Addressing child undernutrition in India: Opportunities and Challenges

Proceedings of a consultation on intersectoral convergence in Telangana

NOVEMBER 2025

M S Swaminathan Research Foundation
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Proceedings of the Online Consultation on Intersectoral Convergence for Nutrition held with Government Departments of Telangana (Held on 22nd January 2025 and 14th February 2025)

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Proceedings of the Online Consultation on intersectoral convergence for Nutrition

held with

Government Departments of Telangana

as part of the study on

"Assessing the Impact of Poshan Abhiyaan in Addressing Child Undernutrition in Aspirational Districts Across India"

Held on 22nd January 2025, 10.00am

and 14th February 2025, 02.00pm

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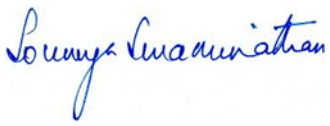
PREFACE

The Integrated Child Development Services (ICDS) Programme is the largest, domestically funded Early Childhood Programme in the world. As early as 1975 when it was introduced, it operationalized taking services right into the community and served as a convergence platform to meet the intersecting needs of women and children. While the core principles continue to remain the same, there have been considerable changes in the programmatic and administrative aspects of service delivery, for improving efficiency and impact. The Poshan Abhiyaan program launched in 2018 aimed to further strengthen convergence and had an ambitious goal of reducing stunting by 2% and undernutrition by 2% per year.

We are thankful to the Ministry of Women and Child Development for having given M S Swaminathan Research Foundation an opportunity to organize a series of consultations with government departments across several states on this subject. It was a very interesting exercise and threw up the heterogeneity of the situation in India across States, and also a lot of insights from a variety of stakeholders. I thank all the government officials of Telangana who gave their valuable time in participating in the consultation. As those who are implementing the programme and involved in serving the community, their critical inputs and suggestions are key to enhancing service delivery and improving the impact of the program. We hope that the findings of this consultation will help WCD in addressing the gaps and leveraging the opportunities to further reduce malnutrition in the country.



Soumya Swaminathan
Chairperson
M S Swaminathan Research Foundation
November 2025

ACKNOWLEDGEMENTS

The M S Swaminathan Research Foundation is deeply thankful to the Ministry of Women and Child Development, Government of India for allowing us to organize a series of consultations across several states to understand the convergence between various government departments to address child undernutrition in India.

We extend our gratitude to all the government officials from Telangana who participated in the online consultation representing the departments of Women and Child Development, Panchayati Raj and Rural Development and Department of Rural Water Supply and Sanitation.

We thank the Gates Foundation and the Karmannya Council for the financial and logistic support extended towards this consultation.

Contents

Background

Malnutrition is a multi-faceted phenomenon requiring concerted efforts from different stakeholders. In India there are several government programmes across life cycle to improve peoples' health and nutrition. These include direct feeding programmes, health interventions, provision of safe drinking water supply, sanitation, agricultural interventions, and livelihood enhancement programmes. While all these have helped in improving health and nutritional outcomes, progress has been slow. Of even more concern is that some states are lagging more than others. In 2018 the Government of India launched the aspirational districts programme, to propel the 112 least developed districts towards prosperity and good health.

The Poshan Abhiyaan or the Prime Minister's overarching scheme for reducing malnutrition among young children, also launched in 2018, is an important milestone in India's journey towards eliminating malnutrition. Poshan Abhiyan aims to improve the nutritional status of pregnant women, lactating mothers, adolescent girls, and children between 0-6 years in a time bound manner by reducing stunting and wasting in children (0-6 years) as well as reduction in anaemia in women, children, and adolescent girls. This program drives its mission for nutrition security through a three-pronged strategy: harnessing innovative technology, fostering convergence among government departments, and mobilizing communities through the Jan Andolan public movement for social and behavioural change.

Recognizing well the importance of convergence between various government departments to tackle the problem of malnutrition holistically, Poshan Abhiyan provides a platform for convergence to realize the goal of 'Suposhit Bharat.' It lists out high impact interventions of 18 ministries/departments especially during the first 1000 days of life since conception Every department formulates a strategic plan for nutrition and aligns it with its current initiatives.

The M. S. Swaminathan Research Foundation (MSSRF) with support from the Ministry of Women and Child Development undertook a study to assess the impact of Poshan Abhiyaan in reducing child undernutrition in select aspirational districts between November 2024 to June 2025. As part of this exercise MSSRF held a series of online and offline consultations with various government departments to understand their role and contributions in addressing

malnutrition. Online consultations were held in the states of Andhra Pradesh, Telangana, and Rajasthan while offline consultations were held in Assam, Chhattisgarh, and Jharkhand.

"The current proceedings highlight the initiatives undertaken by government departments and programs in Telangana to address malnutrition."

Agenda of the online consultation held on January 22, 2025

TIME	TOPICS	DETAILS
FORENOON SESSION		
10.00 to 10.05 am	Welcome Address	Dr. Rama Narayanan – Senior Fellow, MSSRF
10.05 to 10.10 am	Introduction of Participants	
10.10 to 10.15 am	Purpose of the consultation	Dr. Rama Narayanan – Senior Fellow, MSSRF
10.15 to 10.55 am	Convergence of safe drinking water supply and sanitation facility to households with children below six years in aspirational versus non aspirational districts and convergence for behavior change communication	Mr. A. Vijay Kumar Chief Engineer Planning, Mission Bhagiratha, Department of Drinking water, Govt. of Telangana
10.55 to 11.00 am	Closing Remarks	Dr. Rama Narayanan – Senior Fellow, MSSRF
AFTERNOON SESSION		
03.00 to 03.05 pm	Welcome Address	Dr. Rama Narayanan – Senior Fellow, MSSRF
03.05 to 03.10 pm	Introduction of Participants	
03.10 to 03.15 pm	Purpose of the consultation	Dr. Rama Narayanan – Senior Fellow, MSSRF
03.15 to 03.55 pm	Improving livelihoods for ending hunger, childcare support to mothers of young children in MGNREGS and convergence with another department	Mr. Murali State Programme Manager – MGNREGA, Department of Panchayati Raj and Rural Development, Govt. of Telangana and M. Seshu Kumar, Joint commissioner MGNREGA, Department of Panchayati Raj and Rural Development, Govt. of Telangana
03.55 to 04.00 pm	Closing Remarks	Dr. Rama Narayanan – Senior Fellow, MSSRF

Agenda of the online consultation held on February 14, 2025

TIME	TOPIC	DETAILS
02.00 to 02.10 pm	Welcome address and Purpose of the Consultation	Dr. Rama Narayanan – Senior Fellow, MSSRF
02.10 to 02.15 pm	Introduction by the participants	
02.15 to 03.00 pm	State Nutritional Profile of Children (0-6 years) and Role of Poshan Abhiyaan in addressing child undernutrition	Dr. Vijayalaxmi – Joint Director, Department of Women and Child Development, Govt. of Telangana
03.00 to 03.15 pm	Discussion and Closing Remarks	Dr. Rama Narayanan – Senior Fellow, MSSRF

The online consultation with officials from the Department of Rural Water Supply, Government of Telangana begins with the welcome address by the moderator Dr. Rama Narayanan, Senior Fellow of M S Swaminathan Research Foundation. Followed this the delegates participated in the consultation introduced to set stage for the discussion.

The moderator invited the presenter Mr. A. Vijay Kumar, Chief Engineer Planning, Mission Bhagiratha from the Department of Rural water supply to narrate the role and efforts of the department in addressing nutritional status of the children.

Role of Rural Water Supply department in addressing undernutrition

Presented by: Mr. A. Vijay Kumar, Chief Engineer Planning, Mission Bhagiratha,
Department of Rural water supply

Mission Bhagiratha in Telangana:

Mission Bhagiratha, an initiative of Telangana's Rural Water Supply department, delivers treated surface water to rural communities and provides bulk water to urban local bodies outside the outer ring road. Its goal is to ensure a daily supply of piped drinking water to every home, with a designated per-person amount of 100 Litres per Capita per Day (LPCD) in rural areas, 135 LPCD in municipalities, and 150 LPCD in municipal corporations. The program sources raw water from the Krishna and Godavari River basins. This water is purified at 123 treatment plants across the state before being distributed daily to 23,836 rural habitations and 127 Urban Local Bodies (ULB). For an additional 150 remote habitations in deep forests and hilly areas, individual solar-powered schemes provide safe drinking water. The mission has achieved universal coverage, supplying all 23,511 schools and 27,310 Anganwadi centres. It has also provided 53.74 lakh rural households with Functional Household Tap Connections (FHHTC), a milestone Telangana reached in 2019. This reliable access to safe, surface-based water has eliminated waterborne diseases in the state. In case of disruption in Mission Bhagiratha grid supply, local backup sources including hand pumps, single-phase pumps, and standalone pump and sump (SUS) schemes were used to maintain water supply.

Table 1: Coverage of Rural Water Supply in Telangana

Sl.no	Particulars	Coverage
1	Rural District	32
2	Mandals	541
3	Gram Panchayats	12743
4	Villages	10452
5	Rural Habitations	24459
6	SC Dominated Habitations	1992
7	ST Dominated Habitations	10039
8	Rural population (Lakhs)	225.90
9	Rural SC population (Lakhs)	44.76
10	Rural ST population (Lakhs)	33.40

Stages involved to reach bulk treated water to the habitation/urban Local Bodies:

The process of delivering treated water to communities involves two main stages involving bulk supply to the community and then distribution to individual houses.

1. Bulk Supply to the Community (The Grid)

- **Sourcing:** Raw water is first drawn from sources like rivers, reservoirs, or dams.
- **Transportation:** This water is then moved, either by pumping or by gravity flow, to Water Treatment Plants (WTPs).
- **Treatment:** At the WTP, the water undergoes processing, filtration, and disinfection until it meets safe drinking standards.
- **Lifting to Storage:** The treated water is pumped to large, elevated storage reservoirs (Overhead Bulk Reservoirs - OHBRs) or ground-level reservoirs (GLBRs) located at the highest available points, such as hilltops.
- **Gravity-Fed Distribution:** From these high-point reservoirs, the water is transmitted downhill through a secondary network of pipelines. Approximately 98% of this distribution to local service tanks like Over Head Storage Reservoirs (OHSRs) is achieved using gravity, requiring no additional pumping.

2. Distribution to Individual Households (Within the Village)

- **Final Disinfection:** Once the treated water reaches a village's local storage tank (OHSR), it is disinfected a second time, typically by adding bleaching powder.
- **Gravity-Based Distribution:** The water flows from the storage tank through a network of pipes that use gravity to reach every household in the community.
- **Household Connection:** Water is delivered directly to each home through a tap connection fixed to the distribution pipeline.

Water Quality Monitoring & Safety:

Water safety is ensured through a rigorous, multi-layered monitoring system. A network of 187 laboratories (76 from the Mission Bhagiratha department and 111 at Water Treatment Plants) continuously tests water samples. These tests, conducted as per Central Public Health and Environmental Engineering (CPHEEO) guidelines. CPHEEO serves as the technical wing of the Ministry of Housing and Urban Affairs (MoHUA) in India, responsible for urban water supply, sanitation, and municipal solid waste management. The analyse raw and treated water for physical, chemical, and bacteriological properties are carried out to guarantee that the potable water supplied to every household meets the Bureau of Indian Standards (IS 10500:2012). This surveillance covers the entire journey of the water, from the initial intake point to the final household tap.

Preventive Maintenance & Operations

The operation and maintenance of the village-level water supply infrastructure are managed by the Gram Panchayats (GPs). A strong focus is placed on preventive measures to avoid gastroenteritis (GE) outbreaks. Key practices include:

- **Regular Chlorination:** A measured dose of bleaching powder is added to village storage tanks each time they are filled to disinfect the water before distribution.
- **Tank Cleaning:** The cleaning of all village storage tanks is scheduled on a strict ten-day cycle, specifically on the 1st, 11th, and 21st of each month.
- **Hygiene and Leak Control:** The areas around water sources like OHSRs, hand pumps, and single-village schemes are kept hygienic. Pipeline and valve leaks are repaired immediately.
- **Infrastructure Safety:** It is ensured that drinking water pipelines do not run through village drains and that households do not use unsafe "pit taps."

Special Measures & Community Awareness

Additional precautions are activated during high-risk periods:

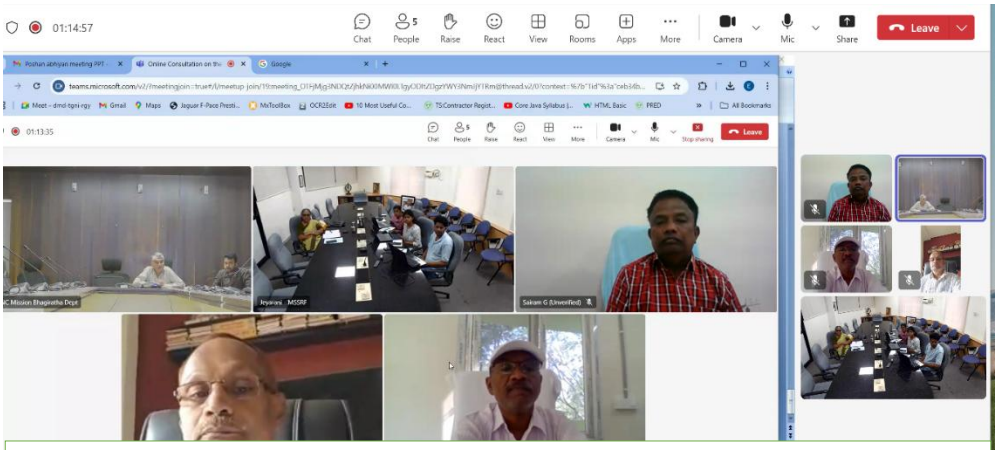
- **Increased Chlorination:** The chlorine dosage is doubled during heavy rains or floods to prevent waterborne diseases.
- **Residual Chlorine Testing:** Gram Panchayats are equipped with Chloroscope to test chlorine levels at the local level.
- **Public Awareness:** Consumers are advised to consume only boiled or filtered water during floods or GE outbreaks. Awareness programs also educate the public on the potential health risks associated with excessive consumption of RO water.
- **Capacity Building**: To sustain this system, 13,817 village-level officials ('Grama Manchineeti Sahayakulu' or GMS) have been trained. This equips them with the necessary skills to perform minor repairs and essential preventive maintenance, ensuring the system's long-term functionality.

Table 2: Habitations Coverage in Aspirational Districts

S.No	Districts	Total Habitations	Covered with surface sources	Covered with local safe source	Newly Identified habitations
1	Bhadradri Kothagudem	1587	1450	128	9
2	Jayashankar Bhupalapally	431	426	0	5
3	Kumarambheem Asifabad	1176	1138	9	29

Table 3: Households Coverage in Aspirational Districts

S.No	Districts	Total Households	Covered with FHHTC	In progress
1	Bhadradri Kothagudem	228738	218109	10629
2	Jayashankar Bhupalapally	106020	105842	178
3	Kumarambheem Asifabad	109096	100404	8692



Online Consultation with the Department of Rural Water Supply, Government of Telangana

Key outcome of the Floor Discussion:

- ✓ A significant operational challenge within the water supply system pertains to the timing of water delivery to educational institutions, specifically schools and anganwadi centres. Currently, the water supply is scheduled for early morning and late evening hours. This creates a critical mismatch, as the supply ceases just as the school day begins, leaving these facilities without direct access to water during their core operational hours.
- ✓ This issue has direct consequences for the health, hygiene, and nutrition programs—such as the Mid-Day Meal scheme and supplementary nutrition at anganwadis, that rely on a consistent and accessible water supply throughout the day.
- ✓ To resolve this infrastructural gap, the identified solution is the installation of dedicated storage facilities, such as overhead tanks or large sumps. This would allow the institutions to store water delivered during off-peak hours and utilize it as needed throughout the day.

The next session of the consultation begins with the presentation by Mr. M. Seshu Kumar, Joint commissioner of MGNREGA and Mr. Murali, State Programme Manager of MGNREGA to

present the initiatives of Panchayati Raj and Rural Development department to ensure the health status of the community particularly among children.

Role of Panchayat Raj and Rural Development department in addressing undernutrition

Presented by

Mr. M. Seshu Kumar, Joint commissioner of MGNREGA and Mr. Murali, State Programme Manager of MGNREGA

Program Objectives and Core Principles:

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is not merely a scheme but a landmark social welfare legislation that acts as a cornerstone of India's rural development policy. Its primary aim is twofold: first, to enhance rural livelihoods by legally guaranteeing up to 100 days of wage employment per household per year, thereby acting as a critical safety net during periods of economic distress.

Second, it mandates the creation of durable and productive assets that strengthen rural infrastructure, improve environmental sustainability, and provide long-term benefits to the entire community. This dual focus—on immediate poverty alleviation and long-term asset creation—ensures that the program delivers both immediate financial relief and generates enduring economic and social value, fundamentally transforming the rural landscape.

Workforce Demographics and Wage Structure

The scheme is notable for its high participation rate from women, who constitute 62% of the workforce, a figure that significantly surpasses their participation in many other sectors of the economy. This high involvement is often attributed to the scheme's provisions for equal wages and work within proximity to their homes.

The workforce is typically aged between 18 and 70, with a majority being over 50 years old, highlighting the program's role in providing employment for those who may find fewer opportunities in more physically demanding labour markets. Remuneration for work is set at a standardized daily rate of Rs. 250 to 300, a policy that applies equally to all workers regardless of gender. These wages are disbursed electronically via direct deposit into individual bank accounts. This digital transfer system is a cornerstone of the program's design, ensuring transparency, reducing leakage, and promoting financial inclusion by bringing unbanked populations into the formal economy.

Operational Timing and Seasonal Nature:

MGNREGA's operational calendar is strategically aligned with the agricultural cycle. It is most active during the summer months (March to June), which coincides with the lean agricultural season when demand for farm labour is at its lowest. This deliberate timing ensures that the scheme provides a critical source of income when rural households are most vulnerable to economic hardship. In order to safeguard worker health and well-being, work schedules are carefully adjusted to avoid the intense afternoon heat, typically running from 6 AM to 11 AM.

Economic Impact and Spending Patterns

- The income from MGNREGA has a profound and gendered impact on household economies. Studies and data indicate that women tend to allocate a substantial majority (approximately 70%) of their earnings towards critical family welfare needs such as healthcare, children's education, and purchasing inputs for the upcoming cultivation season. The timing of these wage payments is crucial, as they are received just before the June-July sowing period and the start of the school year, allowing for strategic investment in productivity and human capital.
- Landless laborers, with fewer assets to invest in, often spend their income primarily on immediate food security, thereby enhancing household nutritional intake. Men's spending priorities are often observed to differ, sometimes including other expenses. Most importantly, this increase in mothers' income has been directly correlated with improved nutritional status and health outcomes for their children, underscoring the program's indirect role in enhancing human development indicators.

Budget Allocation and Types of Work Created:

The program's financial execution is highly seasonal, with a significant portion (70%) of its annual budget being utilized during the intensive summer work season. The budget allocation follows a standard ratio: 60% is dedicated to worker wages, fulfilling the primary objective of income generation, while 40% is dedicated to materials and infrastructure development, ensuring the creation of tangible assets. The projects undertaken are diverse and specifically designed to boost the rural economy and ecological health, with individual project values tailored to local needs. These projects are broadly categorized into:

- Agricultural Development: This includes land development activities like levelling and converting uncultivable wasteland into productive fields, constructing, and renovating water conservation structures like farm ponds and open wells to enable irrigation and promote perennial cropping, and promoting sustainable agriculture through horticulture

(e.g., providing fruit saplings) and agroforestry (e.g., Moringa plantations). Support extends to animal husbandry by aiding the construction of livestock sheds and promoting milch animal ownership through Self-Help Groups (SHGs).

- Rural Infrastructure: This involves constructing vital community assets that improve quality of life and governance which includes construction of Anganwadi centres, Gram Panchayat offices, public toilets under the Swachh Bharat Mission, and provision of drinking water supply facilities. A specific directive from the Ministry of Women and Child Development and Rural Development mandates the construction of at least one Anganwadi centre in each mandal (administrative block).

Community Demand and Social Infrastructure:

There exists a strong, bottom-up demand from communities for specific types of infrastructure, particularly all-weather roads, and drainage systems, which are seen as essential for connectivity, safety, and public health. The construction of Anganwadi centres is also highly valued and frequently requested. These centres serve a critical dual need: they provide essential early childhood education and nutrition, while also enabling mothers to participate in the MGNREGA workforce by offering a safe and supervised environment for their children from 8 AM to 12 noon. The provision of meals at these centres acts as a significant incentive for enrolment.

Online consultation with Department of Panchayati Raj and Rural Development, Government of Telangana

Key outcome of the Floor Discussion:

- ✓ Despite its transformative successes, the scheme faces persistent operational challenges that impact its efficacy. The most cited issue is the delayed payment of wages, which often occurs one to one-and-a-half months after work is completed. This delay undermines the very concept of a "safety net," forcing workers to rely on high-interest informal credit to meet immediate consumption needs, potentially pushing them into debt cycles.
- ✓ Furthermore, the participation of lactating mothers remains disproportionately low. This is due to the absence of on-site crèche facilities at worksites, which presents a significant structural barrier to their inclusion and economic empowerment.
- ✓ Finally, while the program's positive impacts are widely observed anecdotally and in localized studies, there is a recognized need for a more formal, comprehensive, and longitudinal study to fully quantify its long-term effects on rural development, poverty reduction, and climate resilience.

To conclude the day's agenda, the Department of Rural Water Supply and the Department of Panchayati Raj and Rural Development delivered presentations. The representatives from these outlined the critical functions and strategic approaches of each department in tackling issues related to child nutritional status.

The next consultation session with the Department of Women and Child Development was convened on February 14, 2025. After a welcome address and a briefing on the session's purpose by the moderator, the delegates were formally introduced. The key presentation was delivered by Mr. Rahul Sadhu, In-charge of the Poshan Abhiyaan Scheme, who provided a detailed exposition of the department's framework and efforts in managing and improving the nutritional well-being of children.

Role of Women and Child Development department in addressing undernutrition

Presented by

Mr. Rahul Sadhu, In-charge of Poshan Abhiyaan Scheme,

The high prevalence of malnutrition in India's Aspirational Districts is driven by a complex interplay of socioeconomic and environmental factors. Foremost among these is pervasive poverty, which creates significant economic constraints. This limits households' financial capacity to regularly purchase diverse, nutrient-rich food and restricts their access to essential healthcare services. This situation is further compounded by inadequate healthcare infrastructure and poor sanitation. A lack of clean drinking water, improper hygiene facilities, and substandard medical services create an environment where recurrent infections, such as diarrhoea and respiratory illnesses, are common. These illnesses not only deplete the body's nutrients but also severely hinder the absorption of what little nutrients are consumed. Additionally, low awareness about optimal nutritional practices and dietary deficiencies play a critical role.

Communities often rely on unbalanced diets due to a lack of knowledge, and sometimes, long-standing cultural food practices can inadvertently exacerbate nutritional gaps. Consequently, the high burden of communicable diseases and chronic undernutrition form a vicious cycle, where disease worsens malnutrition, and malnutrition in turn increases susceptibility to disease, trapping vulnerable populations in a state of poor health.

Table 4: State Nutritional Profile of children 0-5 years

Indicators	NFHS-5 (0-5)	Poshan Tracker Jan 2025	
		0-5 years	5-6 Years
Severely Wasted (SAM)	8.5	1.21%	NA
Moderately Wasted (MAM)	13.2	4.06%	NA
Stunted	33.1	33.68%	35.19%
Underweight	31.8	15.83%	25.79%

Table 5: Nutritional Status among children between 0 to 6 years from Poshan Tracker

Months/ Indicators	0-5 years				5-6 years	
	MAM	SAM	Stunting	Underweight	Stunting	Underweight
September 2024	4.8	1.22	32.57	16.66	35.19	26.79
October 2024	4.52	1.1	32.58	16.19	35.15	26.48
November 2024	4.28	1.09	32.73	15.81	35.15	26.22
December 2024	4.11	1.1	33.12	15.57	35.2	25.94
January 2025	4.06	1.21	33.68	15.83	35.19	25.79

Table 6: Difference between aspirational and non-aspirational districts

Indicator	Non-Aspirational	Aspirational	Difference
Measurement efficiency (%)	98.05%	95.04%	3.01%
Severely stunted (%)	9.68%	9.58%	0.10%
Moderately stunted (%)	23.89%	25.89%	-2.00%
SAM (%)	1.20%	1.48%	-0.28%
MAM (%)	4.03%	4.56%	-0.53%
Severely underweight (%)	2.36%	2.81%	-0.45%
Moderately underweight (%)	13.33%	15.09%	-1.76%

Strategic Solutions to mitigate malnutrition:

A multi-faceted strategy is essential to effectively combat malnutrition in these regions. This begins with the critical expansion and modernization of healthcare services, placing a special emphasis on maternal and child health. It involves training frontline workers, integrating nutrition counselling into routine health check-ups, and providing necessary supplements. Complementing this effort is a major push to improve sanitation infrastructure, including ensuring access to clean water and promoting toilet usage, which is fundamental for reducing the high incidence of hygiene-related diseases that perpetuate the cycle of infection and malnourishment.

Sustainable change requires empowering communities; therefore, encouraging community-led awareness campaigns and fostering grassroots involvement ensures that nutrition programs are culturally relevant, trusted, and owned by the people they are designed to serve. And also to ensure scalability and innovation, collaboration with NGOs and private organizations is crucial. These partnerships can leverage diverse expertise and resources to implement proven, sustainable interventions, from fortifying local foods to establishing community nutrition gardens, creating a cohesive and powerful response to the challenge.

Role of Poshan Tracker in identifying malnourished children and its effectiveness:

The Poshan Tracker plays a pivotal role in the fight against malnutrition by serving as a sophisticated digital tool for identification and targeted intervention. Its effectiveness is rooted in its ability to leverage real-time data, which is systematically collected by Anganwadi

Workers (AWWs) on the ground. The frontline workers use the application to regularly record critical growth indicators such as weight and height for children under five, creating a dynamic and up-to-date nutritional profile for each child. Consistent monitoring allows the system to automatically flag those who are showing signs of undernourishment by comparing their metrics against established World Health Organization (WHO) growth standards for their specific age and gender. Consequently, this data-driven mechanism facilitates a proactive and targeted approach. By pinpointing at-risk children early, before their condition deteriorates, health officials and Anganwadi Workers can initiate timely corrective measures, such as providing nutritional supplements, counselling parents, or referring severe cases to healthcare facilities. This shift from a reactive to a preventive model is crucial for stopping the progression of malnutrition and improving long-term health outcomes.

Improved Monitoring and Accountability:

- **Real-Time Monitoring:** Advanced digital tools such as the Poshan Tracker and Nutrition and Health Tracking System (NHTS) facilitate the real-time monitoring of children's nutritional status, ensuring early detection of malnutrition and enabling swift corrective actions.
- **Enhanced Service Delivery:** These technologies have empowered Anganwadi workers by streamlining their workflows, leading to more efficient and targeted service delivery and improved care for children.
- **Structured Accountability:** A robust accountability framework is maintained through weekly performance reviews between senior administration officials and District Welfare Officers (DWOs).
- **High-Level Oversight:** District Collectors conduct regular joint reviews to ensure cross-departmental coordination and maintain a prominent level of oversight over the nutritional program's implementation.

Protocol for identifying and addressing child malnutrition:

The protocol for managing child malnutrition that includes stunted, wasted, SAM / MAM children employ a hybrid model that strategically integrates both community-based management and institutional care. The pathway for an individual child is determined by the severity of their condition and the presence of medical complications. The identification and addressing process undergoes following ten steps;

1. **Growth Assessment and Monitoring:** This is the continuous foundation of the system. Anganwadi Workers (AWWs) regularly measure key growth indicators of children under five, primarily weight and height/length. This data is often recorded

digitally on the Poshan Tracker to create a longitudinal view of the child's growth trajectory and identify deviations early.

2. **Classification of Nutritional Status:** The collected measurements are compared against the World Health Organization (WHO) growth standards. Children are classified into categories:
    - Stunted: Low height-for-age, indicating chronic malnutrition.
    - Wasted: Low weight-for-height, indicating acute malnutrition.
    - MAM (Moderate Acute Malnutrition): Identified by a Mid-Upper Arm Circumference (MUAC) between 115mm and 125mm, or weight-for-height between -3 and -2 standard deviations from the median.
    - SAM (Severe Acute Malnutrition): Identified by a MUAC < 115mm, weight-for-height < -3 SD, or the presence of bilateral pitting edema.
3. **Appetite Test:** This is a critical diagnostic and triage tool specifically for children identified with SAM. The child is offered a known amount of food that must be eaten within stipulated time. A child who fails to consume an adequate amount of the food has said to have "poor appetite," which is a sign of serious medical complications. This test is a key determinant for the next step.
4. **Medical Assessment:** All children with SAM, and those with MAM and complications, undergo a basic medical check. This is to identify underlying illnesses or comorbidities that could be contributing to or resulting from malnutrition, such as diarrhoea, respiratory infections, malaria etc.
5. **Deciding the Level of Care (The Critical Junction):** Based on the above assessments, the child is directed to the appropriate care pathway:
    - ❖ Community-Based Management (SAM without complications): A SAM child WITH a good appetite and no apparent medical complications is managed at home and through regular visits to the Anganwadi Centre (AWC). The caregiver is provided with RUTF and detailed counselling on its administration and feeding practices.
    - ❖ Institutional Care (NRC): A SAM child WITHOUT a good appetite (fails the appetite test) and/or with serious medical complications is immediately referred to a Nutrition Rehabilitation Centre (NRC). NRCs provide 24/7 medical care, therapeutic feeding, and intensive monitoring.

6. **Medication and Micronutrient Supplementation:** Regardless of the care path, necessary treatments are administered. This includes a broad-spectrum antibiotic (e.g., Amoxicillin), antipyretics, deworming medication (Albendazole), and micronutrient supplements (like Vitamin A, folic acid, and zinc). This addresses hidden deficiencies and treats infections.
7. **Nutritional Treatment (Therapeutic Feeding):** The children will be provided with Balamurtham plus for those with SAM and MAM and Balamurtham for underweight children. Eight feeds per day will be provided with the interval of 2 to 3 hours.
8. **Follow-up Visits (During SSFP):** Children under community-based management are closely monitored. AWWs and ASHAs conduct regular follow-ups to track weight gain, assess the child's health, provide continued counselling, and ensure the therapeutic food is being used correctly.
9. **Discharge Criteria:** A child is not discharged simply from Nutrition Rehabilitation Centre (NRC) or Supervised Supplementary Feeding Program (SSFP) because their ration cycle is complete. Clear, measurable targets must be met:
    - For SAM children, discharge from an NRC typically occurs when they have achieved weight-for-height > -2 SD (i.e., moving from SAM to MAM/normal status) and are free of oedema and medical complications for at least two weeks.
    - For MAM children, discharge occurs when their weight-for-height improves to ≥ -2 SD (i.e., they are no longer acutely malnourished).
10. **Follow-up After Discharge:** Post-discharge from NRC/SSPC, the child is brought back into the routine growth monitoring system at the AWC. This is a crucial step to prevent relapse. The AWW continues to plot the child's growth on the growth chart to ensure they remain on a healthy trajectory and can identify any backsliding early for rapid re-intervention.

The protocol is a sophisticated, integrated system that prioritizes community-based care to maximize reach and scalability, while wisely using institutional NRCs as a safety net for the most critical cases. The "appetite test" acts as the simple, effective gatekeeper between these two levels of care.

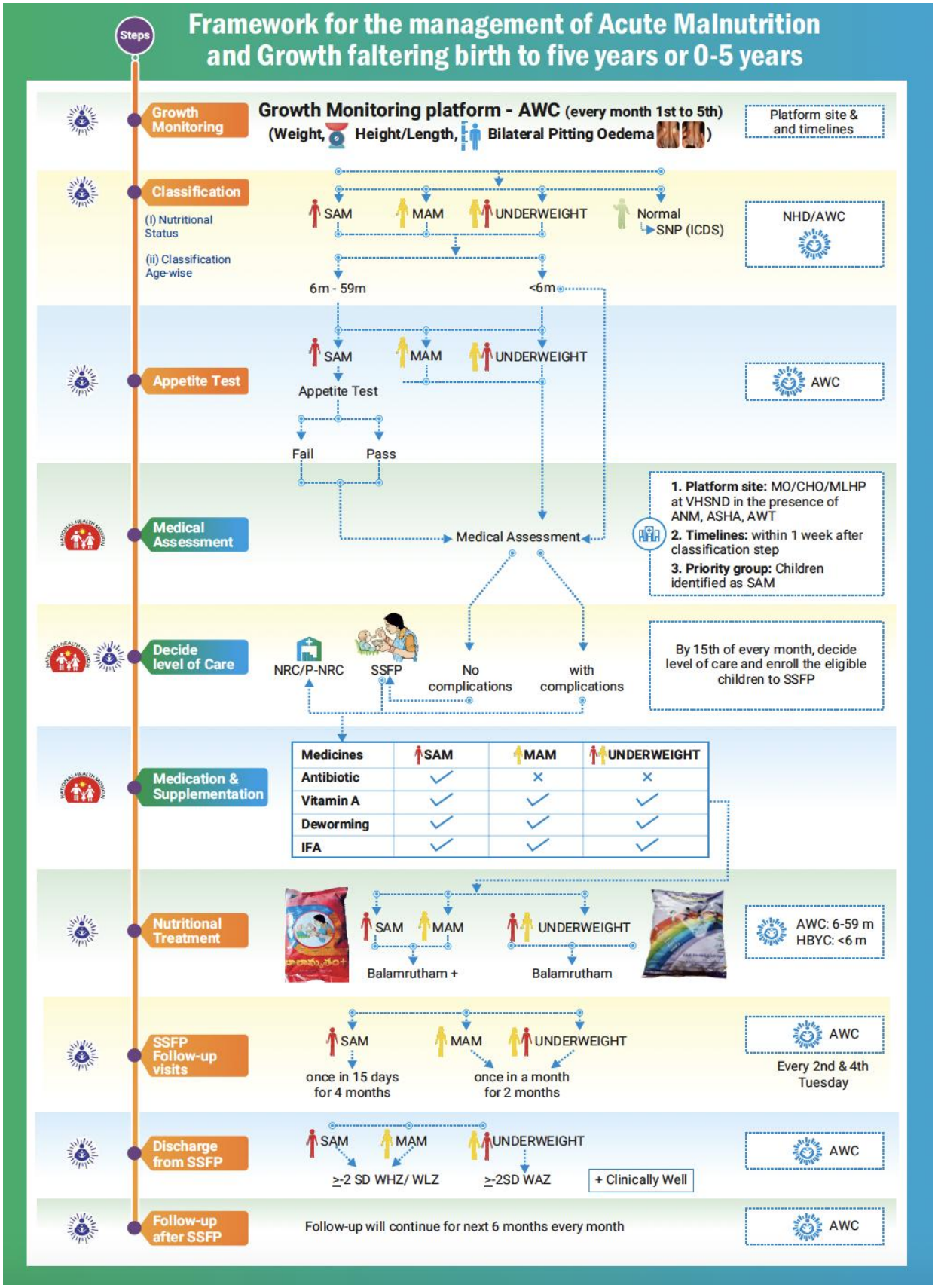


Figure 1: Protocol for Malnutrition Management

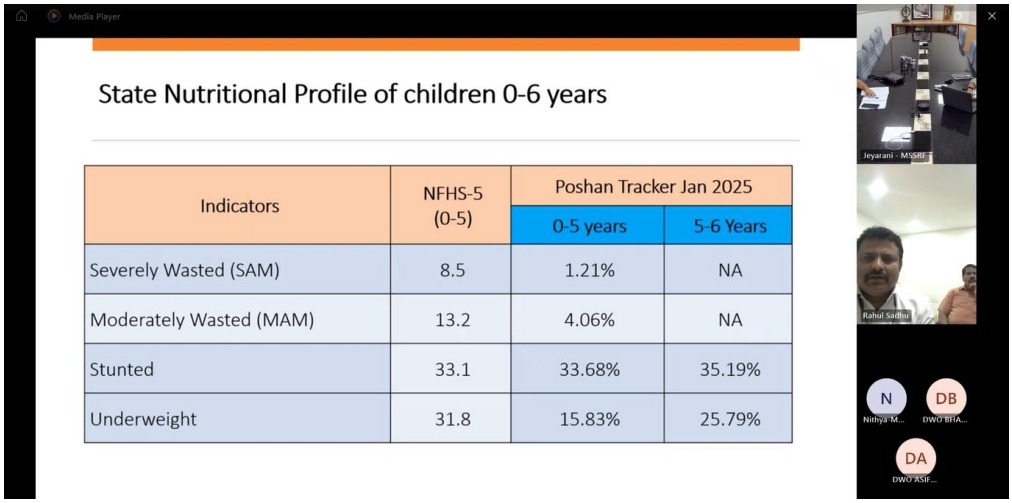
Convergence with other government departments:

The effective addressing of child undernutrition relies on a coordinated approach involving multiple government agencies such as those overseeing health, ICDS, drinking water, and sanitation is essential to tackle child undernutrition. This strategy relies on integrated data sharing across various administrative levels to ensure a unified response. Key convergences include:

1. **Health & Family Welfare (HFW):** Leads the integration of health and nutrition services, primarily through the implementation of the State Supplementary Food Programme (SSFP).
2. **Rural Livelihood Missions (SRLM/SERP), HFW, & Panchayati Raj Institutions (PRIs):** Collaborate to strengthen Village Health, Sanitation, and Nutrition Days (VHSNDs), improve growth monitoring practices, and effectively roll out the SSFP.
3. **Tribal Welfare:** Provides targeted nutritional support by distributing specialized supplements like Giri Poshana and Mahua Laddus to pregnant women, adolescent girls, and children in tribal communities.
4. **Education Department:** Raises awareness and engages the community by organizing anaemia camps, educational competitions (essays, quizzes), and participation rallies during national nutrition campaigns like Poshan Pakhwada and Poshan Maah.
5. **UNICEF:** Offers crucial technical expertise and independent monitoring support to enhance the effectiveness of nutrition programs.
6. **Ayush Department:** Supports maternal health through pregnancy care, promotes wellness via televised yoga sessions, and advises on medicinal plants for nutrition gardens (Poshan Vatika).
7. **Horticulture Department:** Provides essential knowledge and support for the development of nutri-gardens, which are key to promoting dietary diversity and access to fresh produce.
8. **Impact of Poshan Abhiyaan on child malnutrition – Achievements:** The KPI Survey was taken up by the Government of Telangana in 2023, and a considerable reduction is observed in Wasting and Underweight among <5 children. NFHS 5 reported wasting 21.7% while by KPI (2023) 18.8% and underweight reduced from 31.8% (NFHS 5) to 24.7% by KPI.

Challenges

- **Budgetary Delays:** Untimely release of funds create operational bottlenecks.
- **Logistical Access:** Difficulty delivering services to hard-to-reach tribal zones and unserved urban communities.
- **Infrastructure Gaps:** A lack of proper storage facilities at many Anganwadi Centers.
- **Technical Connectivity:** Persistent mobile network issues hinder real-time data transmission.
- **System Integration:** Challenges in seamlessly integrating the Nutrition and Health Tracking System (NHTS) and POSHAN Tracker platforms.



Presentation by Mr. Rahul Sadhu representing the department of Women and Child Development, Govt. of Telangana

Key outcome of the Floor Discussion:

- ✓ Enhance and strengthen the participation of line departments in achieving "Kuposhan Mukt Panchayats" (Malnutrition-Free Panchayats) across Telangana.
- ✓ Harness the support of civil society organizations to improve the nutritional status of children, women, and adolescents.
- ✓ Expand coverage and accessibility of nutritional programs in urban areas. Prioritize tribal communities like PvTGs (Particularly Vulnerable Tribal Groups), by allocating additional resources.
- ✓ Scale up the Scheme for Adolescent Girls (SAG) across the entire state and strengthen its implementation to advance nutritional outcomes.
- ✓ Equipping frontline workers with modern technology, such as 5G-enabled tablets with sufficient processing capacity of about 6GB RAM which is essential for boosting operational efficiency and service delivery.

List of Participants

- Dr. Vijayalaxmi, Joint Director, Department of Women and Child Development,
- M. Seshu Kumar, Joint commissioner of MGNREGA, Department of Panchayati Raj and Rural Development,
- Mr. Kalyan, Deputy Director from the Department of Rural water supply
- Mr. A. Vijay Kumar, Chief Engineer Planning, Mission Bhagiratha, Department of Rural water supply
- Mr. E. Sadashiva Kumar, Superintending Engineering, Rural water supply
- Mr. K. Mallesh, Superintending Engineering of Bhupalpally, Mulugu and Hanamakonda district, Rural water supply
- Mr. K. Ravinder, Superintending Engineering, Rural water supply,
- Mr. Murali, State Programme Manager of MGNREGA, Panchayati Raj and Rural Development,
- Mr. Narasima Rao – Consultant from UNICEF
- Mr. Pratap Ji, Section In-charge, WCD
- Mr. Rahul Sadhu, In-charge of Poshan Abhiyaan Scheme, WCD
- Ms. Prashanti, Technical specialist – Health and Nutrition, WCD
- Dr. Bhaskar, DSWO of Asifabad
- Dr. Rama Narayanan, Senior Fellow of M S Swaminathan Research Foundation
- Dr. DJ Nithya, Scientist, M S Swaminathan Research Foundation
- Ms. Jeya Rani A, Senior Research Associate, M S Swaminathan Research Foundation.