

Impact of Covid19 Outbreak on Health and Nutritional Status of Women and Children in Madhya Pradesh

STUDY BRIEF

Nutrition Security Amidst Covid-19

Sooner, The Better



BRIEF SUMMARY

1. Brief Overview

Malti Yadav is now barely able to feed her three daughters even with Chapati and salt. Her husband had migrated to Surat a few days back to earn his luck. Unfortunately, Corona-Covid 19 pandemic-triggered abrupt shutdown never gave him the opportunity to return back to his family. Malti's youngest daughter is Severely Acute Malnourished and needs nutritional support apart from food to sustain her life. More families like Malti's are striving hard for their daily breads.

1.1. Nutritional Status of India and MP

NFHS-4 says that in India, 58.4 percent of children in the ages of 6 to 59 months are anemic, 38.4 percent are stunted (Low Height-for-Age) 35.7 percent of all the children are under-weight (Low Weight-for-Age) and 21.0 percent are wasted (Low Weight-for-Height)¹. With a strikingly high Maternal Mortality Rate (MMR) at 130 per 100, 000 live births, Infant Mortality Rate (IMR) at 32 per 1000 live births and Under5 Child Mortality Rate (U5CMR) at 30 per 1000 live births, India is still striving hard to secure its nutritional equilibrium and that the situation in Madhya Pradesh is worse.

- According to National Family Health Survey -4 (NFHS-4), 42.8 percent of children are underweight, and 42.0 percent are stunted in Madhya Pradesh.
- Only 37.4 percent women between the ages of 15 and 24 years are adopting safe hygienic methods during menstruation whereas only 11.4 percent women receive full antenatal services.
- It is also notable that only 34.4 percent of the children are initiated early breastfeeding within one hour of birth, while 58.2 percent of the children receive Exclusive Breastfeeding for 6 months. It means that the rest of the 41.2 percent infants receive complementary feed as well along with the breast feed, within the first six months of life, which is a grossly inappropriate practice.
- Going by the facts and figures, four out of every ten children are affected by malnutrition in Madhya Pradesh. The Infant Mortality Rate is strikingly high at 47 in the state. More than half of the women and about two-thirds of adolescent girls are anemic.

1.2. Migration Status

According to Census 2011, about 453 million of people were recorded as migrants by place of last residence in India. The total migrant population of Madhya Pradesh is 25.3 million amongst with two-third of them being females. Bundelkhand region of the State represents a scenario wherein one member each from 50-70 percent of rural households migrates annually. **The study area also reflects the higher migrant pattern and has also witnessed maximum reverse migration cases during the lockdown. Simultaneously, their families have continued to remain affected due to lack of proper services delivery.**

1.3. Outbreak of Covid19 and its Impact

The outbreak of coronavirus disease 2019 (COVID-19) has caused a worldwide wellbeing crisis. It has established an unparalleled calamity leaving all the nations in dismay in the wake of catastrophic pandemic. India announced a 21-days lockdown to avert the pandemic spread of the virus in Phase-I, followed by complete lockdown for a period of another 19 days in phase-II and 15 days in phase-III. The Ministry of Health and Family Welfare, Gol suggested that the situation is turning grave as Covid-19 Positive cases are spiking up with each passing day. In a short span of mere a month, Madhya Pradesh has soared to more than 4000 cases.

¹ Government of India, Ministry of Health and Family Welfare, National Family Health Survey-4. 2015-16

Amidst already crucial health condition in the state, the outbreak of Covid-19 has largely affected more than 3 crore persons of unorganized and agriculture sectors. Around five lakh workers have herded back to their villages as almost all employment opportunities in construction, industry, and retail sectors have either been shut down or are severely curtailed to fewer ones in the wake of the pandemic.

With the onset of this pandemic, serious concern is raised on nutritional wellbeing of pregnant women, lactating mothers and 15000 children of these returning migrant families. Unfortunately, they are bound to feed on salt with chapati or rice to meet their basic hunger needs. Undoubtedly, the pandemic has also had an adverse impact on the implementation of schemes for their nutritional wellbeing and food security. This calls for an urgent and analytic insight into the situation at the ground level.

2. Methodology

2.1. Study Plan and Objectives

This Study, implemented amongst the community and migrant families, seeks to look into the plight of and problems faced by women and children of the marginalized and returning migrant families in the wake of Covid 19.

It aims to capture information on households documented through case studies, video, and photo documentation and by conducting in depth interviews and situation analysis through a mini survey conducted across 122 villages.

2.2. Geography and Sample Size

The studied area covered 6 districts of Madhya Pradesh: Panna, Satna, Rewa, Niwari, Umariya, and Shivpuri from where randomly selected 33 households across 122 villages having pregnant women, lactating mothers, children below 6 years and migrant families with mixed population were chosen to record case studies.

2.3. Method

This study has been carried out in two phases –

Phase One: In this phase, case studies on different scenarios and situations were collected with reference to the effect of pandemic and lockdown-triggered shut down on life, livelihood, food, and diet of the vulnerable and excluded and migrant families.

Phase Two: This phase looks into the analysis pertaining to the functionality of service delivery across 122 villages of 6 districts through a questionnaire in situ filled by the Field Teams.

2.4. Tools

A one-pager questionnaire with featured questions focusing on the migration status, economic and financial status, food security, benefits from schemes, etc. was administered by the Field Teams during the relief work undertaken by the Vikas Samvad Samiti. In doing so, Covid-19 protocols were duly observed. Follow-up through phone calls was also done with the respondents.

A mini-survey format covering the service deliverance issues was also administered across 122 villages.

3. Analysis and Findings

Based on the quantitative data derived both from the case studies recorded from the 33 different households covering the pregnant women, lactating mothers, children under-6, especially from the migrant families and daily wagers, and survey of 122 households, the analysis and findings as inferred are presented below –

3.1. Case studies-based Findings

3.1.1. Basic Profiling

1. **Population, Census Classification and Family Size:** Total number of family members across 33 covered cases stands at 179. The 33 household cases include as many as 21 migrant families (64 percent). These 33 households have 6 pregnant women, 12 lactating mothers 21 children (below 3 years of age), 24 children (3 - 6 years of age) and 12 adolescents.
2. Maximum households belong to Scheduled Tribes (79 percent including Mawasi, Gond, Kol and Baiga). Others include 12 percent OBCs and 9 percent SCs. Average family size is 5.4.
3. **Earnings during Lockdown** – 30 out of the 33 families (91 percent) did not have any employment as labourer or wage worker whereas 3 families (9 percent) were an exception, with 2 families (6 percent) being involved in Non-Timber Forest Produce (NTFP) collection and the other 1 family (3 percent) being employed on harvesting work in someone's field.

Rajankali Kol, Rewa says, "Somehow I have managed working in a landlord's field for harvesting and have received 70 Kg wheat on barter basis on 10 Kg per day basis. For buying food and ration, I had sold 30 Kg of wheat. Rest of the provisions I have procured by borrowing an amount of ₹1000. And, I shall pay it up once my husband is back home"

4. **Debts and Borrowing** – 24 percent of the households are under debt of total amount of ₹21250, with 12 percent being in debt for an amount ranging from ₹2000-4000, 9 percent of the families had borrowed lesser than ₹1000 and 3 percent families had owed more than ₹4000. Conversations with the families brought out that one family had even borrowed an amount of ₹50. Again, one of the cases is reported to have borrowed ₹7000. The families have owed the money in order to survive the odds this Covid has brought to them for running their daily errands and buying the kitchen essentials including spices, condiments, and oil apart from pulses and vegetables.

Khushbu Kol from Rewa says, "We owed ₹100 to the local shop a few days back, who has denied us giving any more credit. Nor the farmers on whose land we work, are willing to lend us money. Rather they would help us with grains. But we have run out of daily essentials. This has made life difficult. I have borrowed ₹1500 from a relative to buy the oil, spices, and vegetables. God knows what will happen if this lockdown persists..."

3.1.2. Schemes Outreach

Findings on the impact of Covid-19 on the Schemes like Public Distribution System (PDS), Mid-Day Meal (MDM), Integrated Child Development Services (ICDS), and its outreach to community are presented pointwise below –

1. **Take Home Ration (THR):** 35 percent of the beneficiaries have not received any THR packets compared to 65 percent who have received packets at home distributed by the Anganwadi Workers (AWWs). About 38 percent have received only two packets of THR.

Mamta Ahirwar, Niwari "I was on migration with my husband and 2 children when lockdown was imposed. I am 7 months pregnant and have just got registered under Anganwadi Centre (AWC) after arriving from Haryana. I got vaccinated but have not received THR on regular basis. I only have received 2 packets of Daliya but have not got any laddu or Sattu as of yet. My delivery and health conditions concern much to me..."

2. **Ready to Eat (RTE) Food:** 60 percent of beneficiaries have not received any RTE as of now. The 40 percent recipients include 10 percent getting 500 g of Sattu only once and 30 percent who have received 1200 g (600 g each for two weeks).

Siyabai Gond, Panna "I recently have become a mother second time to a girl. Due to health issues, I did not pay visit to AWC nor I have received any THR packets or Sattu for my 2 years old son. Both vaccination and home visits are due..."

3. **Self Help groups and RTE:** Guidelines were issued to provide ready-to-eat nutritious food to the beneficiaries of hot cooked meal under the Integrated Child Development Program in the emerging

crucial circumstances due to Covid 19. According to orders, local Self-Help Groups were instructed to prepare sattu or laddu and make it available to Anganwadi centers. Nevertheless, it is evident from the study that these SHGs were not provided with any clear instructions and information regarding the procedure for preparing RTE, quantity number of beneficiaries for availing the benefits and the cost they might need to bear for the preparation.

This information is crucial in terms of determining the monetary stability for these women groups who belong to disadvantaged and economic feeble section. They did not have enough credits or investments to maintain the supply of RTE from their side. In the absence of proper monitoring system at the state level, children had to be deprived of receiving the continuous and desired supply of RTE. Major findings below –

- 3.1. Self-help groups have provided RTE on an average of 67 grams per day, while according to the provision RTE to be supplied was 200 grams per day for children and 250 grams per day for women.
- 3.2. In this way, children have received only 66.5% whereas women have received 73% of the recommended as announced in the order.
- 3.3. About 88 percent of Self-Help Groups have not been paid for supplying RTE for 2 to 4 months.
- 3.4. About 88 percent of Self-Help Groups were not given any information regarding RTE supplies, its arrangements, recommendation etc.
- 3.5. The major cause behind the lack of supply of RTE came out to be the failure on State government's part in terms of not delving proper information and instruction to SHG and their timely payment arrangements.

4. **Growth Monitoring Status and Identification of Severe Acute Malnutrition (SAM)/Moderate Acute Malnutrition (MAM):** None of the beneficiaries have had their weight and height checked in the past two months. Nor any children's growth monitoring has been recorded across the districts.

Kusum Aadvasi, Pohri Shivpur says, " My younger daughter Anjali is a major concern for us for having been the malnourished child. She has contracted diarrhoea during the lockdown and felt sick. She is becoming weaker and growing thinner with the passing days. No monitoring is maintained to check on her. Her health has deteriorated, and this has uneased me..."

5. **Hot Cooked Meal (HCM):** None of the 24 children belong to 3-6 years of age were provided with Hot Cooked Meal by any Self-Help Groups (SHGs) as Anganwadi Centres are closed in the wake of Covid-19. The children ought to have been provided with THR packets and RTE as per the norms set by the government.

Phhool Bai Baiga Umaria, " My son Aakash who used to eat 5 times a day prior to this lockdown (including 4 times meal at home and Hot Cooked Meal once at the Anganwadi Centre. This has now completely stopped. I am concerned about his health. He cries often for food. I give him small portions of food three times a day..."

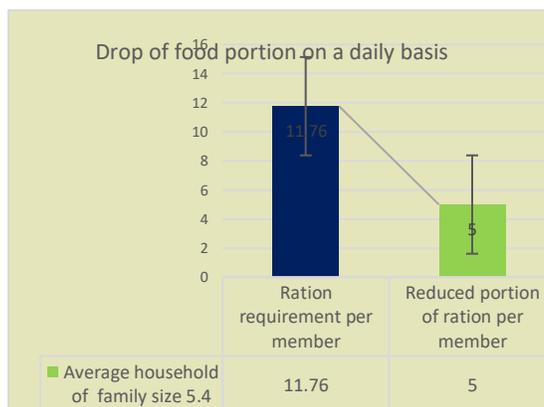
6. **Mid-Day Meals (MDM) in Primary Schools:** 58 percent school-going children have not received any food allowance in lieu of MDM, whilst those who have received, they have got as per the guidelines i.e. 3 Kg 300 g of wheat or rice or both as per the provision provided in the state. Also, about 96 percent are yet to receive the recommended cash allowances of ₹146 for 33 days.

Shakuntala Mawasi says, "My elder son Rajneesh, 8 years old, goes to school and used to have one meal there. I was not worried then but as it is stopped, it bothers me for his food. He has not received any ration as yet from the school..."

7. **Mid-day Meals in Secondary Schools:** 80 percent of the students have received MDM food allowances as per the recommendation (4900 grams for 33 days). Amongst these beneficiaries only 30% have received the cash as per the norms i.e. 221 for 33 days whereas 70% are yet to receive any.
8. **Status of Ration Availability through Public Distribution System (PDS):** 17 (52 percent) of families have been benefitted as per National Food Security Act (NFSA) entitlements whilst 6 (18 percent) of the families have only partially benefitted.

Pan Bai Baiga, Umaria *“My elder daughter is 9 and younger is only five and both of them have growing needs of nutrition in their diet which I fail to provide these days for having no livelihoods in hands. Chhoti (younger) often cries out of hunger and has become irritated from the past few days. Also, she appears weak as compared to earlier. We have had to cut down on their meals to two. With no aid from the PDS and extremely limited resources on earnings, I have left the condition into God’s hand...”*

9. **Ration Cards and Eligibility Slips:** 52 percent have eligibility slips, against 30% those who do not have any eligibility slip. 18 percent do not have separate ration cards but are registered under their parents’ cards.
10. **NFSA Category:** As many as 70 percent families have been benefiting from the PDS facilities under NFSA. However, the 30 percent families which have not accessed the benefits should be a cause for deep concern. Further, it is also notable that the 70 percent benefited families comprise 52 percent of those which have all members of the family covered in the scheme whereas 18 percent families are such where ration has been available to only one or two members of the families. Besides, 94 percent of the sampled families are entitled for Priority Household (PHH) Cards and that 6 percent are entitled for Antyodaya Anna Yojana (AAY).



11. **Ration Allocation during Covid-19 Lockdown:** About 9 percent of the families are deprived of receiving any ration from the government despite having BPL cards or AAY cards. 91 percent of the families have ration provided by other sources also apart from PDS subsidized ration.
12. **Source of Ration Allocation:** About 45 percent of the families are directly benefitted through PDS shops by purchasing the subsidized ration as per their allocation marked in eligibility slip. PMGKAY benefits are availed by fewer families (15 percent) by receiving ration free of cost from PDS as per 5 Kg per person. 12 percent of the families have been benefitted from relief work.

3.1.3. Food and Nutrition Security

With the event of Corona-19 outbreak and imposed lockdown, all the pillars of food security seem to have been compromised on all fronts leaving the community dependent only on the government schemes. The pillars include livelihood, harvesting, access to market, fields, and jungles.

3.1.3.1. Household Food Security

1. **Food availability:** 52 percent of families have PDS ration available as per NFSA entitlements against 18 percent of the families who are not getting 100 percent of the allotment.

2. **Food Sustainability:** About 77 percent families have received ration from different sources [including PDS subsidy and free/Pradhan Mantri Garib Kalyan Yojana (PMGAKY)/Panchayat/Relief kit by organization] and have food sustainability only for a month.
3. **Food Sufficiency:** An average family (with family size of 5.4) which requires a monthly ration of 63 Kg is provided with only 25 Kg. This has significantly dropped down per member's monthly intake from 11.76 Kg of ration to less than half i.e. to 5.04 Kg a month i.e. 168 g of daily intake of cereals. **It is worth mentioning here that this daily intake is just half the average recommended allowance by ICMR i.e. 270 g for Adult woman and 360 g for Adult man².**

Thus, the study concludes the food available to the family is insufficient in terms of monthly and daily food needs, portion size, dietary recommendation, and nutrient requirements.

3.1.3.2. Food Security of Pregnant Women, Lactating Mothers, and Children Below 6 Years of Age

Demonstrated in the table is the food security of women and children. Findings are analysed below –

A. Pregnant Women:

1. **PDS:** The ration availability from PDS is only 50 percent. Following various exclusions (uncovered members, non-inclusion of families etc.) cereals provided from PDS on a daily basis is computed as **150 g only**.

2. **THR Packets and Grains Per Day:** THR received by the women is averaged out to **2000 g** for three weeks which 2500 g lesser than the recommended allowance i.e. 4500 g. Also, per day THR grains intake is computed as 19 g which is only 8 percent of recommended value of 250 g a day. However, though the THR packets are meant for pregnant women or the lactating mothers, it is observed that the THR grains are consumed by all the family members in one or two meals. This is a general practice obtaining in the community. The practice is a pointer to an already a pitiable situation in the community with regard to the inadequacy of availability of foodgrains to the poor and vulnerable families. Consequently, the actual intake of dietary allowance for the pregnant woman is further cut down to 19 g for pregnant woman [(with an average family size of 5.4), which is just the 8 percent of the recommended THR Allowance i.e. 250 g a day]. This severely impacts her own nutritional wellbeing apart from that of the foetus.

3. **Daily Consumption Vs. Recommended Daily Allowance (RDA):** Total grains including THR and PDS, consumed by pregnant women per day is computed as 169 g in a day which is 63 percent of the recommended dietary allowance of 270 g a day.

A deficit of 101 g of cereals is recorded on a daily basis which would have serious health repercussions.

Pooja Bai Kol, Satna says that, "I am 5 months pregnant and my pregnancy is not yet registered at an Anganwadi Centre (AWC). I was about to register but failed to do so as the AWC was shut down because of Corona. My husband is a labourer and his earning is our source of income. As everything is closed, we are not even able to fulfil our diet needs. I

Particulars	Pregnant women	Lactating mothers	6 months - 3 years	3-6 years
Ration availability through PDS in percent age	50 %	50 %	50 %	50 %
Cereals provided by PDS per day	150.0	178.0	206.0	219.9
THR provided	2000.0	1700.0	1100.0	1100.0
THR recommended	4500.0	4500.0	3600.0	3600.0
Deficit	2500.0	2800.0	2500.0	2500.0
Per day THR grain intake computed as	19.0	15.0	12.0	12.0
Total grains consumed in a day (PDS+THR/RTE)	169.0	193.0	218.0	231.9
Recommended Dietary Allowance for cereals per day	270.0	300.0	60.0	120.0
Deficit	101.0	107.0	-158.0	-111.9

² ICMR

can even avail no Anganwadi benefits. Essentials like vegetables and other groceries are not available now which has left us with no choice apart from eating rice and dry roti with salt and sometimes dry aloo.”

B. Lactating Mothers

1. **PDS** : The ration availability from PDS is only 50 percent. Cereals provided from PDS on a daily basis is computed as **178 g** only.
4. **THR Packets and Grains**: THR received by the women is averaged out to 1700 g for three weeks which is 2800 g lesser than the recommended allowance i.e. 4500 g. However, though the THR packets are meant for the lactating mothers, it is observed that the THR grains are consumed by all the family members in one or two meals. This is a general practice obtaining in the community. The practice is a pointer to an already a pitiable situation in the community with regard to the inadequacy of availability of foodgrains to the poor and vulnerable families. Consequently, the actual intake of dietary allowance for the lactating mother is further cut down [15 g for lactating mother (with an average family size of 5.4) which is just the 6% of the recommended THR Allowance i.e. 250 g a day]. This severely impacts her own nutritional wellbeing apart from that of the breastfed children under 2.
2. **Daily Consumption Vs. RDA**: Total grains including THR and PDS, consumed by lactating mother per day is computed as **193 g in a day** which is 64percent of the recommended dietary allowance of **300 g** a day.

A deficit of 107 g of cereals is recorded on a daily basis which would cause deficiency of nutrients in the long run.

Anari Adivasi, Shivpuri, says “I recently have delivered a boy who is 1.5 months old. My younger son has got stricken with fever and diarrhoea so referred a local quack and gave him a fee of ₹50 out of a saving of ₹200. I had borrowed 2 Kg of ration from my neighbor to survive a day. I also had to borrow 10 Kg of ration from my mother in law. Panchayat provided me 10 Kg. I have managed 22 Kg but it still lesser than my family needs for a month about 30 Kg. I have thus cut down on meals with reduced rotis and more salt, chatni and potatoes if made available someway. I have dropped down on my elder son’s meals as well in order to survive the crisis. I neither have any access to CHCs or have met anganwadi or ASHA Didi”

C. Infants and Children

1. **Breastfeeding Frequency: Increased** - The breastfeeding frequency has increased in both the age groups. There is a demonstrated increase in the breastfeeding to almost 12 times a day i.e. the frequency has been doubled. Clearly, feeding load on the lactating mother has gone up and that the need to make up her nutritious dietary needs cannot be ignored.

Urmila Mawasi, Satna is a breast-feeding mother to one-year old young child who is currently being fed 10-12 times a day which is twice the frequency he was fed before the lockdown. Urmila states the irony that she is not provided with pulses, legumes, green vegetables and also running out of kitchen essentials including groceries, oil, and condiments. In such a time they have reduced the amount and quantity of the food along with its frequency. They have confined their vegetables only twice a week provided if some made it available to them from the field. Having two meals a day one with vegetable or potatoes and one with salt. Urmila is scared for not having provided the children with the desirable nutrient to meet their bodies’ demands at present.

2. **Meal Frequency: Decreased** -The meal frequency has fallen from 6 times a day to 3 times a day for children between 6 months to 3 years of age.

Bijna Adivasi, Shivpuri, “My elder daughter, Bandhana is only 4 years and has growing nutritious need. However, we have compromised with needs in view of the current circumstances. We have reduced the portion of their meals as well as mine to only two and sometimes one.

3. **PDS**: The ration availability from PDS is only confined to 50 percent. Cereals provided from PDS on a daily basis is computed as 206 (children 6 months – 3 years) and 219 g (children 3 - 6 years).
4. **THR Packets and RTE**: During the lockdown, the children are provided with THR packets as well as RTE food that includes Sattu in the studied districts. The total provision for RTE and THR packets for the

children between 6 months to 6 years as per the guidelines/orders issued by WCD was 3600 g (Based on 200 g per day, about 1200 g in a 1 week (6 days) and 3600 g for 3 weeks). However, in the study, it was computed that together the THR packets and RTE food as received by the children is averaged out to 1440 g for three weeks which is only 40% of recommended allowance i.e. 3600 g.

5. **THR Grains and RTE Grains Per Day:** Similarly when consumption of these grains was analysed on a daily basis, per day THR and RTE consumption is averaged out as 12 grams for children below 6 years of age (with an average family size of 5.4) which is just the 6% of the recommended allowance i.e. 200 g a day. It is worth mentioning again here that per day THR and RTE grains are computed based on the common practice observed in the villages of having packets and RTE food consumed by all family members.
6. **Daily Consumption Vs. RDA:** Total grains including THR and PDS, consumed is computed as 218 g by children 6 months – 3 years and 231.9 g by children 3 - 6 years.

As depicted, consumed grains by children of both the age groups during lockdown is only high on cereals which is even more than the recommended allowance but this is steeply very low on proteins food groups and immunity boosting foods that includes milk and milk products, animal products and green leafy vegetables and fruits which is true for pregnant and lactating mothers as well. This will create a deficit of nutrients for the both the groups of children, pregnant women and feeding mothers and would push them into the vicious cycle of malnutrition.

3.1.3.3. Nutrient Analysis

Nutrients	Pregnant woman				Lactating mothers				Children*			
	RDA	Consumed	Deficit	Deficit %age	RDA	Consumed	Deficit	Deficit %age	RDA	Consumed	Deficit	Deficit %age
Net Energy Kcal/d	3200	1043	2157	67%	3450	1116	2334	68%	1350	657	693	51%
Protein g/d	78	32	46	59%	74	35	39	53%	20	12	8	41%
Visible Fat g/day	30	20	10	34%	30	20	10	34%	25	19	6	24%
Calcium mg/d	1200	303	897	75%	1200	290	910	76%	600	230	370	62%
Iron mg/d	35	15	20	56%	21	16	5	23%	13	0	13	97%
Retinol	800	208	592	74%	950	207	743	78%	400	4	396	99%
Ascorbic acid mg/d	60	53	7	11%	80	52	28	35%	40	1	39	97%
Dietary folate g/d m	500	206	294	59%	300	206	94	31%	100	0	100	100%
Vitamin B12g/d	1	0	1	100%	2	0	2	100%	-	0	0	0%
Zinc mg/d	12	8	4	35%	-	8	0	0%	7	0	7	95%

**children those who are breastfed are not included under this analysis*

The nutrient Analysis is presented in Table-2. It brings out the following:

1. Pregnant women during this lockdown are consuming diet deficit in energy by 67 percent than recommended total calories, thus in similar pattern diet is deficit in protein by 59 percent, total fats by 34 percent and iron by 56% than the Recommended Dietary Allowances as prescribed by ICMR.
2. Similarly, lactating mothers are consuming diet deficit in energy by 68 percent than recommended total calories, thus in similar pattern diet is deficit in protein by 53 percent, total fats by 34 percent and iron by 23% than the Recommended Dietary Allowances as prescribed by ICMR.
3. Likewise, the diet consumed by children are also deficit by 51 percent in energy, 41 percent in proteins, 24 percent in fats whereas 62% in calcium and 97 percent in iron as compared to their Recommended Dietary Allowances prescribed by Indian Council of Medical Research.

These nutrients are calculated based on the cereals and grains consumption as computed per day as obtained by the beneficiaries from PDS and THR. This also includes the inclusion of the vegetables, pulses and oil consumption provided to the families on a weekly basis. This contains the consumption of potatoes, tomatoes, onions and other vegetables including brinjal, cabbage and bottle gourds once in a week. This is followed by consumption of oil which is limited to 2-3 kilograms in a month. The families are provided with

green leafy vegetables from other fields once in a while making their total consumption to 1-2 kilograms a month during this lockdown. Pulses consumption is however confined to barely 1 kg in a month given the consistency which is diluted to meet the families need.

This is alarming in terms of nutrients and diet consumption during this lockdown and if situation persists, children may fall in the Severe Acute Malnutrition (SAM) and Moderate Acute Malnutrition (MAM) categories and women may have to face severe drawbacks of nutrients deficiency.

3.2. Survey based Findings

Major highlights below –

- 1. Take Home Ration:** THR Distribution services are partially affected in 61 (50 percent) of the villages due to delay in receiving allotment, unavailability of THR stocks, closure of AWCs to prevent corona spread etc. THR is well distributed in 32 (26 percent) villages by AWWs at the beneficiaries' home with the support of the Anganwadi helpers.
- 2. Hot Cooked Meals:** As per the government orders followed, 85 percent AWCs have completely stopped providing HCMs whereas in 15 percent villages from Panna, Satna, Shivpuri, the HCM was stopped by centres themselves in the event of Covid-19. About 26 percent has not received any orders but was directed via WhatsApp message, verbal communication, or text messages.
- 3. Home visits:** 53 percent of the Anganwadi centres in the surveyed villages have remained unaffected by the lockdown and Anganwadi workers are found to have been doing regular nutrition counselling visits started from second week of April. Anganwadi workers from 40 percent of the villages have completely stopped doing home visits in the wake of Corona Covid-19 lockdown. They were directed either verbally over phone or through WhatsApp messages.
- 4. Community Events and Village Health Sanitation Nutrition Day (VHSND):** No community events have been taking place in 77 percent villages and VHSND has been stopped completely in 58 percent villages due to Covid 19 protocols. In 26 percent villages, frontline workers have not been given any instructions. In 21 percent villages, where these events do not seem as a priority.
- 5. Growth Monitoring Status and identification of Severe Acute Malnutrition (SAM)/Moderate Acute Malnutrition (MAM):** In 51 percent villages growth monitoring is completely stopped and in almost all the Anganwadi of 47 percent villages, management and identification of MAM and SAM children has come to a halt.
In 20 percent villages (i.e. 25 villages of Satna and 5 villages of Rewa), if any malnourished children are observed during home visits, are provided with supplementary nutrition and THR packets. This way, during home visits and THR distribution, Anganwadi workers and helpers are observing the MAM and SAM children in terms of health symptoms.
It is thus evident that none of the villages have been continuing on growth monitoring on technical grounds i.e. as per the established norms by following weighing and measuring weight and height of the children.
- 6. Review meetings and convergence meetings:** Regular convergence meetings held between health and Integrated Child Development Services (ICDS) departments are completely stopped in all the 122 villages. Likewise, regular review meetings and nutrition meetings have stopped completely in 74 percent villages.
- 7. Provisions of Hot Cooked Meal (HCM) for Children:** None of the villages have shown continuation of HCM during the lockdown. However, the allowance in lieu of this is also not fully established.

8. **Mid-Day Meals (MDM) for both Primary and Secondary schools:** Schools of 80 percent villages have discontinued the MDM completely due to closures of schools and simultaneously Mid-day meal programmes. Schools of 20 percent villages have established distribution of the food allowance in place of the MDM as per the recommended norms
9. **Status of PDS Across the Villages:** In 78 percent of the villages, it remained unaffected i.e. 95 villages have continued providing ration during Covid 19. Contrary to this, about 22 percent villages of the districts have faced partially affected services during the Covid 19 lockdown.

4. Detailed Recommendations

Based on the analysis, conclusion, and discussions, on the findings of the study and the scenario from the field area, following detailed recommendations are suggested to be looked into at both the levels of policy and implementation:

1. Under the ICDS program, the Supplementary Nutrition Program (SNP) should be converted into the Complete Nutrition Program (CNP). For this purpose, the per beneficiary provisions need to be increased.
2. Immediate provisions should be earmarked and allocated to provide complete nutrition food to the children of migrating families / workers.
3. Nutrition programme should be decentralized through women's and Self-help groups.
4. Maternal entitlements (currently Pradhan Mantri Matru Vandana Yojana) should be universalized. For maternal benefits, the conditions affecting the health and life of women should be removed. As a maternal benefit/entitlement, six months' support should be provided at par with the minimum wage.
5. It is recommended to decentralize the ration system i.e. Public Distribution System wherein procurement and distribution of local produce should be established. Social audit of PDS under NFSA must be done.
6. 200 days employment should be given under MNREGA. Under MNREGA, provision of living wage should be maintained while abolishing minimum wage provision. Social Audit should be implemented along with effective grievance redressal system.
7. All claims of individual and community rights should be accepted under the Forest Rights Act.
8. The provision of nutrition garden / kitchen garden should be made mandatory in all Anganwadi centres and schools. In every village, fruit trees should be planted 5 times the total families residing there while maintaining the continuous monitoring.
9. There should be provision of subsidy to raise milking cattle and availability of fodder to increase the milk production and incentive scheme should be started for fish farming and pond construction.

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