

# Situational Overview of Nutritional Status, Food security, and Continuity of Essential Services in India during the COVID-19 Pandemic



© UNICEF/UN0491476/Vishwanathan

For the period of October to December 2021



February 2022

## Abbreviations

ASHAs:	Accredited Social Health Activists
AMB:	Anemia Mukht Bharat
AWCs:	Anganwadi Centres
AWWs:	Anganwadi Workers
ANC:	Ante-Natal Care
ANMs:	Auxiliary Nurse-Midwives
BE:	Budget Estimates
BMC:	Brihanmumbai Municipal Corporation
CAS:	Common Application System
FLW:	Front Line Workers
FY:	Financial Year
IFA:	Iron and Folic Acid
ICDS:	Integrated Child Development Services
LMIC:	Low and Middle Income Countries
MAM:	Moderate Acute Malnutrition
MDM:	Mid-Day Meal
MoWCD:	Ministry of Women and Child Development
NFHS:	National Family and Health Survey
NHM:	National Health Mission
NRC:	Nutrition Rehabilitation Centre
NGO:	Non-Governmental Organization
PPE:	Personal Protective Equipment
POSHAN:	PMs Overarching Scheme for Holistic Nourishment
PDS:	Public Distribution System
RE:	Revised Estimates
SAM:	Severe Acute Malnutrition
SBCC:	Social and Behaviour Change Communication
SBM:	Swachh Bharat Mission
SNP:	Supplementary Nutrition Programme
THR:	Take Home Rations
TPDS:	Targeted Public Distribution System
VHSND:	Village Health Sanitation and Nutrition Day
U5:	Under Five
U5MR:	Under Five Mortality Rate
WASH:	Water, Sanitation and Hygiene
WCD:	Women and Child Development
WRA:	Women of Reproductive Age
ICMR-NIN:	Indian Council Medical Research- National Institute of Nutrition

## Foreword

This second<sup>1</sup> situation overview is produced by Nutrition Development Partners with support from UNICEF India and PHFI. It serves to document and monitor the situation and needs of vulnerable women and children along with provision of information on an effective nutrition sector response amidst the COVID-19 pandemic. It also attempts to draw attention to what critical and granular data is missing to comprehend the impact of COVID-19 on nutrition in India.

The quarterly report is prepared by collecting relevant information from concerned partners and gathering the related and available data from government monitoring system and key assessments. It is then shared with all nutrition partners and is also archived at <https://poshancovid19.in/>. The report presents most recent available information up to end of December 2021. Considering the rapidly changing COVID situation, best possible efforts are made to be specific on the time frame where data precedes the specific reporting period of October - December 2021.

While there are hopes that the COVID pandemic might be over the height of its devastating impact, there is a real chance that the broader impact of COVID on families and communities will last longer, possibly even for years. It is the intention of development partners to continue these efforts to document the impact of COVID on nutrition with updates on a quarterly basis.

While we did our collective best to prepare a high-quality analysis and summary of available evidence and data, we hope you can let us know of any mistakes, key data and studies missed, etc, so we can correct that in future [poshan@unicef.org](mailto:poshan@unicef.org).

A big thanks to all who contributed to these reports, and even more so to all the [#NutritionChampions](#) who continue to support and promote COVID-sensitive nutrition practices and services for those families and communities that need it the most.

We wish you happy reading and much inspiration!

Kind Regards,

Arjan de Wagt,

Chief, Nutrition Programme, UNICEF India.

[#StopChildMalnutritionIndia](#)

---

<sup>1</sup> The first report can be found at: [2021\\_10\\_POSHAN\\_COVID\\_Situation\\_Overview\\_Report.pdf \(mcusercontent.com\)](#)

## Table of Contents

Executive Summary .....	5
CHAPTER 1: Background .....	8
CHAPTER 2: Impact of COVID-19 on nutritional outcomes in Indian population .....	11
2.1 Nutritional status of preschool children.....	11
2.2 Nutritional status of women of reproductive age and adult men .....	14
CHAPTER 3: Impact of COVID-19 on immediate determinants of nutrition .....	16
3.1 Dietary and nutritional intake of the population amidst the pandemic.....	16
3.1.1 Feeding practices and dietary intake among infants and children amidst COVID-19 .....	16
3.1.2 Dietary and nutritional intake of adult population during COVID-19 pandemic .....	17
3.2 Diseases and infection .....	18
3.2.1 Prevalence of morbidity among different age groups amidst the pandemic .....	18
CHAPTER 4: Impact of COVID-19 on underlying determinants of nutrition .....	20
4.1 Food security scenario amidst COVID-19 pandemic .....	20
4.1.1 Food production dimension of food security amidst the pandemic.....	20
4.1.2 Food accessibility dimension of food security amidst the pandemic .....	21
4.2 Care and feeding practices during COVID-19 pandemic .....	23
4.2.1 Food preparation, handling and safety practices during COVID-19 pandemic .....	23
4.3 Environment .....	23
4.3.1 Continuity of essential health and nutrition services during the pandemic.....	23
4.3.2 WASH (Water, Sanitation and Hygiene) scenario amidst COVID-19 .....	34
4.3.3 Social and behaviour change communication (SBCC) for health/nutrition promotion during the pandemic .....	35
CHAPTER 5: Impact of COVID-19 on enabling determinants of nutrition .....	37
5.1 Governance and policy environment .....	37
5.1.1 Transition from POSHAN Abhiyaan to POSHAN 2.....	37
5.1.2 National initiatives/programs launched amidst the COVID-19 pandemic .....	37
5.2 Resource allocation towards nutrition services during the pandemic.....	38
5.2.1 Financial allocation to nutritional interventions and services during COVID-19 .....	38
5.2.2 Enabling human resources for COVID-19 appropriate service delivery .....	39
5.2.3 Technological advancement to enhance service delivery and monitoring during COVID-19 .....	40
5.2.4 Data system and monitoring to inform nutrition scenario during COVID-19 .....	40

<b>5.3 Norms (Gender and equity) that may impact nutritional scenario during the COVID-19 pandemic .....</b>	<b>41</b>
<b>CHAPTER 6: Key global highlights .....</b>	<b>43</b>
<b>Bibliography .....</b>	<b>45</b>

## Executive Summary

The COVID-19 pandemic and related disruptions to food, health and economic systems continues to threaten the nutrition conditions worldwide. Measuring the impact of COVID-19 on nutrition has been a challenge as information systems did not deliver regular, timely and complete data during the crisis. In India, it is critical to monitor the effects of the COVID-19 pandemic in order to prevent the potential increase of all forms of malnutrition (undernutrition, overweight/obesity and micronutrient deficiencies). The situational overview report for the 4<sup>th</sup> quarter of 2021 (October-December 2021) provides a systematic tracking and documentation of data to understand the impact of COVID-19 on food and nutrition scenario along with identification of gaps in information.

The report starts with the National Family Health Survey (NFHS-5). No conclusions can be made from this survey on the national level impact of COVID-19 on nutrition as data collection was completed for 22 states/Union Territories (UT) before COVID-19 and in the remaining 14 states/UTs both before and during the pandemic. At the national level there was stagnation in the reduction of undernutrition and an increase in the prevalence of anaemia and overweight /obesity amongst different age groups. The subsequent chapters in the report document the direct and indirect impact of COVID-19 on immediate, underlying, and enabling determinants of nutrition in the population with a specific focus on maternal and child nutrition.

The threat of stopping breastfeeding in suspected or COVID infected children or mothers were found in anecdotal data. There is a need for more granular data to understand the trends on individual dietary diversity in the populations especially among those most vulnerable to malnutrition (preschool children, adolescents and pregnant women). Both prior and during the pandemic, low dietary diversity was noted as an important issue. A longitudinal study conducted in August 2020 found less than one in five children in Uttar Pradesh were fed with a minimum dietary diversity ( $\geq 4$  food groups). A cross-sectional study from Maharashtra conducted in May-June 2020 highlighted that only half of the lactating women consumed a diet with a minimum dietary diversity. A large study that focused on women's conditions in 10 states found that more than one in ten women limited their food intake or ran out of food in the week they were surveyed. There is a paucity of representative data on individual level nutritional intakes among all age groups.

A number of studies collected data on the impact of pandemic on dietary intake among household members and found an overall reduction in meal frequency and quantity. One rapid assessment conducted among rural households across 12 states in April 2020 found over two thirds of surveyed households reported reduced number of food items consumed in each meal, and half reported consuming a lesser number of meals.

Nutrition is a determining factor in outcomes of common childhood infections such as diarrhoea, pneumonia. There has been concerns that the COVID-19 pandemic has limited access to preventive and curative treatment from health services affecting the nutrition of the vulnerable populations. The annual tuberculosis (TB) Report 2021 documented that notification for TB decreased by one-third in 2020 compared to 2019. To ensure uninterrupted distribution of essential medicines for other chronic

infectious disease like AIDS, measures like multi-medicine dispensing were implemented by the National AIDS control program during the pandemic.

Social safety schemes were strengthened at the beginning of the pandemic. The targeted public distribution system for the general population provided additional grain distribution under Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY). Currently, this scheme continues until March 2022. UNICEF monitored the provision of some social safety nets and nutrition services across 14 states (Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Telangana, Uttar Pradesh and West Bengal) from the start of the lockdown in April 2020. Provision of growth monitoring and promotion services increased from 2 states in May 2020 to 14 states in December 2021. The critical lifesaving facility-based management of severe acute malnutrition (FSAM) services were converted into COVID wards in many hospitals. Services for SAM children were provided in 11 states in May 2020 increasing to 13 states by December 2021. The provision of Take Home Rations from ICDS for children under 6 years and pregnant women continued throughout the pandemic without a reduction in services in most states (except Jharkhand). THR for children is functional in all monitored states in December 2021 and THR for pregnant and lactating women is functional in 13 states except Jharkhand.

Many small-scale studies documented the fall in income and loss of livelihoods in women and the working class. A ten-state study on the effects of COVID-19 on women found that half of respondents reported an increase in unpaid chores during the pandemic and lockdown. One survey from July 2021 reported that daily wage workers, domestic workers, small farmers and shopkeepers from 3 states had no work at the time of survey (e.g., 54.7 percent respondents from Uttarakhand) and had decreased nutritious food intake e.g. egg consumption fell from 77.8 (pre-pandemic) to 26.2 percent. A rapid assessment of rural households across 12 states found that half of the households who sold milk and 40 percent of those in poultry business reported income losses. About 5 percent of respondents reported the sale of different productive assets as coping mechanism.

In terms of nutrition policy, several updates were made during the pandemic period. The POSHAN 2.0 was announced in January 2021. To ensure that social safety programs would meet the needs of the vulnerable communities in the Union Budget 2020-21, Rs. 35,600 crore was announced for 'nutrition-related programmes'. The PM proclaimed rice fortification for all public distribution programs in August 2021. The Pradhan Mantri Poshan Shakti Nirman (PM POSHAN) scheme was approved in September 2021. The PM POSHAN is a modified version of the earlier Mid-Day Meal in Schools.

At the start of the pandemic and lockdown in April 2020, frontline workers were shifted from their routine responsibilities to support COVID prevention and address needs of migrants returning to their home states. The delivery modality of many services changed as Anganwadi centres and schools were closed and in-person contacts were restricted. Distribution centres were closed and doorstep delivery was initiated producing new challenges as infrastructures were not in place to ensure last mile delivery. As in-person and group counselling were no longer allowed due to COVID risks, a shift to tele-counselling facilitated behaviour change messaging with anecdotal evidence on enhanced male participation in early childhood development in for instance Maharashtra and Rajasthan.

Global reviews covered at the end of this report elaborate upon the potential increasing burden of global poverty along with the social safety schemes needed to mitigate the negative effects of the pandemic. A modelling study by Standing4Nutrition estimates that the pandemic will have a long-term impact on economics, development and nutritional status among the vulnerable populations for years to come.

The loss of livelihoods, increased food insecurity and reduced dietary diversity could have an impact on the status of maternal and child nutrition. Data gaps exist in monitoring both the comprehensive delivery of essential public health nutrition services, social safety nets along with measures of the impacts on the population in terms of undernutrition, overweight/obesity and micronutrient deficiencies. More robust data systems are needed to identify early signs of distress among communities. Strong mitigation measures are in place but need to achieve full coverage with an equity focus to ensure that all populations are protected from the destructive effects of malnutrition.



## CHAPTER 1: Background

The COVID-19 pandemic and its rapid and extensive spread can have profound implications on the nutrition scenario of India ([Osendarp S. et al, 2021](#)). The unfolding crisis potentially has direct effects and also critical indirect impacts on health and nutritional status of the population. The indirect impacts could be attributed to disruptions in the food supply chain in the wake of lockdowns triggered by this global health crisis, food price inflation and severe disruptions to the delivery and use of routine services, including essential health and nutrition services ([Headey D. et al, 2020](#)). The pandemic could have a long-term impact by reversing the development gains made over recent years and may have a negative impact on the nutritional wellbeing of the vulnerable population especially women and children.

It is imperative to assess and systematically document, monitor, and identify gaps in information on the impact of COVID-19 on food and nutrition scenarios in India during the different phases of the pandemic. This is likely to provide crucial information to the policymakers, academia, program planners, and implementers to adopt effective strategies to mitigate the COVID-induced food and nutritional imbalances. Additionally, the data collated is also essential to understand the resilient attributes of various sections of the population and their food and health systems, who managed to strive through this pandemic by adapting local and innovative solutions to mitigate its direct and indirect impact.

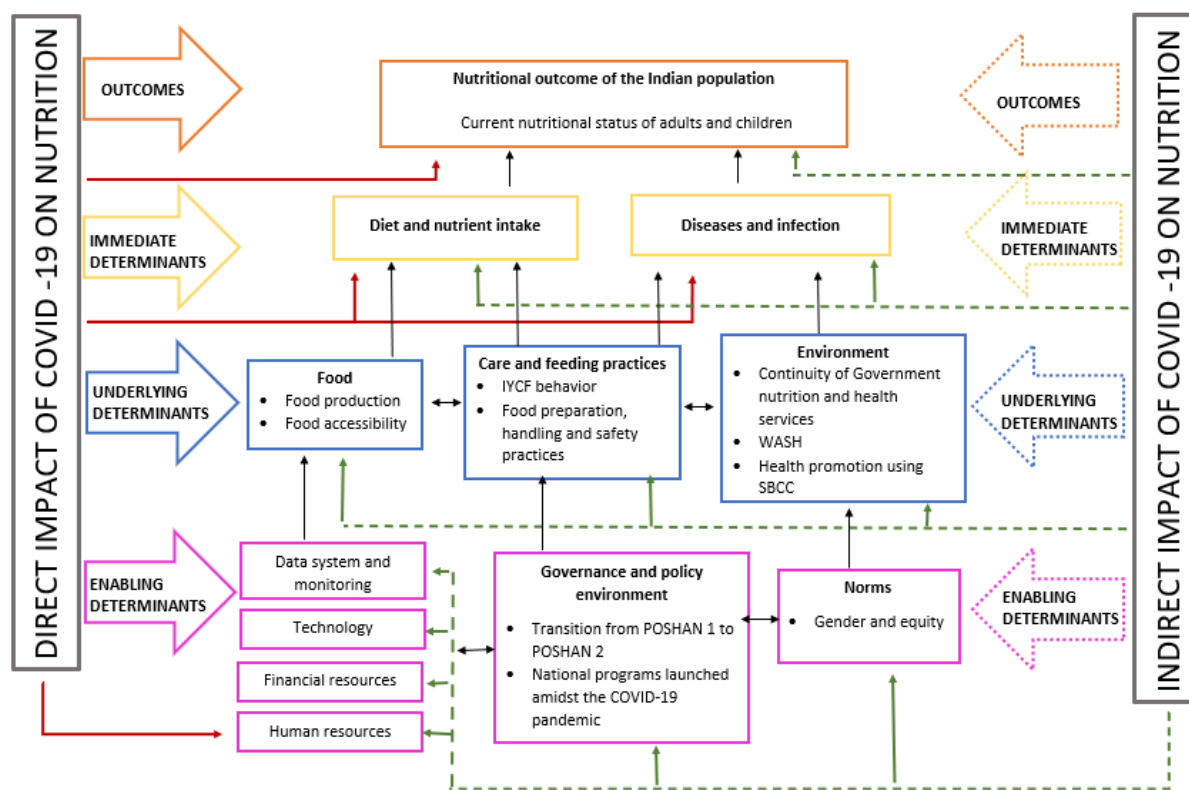
Malnutrition in India includes the coexistence of a large number of undernourished children and women, high levels of micronutrient malnutrition alongside rising overweight and obesity with a high prevalence of non-communicable diseases. Lockdowns triggered by the pandemic has affected the informal sector and induced economic insecurity, which in turn has affected the food accessibility of the vulnerable households ([Nguyen, et al., 2021](#)) ([KISLAY Social Research Collective, 2021](#)) ([rural indiaonline.org, 2020](#)). The market disruption, reverse migration, and resulting labour shortage has affected agricultural production, supply and trading ([Jaacks, et al., 2021](#)) ([Hari, et al., 2020](#)). Further, while the focus shifted to COVID prevention and management, other health and nutrition services were disrupted to some extent with the most nutritionally vulnerable sections of the population being worst affected ([rural indiaonline.org, 2020](#)) ([Nguyen, et al., 2021](#)) ([Gupta, et al., 2021](#)) ([Rajpal, et al., 2021](#)) ([Dalberg, 2021](#)).

While the COVID-19 pandemic brought about numerous challenges with respect to disruptions in service delivery, yet opportunities also came alongside in the form of new innovations, adaptations and learnings. The health and nutrition system of the country along with its workforce especially the Frontline Workers (FLW) adapted to the changing times in order to provide essential healthcare services at the doorsteps of the community that they were serving ([Nguyen, et al., 2021](#)). However, systemic and governance issues hindered this smooth transition of service provision. Nonetheless, lessons from this phase are worth exploring to build a better nutrition environment that is durable and resilient to adversities.

In an effort to do so, Nutrition Development Partners with technical support from UNICEF India and PHFI plan to develop a series of periodic situational overview reports. The present report gives the

situational overview up to the 4<sup>th</sup> quarter of 2021 (December 2021) and continues with the effort of the 3<sup>rd</sup> quarter<sup>2</sup>. UNICEF's Conceptual Framework on the determinants of maternal and child nutrition, 2020 has been contextualized to the COVID-19 situation of the country to systematically present this report on the impact of the pandemic on nutrition in India (figure 1).

**Fig1. Conceptual framework to assess the impact of COVID-19 on nutrition among the Indian population**



Based on this framework, the current nutritional status of the Indian population has been compiled using national-level data based on the complete report for NFHS-5 (includes round 1 and round 2) along with other studies documenting the current nutritional status of the population. Factors like dietary intake and prevalence of morbidity in the population have been captured to understand the immediate determinants affecting the nutritional status of the population. The report underscores a lack of both sporadic and routine data to understand the nutrient intake of the population during the pandemic period. For the underlying determinants, food security and household dietary diversity have been explored in detail. Though very scarce data on feeding practices is available but environmental factors like Water and Sanitation Hygiene (WASH), efforts on effective utilization of Social Behaviour Change and Communication (SBCC) for health promotion along with continuity of health and nutrition service and schemes food security schemes like nutrition services under ICDS, food security programs like Targeted Public Distribution System (TPDS) and PM Poshan/Mid-Day Meal (MDM) scheme along with other nutrition sensitive programmes of health services and immunization program have been

<sup>2</sup> First report can be found at: [2021\\_10\\_POSHAN\\_COVID\\_Situation\\_Overview\\_Report.pdf](https://www.mcausercontent.com/2021_10_POSHAN_COVID_Situation_Overview_Report.pdf) (mcusercontent.com)

documented. How these services and schemes were adapted and modified for optimal service provision to the target population during the crucial COVID times have been covered in detail.

Other enabling determinants like improved financial inputs at the level of state and central government allocated towards a resilient recovery of nutrition services is another key highlight. The report is heavily derived from studies conducted by various developmental organizations, along with data dashboards from central and state governments apart from studies documented in peer-reviewed journals. Thus, through this situational overview report, we intend to compile data on nutrition status, food security and continuity of essential health and nutrition services in India during the COVID-19 pandemic with a focus on studies conducted from the start of the pandemic until December 2021.

## **Methodology followed for the preparation of this document**

This document is a compilation of studies, reports, data that were extracted from the open sources using all the key terms in the conceptual framework provided in figure 1. All the data sources were scrutinised for originality. Only source authenticated documents were used. Most of the data reported were assessed for their strength of evidence and were found to be of “fair” or “good” quality evidence (annexure 1). However, some anecdotal data that were identified as relevant despite an unclear/incomplete methodology were also documented in this 4<sup>th</sup> quarterly situation overview report. Annexure 1 attached with this document provides details of the studies reviewed and included in this report. It is also important to note that some data older to the 4<sup>th</sup> quarter of 2021 have been used to provide context and to aid better understanding of the thematic areas covered in the current document.

## CHAPTER 2: Impact of COVID-19 on nutritional outcomes in Indian population

The COVID-19 pandemic and the resulting disruptions has increased the risk of nutritional status being impacted. In the paucity of data reflecting the impact of pandemic on nutritional status in India, round 2 of National Family Health Surveys 5 (NFHS-5) provides the most recent insights on the same for the time period that was immediately before as well as during the pandemic. This national-level survey has been conducted in two rounds, round one from 17 June 2019 to 30 January 2020 and round two from 2 January 2020 to 30 April 2021 ([NFHS-5, 2019-21](#)). As the latest national level data available on nutritional outcomes are combined data from round 1 and 2 (pre and during COVID-19) it is difficult to ascertain that the nutritional status of the population reflected in this data could be attributed to COVID-19 pandemic. It is important to reiterate that this most recent national level data provides a snapshot of the current nutrition scenario of the country. It may however be noted that the impact of the pandemic resulting from job loss, food insecurity or change in quality of diet, or disruption in services, particularly childhood vaccination, face to face counselling etc, may be seen in days to come. This chapter provides key highlights from the NFHS-5 report on nutritional outcomes. In addition to that, data from other studies conducted on nutritional status of Indian population during the period of the pandemic are also reported.

### 2.1 Nutritional status of preschool children



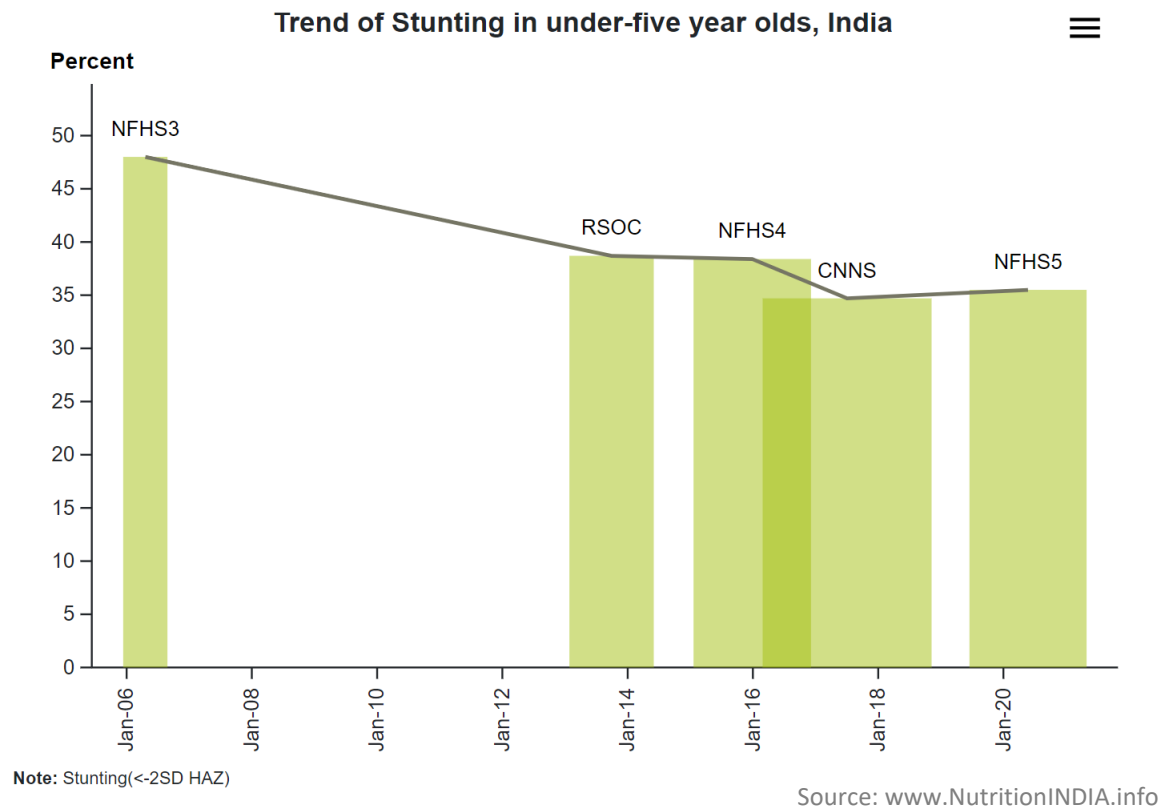
© UNICEF/UN0491476/Vishwanathan

The first 5 years of life are crucial for growth; and malnutrition in these years can have detrimental effects on the overall health and wellbeing of the child. It is also important to introduce interventions to meet the nutritional requirements of children early in life to break the vicious cycle of malnutrition. Several states during round 1 of the survey have shown worsening in at least one of the undernutrition indicators. In round 2 none of the states have shown worsening of undernutrition. This could be attributed to a difference in time periods of data collection.

#### 2.1.1. Stunting

Over the last 14 years prevalence of stunting has shown a declining trend. When comparing the most recent data sets there was a slight decrease of about 4 percentage points, i.e., from 38.4 percent recorded in NFHS-4 (2015-16) to 34.7 percent recorded in Comprehensive National Nutrition Survey (CNNS) (2016-18), which then marginally increased to 35.5 percent as recorded in NFHS-5 (2019-21). (fig 2) ([NutritionINDIA, 2021](#)). The impact of the pandemic on childhood in India is yet to be ascertained.

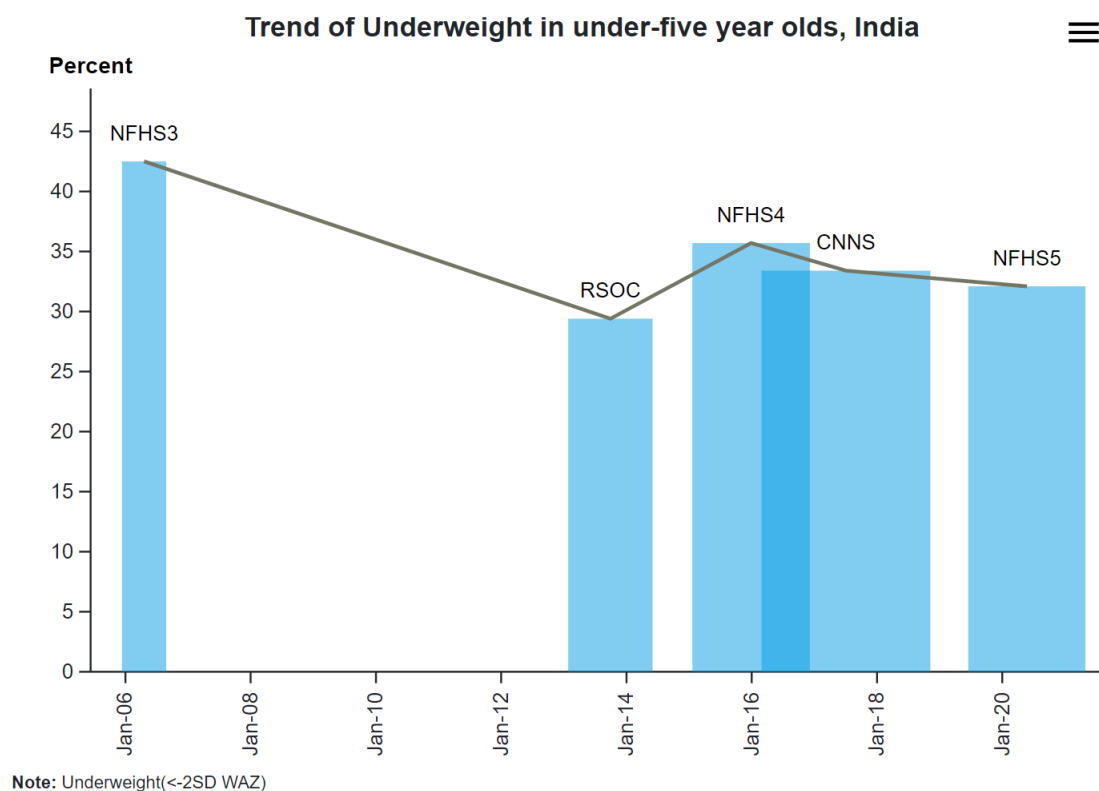
Figure2: Trend of stunting for U5 children



### 2.1.2. Underweight

Upon comparing the national level data from last 14 years, prevalence of underweight initially showed a drastic reduction till 2014. But an increase in prevalence was recorded in NFHS-4 (35.7), which marginally reduced to 33.4 in CNNS followed by a non-statistically significant reduction to 32.1 in NFHS-5 (fig 3) ([NutritionINDIA, 2021](#)). The impact of the pandemic on childhood underweight in India is yet to be ascertained.

Figure3. Trend of underweight among U5 children

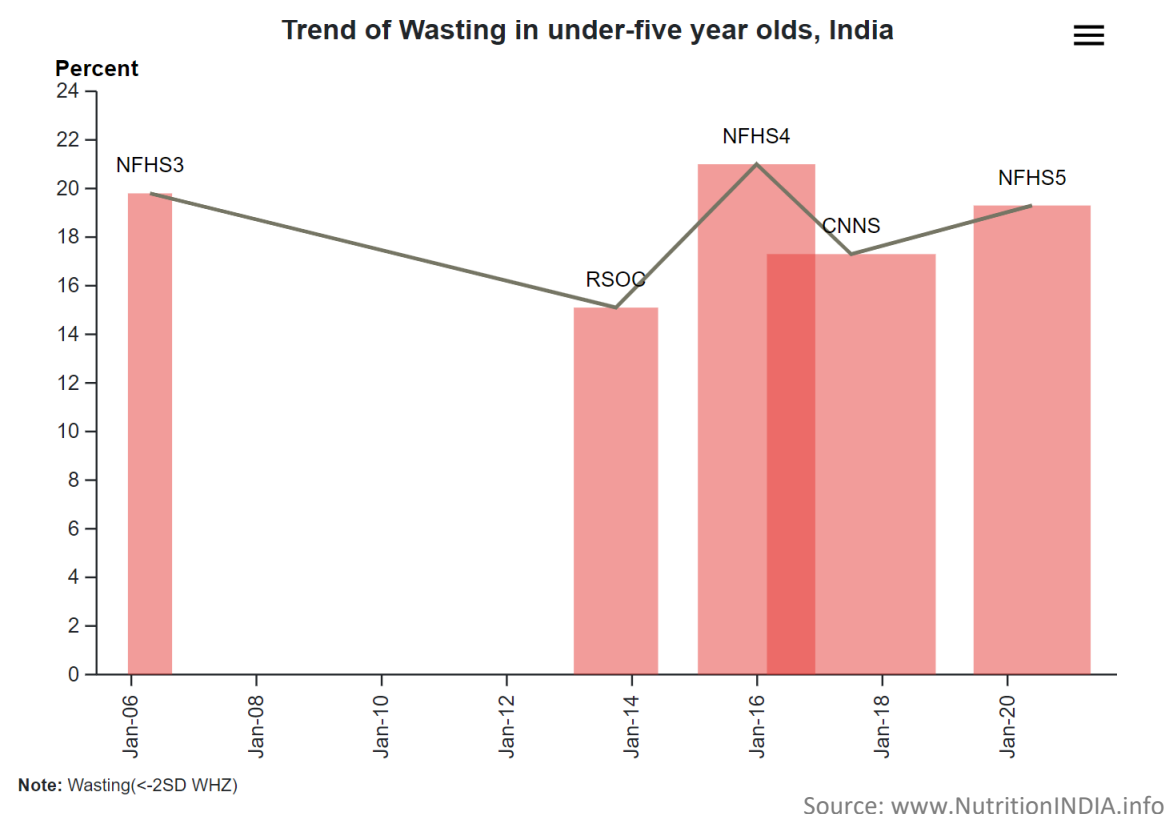


Source: [www.NutritionINDIA.info](http://www.NutritionINDIA.info)

### 2.1.3. Wasting

The prevalence of wasting also showed a trend similar to underweight. Upon comparing the most recent data sets there is a slight decrease from 21 percent in NFHS-4 to 17.3 percent in CNNS which then marginally increased to 19.3 in NFHS-5 (fig.4) ([NutritionINDIA, 2021](#)). A study on seasonality has found that the timing of data collection can have a large impact on wasting and complicate the analysis of in trends of acute malnutrition across surveys ([Johnston, et al., 2021](#)). The impact of the pandemic on wasting in India is yet to be ascertained.

Figure 4: Trend of wasting among U5 children



#### 2.1.4. Obesity

The trends of childhood obesity increase from 2.1 percent to 3.4 percent between NFHS-4 and NFHS-5 (NFHS-5, 2019-21). It is yet to be seen if the pandemic accentuated obesity due to lifestyle changes, prolonged stay at home periods and consumption of high calorie and sugary diets in parts of the population (Cuscheiri,S, et al, 2020) (Browne, N.T, et al, 2021).

## 2.2 Nutritional status of women of reproductive age and adult men



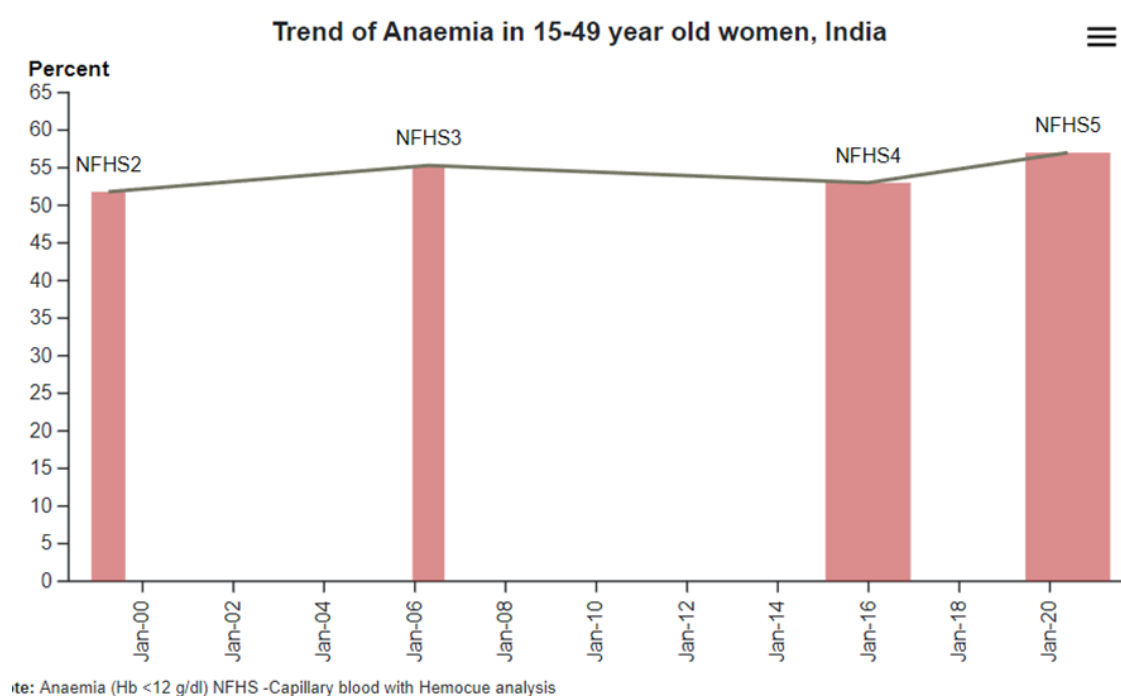
© UNICEF/UN0491560/Vishwanathan

The NFHS-5 factsheets do not present any data on the impact of COVID on nutritional scenario. However, the following section provides most recent data on national status of adult population. According to NFHS-5, there has been some improvement in the prevalence of chronic energy deficiency and underweight among women of reproductive age (WRA) which has decreased approximately by 3 percent points (22.9 to 18.7 between NFHS-4 and 5). Similar trend has been observed in prevalence of underweight in men, wherein a

decrease of 4 percent points is noted (20.2 to 16.2 in NFHS 4 and 5). However, on the other end of the spectrum of malnutrition, there is an increase in the prevalence of overweight among WRA group and men. According to NFHS-5, a 4 percent point increase in prevalence of overweight in the WRA group has been reported (24 percent in NFHS-5 versus 20.6 percent in NFHS-4). Overweight men also increased from 18.9 percent (NFHS-5) to 22.9 percent (NFHS-4) showing a 4 percent point increase. Thus, although the overall nutrition situation in the country is showing an improving trend, the evident effect of nutrition transition is clearly demonstrated with an increasing prevalence of overnutrition (NFHS-5, 2019-21). This is likely to accrue to the growing burden of Non-Communicable Diseases (NCDs) in the country. A shift to cereal based low-cost staple diet during the pandemic may further exacerbate the problem.

Upon comparing the most recent data sets there is a slight increase of 4 percent points in prevalence of anaemia among women of reproductive age. Prevalence of anaemia has increased from 53 percent in NFHS-4 to 57 percent in NFHS-5.

Figure 5: Trend of Anaemia among women of reproductive age



Source: [www.NutritionINDIA.info](http://www.NutritionINDIA.info)



## CHAPTER 3: Impact of COVID-19 on immediate determinants of nutrition

Diet and nutritional intake are critical and immediate determinants of nutritional status of the population. To ensure the optimal utilization of the nutrients by the body, it is essential to prevent the occurrence of diseases and manage existing co-morbidities. The following chapter covers impact of COVID-19 on each of these immediate determinants in details.

### 3.1 Dietary and nutritional intake of the population amidst the pandemic

Dietary and nutritional intake of the population has been impacted during the COVID-19 pandemic. The analysis of individual dietary diversity and nutritional intake within households provides a more precise estimate of intra-household food allocation and utilization ([Jones, et al., 2013](#)). Poor consumption patterns at the household level have been documented in section 4.1.1, however, there is a paucity of data with respect to the reduced individual level consumption for the vulnerable population

#### 3.1.1 Feeding practices and dietary intake among infants and children amidst COVID-19



© UNICEF/UN0491472/Vishwanathan

It is crucial to understand how pandemic has impacted the infant and young child feeding (IYCF) practices. During the initial phase of COVID-19 pandemic, many concerns regarding the appropriate childcare practices existed. Soon after, experts from around the world highlighted that coronavirus has not been traced in amniotic fluid or breast milk and therefore cannot be transmitted during pregnancy or through breast milk ([WHO,2020](#)). Following this, in June 2020, National health portal (a portal under the MoHFW) issued guidelines to ensure COVID

appropriate breastfeeding practices for mothers ([National Health Portal, 2020](#)).

#### **Recommended COVID appropriate Breastfeeding practices ([National Health Portal, 2020](#))**

- During breastfeeding, a COVID-19-positive mother should wear a mask and practise respiratory hygiene.
- Masks should be replaced as soon as they become damp, dispose of masks immediately; not reuse a mask; not touch the front of the mask but untie it from behind.
- Washing hands (for 40 seconds) before each feeding session, along with routine disinfection and cleaning of surfaces is essential.
- In a situation where, the COVID-19-positive mother is too unwell to breastfeed, she needs to be supported. Expressing milk or using human donor milk are two recommended methods to enable safe delivery of breast milk to the baby. However, while expressing milk, proper hand hygiene must be maintained. The expressed breast milk should be fed to the new-born by a healthy caregiver.

Although sporadic data is available on the diet and nutritional intake of children, elaborate data is desirable to understand the current trends among this population. A longitudinal study conducted among mothers with children less than 2 years in 26 blocks of 2 districts in Uttar Pradesh to assess changes in household food insecurity (HFI) during the pandemic and examine the inter-linkages between HFI with child feeding practices and coping strategies. Child feeding practice indicators were alarming, with only 19 percent of children achieving minimum dietary diversity ( $\geq 4$  food groups). An extremely low proportion of children were fed flesh foods (1 percent), eggs (1 percent) and vitamin-A rich fruits and vegetables (4 percent). One-third of the children consumed other fruits and vegetables and nearly two-thirds consumed legumes and nuts in the 24 hours prior to the survey. Children in newly or consistently food-insecure households were less likely to consume a diverse diet (adjusted OR, AOR 0.57, 95% CI 0.34 to 0.95 and AOR 0.51, 95% CI 0.23 to 1.12, respectively) compared with those in food-secure households (Nguyen, et al., 2021).



© UNICEF/UNI335899/ Bhardwai

prevalence of MDD among lactating women was higher among households with higher income (73.1 percent; 95% CI: 45.2; 89.9) than those in lower income group (50.7 percent; 95% CI: 42.3; 58.9). Lactating mothers (in early phase) who received health and nutrition counselling services were more likely (OR: 2.37; 95% CI: 0.90; 6.26) to consume a diversified diet. Food groups namely fruits, meat, poultry, seeds, nuts, and fish were among the food items rarely consumed. The dietary pattern lacking in consumption of fruits, nuts, and iron rich foods indicate more significant risks of micronutrient deficiencies (Rajpal, et al., 2021).

<sup>3</sup> In this study Minimum dietary diversity (MDD) has been defined as consumption from at least 5 food groups.

and an increase in meal portion size (72 percent) are also highlighted in the survey. In general, if a meal was skipped, 44 percent of participants reported a tendency to skip breakfast more often than other meals. In total, 197 (18 percent) of participants reported more snacking periods, and 83 (8 percent) reported fewer snacking periods during the COVID-19 period than pre-COVID-19 ([Madan, et al., 2021](#)).

It is important that granular and routine data monitoring of the nutrient intake a women and children are required to be generated for better understanding of the situation of dietary and nutrient intake of the vulnerable population groups amidst the pandemic. Non-availability of HMIS data in public domain related to the feeding indicators remains a major constraint in assessing nutritional practices during the pandemic.

## **3.2 Diseases and infection**

### **3.2.1 Prevalence of morbidity among different age groups amidst the pandemic**

The bidirectional relationship of nutrition and infection holds true in the context of COVID-19 as undernutrition weakens the immune system and increases susceptibility to the disease and the disease itself affects the overall nutritional status, health, and wellbeing. In addition to that, the high prevalence of diet related Non-Communicable Diseases (NCD) co-morbidities in the Indian context may further affect the recovery rates. The NFHS-5 data provides recent insights on some of the crucial morbidity indicators among different age groups of the population. An almost stagnant trend in prevalence of acute respiratory infection (2.8 percent NFHS-4 and 2.7 in NFHS-5) and a very nominal decline in diarrhoea (9.2 percent in NFHS-4 and 7.3 percent in NFHS-5) among U5 children is observed. U5 children receiving Zinc (20.3 percent in NFHS-4 and 30.5 percent in NFHS-5) and ORS (50.6 in NFHS-4 and 60.6 in NFHS-5) increased by 10 percent points during the pandemic ([NFHS-5, 2019-21](#)). According to annual TB report 2021, nationally, 18 lakh TB notification were made in the year 2020 (a 35 percent reduction from 2019) out of these 95 percent were put on treatment ([India TB report, 2021](#)). There are potentially grave consequences for existing and undiagnosed TB patients amidst the pandemic in Low- and Middle-Income Countries (LMICs). Though the government made provision to provide TB patient with 1 month of medication to ensure uninterrupted management during the lockdown, the effectiveness of same is yet to be established ([India TB report, 2021](#)). In the context of TB prevalence and management during the pandemic, the gender disparities also become a crucial factor where it is known that women access the healthcare services less than their male counterparts. They are, therefore, more likely to suffer as part of the "collateral damage" of this pandemic and also experience the impact of the double stigma disproportionately ([Suresh, et al., 2020](#)). Global tuberculosis report highlights that globally, case notifications have drastically reduced because of pandemic-related disruptions in services. For the first time in more than a decade, tuberculosis mortality has increased. Nearly 20 percent of global tuberculosis incidence is attributable to undernutrition ([WHO, 2021](#)). An article published in October 2021 highlights that, in India, malnutrition and poverty could be important attributes to tuberculosis in the coming years ([Sinha, et al., 2021](#)).

HIV patients are nutritionally vulnerable. In people with HIV, good nutrition supports overall health and helps maintain the immune system. Good nutrition also helps people with HIV maintain a healthy weight and absorb HIV medicines ([NIH.gov.in, 2021](https://www.nih.gov)). Owing to COVID-19, the disruption of health and nutrition services to the people living with HIV/AIDS may have direct as well as indirect implications on the nutritional status of this population. Though, there is lack of granular data on impact of COVID-19 on service provision to people living with HIV/AIDS, it is encouraging to note that the National AIDS control program, ensured multi-medicine dispensing and encouraged local action plans to be developed by the State AIDS Control Societies to ensure uninterrupted services ([NACO.gov.in, No Date](https://www.naco.gov.in)).

For the chronic non-communicable diseases, upon comparing the national level data from NFHS-5 and NFHS-4 for conditions like hypertension and diabetes, an alarming trend is evident. Prevalence of very high blood sugar level among men has increased by approximately 3 percent points (3.9 in NFHS 4 to 7.2 in NFHS-5) while among women, this has increased from 2.8 in NFHS-4 To 6.3 in NFHS-5 ([NFHS 4, 2015-16](#)). Similarly, the prevalence of elevated blood pressure among men and women are 24 percent and 21 percent respectively (NFHS-5) ([NFHS-5, 2019-21](#)). The impact of the pandemic on increased high sugar levels and hypertension is yet to be understood.

COVID-19 and the resulting lockdown may have an indirect impact on the prevalence of NCD and risk factors. Disruption of health care services with accompanying disruption in food supply chain and higher food prices due to COVID-19 may have made people with these co-morbidities nutritionally vulnerable and could have attributed to higher prevalence of NCDs and its risk factors. Additionally, this situation has likely made people vulnerable to COVID-19 related complications.

## CHAPTER 4: Impact of COVID-19 on underlying determinants of nutrition

Nutritional outcomes cannot be solely attributed to dietary and nutritional intakes and diseases. Several underlying factors such as food security, feeding practices and the environmental conditions may have an impact. Therefore, it becomes essential to understand the current status of these underlying determinants and explore data on the impact of pandemic on these factors.

### 4.1 Food security scenario amidst COVID-19 pandemic

In the following sections, impact of COVID-19 on food security scenario is discussed with a focus on two dimensions, namely food production and food accessibility.

#### 4.1.1 Food production dimension of food security amidst the pandemic

##### A. Agricultural production and supply chain

Agriculture is a crucial sector of the Indian economy with a significant percentage of the population dependent on it. According to the 1st advance estimates for 2020-21 (Kharif crops only) by the Ministry of Agriculture and Farmers' Welfare, total food grain production in the country is estimated at 144.52 million tonnes which was higher by 9.83 million tonnes than the previous five years' (2014-15 to 2018-19) average production of food grains. ([Ministry of Agriculture and Farmer's Welfare, 2020](#)). Despite this encouraging trend in food grain production, at national level, several state level studies conclude that with the emergence of COVID-19, this sector has experienced disruptions in activities like production, storage, transportation and trading ([Hari, et al., 2020](#)). A cross sectional phone survey conducted in May 2020, among 1437 farmers, across 12 states and 200 districts in India documented that out of all the farmers that did not harvest in the past month (11 percent), 24 percent stated a "lockdown related" reason for not harvesting. From those who harvested (63 percent), 39 percent had stored their crop, out of which more than half (55 percent) reported lockdown-related issues as the reason for storing. Again, 2 percent of the farmers who harvested, reported that the harvest was wasted because of inability to sell. Vegetables accounted for nearly all the wasted crops in the study sample. Farmers who were able to sell their harvest, reported that they had to pay for transport, which was not the case prior to the lockdown. Over half (55 percent) of farmers reported that the lockdown had impacted their ability to prepare for the upcoming sowing season ([Jaacks, et al., 2021](#)). Another longitudinal study conducted among 833 farmers across 12 states in India at three time points between May and August 2020 concluded that farmers with greater crop diversity were more resilient to market disruptions from the COVID-19 pandemic. ([Connors, et al., 2021](#)). As a sequel to disruption in production, the vegetable supply chain was also disrupted. Quantities of vegetables reaching the *mandis* were significantly lower whereas prices were much higher during all phases of lockdown and subsequent unlocking phases as compared to pre-COVID-19 times ([Tripathi, et al., 2021](#)).

##### B. Import-export scenario

Despite challenges posed by the COVID-19 pandemic, it is observed that export of agricultural and processed food products increased by 21.8 percent in the first five months of the current financial

year 2021 in comparison to the same time period of last year as highlighted in quick estimates released by DGCI&S ([Livemint.com, 2021](https://livemint.com)).

#### **4.1.2 Food accessibility dimension of food security amidst the pandemic**

##### **A. Changes in income amidst the pandemic**

A report published in December 2021, by WHO suggests that the COVID-19 pandemic has impacted the global economy. In India, per capita GDP contracted by more than 8 percent and a large number of formal sector workers moved to the informal sector or became self-employed following the initial phases of COVID-19 control and social distancing measures. Government revenue also declined by 1 percent GDP ([WHO, 2021](https://www.who.int)).

Two studies that assessed the effect of pandemic on the income and livelihood among the population has been identified. A rapid assessment conducted by a consortium of civil society partners like PRADAN, New Delhi; Action for Social Advancement, Bhopal among others published in May, 2020, covered 5,162 rural households and 47 districts over 12 states – Assam, Bihar, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Maharashtra, Madhya Pradesh, Odisha, Rajasthan, Uttar Pradesh and West Bengal. The data was collected between April 27 and May 2, 2020. The study reiterated that lockdown and rumours have adversely affected income. Twenty-three percent households which owned milking livestock sold milk, out of which half reported reduction in sales. Fifty-six percent households were engaged in poultry business, out of which more than 40 percent reported reduction in sales. Around 3 to 5 percent of respondents reported the sale of productive assets – 3 percent sold agricultural tools, 6 percent sold dry cattle, 3 percent sold in-milk cattle, 5 percent sold mortgaged land and 3 percent sold their land. These might be an indicator of increasing indebtedness ([ruralindiaonline.org, 2020](https://ruralindiaonline.org)). A longitudinal study conducted in December 2019 and followed up in August 2020 among mothers with children less than 2 years in 26 blocks of 2 districts in Uttar Pradesh reported that the key challenges faced by households were non-availability of funds to buy food (59 percent), non-availability of foods in market area (21 percent), increase in food prices (17 percent) and inability to travel or transport issues (21 percent). The pandemic-related challenges had resulted in unemployment/loss of income in 78.4 percent of the studied households ([Nguyen, et al., 2021](https://www.researchgate.net/publication/354844444)).

Another survey conducted among daily wage workers, domestic workers, small farmers and shopkeepers in Uttarakhand, Tamil Nadu, and Delhi published in early September, 2021, reported that with the pandemic, these population groups had to cut back on their nutritious food intake by at least half as a direct fall out of their economic conditions ([KISLAY Social Research Collective, 2021](https://www.kislaysocialresearchcollective.org)).

##### **B. Status of household dietary diversity during the pandemic**

Household dietary diversity is an important indicator to understand the access of households to nutritious diets. Given the scarcity of national level data exploring the Household (HH) dietary diversity during the pandemic, a few small regional studies provide some insights into the situation. A rapid assessment conducted in 12 states – Assam, Bihar, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Maharashtra, Madhya Pradesh, Odisha, Rajasthan, Uttar Pradesh and West Bengal between April 27



and May 2, 2020 identified that nearly 68 percent of surveyed households reported reduced food items in each meal, 50 percent reported a reduced number of meals and 84 percent reported having received food items through the public distribution system (PDS) ([ruralindiaonline.org](https://ruralindiaonline.org), 2020).

A longitudinal study conducted among 587 mothers with children less than 2 years in 26 blocks of 2 districts in Uttar Pradesh to assess changes in household food insecurity (HFI) during the pandemic and examine the inter-linkages between HFI with child feeding practices and coping strategies. The parent study was conducted in December 2019 and the follow up assessment was done in August 2020 over telephonic interview. The result indicates sharp increase in HFI from 21 percent in December 2019 to 80 percent in August 2020, with 62 percent households changing the status from food secure to insecure over the study period. It was also reported that households with food insecurity were more likely to engage in coping strategies such as reducing other essential non-food expenditures (AOR 2.2, 95% CI 1.09 to 4.24), borrowing money to buy food (AOR 4.3, 95% CI 2.31 to 7.95) or selling jewellery (AOR 5.0, 95% CI 1.74 to 14.27) to obtain foods ([Nguyen, et al., 2021](#)).

Another survey of 1,694 households in Bihar and Uttar Pradesh in May 2020 concluded that 32-48 percent of households faced a shortage of food items in the previous month, and 49-59 percent of households had to reduce their food intake during the lockdown ([IFPRI, 2020](#)). Diet diversity (in terms of Food Variety Score<sup>5</sup>) of 450 urban households in the metropolitan cities of Mumbai, Pune, Hyderabad, Chennai, Bangalore, Delhi and Kolkata during the nationwide COVID-19 lockdown was assessed. More than 85 percent of these HHs belonged to upper-middle or upper SES. The study concluded that there were no constraints in accessibility and availability of food except for the animal foods. Overall, low Food Variety Score (FVS), for most of the food groups except for 'sugar' along with 'milk and milk products' were observed for 84 percent of the HHs. Despite being food secure, these upper SES HHs in urban India demonstrated poor diet diversity at the household level ([Aneesh, et al., 2021](#)). A survey conducted among daily wage workers, domestic workers, small farmers and shopkeepers in Uttarakhand, Tamil Nadu, and Delhi was published in early September 2021. The study highlighted that the consumption of eggs dropped from 77 percent to 30 percent and consumption of chicken from 72 percent to 22 percent as compared to pre-pandemic times ([KISLAY Social Research Collective, 2021](#)).

A longitudinal study assessing impact of crop diversity on diet diversity among 833 farmers across 12 states in India at three time points between May and August 2020 showed dietary diversity at household level decreased over the study period. This decline was more evident when lockdown measures were most restrictive. Compared to farmers who cultivated 1 crop (mono-croppers), farmers who cultivated 2, 3 or more crops were significantly less likely to experience a decline in dietary diversity from baseline to first follow-up ([Connors, et al., 2021](#)). Changes in dietary intakes and poor household diet diversity caused by the pandemic have further emphasized the need for local nutritious foods and community-based initiatives to tackle food and nutrition insecurity. Some regional examples like, POSHAN Matka initiative in Madhya Pradesh and the promotion of nutrition

---

<sup>5</sup> This study assessed household diet diversity in terms of Food Variety Score (FVS) using a 69-item food frequency questionnaire. FVS was defined as number of different food items eaten in a week during the lockdown period. These food items were assessed in 9 groups: cereals and millets; pluses and legumes; nuts; milk and milk products; meat; vegetables; fruits; sugar; fats.

gardens in Uttar Pradesh, were undertaken to promote dietary diversity and the inclusion of nutrient-rich local and affordable food items in the household food basket during the pandemic ([Livemint.com, 2021](#)). A study published in July, 2021 reported that in Uttar Pradesh, Bihar and Odisha overall food expenditures significantly declined during the lockdown, especially in less developed districts ([Gupta, et al., 2021](#)).

## 4.2 Care and feeding practices during COVID-19 pandemic

### 4.2.1 Food preparation, handling and safety practices during COVID-19 pandemic

Food safety became an important strategy amidst the pandemic. Though there are no data to understand the situation of individual or household level food handling practices, food supplementation programs (like Mid-Day Meal Scheme, now renamed as PM POSHAN) took initiative for the provision of safe food handling practices during the pandemic.

#### **COVID appropriate guidelines for food handling in MDM kitchen ([Ministry of Education, 2021](#))**

-The kitchen cum store/place of cooking must be deep cleaned and sanitized before 24 hours of actual cooking after reopening of schools

-Cleaning accessories such as clothes, mops and brushes carry a very high risk of cross-contamination, and must therefore be thoroughly washed, cleaned and dried after use

-The cook-cum help workers should wear masks during cleaning, washing, cutting, cooking and serving of meals

To avoid the danger of contamination of the product, it was advised that the cook/helper refrain from wearing nail polish, watches, rings, jewellery and bangles during cooking and serving the food.

## 4.3 Environment

A healthy environment that prevents infections and facilitates health promotion during the pandemic with appropriate nutrition-sensitive practices is an essential underlying determinant for nutritional outcomes. An environment that facilitates access to optimal health and nutrition services, optimal Water Sanitation and Hygiene practices and social and behavioural change communication strategies for health promotion is highly desirable amidst the pandemic.

### 4.3.1 Continuity of essential health and nutrition services during the pandemic

#### **A. Impact of COVID-19 on continuity of essential health and nutrition services directed towards infants, young and preschool children**

According to a LANCET report, COVID-19 is likely to impact nutritional status of children due to the deteriorating quality of their diets, disruptions in nutrition and other essential services, and the socioeconomic shocks generated by the pandemic in LMICs ([Fore, et al., 2020](#)).



To maintain the continuity of essential health and nutrition services during the pandemic in containment, buffer and beyond-buffer zones, guidelines were issued by [MoHFW](#). Certain services like those related to pregnancy, newborn care, immunisation, management of children with severe acute malnutrition, adolescent health services, family planning were identified as essential health services. Similarly, guidance was issued by [MWCD](#) for opening of Anganwadi centres, provision of supplementary nutrition, growth monitoring, nutrition counselling, pre-school education being provided under ICDS.

### Growth monitoring services



© UNICEF/UN0389821/Vishwanathan

According to UNICEF's continuity of service tracking, as of December 2021 growth monitoring and promotion services were functional in all the 14 states<sup>6</sup> monitored by UNICEF. For the state of Jharkhand, this service was not functional in the month of October but resumed in November and for the month of August and September 2021 services were partially functional. Upon assessing the overall trend for growth monitoring and promotion services, the provision was

very low initially which then picked up by the last quarter of 2020 though the trend has been increasing over time there has been slight variation and same can be visualised in figure 6 ([PoshanCovid19.in\monitoring](#)).

### Anganwadi Centres and Take-Home Rations (THR) for children (6 to 72 months)

A longitudinal study published in April 2021, conducted among 587 mothers of children below 2 years across 2 districts of Uttar Pradesh reported that children from 63 percent of consistently food insecure households (HH) received THR from the Integrated Child Development Services (ICDS) programme. This was similar both before (December 2019) and during the pandemic (August 2020). However, for food secure households, THR provision reduced to 55 percent at end line, compared to 59 percent at baseline ([Nguyen, et al., 2021](#)).

Take home ration was also provided to children 36-72 months in place of hot cooked meals as Anganwadis were closed. According to WFP tracking report from January to April 2021, door-step delivery of THR was being carried out monthly or once every two months. The THR basket varied across the States/UTs and the food items included fortified blended foods, eggs, sorghum powder, chikki (snack food made from nuts and jaggery), milk, and skimmed milk powder ([WFP, 2021](#)). Another report published in May 2021 in Jharkhand and Rajasthan, sharing of the THR for children with other

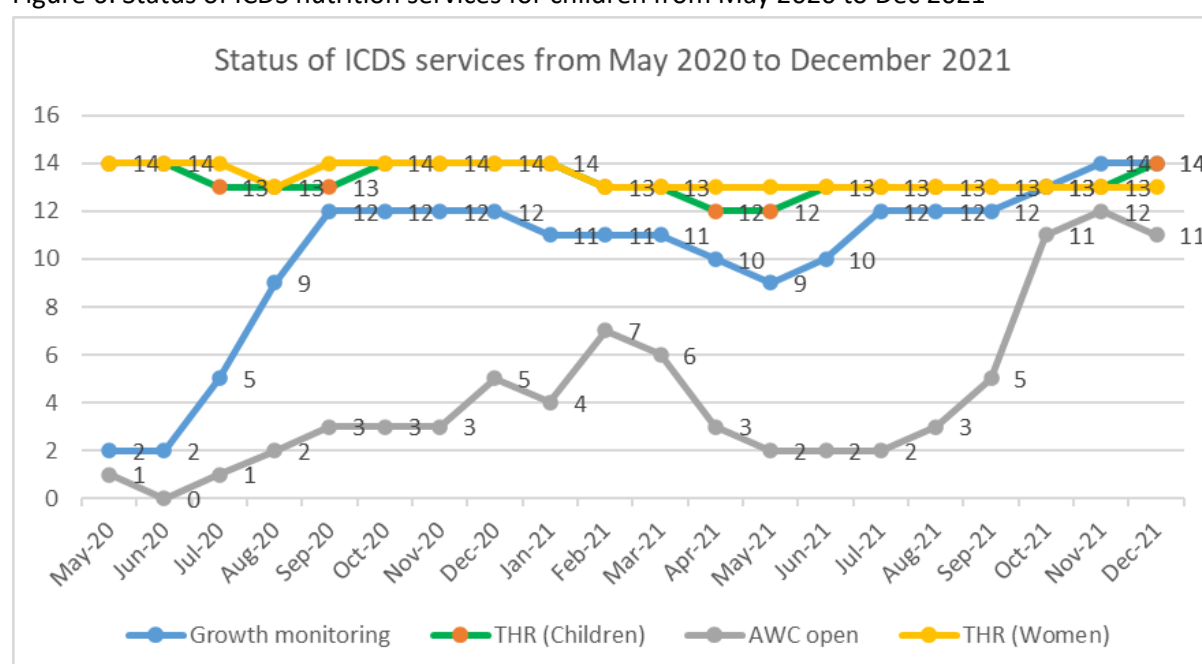
---

<sup>6</sup> UNICEF's monitoring for continuity of services is being carried out in 14 states: Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Telangana, Uttar Pradesh and West Bengal.

family members was reported during August 2020 increasing the risk of dilution of the intended nutritional benefits ([Nair, et al., 2021](#)).

According to UNICEF's continuity of service tracking, as of November 2021 the Anganwadi Centres (AWCs) were functional in Andhra Pradesh, Chhattisgarh, Karnataka, Maharashtra, Rajasthan, Telangana, and Uttar Pradesh and not functional in Assam, Gujarat, Jharkhand, Odisha, and West Bengal. Services were not functional in the month of October but has now resumed in November in Bihar and Madhya Pradesh. In the same time period, THR provided for children (6-35 and 36-72 months of age) was functional in 13 monitored states and non-functional in the state of Jharkhand. Overall trend for opening of AWC and THR distribution for the last 19 months can be understood from the time trend in figure 9. It is important to note that despite AWC not being functional entirely in the last 19 months the THR distribution to children shows minimal variation in trend ([PoshanCovid19.in\monitoring](#)).

Figure 6: Status of ICDS nutrition services for children from May 2020 to Dec 2021



Source: PoshanCovid19.in

### Promotion of Infant and Young Child Feeding (Mothers' Absolute Affection (MAA) scheme)

The service provision under this scheme has been tracked via the UNICEF's continuity of service tracking systems. The latest data reported in December 2021, shows that out of 14 states monitored, the MAA services, aimed at promotion of breastfeeding and complementary feeding for children up to 2 years of age, were provided through home visits in 13 states i.e., Assam, Bihar, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Telangana, Uttar Pradesh, and West Bengal. No information was available for the state of Andhra Pradesh. Overall trend for number of states where services of MAA scheme were available for the last 19 months were stable. ([PoshanCovid19.in\monitoring](#))

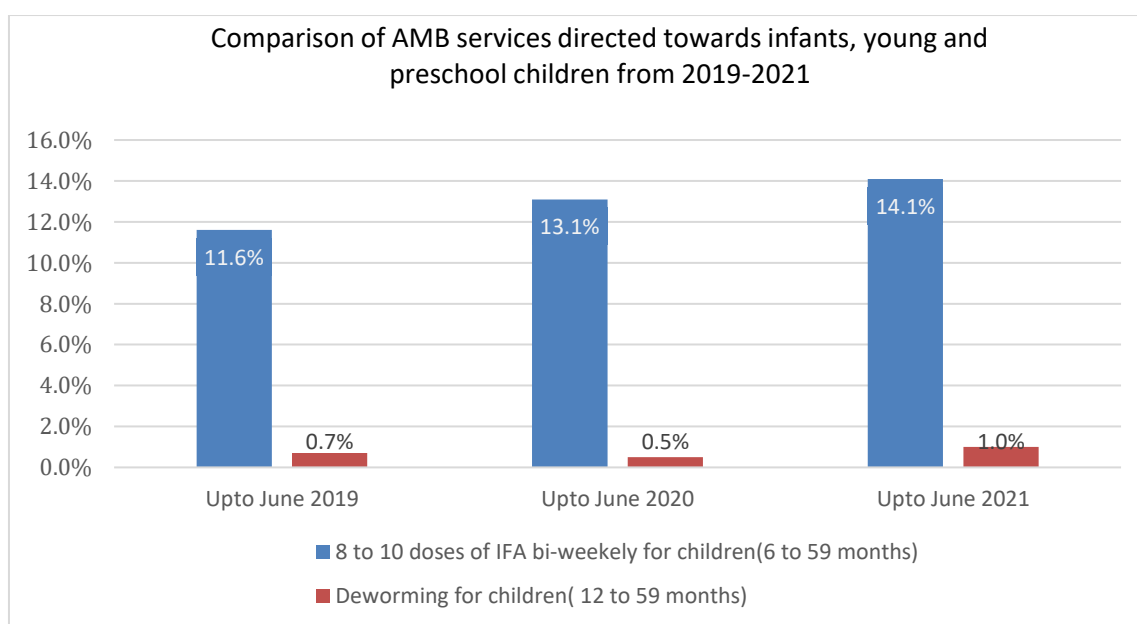
## Home Based Young Child Care (HBYC) services

HBYC programme aims at improving early childhood development and nutrition by providing services for children up to 15 months of age through home visits by ASHAs ([Government of India, 2018](#)). According to UNICEF's continuity of service tracking, as of December 2021 the HBYC program delivering services was functional in the states of Assam, Bihar, Chhattisgarh, Jharkhand, Karnataka, Odisha, Gujarat, Madhya Pradesh, Maharashtra, Rajasthan, Telangana and West Bengal. It was not functional in Uttar Pradesh and no information was available for Andhra Pradesh. It is important to note that in the last quarter, for the state of Bihar, services were not functional in the month of October but has resumed in November. The overall trend for HBYC services were low after the first wave of pandemic and has been recovering slowly over the last 19 months ([PoshanCovid19.in\monitoring](#)).

## Iron and Folic acid supplementation for children 5-69 months

According to data published in Anaemia Mukt Bharat (AMB) dashboard, as of June 2019, nationally, 11.6 percent of children (age 6-59 months) received 8-10 doses of Iron and folic acid (IFA) syrup bi-weekly, which then increased to 13.1 percent during the pandemic, in the year 2020. Data available from June 2019 to June 2021 on the AMB dashboard shows that 14.1 percent of children have received IFA supplementation as of June 2021. Though the status of deworming of children (aged 12 to 59 months) has been consistently poor and is almost stagnant in all three years of comparison (fig 6) ([anemiamukt Bharat.info](#)) (accessed on 06.01.2022).

Figure: 7 Comparison of iron folic acid supplementation and deworming for preschool children from June 2019 to June 2021



Data source: anemiamukt Bharat dashboard (accessed on 06.01.2022)

## Vitamin A supplementation (VAS)



© UNICEF/UN0491447/Vishwanathan

Bi-annual Vitamin A supplementation is administered to all children 9-59 months of age under national vitamin A prophylaxis programme. ([MoHFW, Govt of India](#)) According to the NFHS-5 round 2 report, the percentage of children (9-35 months) receiving their Vitamin A supplementation dose increased by 5 percent points (71.2 percent in NFHS-5 versus 64.5 percent in NFHS-4) ([NFHS-5, 2019-21](#)). To ensure the COVID-19 appropriate implementation of VAS each state adopted its unique way of VAS administration. While Chhattisgarh continued to use auto dispensers to dispense Vit A syrup and hence was safe, Madhya Pradesh used the measuring spoon provided with VAS bottles to measure the dosage and pour it into spoons carried by beneficiaries to avoid contamination. Similarly, in Uttar Pradesh, district administration purchased disposable spoons to administer Vit A syrup. Along with that, Front Line Workers (FLWs) enabled delivery of services in a phased manner on VHNSDs and ensured that social distancing norms were followed at the sites. This led to the effective conduct of biannual VAS rounds in the states without any disruption (Reference: [Innovations and Adaptations](#), POSHAN Weekly, UNICEF, December, 2021).

## Current status of immunisation services

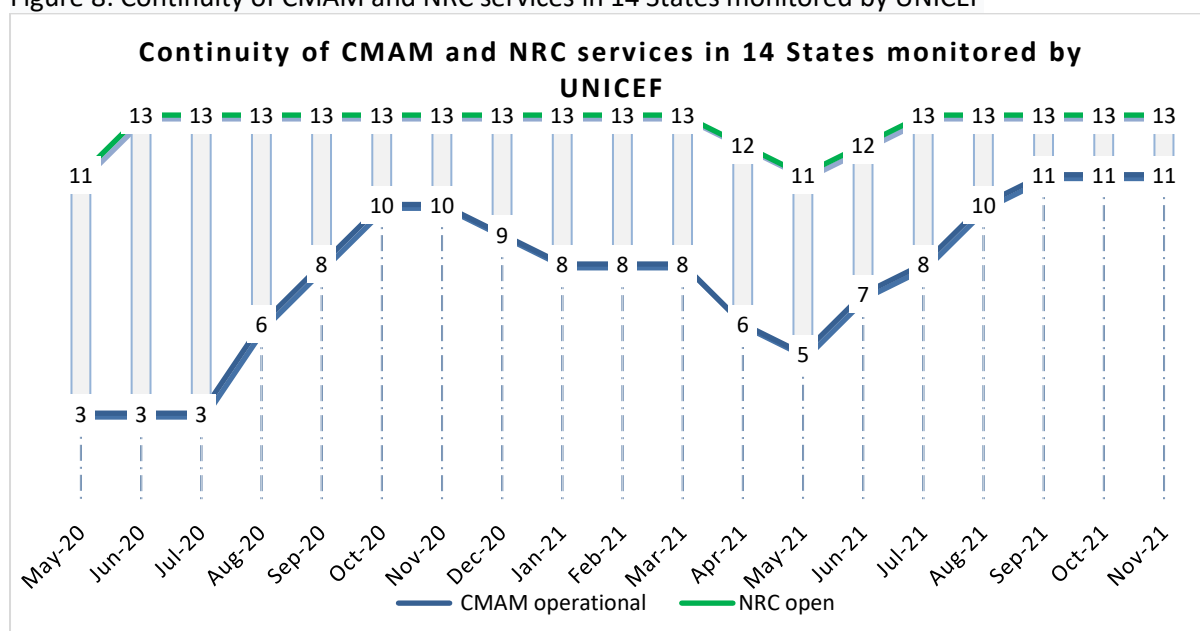
During the first wave of pandemic, around April 2020 the number of immunisation sessions planned and held declined significantly. As a result, the number of children and pregnant women immunised in April fell by up to 17 lakhs. This was a consequence of the lockdown, and fewer immunisation sessions, 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 immunisation camps remains low due to fear among parents of their children getting infected with COVID-19 ([Accountability Initiative, 2020](#)). The NFHS-5 survey data gives an insight into the current national immunization coverage, however this is not reflective of situation during the pandemic, as the data was captured both before and during the pandemic. Overall, 83.8 percent of children aged 12-23 months are reported to be fully vaccinated (based on information from vaccination cards). This is a 6 percent point improvement from the immunization coverage data of NFHS 4 (77.9 percent). Further, the immunization coverage from public facilities has also improved (94.5 percent in NFHS-5 versus 90.7 percent in NFHS-4). There has been a 5 percent point increase in BCG vaccine recipients (12-23 months) (91.9 percent in NFHS-4 to percent to 95.2 percent in NFHS-5). There has also been about 8 percent points increase for 3 dose completion for both polio vaccine (from 72.8 percent in NFHS-4 to 80.5 percent NFHS-5) and DPT vaccine (from 78.4 percent in NFHS-4 to 86.7 percent NFHS-5) ([NFHS-5, 2019-21](#)).

## Management of Severe Acute Malnutrition (SAM)

Current status of community-based management of acute malnutrition can be assessed based on the data available on UNICEF's monitoring dashboard. Out of 14 states where monitoring for continuity of essential nutrition services is being carried out, CMAM services were active in 11 states, no information was available for the states of Karnataka and Andhra Pradesh whereas services were non-functional in the state of Gujarat. It is important to note that the CMAM services in Rajasthan was not functional since December 2020 and have now resumed in September 2021 ([PoshanCovid19.in\monitoring](https://poshan.covid19.in/monitoring)).

Also, according to UNICEF's continuity of service tracking, as of December 2021, NRCs were functional in Assam, Bihar, Chhattisgarh, Gujarat, Odisha, Jharkhand, Karnataka, Maharashtra, Madhya Pradesh, Rajasthan, Telangana, Uttar Pradesh, West Bengal. No information was reported from Andhra Pradesh. Though CMAM services encountered many fluctuations during the pandemic period, the facility-based management of SAM through NRCs were operational throughout and only experienced a small dip in the month May'21 but recovered thereafter ([PoshanCovid19.in\monitoring](https://poshan.covid19.in/monitoring)). However, information of admissions to the NRCs is not available in public domain.

Figure 8: Continuity of CMAM and NRC services in 14 States monitored by UNICEF



Data source: UNICEF Monitoring

## B. Impact of COVID-19 on continuity of essential health and nutrition services directed towards school age children and adolescents

### Status of Mid-day Meal Scheme (now renamed as PM POSHAN)

Mid-day meal scheme (MDMS) now known as PM POSHAN is one of the largest supplementary feeding programs in India. However, the COVID-19 and the resulting school closure has hampered the functioning of this program. Over the past 1.5 years of pandemic, several states modified their MDM scheme, and changed their modality to either transferred allowance or distributed dry ration or a combination of both ([WFP, accessed on 10.2.2021](#)).

According to WFP MDM tracking report (April-June 2021), schools remained closed and most of the States/UTs had not taken any decision regarding reopening of the elementary classes which are the target groups for the MDMS. However, MDMS was reported to be functional in one form or another in 35 of 36 States/UTs (except in Telangana.) Nineteen States/UTs were providing dry rations and other food items, whereas 16 others were providing dry rations with cooking cost as Food Security Allowance, up to the period of summer vacation. The food items provided include mostly grains complemented with pulses, oil, potatoes, eggs plus salt and condiments, which vary from place to place ([WFP, 2021](#)).

Another survey conducted in August 2021 among 1400 school children in underprivileged households in 15 states found MDMS had been discontinued in all the sampled states<sup>7</sup> with school closures. Among parents with a child enrolled in a government school, both urban and rural population showed similar trend. 63 percent of children received food (mainly wheat or rice) in lieu of MDM, about 15 percent received a combination of food and cash, a very small proportion (8%) received only cash and more than 15 percent did not receive anything during that period in rural areas. In urban areas, 69% children received food items, 11% received combination of food and cash and 20% reported to not receiving anything at all. Among those who received food, there were complaints that the parents had received less than what they were entitled to (100 grams per child per day at the primary level). Most parents were in favour of re-opening of schools as soon as possible ([SCHOOL survey, 2021](#)).

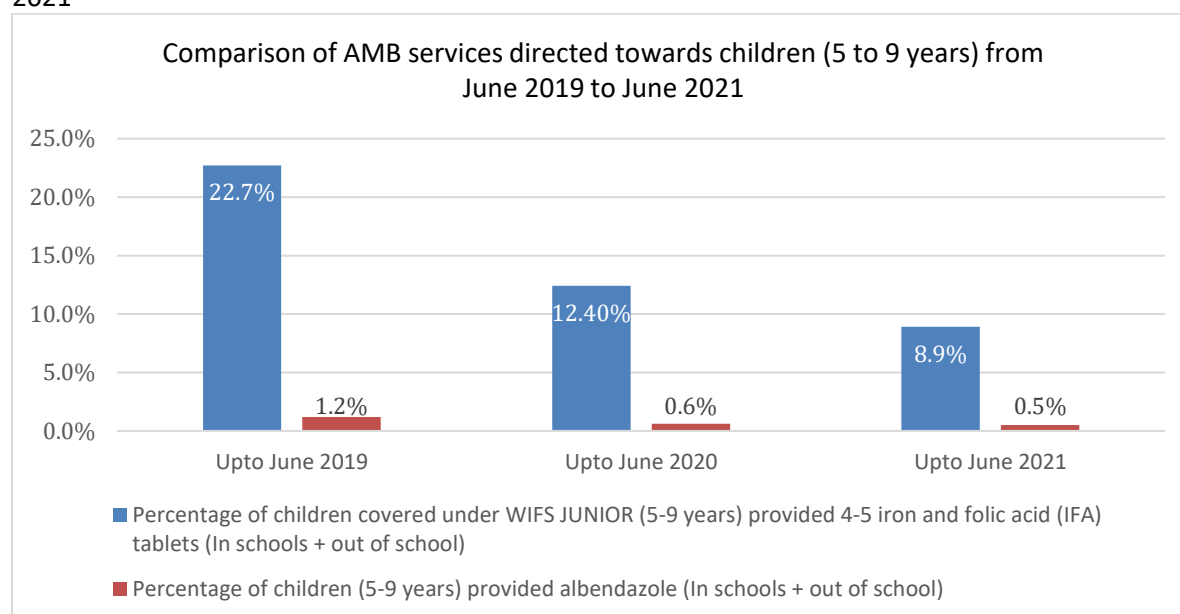
### Status of Iron and Folic acid (IFA) supplementation and deworming

Apart from supplementary feeding scheme like MDMS, nutritional supplementation services like IFA distribution to school going children were also affected during the pandemic. As the schools were closed, children who would normally receive IFA in schools, the provision for the same witnessed a decline since February 2020. Similar decline in trend was observed for out-of-school children who would receive IFA from the AWCs ([Accountability Initiative, 2020](#)).

---

<sup>7</sup> 15 states sampled were Assam, Bihar, Chandigarh, Delhi, Gujarat, Haryana, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Punjab, Tamil Nadu, Uttar Pradesh and West Bengal.

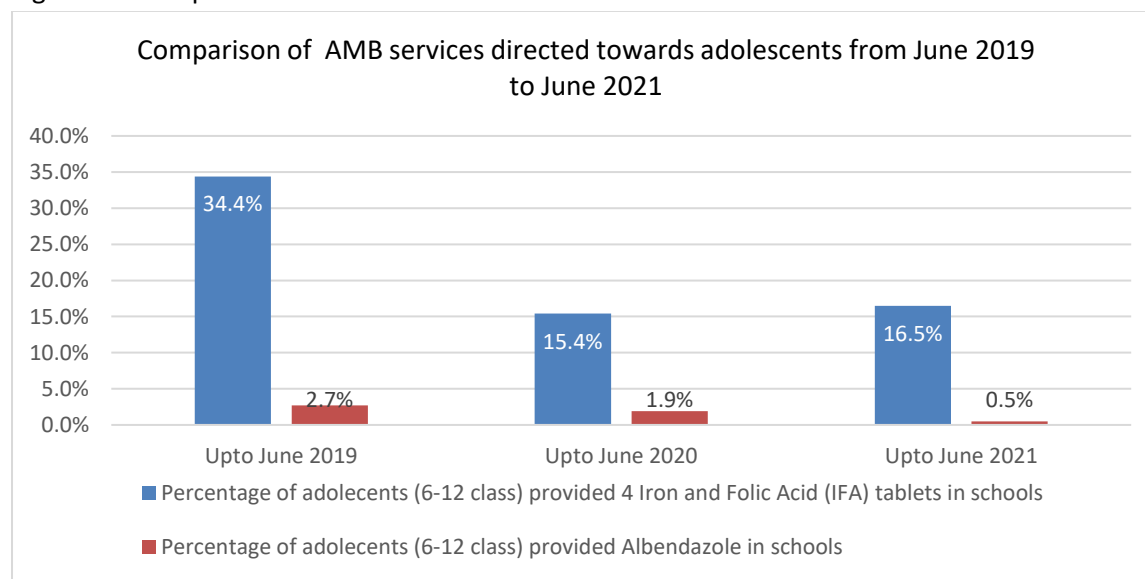
Figure 9: Comparison of AMB services directed towards children (5 to 9 years) from June 2019 to June 2021



Data source: anemiamuktbharat dashboard (accessed on 06.01.2022)

According to data published in AMB dashboard, as of June 2019, nationally, 22.7 percent of both in school and out of school children (age 5 to 9 years) were provided 4 to 5 Iron and Folic Acid (IFA) tablets in a month, which then decreased to almost half (34.7 percent) during the pandemic, in the year 2020. Recent data from June 2021 shows further reduction of almost 4 percent points and stands at 8.9 percent. The status of albendazole tablet distribution as part of deworming services for this age group has been decreasing consistently in all three years of comparison (figure 9) ([anemiamuktbharat.info](http://anemiamuktbharat.info)) (accessed on 06.01.2022).

Figure 10: Comparison of AMB services directed towards adolescents from June 2019-June 2021



Data source: anemiamuktbharat dashboard (accessed on 06.01.2022)



To understand the situation of these services directed toward adolescents, national level data published in AMB dashboard shows that, as of June 2019, 34.4 percent of adolescents (class 6 to 12) received 4 IFA tablets per month, which then decreased to 15.4 percent during the pandemic, in the year 2020. Recent data shows a slight increase and as of June 2021 25.2 percent adolescents received 4 IFA tablets. The status of deworming for adolescents (class 6 to 12) has been decreasing consistently in all three years of comparison (figure 10) ([anemiamukt Bharat.info](http://anemiamukt Bharat.info)) (accessed on 06.01.2022).

### C. Impact of COVID-19 on continuity of essential health and nutrition services directed towards Women of Reproductive Age



© UNICEF/UN0491531/Vishwanathan

The provision and uptake of government nutrition services targeted towards the WRA group underwent many changes during the COVID-19 pandemic. Different documents highlighted regional variations in the availability of the supplementary nutrition services under the ICDS to pregnant and lactating women. In the state of Telangana, as of October 2021, pregnant and lactating women (along with children) have been benefiting from Arogya Lakshmi scheme. As a part of this scheme, beneficiaries receive 1 hot

cooked meal for about 300 days in a year ([wdcw.tg.nic.in](http://wdcw.tg.nic.in), 2021). In Dharwad district of Karnataka, a committee is constituted by the department of WCD to ensure quality and quantity of nutritional food kits distributed to pregnant and lactating mothers among other beneficiaries. Further, measures are being implemented to inform beneficiaries about the service, along with provision of raising a complaint in case of non-availability of the food kit. The kit included 750 grams wheat, 3 kilograms rice, 275 grams tur, 400 grams green gram, 250 grams groundnut chikki, 1 kilogram jaggery, 375 grams sugar, 50 grams masala powder, 250 grams edible oil, 500 grams milk powder and 25 eggs per month ([thehindu.com](http://thehindu.com), 2021). Apart from the supplementary nutrition services, nutrition education and counselling an essential component of ICDS service, has also suffered during the pandemic. After the first wave of pandemic, AWCs across at least 18 large states remained shut till June 2020. As a result, services like health check-ups, in-person counselling at health centres, Village Health Sanitation and Nutrition days (VHSNDs) and other community-based events were not conducted ([Accountability Initiative, 2020](#)). However, in paucity of recent data the current status of the nutrition counselling service provision under the AWCs cannot be fully established.

A report released by developmental organizations in December 2020 highlighted how the lockdown hindered access and utilization of services directed towards management of anaemia during the initial phase of the pandemic. During the initial stages of the pandemic, the distribution of IFA for pregnant women dipped but eventually, to a large extent, recovered to pre-lockdown levels. However, in the case of lactating mothers, distribution of IFA did not show similar trends in recovery ([Accountability Initiative, 2020](#)).



## Ante-natal Care (ANC) services

According to government data from AMB dashboard, before COVID-19 as of June 2019, nationally around 95 percent of pregnant women were registered for ANC. This reduced by 8 percent points to 87.2 in June 2020 and further reduced to 85.3 in June 2021 (figure 11) ([anemiamuktbharat.info](https://anemiamuktbharat.info)) (accessed on 06.01.2022).



© UNICEF/UN0491522/Vishwanathan

Other studies have reported that the fear of COVID-19 infection could be attributed to poor utilization of ANC services. A cross-sectional study conducted in June-July 2020 (published in February 2021) in 8 districts of the state of Chhattisgarh reported that the majority of pregnant women believed that they were at a high risk of infection with COVID-19, and many were worried about potential health consequences, especially for their unborn child as reasons for poor utilization of ANC services. About 90 percent of pregnant women were isolated at

home most of the time and more than 60 percent of them were afraid of giving birth in the uncertain COVID times and getting an infection during ANC visits to hospital ([Singh, et al., 2021](#)). Further, other reasons for not availing services during the pandemic as reiterated in reports included loss of income and livelihood in COVID times along with high Out of Pocket (OOP) expenditure associated with care access. Though, according to NFHS-5 round 2 report, average OOP expenditure for delivery in public facilities has marginally reduced as compared to NFHS-4 from Rs. 3197 to Rs. 2916. Despite the looming fear of infection and low ANC uptake, it is important to note that there has been a 10 percent points increase in institutional deliveries with 88.6 percent of all deliveries reported during the NFHS-5 were institutional deliveries (as compared to 78.9 percent in NFHS-4) ([NFHS-5, 2019-21](#)).

## IFA, calcium supplementation and deworming

According to data published in AMB dashboard, as of June 2019, nationally, 87.1 percent of pregnant



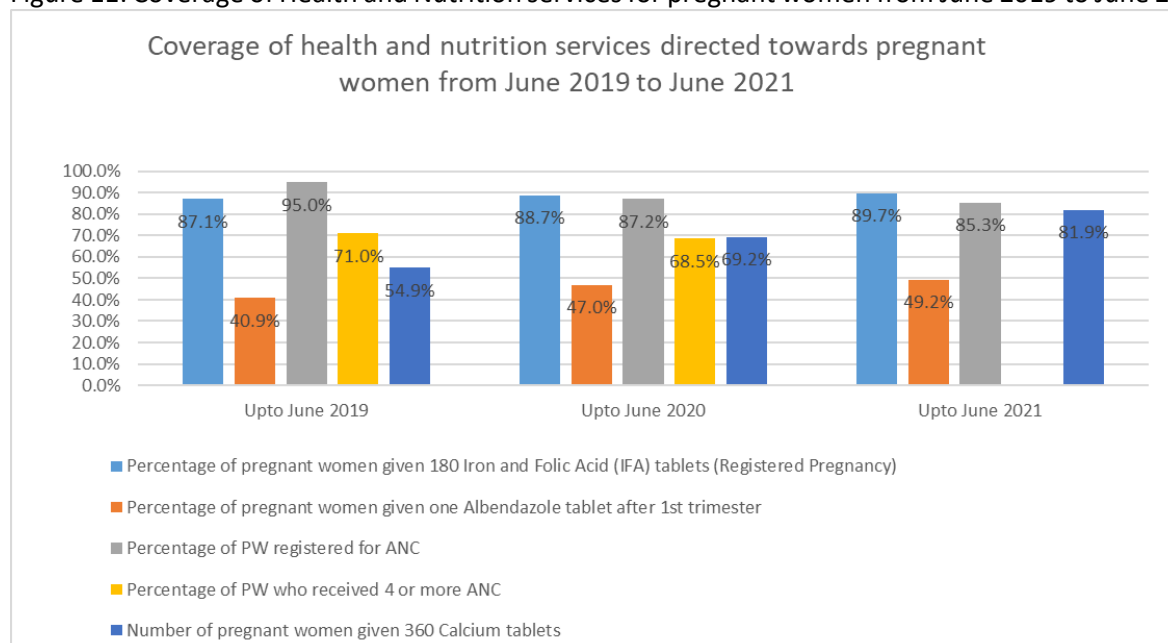
© UNICEF/UN0389909/Vishwanathan

women were provided 180 Iron and folic acid (IFA) tablets, which then increased marginally in the subsequent 2 years (88.7 percent in June 2020 and 89.7 in June 2021). The status of deworming of pregnant women indicated an increase of about 6 percent point (from 40.9 in June 2019 to 47 percent in June 2020). As of June 2021, 49.2 percent of pregnant women received deworming services (as shown in figure 11) ([anemiamuktbharat.info](https://anemiamuktbharat.info)) (accessed on 06.01.2022).

Pregnant women who received 360 calcium tablets has shown a steady increase over the last 3 years. Till June 2019, 54.9 percent of pregnant women had 360 calcium tablets which increased to 69.2 percent in 2020 and further increased by almost 10 percent points to 81.9 percent in June 2021.

To understand the situation of IFA supplementation directed towards lactating mothers, national level data published in AMB dashboard showed that, as of June 2019, 58.4 percent of lactating mothers were provided full course of 180 Iron and folic acid (IFA) tablets, which then increased to 67.8 percent during the pandemic, in the year 2020 and then to 79.5 percent as of June 2021 (Fig.11) ([anemiamuktbharat.info](http://anemiamuktbharat.info)) (accessed on 06.01.2022).

Figure 11: Coverage of Health and Nutrition services for pregnant women from June 2019 to June 2021



Data source: anemiamuktbharat dashboard (accessed on 06.01.2022)

## THR for pregnant and lactating women

According to UNICEF's continuity of service tracking, as of December 2021 the Take Home Rations (THR) provided for Pregnant/Lactating women is functional in 13 states except Jharkhand. Out of 14 states and UTs monitored, 13 were functional. THR for pregnant/lactating women was not functional in Jharkhand since the month of October but till December 2021. Overall trend for number of states where THR was provided to pregnant and lactating women for the last 19 months did not show much difference and the same can be visualized from the time trend in Figure 6 ([UNICEF monitoring, 2021](#)).

## Pradhan Mantri Matru Vandana Yojana (PMMVY)

Out of 14 states monitored for continuity of essential nutrition services, PMMVY program providing maternity benefits were functional in all the states as of December 2021. Overall trend of all the monitored states for the last 19 months shows that though the service provision was slightly low but picked up after the first wave of pandemic and has been maintained till December 2021 ([UNICEF monitoring, 2021](#)).

## D. Impact of COVID-19 on continuity of essential health and nutrition services directed towards general population

### Status of the Targeted Public Distribution System (TPDS)

The global COVID-19 pandemic has overwhelmed India's public health infrastructure and disrupted the economy. The services that addressed food security of the general population played a key role in helping vulnerable families tide over the pandemic-induced food insecurity ([Centre for Policy Research, 2021](#)). When India went into its first lockdown in 2020, the government announced Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY), under which over 800 million people were free given rice, wheat, and pulses, in addition to the ration distributed under the public distribution system (PDS). Pulses were provided under PMGKAY to 194 million households between April and November 2020 ([Ministry of Women and Child Development, 2021](#)). Initially, the scheme was launched for the month of April-June 2020, but later it was further extended till November 30, 2021. The union cabinet during the end of November 2021, decided to extend the free ration scheme till March 2022 ([Central Government, 2021](#)). As One Nation One Ration Card plan (ONORC) was initiated in a phased manner in 2019, it was targeted to address the difficulties faced by migrant population and provide an integrated approach to empower beneficiaries to access PDS from any fair price shop (FPS) from any part of the country. ([financialexpress.com, 2020](#)). As of 2nd Feb, 2021 it was reported that the ONORC system was active in 32 states/UTs ([Ministry of Consumer Affairs, Food and Public Distribution, 2021](#)). But, as systemic issues like the significant exclusion errors of eligible beneficiaries persist, vulnerable families are likely to struggle to optimally utilize this food security scheme and cope with the economic aftermath of the pandemic ([Centre for policy research, 2021](#)).

### 4.3.2 WASH (Water, Sanitation and Hygiene) scenario amidst COVID-19



© UNICEF/UN0491151/Vishwanathan

The importance of the water, sanitation, and hygiene (WASH) has been revitalised during the ongoing pandemic. Water and soap are essential elements, though, access to the same is limited in many parts of India. While the COVID-19 protocol suggests a 20-seconds hand washing routine, if a person washes hands 5 times a day, about 10-12 litres of water would be required. For some people who have to fetch water from faraway areas this might seem to be an additional requirement ([Kalpana, et al., 2021](#)). However, in order to provide safe drinking water amidst the pandemic, many initiatives have been implemented. One such initiative was reported from the city of Puri in Odisha where for the first time in India, in the month of July, the government announced to provide 24x7 potable drinking water to the city's inhabitants ([Odisha CM, 2021](#)). The pandemic has provided great learnings regarding appropriate WASH interventions that can attribute towards the expansion of functional household tap connection, the measures around source protection and water conservation along with infrastructure development. Parallely, behaviour change communication strategies for efficient water usage and

hygiene practices need to be reiterated. There is an urgent need for long-term preparedness and planning on WASH interventions to cope and adapt to similar crises like the pandemic, especially for the poor settings requirement ([Kalpana, et al., 2021](#)). According to NFHS-5 round 2, at the all-India level, there is remarkable progress in the use of improved sanitation facilities from 49 percent in NFHS-4 (2015-16) to 70 percent in NFHS-5 (2019-2021) ([NFHS-5, 2019-21](#)). The Jal Jeevan Mission (JJM) annual report published in this quarter highlights that, despite COVID-19 pandemic, JJM was active at different levels. In August 2019, only 3.23 Crore (17 percent) rural households had tap water connections. This is now available in 8.75 Crore (45.5 percent) households (HHs). Similarly, 8.37 lakh (81 percent) schools, 8.55 lakh (77 percent) AWCs and 3.37 lakh (75 percent) public institutions like Gram Panchayat buildings, Primary Health Centres/ Community Health Centres, etc. also have provision of clean tap water supply. In Aspirational districts, coverage increased by 4 times, from 24.32 lakh (7 percent) to 1.30 Crore (38.4 percent) ([Jal Jeevan Mission, 2021](#)).

#### 4.3.3 Social and behaviour change communication (SBCC) for health/nutrition promotion during the pandemic



© UNICEF/UNI365376/Panjwani

Though there is no national level data available on how SBCC has been adapted in the COVID times but some ground level evidence is available on how behaviour change in the community was brought about during the COVID-19 pandemic.

Similar to many health and nutrition services that were disrupted nationally, functioning of ICDS in the state of Maharashtra was also hampered. Owing to this scenario, a new initiative of '*Tarang Suposhit Maharashtra*', was launched in October, 2020 by the state department of Women

and Child Development (WCD) and of December 2021, the program is currently active in all of the district of Maharashtra with more than 12 lakh users. Under the initiative, an interactive voice response system has been created to provide awareness on breastfeeding, nutrition and childcare with the help of digital posters, whatsapp chatbot, informative recorded phone calls from the authorities. As male members of households have the access to mobile phones, one major behaviour change brought about by this initiative is that it is able to add fathers to the list of stakeholders. After the intervention, fathers are more involved than before and people are more receptive to the information shared. Although the program was envisaged with the COVID-19 pandemic in mind, the utility of the platforms to increase the access to information, induced a behaviour change as people were able to access information in their own space thus making this digital platform useful even after the pandemic (Reference: [Innovations and Adaptation](#), POSHAN Weekly, UNICEF, December, 2021).

Another example is from the state of Uttar Pradesh where, an initiative is undertaken in 21 district hospitals by Nation Health Mission (NHM), in collaboration with UNICEF in June (baseline) to August (end line) 2021 to improve IYCF practices at the household level. The initiative was aimed to reduce the misuse of formula milk and address the issue of breastfeeding during the time of pandemic with the help of special communication package for counselling. At the end line, there has been a

considerable decline in the use of formula milk (from 40 percent from baseline to 13 percent at the end line). Early initiation of breastfeeding rates has also improved significantly (45 percent at the baseline to 58 percent at the end line) (Reference: [Innovations and Adaptation](#), POSHAN Weekly, UNICEF, December,2021).



## CHAPTER 5: Impact of COVID-19 on enabling determinants of nutrition

The enabling determinants of nutritional outcomes include governance, policy environment, continuity of essential health and nutrition services, resource allocation along with social norms. Thus, it is essential to understand how these determinants have been impacted by the COVID-19 pandemic.

### 5.1 Governance and policy environment

In this section, policy environment amidst the pandemic with focus on the transition of POSHAN 1 to POSHAN 2 has been discussed. Along with this the initiation and progress regarding the food fortification on a policy level has also been covered.

#### 5.1.1 Transition from POSHAN Abhiyaan to POSHAN 2

POSHAN Abhiyaan was launched in 2018 to tackle malnutrition in mission mode. It was targeted towards children (between 0-6 years of age), pregnant women and lactating mothers. It aimed at reducing child stunting, underweight and low birth weight by 2 percent points per annum and anaemia among children (and young females) by 3 percent points per annum ([Govt of India, accessed on 10.12.2021](#)). For implementation of POSHAN Abhiyaan a four-point strategy/pillars were adopted. This included inter-sectoral convergence for better service delivery; use of technology (ICT) for real time growth monitoring and tracking of beneficiaries; Intensified health and nutrition services for the first 1000 days and Jan Andolan ([NITI Aayog, ND](#)).

Taking lessons from POSHAN Abhiyaan, POSHAN 2.0 was announced in February 2021. The objective of this initiative is to implement a comprehensive, unified strategy to strengthen nutritional content, delivery, outreach and outcome, with renewed focus on developing practices that nurture health, wellness and immunity to disease and malnutrition in the country. The goal of this mission is to have a collaborative effort in executing the programs to counteract regression in the health and nutrition index. Outreach planned under the initiative is towards 112 aspirational districts for the initial phase. This initiative plans to bring together ICDS services like Anganwadi services, supplementary nutrition programme, POSHAN Abhiyaan, scheme for adolescent girls and national creche scheme together under one umbrella. One important element in this transition from POSHAN Abhiyaan to POSHAN 2 is the convergence of multiple schemes into one. Another important change in contrast to POSHAN Abhiyaan is the POSHAN Tracker that has replaced the ICDS portal for tracking and also allows for real time monitoring of AWC, AWWs and last-mile tracking. To support the *Jan Andolan*, new training modules and IEC materials were developed to bring about sustained behaviour change in the community (Reference: Online seminar by Dr Neena Bhatia, Senior Specialist (Joint Advisor) WCD vertical, NITI Aayog).

#### 5.1.2 National initiatives/programs launched amidst the COVID-19 pandemic

Owing to the success of salt fortification initiative, other fortification initiatives at national level are being undertaken ([NFHS-5, 2019-21](#)). In August 2021, a huge push was created for rice fortification to tackle the growing micronutrient deficiency especially in the form of anaemia. To address nutrient gaps especially in low-income groups as part of a comprehensive solution, foods fortified with iron, vitamin B12 and folic acid are being considered as a crucial window of opportunity. The Government

of India plans to supply fortified rice to beneficiaries through the existing food safety nets such as TPDS, Mid-Day Meal Schemes (now PM POSHAN), and ICDS by 2024 ([Government of India, 2021](#)) ([Ministry of Consumer Affairs, Food and Public Distribution, 2021](#)).

Fortified rice has been distributed in all the food-based safety nets in the States/ districts of:

1. **Maharashtra** - Gadchiroli (since February 2020)
2. **Gujarat**- Narmada (since February 2020)
3. **Andhra Pradesh**- Vizianagaram (since April 2020)
4. **Tamil Nadu**- Trichy (since October 2020)
5. **Chhattisgarh** -Kondagaon (since November 2020)
6. **Uttar Pradesh**- Chandauli (since January 2021)
7. **Odisha**- Malkangiri (since July 2021)
8. **Telangana**- Jayashankar Bhupalpally (since September 2021)
9. **Uttarakhand**- US Nagar (since September 2021)
10. **Madhya Pradesh** -Sigrauli (since September 2021)

Till date, FCI has made a procurement of around 15.5 LMT for supply in ICDS/MDM across the country. Under ICDS and MDM, fortified rice distribution has started, currently 18 states under MDM and 12 states under ICDS have been covered (personal communication with WFP).

## 5.2 Resource allocation towards nutrition services during the pandemic

This section discusses how financial and human resources and technological advances along with monitoring have adapted to the changing nutrition scenario and essential service delivery during the pandemic

### 5.2.1 Financial allocation to nutritional interventions and services during COVID-19

The policy focus towards nutrition along with the share of financial investments were likely to be halted due to the pandemic and ongoing economic slowdown. The pre-existing inability of the system to utilize the allocated funds was further aggravated with the disruption in essential health and nutrition services caused due to the pandemic ([Accountability Initiative, 2020](#)). In the Union Budget 2020-21, a sum of ₹35,600 crore was announced for 'nutrition-related programmes'. Along with that, for the financial year 2020-21, the 15<sup>th</sup> Finance Commission identified the need for higher spending on nutrition, and recommended additional grants of ₹7735 crore to states for increased spending under Supplementary Nutrition programs (SNP), based on the need for food fortification ([CRY, 2021](#)).

### Financial allocation to Saksham Anganwadi and POSHAN 2.0

For Financial Year (FY) 2021-22, allocations for Saksham Anganwadi and POSHAN 2.0 stood at ₹20,105 crore. This was marginally lower than FY 2020-21 budget estimates for the erstwhile ICDS which stood at ₹20,532 crore. Government allocated budget estimates of ₹24,435 crore to MWCD which was a 16 percent increase from the previous financial year's revised estimates. However, the COVID-19 pandemic resulted in a decrease in expenditures across ministries. In FY 2020-21, revised estimates were 30 percent lower than the budget estimates and stood at ₹21,008 crore. Provisional

expenditures were even lower at ₹19,231 crore. In FY 2021-22, till October, 47 percent of the year's budget estimates had been spent ([Accountability initiative, 2022](#)).

#### Financial allocation to MDM (modified as PM-POSHAN)

Amidst the pandemic new budgetary allocations were made by the central government towards specific programs/schemes. In April 2020, the cooking cost of MDM increased from ₹4.48 to ₹4.97 for primary school children, and from ₹6.71 to ₹7.45 for upper primary school children to address the disruptions in service caused by the pandemic ([CRY, 2021](#)). In September 2021, MDM was modified into PM-POSHAN scheme and the same has been approved for the next five-year period until 2025-26, with a collective outlay of ₹1.31 lakh crore, including ₹54,061.73 crore as central share and the rest to be borne by the state governments. The Centre also plans to bear an additional cost of ₹45,000 crore for food grains ([Ministry of Women and Child Development, 2021](#)). In the year 2021-22, government allocated ₹11,500 crore for PM POSHAN, an 11 percent decline from previous year's revised estimates. In order to ensure PM POSHAN provisioning during the COVID-19 pandemic, allocations were increased to ₹12,700 crore despite which allocations remain 48 percent lower than the total demand of Ministry of Education. For the financial year 2022-23, the scheme is to be expanded to include pre-primary students. Additional funds ranging between ₹345 crore and ₹374 crore will be needed from government to provide meals to the 32 lakh students studying in pre-primary or Bal Vatikas in government and government aided primary schools ([Accountability initiative, 2022](#)).

#### Financial allocation to food subsidy and National Food Security Act

Budget estimates towards food subsidy for the FY 2021-22 stood at ₹2,42,836 crore. Despite additional allocations of ₹46,513 crore through supplementary budgets, it was still 32 percent less than the previous year's revised estimates. Allocations of food grains increased significantly in FY 2020-21 and FY 2021-22 owing to the additional allocations made under Pradhan Mantri Garib Kalyan Anna Yojna (PMGKAY) and other pandemic relief measures. With the extension of PMGKAY into its fifth phase (till March 2022), estimated food grain allocations for FY 2021-22 were at a record high of 981 lakh tons, 79 percent higher than FY 2019-20 ([Accountability initiative, 2022](#)). This extension is expected to cost Government of India an estimated ₹53,344 crore ([Ministry of Consumer Affairs, Food & Public Distribution, 2021](#)).

#### 5.2.2 Enabling human resources for COVID-19 appropriate service delivery

The COVID-19 pandemic reiterated the need for training and enabling human resources to adapt and incorporate COVID appropriate behaviours in the nutrition service delivery. A small study in June 2021, was conducted among frontline workers (FLWs) i.e., the ASHAs, ANMs and AWWs in 2 districts of Uttar Pradesh. About 40 to 90 percent of the FLWs who participated in the study reported providing services to the beneficiaries at their doorstep, 80 percent were maintaining social distance, 40 to 50 percent were using Personal Protective Equipment (PPE) kits and about 20 percent were using telephones for communication ([Nguyen, et al., 2021](#)). Along with this, the FLW trio was also responsible in door-to-



door screening; monitoring of positive cases; and reporting of new arrivals ([Centre for Policy Research, ND](#)).

This brings to light the need to further devise strategies to strengthen the capacities of these FLWs to work in a coordinated manner to ensure optimal service delivery while adhering to COVID-19 appropriate behaviour and augmenting human resources for emergencies.

### **5.2.3 Technological advancement to enhance service delivery and monitoring during COVID-19**

As the world shifted to a virtual mode of functioning during the COVID-19 pandemic, many nutrition related initiatives were also undertaken and modified to match the changing times and the demand of the hour. The transition of ICDS-Common Application Software (CAS) to POSHAN TRACKER is also one of the technology highlights for POSHAN 2.0. Purpose of POSHAN TRACKER application is to provide, 360-degree view of the activities of AWCs, service delivery of AWWs and complete beneficiary management for pregnant women, lactating mothers and children. The proposed system should enable real time monitoring and tracking of all AWCs, AWWs and beneficiaries on the define indicators ([POSHAN Tracker, ND](#)). The government's initiative to be at par with the digital trend led to the use of technology to upgrade the existing PDS system, by re-launching 'End-to-end Computerisation of Public Distribution System Operations' and 'Integrated Management of Public Distribution System.' With a growing focus on digital India and ensuring transparency, the issue of misuse is also expected to be addressed to a large extent. As of 2021, EPOS is functional in 4.9 of total 5.4 lakh FPSs across 31 States/UTs and 100 percent functional in 28 States/UTs ([Ministry of Consumer Affairs, Food and Public Distribution, ND](#)).

### **5.2.4 Data system and monitoring to inform nutrition scenario during COVID-19**

Government led information systems like HMIS, AMB portal along with other state specific monitoring tools are available. However, there is a lack of availability of the some of these monitoring data in public domain (e.g., ICDS-CAS now POSHAN tracker). Organisations like UNICEF, WFP and GAIN among others are engaged in routine monitoring activities. One of key highlights of this quarter is the release of NFHS-5 final compendium of fact sheets which is useful in providing insight on the most recent nutrition scenario of the Indian population. Non-availability of HMIS data on feeding indicators is also a major constraint in assessing nutritional practices. There is a need for consolidation of the available data to ensure a thorough understanding of the impact of COVID-19 on nutrition in India. With respect to specific programs there is a paucity of data available to monitor and track the most recent developments in delivery of MDM, facility-based management of SAM, along with micronutrient supplementation services like (vitamin A and Calcium supplementation). Also, availability of real time data for the status of fortification services is limited. To assess the long-term impact of COVID-19 on nutrition in India there is a need for more granular and longitudinal assessments on dietary intakes, nutritional status and health and nutrition service provisions.

### 5.3 Norms (Gender and equity) that may impact nutritional scenario during the COVID-19 pandemic

COVID-19 pandemic disrupted educational facilities as the schools remained closed for more than a year. This not only has an alarming effect on learning, but also poses a threat to gender equality. A recent study titled “When schools shut: Gendered impact of COVID-19 on school closures” conducted by UNESCO and published in October 2021 indicates how different sections of the population were affected by the pandemic induced school closures. In the context of economically deprived families, the learning time of girls was constrained by increased household chores whereas boy's participation in learning was affected by income generating activities. Apart from this, girls also faced difficulties in engaging in digital modalities of remote learning majorly due to limited access to digital devices, lack of digital skills and cultural norms which restrict their use of technological devices. It is important to acknowledge the need for gender responsive and gender inclusive learning besides providing appropriate teacher support and training to combat this inequity ([UNESCO, 2021](#)).

The unequal distribution of household chores and impact of pandemic on the same has been highlighted in a rapid assessment conducted by a consortium of civil society partners like PRADAN, New Delhi; Action for Social Advancement, Bhopal among other published in May 2020. It covered about 5,162 rural households and 47 districts across 12 states – Assam, Bihar, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Maharashtra, Madhya Pradesh, Odisha, Rajasthan, Uttar Pradesh and West Bengal. This data was collected between April-May 2020. Among the surveyed households, those with returned migrants showed a significant increase in household chore for women this included more frequent trips to fetch water along with increased time to fetch water and fuel wood. The result highlighted disproportionate effect of lockdown and returned migrant member on the women of household ([rural indiaonline.org, 2020](#)). In a survey conducted among 15000 women and 2300 men from low-income households across 10 states assessed changes in work responsibilities during and post lockdown period 2020. It showed that a disparity in unpaid responsibilities for women and men existed among those surveyed. About 47 percent of women (compared to 43 percent of men) reported an increase in chores and 41 percent of women (compared to 37 percent of men) reported an increase in unpaid care work; 32 percent rural men lost paid work during the peak of the crisis (compared to 41 percent of rural women) and only 4 percent are yet to recover compared to 11 percent of rural women; more women from historically marginalized groups affected including women from lower-income households, Muslim, migrant women, and single separated/divorced women ([Dalberg, 2021](#)).

As the gender disparity in education and household chores has been highlighted, the gender aspect of household food allocation is also of importance. A survey conducted in 1,694 households from Bihar and Uttar Pradesh concluded that, as compared to men, a higher proportion of women reported food shortage and reduced intake. Pregnant women consumed 3 food groups on an average, falling short of the recommended 5 food groups. Least consumed food groups were dairy and flesh foods. During the pandemic, when households face food insecurity, the gender inequalities may have further increased and the resulting changes in consumption patterns may have inter-generational effect on nutritional status of women and children ([IFPRI, 2020](#)). Though the impact of COVID-19 on individual dietary intake has been discussed in detail in chapter 3, a cross-sectional study conducted in May-June

2020 among 400 lactating mothers in the tribal-dominated district of Palghar, Maharashtra also highlighted disproportionate impact on women. Study finding report that only half of the lactating women (56.5 percent; 95% CI: 37.4; 73.8) had a minimum diversified diet (MDD) ([Rajpal, et al., 2021](#)). As reported in the previous situational overview, decrease in consumption of nutrient rich food groups like meats, eggs, vegetables, and fruits and increased food and nutrition insecurity was highlighted in women belonging to low-income households from 10 states ([Dalberg, 2021](#)). Decline in household food expenditures and women's dietary diversity were found at national, state (UP, Bihar and Odisha) and district level through comparisons of May 2020 to May 2019 data ([Gupta, et al., 2021](#)). The pandemic and resulting measures have further added to the existing inequities. Some studies conducted among the social and economically vulnerable sections also highlight this differential impact. In an attempt to document the plight of vulnerable communities and workers, the COLLECT<sup>8</sup> team gathered information from the most marginalised hamlets over nine months (April to December 2020) across 14 states of India. The study highlights that in October-December 2020 distribution of ration under TPDS was high among ST and SC hamlets (close to 85 percent), whereas among Muslim, De-notified and Nomadic Tribes (DNT) this was around 60-75 percent. More than 50 percent of the hamlets reported that no one received ration in lieu of mid-day meals in April, May and June 2020. This reduced to 36 percent in December. More than 40 percent locations reported that there was at least one instance of lactating mothers not receiving supplementary nutrition. Across the nine months an average of 43 percent locations reported that school going children (6 to 14 years) received dry ration in lieu of mid-day meal ([COLLECT,2020 accessed on 10.01.2022](#)).

---

<sup>8</sup> COLLECT- Community Led Local Entitlement and Claims Tracker. Quarterly data collected (between April-December 2020) from states like Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Maharashtra, NCT of Delhi, Odisha, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand, West Bengal.

## CHAPTER 6: Key global highlights

- Based on World Bank report published in December 2021, despite the global food prices remaining stable and the outlook for global supplies being favourable, domestic food price inflation was rising in most countries. The poorest countries witnessed a sharp increase in food prices in September 2021, reaching the highest level since the start of the COVID-19 pandemic. COVID-19 is estimated to have dramatically increased the number of people facing acute food insecurity in 2020-2021. In countries where World Food Programme operates, an estimate was released quoting that, 272 million people were either at risk of becoming or were already acutely food-insecure ([World Bank, 2021](#)).
- According to the Global COVID-19 Trends and Impact Survey, by WHO, between 8 and 18 percent of the people undergoing COVID-19 tests were reported to be lowering their expenditure on household needs (such as food, housing, and utilities) in order to cope with connected expenses ([WHO, 2021](#)).
- The global report titled The State of Food Security and Nutrition in the World published by FAO in 2021 highlighted the growing global food insecurity. It was reported that hunger has affected 21 percent of the population in Africa, compared with 9 percent in Asia and 9.1 percent in Latin America and the Caribbean. In terms of numbers, more than half of the world's undernourished were found in Asia (418 million) and more than one-third in Africa (282 million). In 2020, almost all low and middle-income countries were affected by pandemic-induced economic downturns, and the increase in their number of undernourished was more than five times greater than the highest increase in undernourishment in the last two decades. ([FAO, 2021](#)).
- A study from sub-Saharan Africa published in September 2021, highlights the measures taken by the government to ensure food security for the vulnerable population. Government safety nets were either in the form of cash transfers, which involve transferring small sums of cash to households, or food assistance, which involves the provision of food, either directly, or through instruments such as food stamps or coupons that may be used to purchase food to assure a minimum level of food consumption. In Kenya, to mitigate the negative impact of COVID-19 restrictions, the government provided direct cash transfers to the poorest households through a scheme called Give Directly ([Dasgupta, et. al., 2021](#)).
- Report by OECD<sup>9</sup>, titled “Combating COVID-19’s effect on children” highlights that while some countries transformed the existing programs or made provision for newer ones, some countries utilized the existing food assistance programs for women and children. For instance, in the United States, there were numerous food assistance programme targeting vulnerable families, including the Supplement Nutrition Assistance Programme (SNAP) (formerly known as the food stamps programme)

---

<sup>9</sup> OECD- Organisation for Economic Co-operation and Development. The OECD’s 38 members are: Austria, Australia, Belgium, Canada, Chile, Colombia, Costa Rica, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States.

and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). During the COVID-19, Pandemic Electronic Benefit Transfers (P-EBT) was introduced, which provides households an EBT card with the value of the free school breakfast and lunch reimbursement rates for the days that schools are closed. In countries where NGOs are responsible for operating food banks are running special COVID-19 appeals to cope with the increased demand for emergency food parcels. The Spark organization in Canada has established a platform where people can post volunteer opportunities and share ideas on how to help populations in need, including with the provision of meals ([OECD, 2020](#)).

## Bibliography

1. A hidden cost: The Pandemic's Impact on Nutrition  
[https://accountabilityindia.in/wp-content/uploads/2020/12/Nutrition-Brief\\_.pdf](https://accountabilityindia.in/wp-content/uploads/2020/12/Nutrition-Brief_.pdf)
2. Agri, processed foods exports buck COVID trends, rise 22% in April-August  
<https://www.livemint.com/news/india/agri-processed-food-exports-buck-covid-trend-rise-22-in-aprilaugust-11632232390027.html>
3. AMB dashboard, cumulative  
<https://anemiamuktbharat.info/monthly-progress-cmnreport/>
4. AMB dashboard, monthly report  
<https://anemiamuktbharat.info/monthly-progress-cmnreport/>
5. Annual report 2020-21  
<https://agricoop.nic.in/en>
6. Annual TB report  
<https://tbcindia.gov.in/index1.php?lang=1&level=1&sublinkid=4160&lid=2807>
7. Breastfeeding and COVID-19  
<https://www.who.int/news-room/commentaries/detail/breastfeeding-and-covid-19>
8. Budget briefs: Food Subsidy and the National Food Security Act (Pre-Budget)  
<https://accountabilityindia.in/publication/food-subsidy-and-national-food-security-act-budget-briefs-2022-accountability-initiative-centre-for-policy-research/>
9. Budget briefs: Pradhan Mantri Poshan Shakti Nirman (Pre-Budget)  
<https://accountabilityindia.in/publication/pm-poshan-budget-briefs-2022-accountability-initiative-centre-for-policy-research/>
10. Budget briefs: Saksham Anganwadi and POSHAN 2.0 (Pre-Budget)  
<https://accountabilityindia.in/publication/saksham-anganwadi-budget-briefs-2022-accountability-initiative-centre-for-policy-research/>
11. Cabinet approves extension of Pradhan Mantri Garib Kalyan Ann Yojana  
<https://pib.gov.in/PressReleasePage.aspx?PRID=1774586>
12. Child malnutrition and COVID19: the time is to act now  
[https://www.thelancet.com/article/S0140-6736\(20\)31648-2/fulltext](https://www.thelancet.com/article/S0140-6736(20)31648-2/fulltext)
13. Collect community led local entitlements and claim trackers, dashboard  
<https://www.communitycollect.info/community-monitored-accountability>
14. Combatting COVID-19's effect on children  
<https://www.oecd.org/coronavirus/policy-responses/combating-covid-19-s-effect-on-children-2e1f3b2f/>
15. Continuity of Antenatal Care Services in Chhattisgarh during COVID19  
<https://www.heraldopenaccess.us/openaccess/continuity-of-antenatal-care-services-in-chhattisgarh-during-covid19>
16. COVID-19 and women's nutrition security: panel data evidence from rural India  
<https://link.springer.com/article/10.1007/s40888-021-00233-9#Abs1>
17. COVID-19 Disrupted Provision and Utilization of Health and Nutrition Services in Uttar Pradesh, India: Insights from Service Providers, Household Phone Surveys, and Administrative Data  
<https://poshancovid19.in/wp-content/uploads/2021/09/COVID-19-Disrupted-Provision-and-Utilization-of-Health-and-Nutrition-Services-in-Uttar-Pradesh-1.pdf>

18. COVID-19 induced Lockdown – How is the Hinterland Coping?  
<https://ruralindiaonline.org/en/library/resource/covid-19-induced-lockdown---how-is-the-hinterland-coping/>
19. Covid-19, disrupted vegetable supply chain and direct marketing: experiences from India  
<https://www.emerald.com/insight/content/doi/10.1108/JADEE-04-2021-0095/full/html>
20. COVID-19: a one-way ticket to a global childhood obesity crisis?  
<https://link.springer.com/article/10.1007/s40200-020-00682-2>
21. Diet diversity of urban households in India during the COVID-19 lockdown  
<https://pubmed.ncbi.nlm.nih.gov/34041988/>
22. Effect of COVID-19 Pandemic-Induced Dietary and Lifestyle Changes and Their Associations with Perceived Health Status and Self-Reported Body Weight Changes in India: A Cross-Sectional Survey  
<https://www.mdpi.com/2072-6643/13/11/3682/htm>
23. Ensure systematic distribution of food kits  
<https://www.thehindu.com/news/national/karnataka/ensure-systematic-distribution-of-food-kits/article37385680.ece>
24. Food for thought: addressing undernutrition to end TB  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8458477/>
25. Food Insecurity, Safety Nets, and Coping Strategies during the COVID-19 Pandemic: Multi-Country Evidence from Sub-Saharan Africa  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8508557/>
26. Food Security and COVID-19  
<https://www.worldbank.org/en/topic/agriculture/brief/food-security-and-covid-19>
27. Food Security Response during COVID-19 and PDS Best Practices in some States/UTs  
<https://reliefweb.int/sites/reliefweb.int/files/resources/WFP-0000133645.pdf>
28. Food Security Response during COVID-19 and PDS Best Practices in some States/UTs  
<https://reliefweb.int/sites/reliefweb.int/files/resources/WFP-0000133645.pdf>
29. FSA distribution circular, Bihar government  
[https://poshancovid19.in/wp-content/uploads/2021/08/MDM\\_Bihar-Guideline-till-Mar-21.pdf](https://poshancovid19.in/wp-content/uploads/2021/08/MDM_Bihar-Guideline-till-Mar-21.pdf)
30. FSA distribution circular, Odisha government  
[https://poshancovid19.in/wp-content/uploads/2021/08/Letter\\_DSME-Dept\\_Distribution-of-MDM-Ration-at-doorstep\\_Odisha.pdf](https://poshancovid19.in/wp-content/uploads/2021/08/Letter_DSME-Dept_Distribution-of-MDM-Ration-at-doorstep_Odisha.pdf)
31. Global monitoring report on financial protection in health 2021  
<https://www.who.int/publications/i/item/9789240040953>
32. Global tuberculosis report 2021  
<https://www.who.int/publications/i/item/9789240037021>
33. Guidance Note for Persons engaged in HIV/AIDS response under National AIDS Control Programme in view of the COVID-19 scenario  
<http://naco.gov.in/sites/default/files/Guidance%20Note-COVID-19.pdf>
34. HIV and Nutrition and Food Safety  
<https://hivinfo.nih.gov/understanding-hiv/fact-sheets/hiv-and-nutrition-and-food-safety>
35. How India got PDS delivery right during the pandemic  
<https://www.financialexpress.com/opinion/how-india-got-pds-delivery-right-during-the-pandemic/2148293/>



36. Impact of COVID-19 on Child Nutrition in India: What are the Budgetary Implications?  
<https://www.cbgaindia.org/wp-content/uploads/2021/01/Impact-of-COVID-19-on-Child-Nutrition-in-India-What-are-the-Budgetary-Implications.pdf>
37. Impact of Covid-19 on Agriculture in India  
<http://www.jepa.casprindia.org/index.php/home/article/view/6>
38. Impacts of COVID-19 on childhood malnutrition and nutrition-related mortality  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7384798/>
39. Impact of COVID-19 on household food insecurity and interlinkages with child feeding practices and coping strategies in Uttar Pradesh, India: a longitudinal community-based study  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8061560/>
40. Impact of Covid-19 on women in low-income households in India  
[https://impactsofcovid.in/assets/front\\_assets/download/Impact-of-Covid-19-25052021.pdf](https://impactsofcovid.in/assets/front_assets/download/Impact-of-Covid-19-25052021.pdf)
41. Impact of Crop Diversity on Dietary Diversity Among Farmers in India During the COVID-19 Pandemic  
<https://www.frontiersin.org/articles/10.3389/fsufs.2021.695347/full>
42. Impact of the COVID-19 pandemic on agricultural production, livelihoods, and food security in India: baseline results of a phone survey  
<https://link.springer.com/article/10.1007/s12571-021-01164-w>
43. Improving the implementation of the Take Home Ration Programme Under ICDS, Findings from Rajasthan and Jharkhand  
<https://www.idinsight.org/publication/improving-the-implementation-of-the-take-home-ration-programme-under-icds/#fnref-4>
44. India's Public Distribution System in the Pandemic  
<https://accountabilityindia.in/blog/indias-public-distribution-system-in-the-pandemic/>
45. Inside district accountability initiative dashboard  
<https://www.insidedistricts.com/by-function>
46. Integrated Child Development Services (ICDS) Scheme in India, Tracking State Government Responses to COVID-19  
[https://poshancovid19.in/wp-content/uploads/2021/08/WFP-2021-05-ICDS-tracker-Report\\_19-Round-6.pdf](https://poshancovid19.in/wp-content/uploads/2021/08/WFP-2021-05-ICDS-tracker-Report_19-Round-6.pdf)
47. Jal jeevan mission annual report  
<https://jalshakti-ddws.gov.in/jaljeevansamvad/2021/december/en/index.html#p=35>
48. LOCKED OUT: Emergency Report on School Education  
<https://roadscholarz.net/>
49. MAKING THE MID-DAY MEALS FUNCTIONAL FOLLOWING SCHOOL RE-OPENING  
[https://docs.wfp.org/api/documents/WFP-0000115619/download/?\\_ga=2.194426788.881081860.1641018075-614548677.1640672559](https://docs.wfp.org/api/documents/WFP-0000115619/download/?_ga=2.194426788.881081860.1641018075-614548677.1640672559)
50. Maternal dietary diversity during lactation and associated factors in Palghar district, Maharashtra, India  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8716033/>
51. MDM guidelines  
[http://mdm.nic.in/mdm\\_website/Files/OrderCirculars/2021/DO\\_Lt\\_dt\\_16-10-2021\\_SOP\\_Guidelines\\_for\\_reopening%20\\_schools.pdf](http://mdm.nic.in/mdm_website/Files/OrderCirculars/2021/DO_Lt_dt_16-10-2021_SOP_Guidelines_for_reopening%20_schools.pdf)

52. Methods for assessing seasonal and annual trends in wasting in Indian surveys (NFHS-3,4, RSOC & CNNS)  
<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0260301>
53. National health portal  
[https://www.nhp.gov.in/breastfeeding-and-covid-19\\_pg](https://www.nhp.gov.in/breastfeeding-and-covid-19_pg)
54. National portal of India  
<https://www.india.gov.in/spotlight/poshan-abhiyaan-pms-overarching-scheme-holistic-nourishment>
55. NFHS-4 factsheet  
[http://rchiips.org/nfhs/factsheet\\_NFHS-4.shtml](http://rchiips.org/nfhs/factsheet_NFHS-4.shtml)
56. NFHS-5 factsheet  
[http://rchiips.org/nfhs/NFHS-5\\_FCTS/Final%20Compendium%20of%20fact%20sheets\\_India%20and%2014%20States\\_UTs%20\(Phase-II\).pdf](http://rchiips.org/nfhs/NFHS-5_FCTS/Final%20Compendium%20of%20fact%20sheets_India%20and%2014%20States_UTs%20(Phase-II).pdf)
57. Niti Ayog Portal  
<https://www.niti.gov.in/poshan-abhiyaan>
58. Nutrition India  
<https://nutritionindia.info/dashboard/5/1/12>
59. Nutrition security should be part of our Covid response  
<https://www.livemint.com/opinion/online-views/nutrition-security-should-be-part-of-our-covid-response-11629134703027.html>
60. Nutrition, Incomes and Livelihoods in Crisis – July Survey Across Four Regions of Three States  
<https://srcindia.wordpress.com/2021/08/14/nutrition-incomes-and-livelihoods-in-crisis-july-survey-across-four-regions-of-three-states/>
61. PIB press release  
<https://pib.gov.in/PressReleasePage.aspx?PRID=1779251>
62. PIB press release  
<https://pib.gov.in/PressReleseDetail.aspx?PRID=1774587>
63. PIB press release  
<https://pib.gov.in/PressReleseDetail.aspx?PRID=1774587>
64. Poshan Tracker dashboard  
<https://poshantracker.in/>
65. Puri, potable tap water  
[https://twitter.com/CMO\\_Odisha/status/1419614296972140545](https://twitter.com/CMO_Odisha/status/1419614296972140545)
66. Reduced food and diet quality, and need for nutrition services during COVID-19: Findings from surveys in Bihar and Uttar Pradesh  
<https://southasia.ifpri.info/2020/07/09/15081/>
67. REDUCED FOOD AND DIET QUALITY, AND NEED FOR NUTRITION SERVICES DURING COVID-19: FINDINGS FROM SURVEYS IN BIHAR AND UTTAR PRADESH  
<https://southasia.ifpri.info/2020/07/09/15081/>
68. School Meals in India – Tracking State Government Response to COVID-19 April- June 2021  
<https://poshancovid19.in/wp-content/uploads/2021/10/MDM-Updates-Round-5-April-June-2021-FINAL.pdf>
69. Statement of Ministry of Women and Child Development on Global Hunger Report 2021  
<https://pib.gov.in/newsite/erecontent.aspx?relid=225742>

70. TB care for women and Covid-A double health crisis in the offing?  
<https://pubmed.ncbi.nlm.nih.gov/33616508/>
71. Telengana Government portal  
[https://wdcw.tg.nic.in/Arogya\\_Lakshmi.html](https://wdcw.tg.nic.in/Arogya_Lakshmi.html)
72. The COVID-19 crisis will exacerbate maternal and child undernutrition and child mortality in low- and middle-income countries  
<https://www.nature.com/articles/s43016-021-00319-4>
73. The state of food security and nutrition in the world 2021  
<https://www.fao.org/3/cb4474en/online/cb4474en.html>
74. UNICEF's continuity of service tracking dashboard  
<https://poshancovid19.in/monitoring/>
75. Water, Sanitation, and Hygiene (WASH) during COVID19 pandemic in India: Practicability in poor settings!  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8292022/>
76. What are we assessing when we measure food security? A compendium and review of current metrics  
<https://pubmed.ncbi.nlm.nih.gov/24038241/>
77. When Pandemics Collide: The Impact of COVID-19 on Childhood Obesity  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7657263/>
78. When schools shut: gendered impacts of COVID-19 school closures  
<https://unesdoc.unesco.org/ark:/48223/pf0000379270>



© UNICEF/UN0390035/Vishwanathan

**Poshan Weekly** is a knowledge dissemination tool intended to share research, evidence, policy and programme guidelines as well as tools on Maternal and Child Nutrition with colleagues around India. It receives, compiles and shares the materials and is not responsible for its contents. The responsibility of contents lies with the authors. A few of the photos were captured pre-COVID-19 hence COVID Appropriate Behaviours are not evident in them. These stories can be shared more widely, as long as credit is given to the authors of the stories.

Please send your feedback, suggestions, and new stories to #PoshanWeekly: [poshan@unicef.org](mailto:poshan@unicef.org). If you want to subscribe to Poshan Weekly, please click here:

[SUSCRIBE](#)

**#PoshanWeekly**

**#StopChildMalnutritionIndia**