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Impact of COVID-19 on Health and Nutrition

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ABSTRACT

The most crucial time to meet a child's nutritional requirements is the first 1,000 days of life, through pregnancy and infancy. Nutrition deficiency during this period leaves children with lifelong impairment in physical and mental development. Therefore, investing in nutrition is the key to securing a country's future generation. Therefore, India's policy framework includes many proven nutrition interventions. In the year 2015, India committed to achieving the sustainable development goal (SDG) of zero hunger. As a step towards meeting the targets by 2030, the government of India (GoI) launched the Prime Minister's overarching scheme for holistic nutrition (POSHAN) Abhiyan in 2017. Unfortunately, the pandemic has increased the risk factors for child malnutrition in India. The economic impact of the pandemic has reduced the frequency and quality of meals consumed by households resulting significant burden of child malnutrition. Malnutrition was found to be the leading risk factor for the death of children under the age of five in India (Lancet, 2019).

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INTRODUCTION

The Government of India (GoI) launched the Prime Minister's Overarching Scheme for Holistic Nutrition (POSHAN) Abhiyan in 2017. Targets were set to reduce stunting, under-nutrition, and low birth weight by two percent each and anemia by three percent by 2022. Unfortunately, the pandemic has increased the

risk factors for child malnutrition in India. With the disruption of Anganwadi services and Mid-Day Meal (MDM), many children no longer have access to regular, nutritious meals. The reason behind the overburdening of health systems is impaired service delivery of critical health and nutrition interventions for children. Results, the economic impact of the pandemic has reduced the frequency and quality of meals consumed by households.

This paper briefly highlights the need for increased public provisioning on child health and nutrition and identifies a range of short-term and long-term policy measures to build a resilient nutrition system.

In India, 68 percent of deaths of children under five are due to malnutrition, or 1,935 deaths every day. The onset of the COVID-19 pandemic, subsequent lockdown, and ensuing constraints are likely to exacerbate the distress of those who are malnourished–in particular, pregnant women, young mothers, and children. Estimates suggest that a decline in Gross National Income (GNI) per capita will result in a 14 percent increase in moderate/ severe wasting in children under 5 years of age and a 22 percent increase in severe wasting. Combined with disruptions in service provision, COVID-19 could lead to several maternal and child deaths.

To avoid losing the momentum gained so far in the battle against malnutrition, public policy should prioritize creating and maintaining robust safety nets for women and children. This paper provides an overview of the nutrition sector before the pandemic, the changes, and impacts due to the pandemic, and briefly discusses what can be done to get nutrition interventions back on track.

There are two types of interventions to address fatal and child nutrition and development. Nutrition-specific interventions that address immediate determinants and nutrition-sensitive interventions that address underlying determinants

Table 1: Nutrition-Specific and Nutrition-Sensitive Interventions

Nutrition-Specific Interventions	Nutrition-Sensitive Interventions
Adequate food and nutrient intake, complementary feeding, caregiving, and parenting practices, and low burden of infectious diseases	Food security; adequate caregiving resources at the maternal, household, and community levels; access to health services; and a safe and hygienic environment

This paper focuses solely on core nutrition-specific interventions for pregnant women, lactating mothers, and children under six years of age. These address the immediate determinants of fetal and child nutrition and development.

Nutrition-sensitive interventions are discussed where relevant.

NUTRITION SECTOR BEFORE THE COVID-19 PANDEMIC

This section provides a brief exposition of India's pre-pandemic nutrition landscape and covers the government's core nutrition-specific interventions as well as major challenges faced by the sector.

An Overview of India's Nutrition Sector

At the Government of India (GoI) level, nutrition-specific interventions are delivered primarily through two Centrally Sponsored Schemes (CSSs): -

- The GoI's flagship program Integrated Child Development Services (ICDS) aimed at providing basic education, health, and nutrition services for early childhood development. It comes within the Ministry of Women and Child Department (MWCD).
- The National Health Mission (NHM) aims to achieve universal access to healthcare by strengthening health systems, institutions, and capabilities, including a focus on maternal and child health. It comes within the Ministry of Health and Family Welfare (MoHFW).

The above two schemes have existed for a long period, progress has been slow and variable. In 2016, stunting (low height-for-age) prevalence in India was high (38.4 percent) and varied considerably across districts (range: 12.4-65.1 percent), with stunting above 40 percent in over a third of districts. as per the National Family Health Survey (NFHS)-4 (2015-16). Updated data is available for 22 States and Union Territories from NFHS-5 (2019-20). In 13 out of 22 states for which data is available, stunting among children under five increased, and in 12 out of 23 states wasting levels increased. This is concerning.

It has seen an increasing policy focus on nutrition. The POSHAN Abhiyaan aims to holistically reduce the prevalence of malnutrition in India by 2022 using technology including the ICDS Common Application System (ICDS-CAS) a real-time monitoring system and job aid; convergence; capacity building; and behavior change communication. Simultaneously, GoI launched several other initiatives, such as the Pradhan Mantri Matru Vandana Yojana (PMMVY) – a maternity benefit scheme aimed at compensating women for wage loss and promoting health and nutrition-seeking behavior; the Anemia Mukt Bharat (AMB) for addressing the high prevalence of anemia; and a Jan Andolan (people's campaign) for Social and Behaviour Change Communication (SBCC). The launch of these schemes has led to a re-prioritization of nutrition outcomes, with clear targets being laid out to be achieved by 2022 (Table 2).

Table 2: POSHAN Abhiyaan Targets

Indicator	Targets (by 2022)
Prevent and reduce stunting in children (0- 6 years)	From 38.4% [as per the fourth round of the National Family Health Survey (NFHS-4)] to 25%
Prevent and reduce under-nutrition (underweight prevalence) in children (0-6 years)	By 6 percentage points at a reduction rate of 2% per annum
Reduce the prevalence of Anemia among young children (6-59 months)	By 9 percentage points at a reduction rate of 3% per annum
Reduce the prevalence of Anemia among women and adolescent girls (15-49 years)	By 9 percentage points at a reduction rate of 3% per annum
Reduce Low Birth Weight (LBW)	By 6 percentage points at a reduction rate of 2%

CHALLENGES

Before the pandemic, the delivery of nutrition-specific interventions was impeded by several challenges. Broadly, they can be classified into three types:

- Access and equity issues
- Bottlenecks in specific interventions, such as the delivery of food supplements
- Lack of an enabling environment for delivery.

Coverage: On average, nationally, no major nutrition-specific intervention exceeded 70 percent even coverage in 2015-16. Coverage of interventions ranged from 65 percent for Iron and Folic Acid (IFA) during pregnancy and nutrition to just about 50 percent or less for most other interventions such as food supplements and ante-antenatal care (ANC). Consequently, most households did not receive all the nutrition interventions. For instance, Menon et al (2019) found that only two of 1,417 households (0.1 percent) received all 19 nutrition-specific and nutrition-sensitive interventions spanning various departments.

In addition to low coverage across interventions, there are also significant inter-state and inter-district variations in coverage. For instance, the coverage of food supplements ranged from barely 3 percent in some districts to over 95 percent in others.

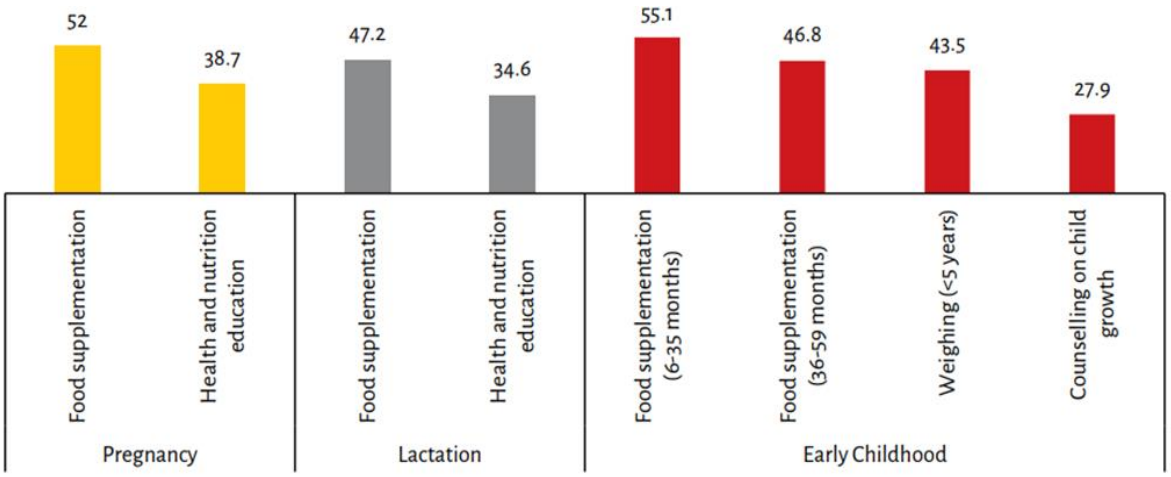

Figure 1: Coverage of Core ICDS Interventions in 2015-16
Source: International Food Policy Research Institute. Data Note No. 4. July 2018.
Online: http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/132803/filename/133015.pdf.

THE EFFECTS OF THE PANDEMIC ON NUTRITION AND HEALTH SERVICES

After going through all the report's recommendations, we required physicians, vets, and ecologists together. Much progress has been made in fostering collaboration between the UN agencies involved, the World Health Organization (WHO), the Food and Agriculture Organization (FAO), the World Animal Health Organization (WAHO), and the UN Environment Program (UNEP). But much more actions to be taken at the national and local level and, above all, in the way we think about these challenges and the solutions we propose to the common challenges.

Through the power of scientific innovation to promote and protect health. Yet we have long known that the way that we organize medical innovation is far from perfect. So, we need to look systematically at where further advances are needed, based on the simple criteria of whether they offer the potential to improve one health and how we can create a true (3P Model) partnership between the public and private sectors in which the risks and the returns are shared. None of this will be possible without the help of global governance of health. These include a new pandemic treaty, a global health board, modeled on the financial stability board created by the G20 after the global financial crisis, and new pan-European structures, including a health threats council to secure high-level political commitment and a health surveillance network that spans the entire 53 countries European region. We need to

explore new ways of accounting for the money spent, seeing many elements of health spending as an investment, in the same way as we view expenditure on education and physical or digital infrastructure.

Will any of this happen?

The aim is to reap the benefits of this extraordinary movement and make the effects of the shock last on our ability to remember the lessons from COVID-19. Apart from the above, the financial sector has realized the cost of failing to invest in health and preparedness. The fight for health has spread beyond the borders of the healthcare systems. Whether the health community seize the opportunity to enter and engage?

The recent policy focus on nutrition and increased investments are likely to be halted due to the pandemic and ongoing economic slowdown. This section first looks at income decline and health service disruption as the two main reasons why the COVID-19 pandemic will impact the nutritional status of children and women. This is followed by a detailed analysis of the impact on nutrition-specific interventions, such as food supplements, immunizations, micronutrient provision, counseling, and maternity benefits.

Income decline

The suggestion from global projections is that even short lockdown measures, combined with severe mobility disruptions and comparatively moderate food systems disruptions, result in declines in income. Without any preventive interventions, it is estimated that over 140 million people globally could fall into extreme poverty (measured against the $1.90 poverty line) in 2020 - a 20 percent increase from present levels. The decline in incomes and consequent increase in poverty is known to have severe consequences on mortality and nutritional outcomes, particularly on wasting (low weight for height). A global estimate data from 1998-2018 found that a 10 percent decline in GNI per capita could lead to a 14 percent increase in moderate or severe wasting in children under 5 years of age and a 22 percent increase in severe wasting.

The impact of the pandemic on incomes in India is already evident. Unemployment had shot up to over 23 percent in May 2020, compared to 7-8 percent before March, and earnings were reduced for those employed. Projecting the impact of declining Gross Domestic Product (GDP) on wasting suggests that with a potential 9.5 percent decline in GDP in India 3.946 million children would be newly wasted, 542,975 mildly wasted; 1.322 million moderately wasted; and 2.081 million severely wasted, with a greatly elevated risk of mortality. Given that the GDP contracted by 22.8% from April to June 2020, these numbers could be even higher.

Nutrition and Health System Disruptions

Reductions in the coverage of key services, even in the short-term, can have long-lasting implications on pregnancy, and child health and nutrition outcomes during the critical first two years. A recent Lancet study across 118 countries

estimated large increases in maternal and child deaths amongst low- and middle-income countries. Assuming coverage reductions in key nutrition-specific interventions of even 9·8–18·5 percent, and a wasting increase of 10 percent, the study projected that over 6 months there would be 2,53,500 additional child deaths and 12,200 additional maternal deaths, across the 118 countries. At the end of the spectrum, reductions in coverage of 39·3–51·9 percent and an increase in wasting of 50 percent, over 6 months could lead to 11,57,000 additional child deaths and 56,700 additional maternal deaths.

In India, government data suggest that while services weren't entirely halted, there was a slowdown in service provision. The lockdown imposed to prevent the spread of COVID-19 affected the delivery of key services. AWCs, the main platform for the delivery of core nutrition-specific interventions were shut as people were encouraged to stay home. As of June 2020, AWCs across at least 18 large states remained shut. Further, AWWs, Accredited Social Health Activists (ASHAs), and ANMs had various COVID-19-related responsibilities, such as contact tracing and public awareness generation, and did not have time for their core duties. These factors, coupled with the rise in potential demand from migrants returning to their home states (5-30 million30), have clear repercussions on the delivery of specific health and nutrition interventions.

The remaining section looks at the status of and potential concerns in several key services. These are food supplements, immunization, care at Nutrition Rehabilitation Centres (NRCs), counseling and check-ups, micronutrient provision, and maternity benefits.

Policy measures needed

- Sufficient allocations should be made to ensure a stock of iron, calcium, and Vitamin A supplements, and essential medicines for children at Primary Health Centres, for distribution by frontline workers. Gaps in the supply chains of IFA tablets under AMB should be addressed.
- Tracking acute malnutrition should be accelerated through regular mobile-based communication from frontline health workers (ASHAs and ANMs). There should be budgetary support for facilitation and training for these activities.
- Focus on investment from the government in personal protective equipment (PPE) and appropriate incentives for frontline workers including ASHAs and ANMs.
- States must invest in decentralized procurement and decision-making so that zones with different levels of COVID-19 transmission can choose between mechanisms for service delivery (doorstep delivery or community level).
- Allocations for important schemes addressing child and adolescent health such as RKSK and Scheme for

Adolescent Girls (SAG) must be increased in the coming years.

- Critical shortages of health professionals in rural and urban health facilities must be addressed and adequate investments must be made to upgrade the physical infrastructure at existing facilities. There is a requirement to be adequate provisioning under NHM and the Health and Wellness Centre component of Ayushman Bharat.

Food supplements:

During the pandemic food security is a big challenge. A survey of 12 states found that many households were reducing the number of food items in a meal and the number of meals in a day. This is evidenced by reports that rural India was already eating less food and less nutritious food. Several states made food provisions, both generally and specifically for ICDS beneficiaries, a priority. Under the Atmanirbhar Bharat Programme, the Public Distribution System (PDS) has been mobilized to provide food supplies. The financial distress caused due to the pandemic has increased the dependency of the poor on the Public Distribution System (PDS). However, the PDS was already facing multiple challenges of exclusion due to the computerization and Aadhaar-enabled service which led to manipulation by ration dealers, technology glitches, and other issues (Economic and Political Weekly, 2020a). Moreover, all large states are providing Home Rations (THR) to both women and children. The means of THR delivery have varied across states. For example, Odisha was delivering THR and dry rations at doorsteps. However, as most AWCs were shut, hot-cooked meals for children (3 to 6 years) were not being served.

The provision of grain alone through PDS does not address the specific nutrition needs of women and children. Hot-cooked meals are meant to ensure that the food is consumed by the child and is not shared among family members. Even with THR, coverage information is limited thus far, and there is no indication that previous issues of access and coverage across districts have been addressed. Despite the relief packages announced under the Pradhan Mantri Garib Kalyan Yojana (PMGKY), the provisions of increased ration and other entitlements have failed to reach all beneficiaries

Policy measures needed

- The government should continue the distribution of free grains under PMGKY.
- Effective measures are needed to solve issues that hamper the distribution of PDS. In a situation of the hunger crisis, biometric identification and legal documentation should be eased. The ration should be provided to all regardless of whether they have linked their ration card to an Aadhar card, and a system should be in place to update the ration cards to include the names of children born after 2011.
- It is critical to strengthen the coverage of the food-based social security nets to

include many vulnerable people who are currently out of the food system across different States. The PDS should be universalized and expanded to include all vulnerable groups. This measure is necessary to address malnutrition among children belonging to such vulnerable households. Universal PDS models have proved to be an effective way to reduce exclusion errors and leakages. The Government of India (GoI) should provide an adequate budget to strengthen the system of FCI.

- More focus is required to maintain transparency and improve accountability in the distribution system. Inspections and grievance redressal constituted with the PDS, or local government should be strengthened to ensure the smooth functioning of the food distribution system and minimize power asymmetries.
- PDS, ICDS, and MDM (Food-based social security nets) should be strengthened by adding food grains with higher nutritive value like ragi, bajra, jowar, etc. 3.2.2 Health Interventions:

Immunization

Immunization services were significantly affected during the lockdown, threatening to unwind progress made toward eradicating vaccine-preventable diseases. Some immunizations cannot be delayed, and delays can have long-lasting effects. A single missed case can lead to a higher chance of the disease spreading in the future, and easily preventable diseases can prove fatal.

The number of immunization sessions planned and held declined significantly in April 2020. As a result, the number of children and pregnant women immunized in April fell by up to 17 lakhs. This was a consequence of the lockdown, and fewer immunization sessions, as sessions are usually held at Village Health Sanitation and Nutrition Days (VHSNDs) every month at AWCs. While these have since recovered, according to some reports, presence in immunization camps remains low due to fear among parents of their children getting infected with COVID-19.

Nutrition Rehabilitation Centres (NRCs)

The treatment of severely malnourished children can be done at home if the child has no medical complications. If complications exist, treatment at NRCs is required. Treatment at NRCs continued in most states as of June 2020. As services have resumed, the number of children admitted to NRC has picked up again.

Counseling and check-ups

Counseling is a key intervention in increasing healthier practices among people. There are several platforms for counselling which include face-to-face meetings, community sessions, digital messages, and public messages. Among these, conversations at health facilities, VHSNDs, and Community-based events reach more people than other platforms. These platforms rely on in-person interaction and can no

longer be used due to AWCs being shut. Home visits and the use of television or audio and video calls for the delivery of key messages have continued in most states, as per reports. Uttar Pradesh remained an exception, and counseling services had not resumed as of June.

A key intervention to reduce maternal and infant mortality is regular antenatal care. As per government norms, there should be at least 4 ANC visits. After a dip in provision in April, ANC visits have picked up again but remain below pre-lockdown levels. The disruption of ANC check-ups is likely to have affected both women and children who were born during this period.

Micronutrient provision:

Micronutrients are crucial for infants and children, who are most vulnerable to micronutrient deficiency, given the high vitamin and mineral intake they need to support their rapid growth and adequate development. Vitamin and mineral deficiencies, particularly of vitamin A, iron, and zinc contribute significantly to morbidity and mortality in children below 5 years of age. Iron deficiencies significantly affect pregnant women and new mothers as well and contribute massively to anemia among women (over 50 percent are anemic).

While the provision of IFA for pregnant women dipped, it has recovered to pre-lockdown levels to a large extent. The same is not true for lactating mothers, for whom provision has not seen a recovery. For adolescents and children who would normally receive IFA in schools, tablet provision has witnessed a decline since February 2020. The same is true for children whose mothers would receive IFA from the AWC, and for out-of-school children.

Maternity benefits:

Maternity benefits (PMMVY and JSY) are meant to incentivize health-seeking behavior as well as compensate for wage losses. Despite prior challenges with cash transfers, these have continued in various states, which is encouraging. The main exceptions are Chhattisgarh and Uttar Pradesh which had stopped PMMVY benefits as of June 2020. Research suggests that direct benefit transfers can be an efficient channel during the COVID-19 pandemic to augment incomes due to lower transaction costs, minimal leakages, and immediate delivery.

GOVERNANCE ISSUES DUE TO THE COVID-19 PANDEMIC

Frontline Workers:

The cornerstone of ensuring the uptake of various interventions is the provision of health and nutrition education. While AWWs, ASHAs, and ANMs continue with immunization, counseling, and ANC, they are also at the frontline in the fight against COVID-19.

They have several tasks, including contact tracing, counseling, monitoring of people who are COVID-19 positive, reporting new cases, etc. FLWs face challenges including a lack of PPE in some states, a lack of training, a lack of transport, and families being non-cooperative. In August,

FLWs went on strike, citing inadequate government assistance while fighting COVID-19. The unavailability of FLWs even in the short term may result in a decrease in service provision.

Financing:

The economic impact of the lockdown starkly reduced economic activity, especially in the first quarter of the year. This led to a shortfall in taxes and subsequently, government revenues. State finances are in a precarious position. Some states require a higher amount of money due to a high malnutrition burden. However, states have differing abilities to respond to such needs. States such as Assam, Bihar, Chhattisgarh, Mizoram, Uttarakhand, and West Bengal depend more on GoI fund transfers. Bihar has a high malnutrition burden, and therefore, requires extra support from GoI. New schemes have been put on hold as well. This leaves finances for several interventions, including nutrition-specific ones, in a tight spot. Expenditures may be low compared to previous years, and this could affect coverage later in the financial year as well.

What can be done?

Several immediate steps must be taken to arrest the decline in coverage and service provision due to the COVID-19 pandemic. India has 22.17 crore children under 5 years of age, and 3.96 crore pregnant women and lactating mothers, all of whom are at-risk, and therefore, providing services requires great care. The decline in service provision, combined with a fall in incomes, and an increase in medical wasting conditions can lead to increased mortality. Nutrition services should be delivered while taking precautions (protective equipment, social distancing, etc.) to prevent the spread of COVID-19. Also, while most services have resumed across states after the lifting of the lockdown, restarting all services is necessary, and states would need to be able to have options on how to deliver these services. Furthermore, states must determine ways to register new beneficiaries, given that AWCs are shut. Even in the absence of opening AWCs, some recommendations are given below (Table 5)

Table 5: Recommendations to Improve the Provision of Nutrition-Specific Interventions

Intervention		Recommendation
Food supplements	Maintaining food security	A lot of services being provided are COVID-19 specific, and these services are being delivered at home. These include counselling on social distancing, or the home delivery of rations. These
Micronutrients	Restart travel routes and supply chains	

Counselling	Expand the use of digital platforms where possible	activities can be combined with nutrition interventions such as counseling and ANC check-ups, the provision of IFA and other drugs, and the distribution of food supplements.
Maternity benefits	Continue cash transfers as they have found some success. However, the amounts given should be revisited to ease the loss of household income	
Immunization	Continue routine immunization while taking all precautions. Delayed or missed immunizations should be administered based on WHO guidelines	
Breastfeeding	Continue, even if the mother has COVID-19	

Apart from these specific interventions, it will be important to strengthen access and coverage. The focus on building an enabling environment of fiscal and human resources will be critical. This includes ensuring FLWs have adequate safety equipment and providing additional incentive payments or increasing honoraria and salaries.

Expanding coverage is essential given pre-existing vulnerabilities being exacerbated by COVID-19. This would require budgeting for 100 percent of the target population. Furthermore, all allocations for nutrition-related schemes including the additional funds by the 15th Finance Commission for ICDS should be ring-fenced to ensure all services are adequately provided.

Finally, Initial state-wise trends from 2019-20 show that even as coverage for some interventions like IFA provision improved, outcomes such as anemia stagnated or worsened. This highlights the importance of looking at underlying causes such as loss of income and economic decline.

In conclusion, with approximately 75,000 children born every day, the nutritional needs of children and women must be protected to ensure that gains made before the pandemic are sustained and improved upon.

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