduced significantly in rural areas, affecting farmers, the backbone of the food supply chain. It is generally reported that those SMEs dealing with fresh foods (e.g. dairy, vegetables, animal-source foods) are the most impacted due to restricted movements. In addition, small and micro businesses tend to have been more impacted than medium-sized businesses, as they cannot afford to bear the costs and lost cash flow. Encouragingly, governments and partners are working to protect access to food, but these measures are likely to fall short of what is truly needed. Protecting and stimulating the production of key nutritious foods will be critical. Due to issues affecting production to transport, the food reaching wet markets has tangibly reduced and will be further reduced if SMEs and farmers are not incentivized and adequately supported.

Recommendations

- a) SMEs in the food and beverage sector are in urgent need of forward contracts at a predetermined fair price, which the government should facilitate within clusters of SMEs as categorised by the SME Foundation. This will mitigate losses of perishable food products and keep SMEs in business without disrupting food supplies.
- b) SMEs also need much broader financial packages, such as soft microcredit schemes to inject cash to re-employ workers and working capital support.
- c) The government should diversify its food package to include products like milk (not for children under-two years), perishable vegetables etc. to ensure better nutrition of the vulnerable population and to revamp production by SMEs.

8.2 Multi-Sectoral Approach

All underlying drivers of malnutrition are at play today and would be there during post COVID-19 period. They cut across many sectors relevant to nutrition and are further exacerbated by the lockdown imposed. The unintentional food and nutrition security consequences is unavoidable. Two key lifeline programs namely, the inclusive social safety Net programs and an uninterrupted food value chain system have to be kept open in order to avoid future crisis of food insecurity and malnutrition. A multi-sectoral and well-coordinated approach is required to onboard all possible sectors starting from designing, implementation, support and monitoring progress of nutrition and food security response plan.

- a. Inter-sectoral coordination mechanisms which have already been established at central, district and sub-district levels by BNNC need further strengthening to make them functional. The Nutrition Council which is chaired by the honorable Prime Minister, the Executive and Standing Technical Committees and inter-ministerial forum have to be activated to revitalize the multisectoral coordination mechanism, to provide policy directions and technical guidelines to the aligned sectors.
- b. BNNC should accelerate its advocacy activities to increase the coverage/allocation/ strengthen the relevant actions/programs of the 22 ministries to contribute directly or indirectly to protect nutrition situation from any future deterioration.

8.3 Establishing a Monitoring & Evaluation, and Surveillance System

Household food insecurity is a risk factor of malnutrition among all age groups and the impact extends from under-nutrition to overweight/obesity and hidden hunger. Moreover, food insecurity, even for a brief period, can result in long-term developmental, psychological, physical, and emotional harm to the children from low-income households. Hence, understanding the nutritional and household food insecurity is critical for formulating appropriate policy and design effective programs to manage hunger and food insecurity, and the nutritional consequences related to COVID-19 and similar epidemics and pandemics. Therefore, government need to regularly assess the nutritional and food insecurity status of the urban and rural households of Bangladesh during the ongoing COVID-19 pandemic. (Please see Annex-3)

Recommendations

- a. Two types of survey can be instituted, first, a quick survey (e.g rapid SMART) to understand the extent of nutrition impact quickly so that immediate decisions and response can be crafted. Secondly, a cross-sectional survey to assess the nutritional and food insecurity status of the urban and rural households of Bangladesh during the ongoing COVID-19 pandemic can be conducted. (Please see the details in Annex 3). Amid the suspension of in-person survey activities, rapid telephone surveys are critical for providing timely insights on the impacts of the COVID-19 pandemic on the poor and vulnerable. The team understood that International Food Policy Research Institute (IFPRI) will conduct a large-scale telephone survey in June 2020, which will assess how COVID-19 is affecting the poor and vulnerable in rural and urban areas in terms of (1) economic shocks, (2) food security and nutrition, and (3) assistance received.
- b. As the COVID-19 situation will not end soon and may continue over several years, it would be wise to establish sentinel sites and develop a nutrition surveillance system for the long run to monitor on continuous basis.

8.4 Develop a Policy Brief

Based on this technical document a short policy brief should be developed for advocacy to main stream nutrition in any response plan, and mobilization of resources for developing, implementing and monitoring of a costed response plan for food and nutrition security encompassing the short, medium and long-term horizons for Bangladesh.

ANNEXURES

Annex-1: List of members and other contributors of the Expert Committee on Food Security and Nutrition

1.	Dr. AFM Iqbal Kabir, Lead Consultant, BNNC (Supported by: NI-UKAid)	Chairperson
2.	Dr. Tahmeed Ahmed, Senior Director, Nutrition and Clinical Services, ICDDRB	Co- Chairperson
3.	Prof. Nazma Shaheen, Institute of Nutrition and Food Science, University of Dhaka.	Member
4.	Dr. Md. Mohsin Ali, Nutritionist	Member
5.	Mr. Hajiql Islam, Research Director, FPMU	Member
6.	Dr Akhter Ahmed, Country Representative, IFPRI Bangladesh	Member
7.	Ms Farhana Sharmin, National Consultant- Nutrition & Food Safety, WHO, Bangladesh	Member
8.	Md. Mainul Hossain Rony, Cluster Coordinator, Food Security Cluster, Bangladesh	Member
9.	Ms Asfia Azim, member, Nutrition Cluster, UNICEF, Bangladesh	Member
10.	Dr. Md. Akhter Imam, Deputy Director, BNNC Office	Member Secretary

Special thanks to:

1. Dr. Md. M. Islam Bulbul, Deputy Program Manager, National Nutrition Services
2. Ms. Piyali Mustaphi, Chief, Nutrition Section, UNICEF, Bangladesh
3. Dr. Lalita Bhattacharjee, Senior Nutrition Advisor, FAO, Bangladesh
4. Dr. Golam Mohiuddin Khan, Nutrition Specialist, Nutrition Section, UNICEF-Bangladesh
5. Md. Habibur Rahaman, Nutrition Consultant for BNNC, UNICEF, Bangladesh
6. Ms. Rudaba Khondker, Country Director, Bangladesh, GAIN, Bangladesh
7. Saiqa Siraj, Country Director, Nutrition International, Bangladesh
8. Ms Tonima Sharmin, Nutrition Program Officer, World food program, Bangladesh
9. Ms. Faria Shabnam, National Professional Officer-Nutrition, WHO, Bangladesh
10. Dr. Delwar Hussain, Deputy Team Leader, BNNC, (Supported by: NI-UKAid)
11. Md. Nezam Uddin Biswas, Consultant-M&E, BNNC, (Supported by: NI-UKAid)
12. Syed Muntasir Ridwan, National Coordinator, SUN Business Network, Bangladesh
13. Taufiqur Rahman, Capacity Building Specialist, ACF, Bangladesh
14. Dr. Purnima Menon, IFPRI-New Delhi office
15. Dr. Eadara Srikanth, Asia TAN Project Manager, Nutrition International
16. Dr. Rupinder Sahota, Asia TAN Project Officer, Nutrition International

Annex-2: Government Order to form the Expert Committee on Food Security and Nutrition

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
বাংলাদেশ জাতীয় পুষ্টি পরিষদ কার্যালয়
আইপিএইচ ভবন (৩য় তলা), মহাখালী, ঢাকা-১২১২
ফোন নং- ০২-৯৮৬১৮২৯, ই মেইল- dgbnncbd@gmail.com



স্মারক নংঃ বাজাপুপ/এম এন্ড ই/১১-৫৪/ ২০১৮/১০৮

তারিখঃ ২৭-০৪-২০২০

বাংলাদেশের জনগণের পুষ্টির মান উন্নয়নের লক্ষ্যে এবং Covid-19 পরবর্তী পরিস্থিতি মোকাবিলায় করণীয় নির্ধারণের লক্ষ্যে বাংলাদেশ জাতীয় পুষ্টি পরিষদ কার্যালয়ের তত্ত্বাবধানে পরিস্থিতি মূল্যায়ন এবং অগ্রাধিকারমূলক গবেষণা কার্যক্রম পরিচালনা করার জন্য 'খাদ্য নিরাপত্তা ও পুষ্টি বিশেষজ্ঞ' দের সমন্বয়ে একটি টেকনিক্যাল কমিটি গঠন করা হল।

১। ডা. এ এফ এম ইকবাল কবির, পরামর্শক, বিএনএনএসি	সভাপতি
২। ডা. তাহমিদ আহমেদ, সিনিয়র ডাইরেक्टर, নিউট্রিশন এন্ড ক্লিনিক্যাল সার্ভিসেস, আই সি ডি ডি আর, বি	সহ-সভাপতি
৩। অধ্যাপক নাজমা শাহীন, খাদ্য ও পুষ্টি বিজ্ঞান ইনস্টিটিউট, ঢাকা বিশ্ববিদ্যালয়	সদস্য
৪। ডা. মো. মহসিন আলী, পুষ্টিবিদ,	সদস্য
৫। জনাব হাজীকুল ইসলাম, রিসার্চ ডিরেক্টর, এফপিএমইউ	সদস্য
৬। জনাব আকতার আহমেদ, কান্ট্রি রিপ্রেজেন্টেটিভ, ইন্টারন্যাশনাল ফুড পলসি রিসার্চ ইন্সটিটিউট, বাংলাদেশ	সদস্য
৭। মিস ফারহানা শারমিন, পরামর্শক, বিশ্ব স্বাস্থ্য সংস্থা	সদস্য
৮। মোঃ মাইনুল হোসেন রনি, ক্লাস্টার কো-অর্ডিনেটর, ফুড সিকিউরিটি ক্লাস্টার, বাংলাদেশ	সদস্য
৯। মিস আসফিয়া আজিম, সদস্য, নিউট্রিশন ক্লাস্টার	সদস্য
১০। ডা. মো. আকতার ইমাম, উপ পরিচালক, বাংলাদেশ জাতীয় পুষ্টি পরিষদ কার্যালয়,	সদস্য সচিব

কার্যপরিধিঃ

- ১। জাতীয় দুর্যোগ ও জরুরী প্রয়োজনে বিশেষত COVID-19 পরবর্তী জনগণের খাদ্য নিরাপত্তা ও পুষ্টির আশু চাহিদা নিরূপণসহ দুর্যোগ ও অপুষ্টির পারস্পরিক সম্পর্ক নির্ধারণে প্রয়োজনীয় সার্ভে/ গবেষণা করা।
- ২। অপুষ্টির হুমকি মোকাবিলায় বহুখাতবিভক্তিক কার্যক্রম বাস্তবায়নে দুর্যোগকালীন বাধা সমূহ চিহ্নিত করা এবং তার প্রতিকারে প্রয়োজনীয় পরামর্শ প্রদান করা।
- ৩। দুর্যোগ পরবর্তী বুকিপুর্ণ জনগোষ্ঠীর বিশেষত নারী এবং শিশুদের অপুষ্টি মোকাবিলায় প্রয়োজনীয় পরামর্শ প্রদান।
- ৪। SUN কান্ট্রি অগ্রাধিকার কার্যক্রমের অংশ হিসেবে পুষ্টি বিষয়ক রিসার্চ স্ট্রাটেজি বাস্তবায়নে সহায়তা প্রদান করা।
- ৫। কমিটি যেকোন সময় সভায় মিলিত হতে পারবেন এবং প্রয়োজনে অনধিক ২/৩ জন সদস্য কো-অপ্ট করতে পারবেন।

ডা. মো. খলিলুর রহমান

মহাপরিচালক

বাংলাদেশ জাতীয় পুষ্টি পরিষদ কার্যালয়

মহাখালী, ঢাকা

অনুলিপিঃ সদয় অবগতি ও কার্যার্থে, জ্যেষ্ঠতার ভিত্তিতে নহেঃ

- ১। সচিব, স্বাস্থ্য ও পরিবার কল্যাণ মন্ত্রণালয়, স্বাস্থ্য সেবা বিভাগ, স্বাপকম। দৃ আঃ একান্ত সচিব।
- ২। অতিরিক্ত সচিব, জনস্বাস্থ্য ও বিশ্বস্বাস্থ্য, স্বাস্থ্য সেবা বিভাগ, স্বাপকম। দৃ আঃ ব্যক্তিগত কর্মকর্তা।
- ৩। মহাপরিচালক, স্বাস্থ্য অধিদপ্তর, মহাখালী, ঢাকা, দৃআঃ সহকারী পরিচালক, সমন্বয়।
- ৪। উপসচিব, জনস্বাস্থ্য-২, স্বাস্থ্য সেবা বিভাগ, স্বাপকম।
- ৫। পরিচালক, জনস্বাস্থ্য পুষ্টি প্রতিষ্ঠান, মহাখালী, ঢাকা-১২১২
- ৬। পরিচালক, সকল, বাংলাদেশ জাতীয় পুষ্টি পরিষদ কার্যালয়, মহাখালী, ঢাকা-১২১২
- ৭। উপ-পরিচালক, সমন্বয়, বাংলাদেশ জাতীয় পুষ্টি পরিষদ কার্যালয়, মহাখালী, ঢাকা-১২১২
- ৮। উপ-পরিচালক, পরিবীক্ষণ, মূল্যায়ন ও গবেষণা, বাংলাদেশ জাতীয় পুষ্টি পরিষদ কার্যালয়, মহাখালী, ঢাকা-১২১২
- ৯। ডা. এ এফ এম ইকবাল কবির, পরামর্শক, বিএনএনএসি
- ১০। ডা. তাহমিদ আহমেদ, সিনিয়র ডাইরেक्टर, নিউট্রিশন এন্ড ক্লিনিক্যাল সার্ভিসেস, আই সি ডিডি আর, বি, ঢাকা।
- ১১। অধ্যাপক নাজমা শাহীন খাদ্য ও পুষ্টি বিজ্ঞান ইনস্টিটিউট, ঢাকা বিশ্ববিদ্যালয়
- ১২। ডা. মো. মহসিন আলী, পুষ্টিবিদ।
- ১৩। জনাব হাজীকুল ইসলাম, রিসার্চ ডিরেক্টর, এফপিএমইউ
- ১৪। মিস ফারহানা শারমিন, পরামর্শক, বিশ্ব স্বাস্থ্য সংস্থা
- ১৫। মোঃ মাইনুল হোসেন রনি, ক্লাস্টার কো-অর্ডিনেটর, ফুড সিকিউরিটি ক্লাস্টার, বাংলাদেশ
- ১৬। জনাব আকতার আহমেদ, কান্ট্রি রিপ্রেজেন্টেটিভ, ইন্টারন্যাশনাল ফুড পলিসি রিসার্চ ইন্সটিটিউট, বাংলাদেশ
- ১৭। অফিস কপি।



ডা. মো. আকতার ইমাম
উপ পরিচালক
বাংলাদেশ জাতীয় পুষ্টি পরিষদ কার্যালয়
মহাখালী, ঢাকা

Annex-3: Proposed methods of cross-sectional survey

“A cross-sectional survey to assess the nutritional and food insecurity status of the urban and rural households of Bangladesh during the ongoing COVID-19 pandemic”

Introduction:

The severe acute respiratory syndrome coronavirus 2 disease (COVID-19) was first reported in Wuhan, Hubei Province, China in December, 2019. Since then it has rapidly spread all over the world and has caused a large global outbreak. Countries around the world, including Bangladesh, have taken ‘lockdown’ approach to contain the spread of the virus. During this lockdown most people, apart from those involved in emergency services, were directed strictly to remain inside their homes. As a result, the means to earn their daily livings were compromised in most cases. The food supply chain was also interrupted, making them vulnerable to acute food insecurity due to a sudden drop in supply or access to food. Though such food insecurity is expected to hit the poorest most, depending on the unavailability of support during a lockdown period, even the lower-middle income and middle income groups are believed to become equally vulnerable. Household food insecurity is a risk factor of malnutrition among all age groups and the impact extends from under-nutrition to overweight/obesity and hidden hunger. Moreover, food insecurity, even for a brief period, can result in long-term developmental, psychological, physical, and emotional harms to the children from low-income households. Hence, understanding the nutritional and household food insecurity status is critical for formulating appropriate policy and design effective programs to manage hunger and food insecurity, and the nutritional consequences related to COVID-19 and similar epidemics and pandemics. Considering the fact, the BNNC aims to assess the nutritional and food insecurity status of the urban and rural households of Bangladesh during the ongoing COVID-19 pandemic.

Objectives: The objectives of the survey would be to estimate the

- 1) childhood malnutrition status (acute and chronic) among under-five children
- 2) proportion of undernutrition among non-pregnant non-lactating women of 16-45 years of age
- 3) proportion of households with poor or borderline food consumption patterns during the ongoing COVID-19 pandemic in Bangladesh.

Methods:

- a) Survey design: A multi-stage sampling design will be employed to collect a representative sample from each division. For the first stage of sampling, a set number of upazilas will be randomly selected from each of the divisions. In the second stage, two unions will be selected from each selected upazila, and in third stage two villages/mohallas will be selected from the selected unions/wards. The list of villages/mohallas in each union will be broken into units of equal size before the selection of two villages/mohallas from a union. Fourth stage sampling will be done at the village level. Households at a village will be chosen systematically. Households will be considered eligible for selection if there is at least one non-pregnant non-lactating woman of 16-45 years living with one of her under five children.
- b) Sample size: Sample size is calculated using the formula for calculating a 95% one-sided confidence interval for a single population proportion. Considering the prevalence of stunting as 31%, at 5% type 1 error the required minimum sample size is at least 526 households from each division at 5% absolute error or precision with a design effect of 1.6.
- c) Survey tools: Pre-tested paper questionnaires will be used to document the household dietary diversity, food insecurity and socio-economic status of a household. Validated anthropometric tools will be used for measuring the nutritional status of the mother and her children.
- d) Timeline: Data collection for two months and total duration of the study would be one year including interim and final analysis, reporting and dissemination.