ICDS in India: Policy, Design and Delivery Issues

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Abstract India's excellent economic growth in the last two decades has made little impact on the nutrition levels of its children. Its main intervention, the Integrated Child Development Services (ICDS) programme, has not yet succeeded in reducing child malnutrition. The programme is reaching less than one-third of all children. ICDS also faces substantial operational challenges, such as lack of monitoring. The article discusses the flaws in the design of ICDS, and suggests practical measures to improve its implementation. It argues that the basic nature of the ICDS scheme should be changed from centre-based to outreach-based, with a focus on children under two years old. The emphasis should be on the difficult tasks of changing child-rearing practices, and the control and treatment of infectious diseases. The article argues against provision of packaged food, as this is unpopular with young children and has led to corruption.

1 Introduction

In the decade and a half that India has embraced economic reform, a problem has haunted the country and vexed policymakers: India's excellent growth has made little positive impact on the nutrition of its children. Undernutrition rates are not only high, but stubbornly persistent and in the last eight years, they have only come down by about 1 per cent. It is uncertain whether the country will meet the MDG targets, or its own ambitious targets set out in the 11th Plan.

The Government's response to this challenge is the Integrated Child Development Services (ICDS). Launched in 1975 as 'the foremost symbol of India's commitment to her children', ICDS provides a package of six basic services; pre-school education, supplementary nutrition, immunisation, health check-ups, referral services and nutrition and health education. These are provided at the *Anganwadi* Centre (AWC). The *anganwadi* worker (AWW) is the pivot of the programme, and its success largely depends on her. While the scale of the programme is impressive, its performance falls short of expectations.

This article examines the performance of the ICDS on the basis of evidence from NFHS-3, and discusses design, policy and delivery issues that will make the programme achieve its objectives.

2 An assessment of the ICDS

2.1 Coverage

The NFHS-3 data show that 81 per cent of children under six years of age were living in an area served by an AWC. This is still far short of the 100 per cent coverage that should have been achieved after 35 years. Accessibility is important, and in a study (WFP 2008) covering four of the poorest states, 88 per cent of all respondents gave distance from the AWC as a reason for not using the AWC.

2.2 Utilisation of services

While coverage is important, it is not enough. Not much is achieved if an AWC exists, but remains closed most of the time. The findings of the NFHS-3 are a damning indictment of the programme, and are summarised in Table 1.

Only 32.9 per cent of children (living in an area covered by an AWC) used any AWC services in the 12 preceding months. The programme provides supplementary food for children below the age of six and pregnant and nursing mothers for 300 days/year. Only 26.5 per cent of children had received Supplementary Nutrition (SN) and

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Table 1 Percentage of children who received services from AWC

Availed any service from AWC	32.9
Supplementary nutrition	
Not at all	73.5
Sometimes	26.5
Almost daily	11.9
Immunisation (not even one antigen)	80
Monthly health check-up	17.8
Regular weighing	18.2
Pre-school activities	22.8
Children whose mothers received supplementary food	
During pregnancy	20.5
While breast-feeding	16.5
Children whose mothers received a health check-up	
During pregnancy	12.3
While breast-feeding	8.5

Note This data relates only to children <6 years who live in an area covered by an AWC.

only 12 per cent regularly received it. A total of 21 per cent of pregnant women and 17 per cent of lactating mothers received supplementary food. The utilisation of other components of the programme is equally dismal. Only 20 per cent of children were immunised in the AWC and 82 per cent of children had never had a health check.

AWCs are equipped with medical kits and AWWs are trained to deal with day-to-day ailments, but only 0.1 per cent (0.2 per cent in the poorest group) said they went to the AWC when a family member was sick. Some 62.5 per cent of households went to a private provider and 36.5 per cent to a government centre.

2.3 Utilisation of AWC services in selected states

The utilisation of AWC services is low in all states, but surprisingly the AWCs perform better in some of the poorest states, such as Orissa and Chhattisgarh.[1]

Table 2 shows that the proportion of children who received services from an AWC was twice as high as the national average in Chhattisgarh and Orissa. Table 3 shows that these two states did equally well in providing services to pregnant and nursing mothers. Judging the performance of AWCs on the basis of so many components can be complicated. We therefore constructed an index of performance. States are first ranked by performance on each component of the programme; the ranks are then aggregated to give a composite index of AWC performance.[2]

Does improving the performance of the AWC impact on nutritional status? Table 4 ranks states by poverty ratio, performance on AWC and improvement in child nutrition. There is no linear or straightforward relationship between performance on AWC and outcomes, but two states stand out, Chhattisgarh and Orissa. They are among the poorest states, but they are the best ICDS performers and most successful at reducing undernutrition. During 1998–2005, the percentage of underweight children declined from 54 per cent to 44 per cent in Orissa and from 61 per cent to 52 per cent in Chhattisgarh.

What accounts for Chhattisgarh's performance? Reports suggest that social mobilisation through the *Mitanin* programme launched in 2002, has contributed to bringing down malnutrition (Garg 2006; Sundararaman 2006). The *mitanin* (meaning a friend) is chosen by the local community and is trained and supported by a block training team, an auxiliary nurse midwife (ANM) and the AWW. She provides the following services: (1) health education, (2) first aid and over-the-counter drugs, (3) treatment for minor ailments, (4) referral advice, and (5) leadership in mobilising the community. There are over 60,000 *mitanins*.

Table 2 **Indicators of utilisation of ICDS services by children**

Percentage of children under age six years who:	received any services	received food supplements	received immunisations	received health check-ups	received early child care/ pre-school	were weighed	had mothers that received counselling
India	32.9	26.3	20	15.8	22.8	18.2	48.9
Andhra Pradesh	30.5	28	14.9	15.5	22	17.8	56.5
Assam	29.8	28	6.5	4.9	14.7	5	36
Bihar	9.9	4.2	7.7	0.8	4.8	0.7	3.64
Chhattisgarh	65.2	58.4	46	32.2	37.1	45.1	48.1
Gujarat	43.9	31.7	33.9	26.5	37	25.3	45.1
Haryana	27.6	22.3	17.2	14.8	18.1	9.3	44.1
Jharkhand	41.7	36.5	26.5	11.9	17	14.4	45.9
Karnataka	35.5	28	26.2	17.1	32.9	17.8	52.5
Kerala	30.8	24.7	9	17.6	30.7	19.2	56.1
Madhya Pradesh	49.8	36.4	37.8	31.5	28.9	39.1	61.8
Maharashtra	49.5	42.4	33.4	36.2	49.9	37.4	40.2
Orissa	65.8	52.5	41.6	43.1	27.7	56.1	29.6
Punjab	14.1	13	2.7	5.2	9.8	5.1	16.7
Rajasthan	21.1	17.3	12.9	9.6	10.3	9.6	37.2
Tamil	42.5	32.2	33.7	25.5	26.5	31.6	75.7
Uttar Pradesh	22.3	14.7	13.5	2.7	12.8	2.8	38.1
West Bengal	42.3	40.2	11.6	24.8	39.2	31.6	48.7

The Government of Orissa (GoO) has developed a comprehensive Health and Nutrition Sector Plan, which aligns the resources of the Government of India (GoI) and development partners' to complement Orissa's efforts to meet its priorities and address shortcomings in both public and private provision for nutrition and health. It has also set up a Nutrition Council that includes experts and professionals from DFID, UNICEF, CARE, World Bank and civil society. It has launched several innovative programmes such as: the Nutrition and Health Day in collaboration with CARE; the positive-deviance approach implemented in partnership with UNICEF; the change-agent approach on the lines of the *Mitanin* experiment of Chhattisgarh to identify and target excluded populations.

We used an OLS regression model to analyse NFHS data to see if AWC services played a role in reducing malnutrition. The results show that overall, the ICDS has contributed to lowering undernutrition.

1 The most important result is that AWCs make a difference. Results show that children who are in areas not covered by an AWC are significantly more undernourished than those in areas covered by an AWC that has been in existence for more than five years.

2 Children seen by an AWW in the past three months are likely to be significantly more undernourished than those who were not seen, suggesting that mothers have faith in AWWs and take their children to her when there is a problem.

Table 3 **Indicators of women's utilisation of ICDS services by state**

	Percentage of children whose mothers received the following, from an AWC during pregnancy			Percentage of children whose mothers received the following, from an AWC while breast-feeding		
	Supplementary food	Health check-up	Health & nutrition education	Supplementary food	Health check-up	Health & nutrition education
India	20.5	12.3	10.9	16.5	8.5	8.3
Andhra Pradesh	22.9	13.1	15.5	17.4	11.4	13
Assam	12.7	2.1	1.7	12.7	1.9	2
Bihar	0.6	0.3	0.2	0.6	0.3	0.3
Chhattisgarh	64.1	43.6	30.2	63.2	26.6	24.6
Gujarat	19.1	14.9	13.5	12.1	8	8.4
Haryana	11	6.3	4.6	6.1	2.9	2.7
Jharkhand	34.7	13.6	13.4	35.9	9.5	12.2
Karnataka	30.3	16.9	20.8	18.4	10.5	12.5
Kerala	15.8	9.6	10.4	10.5	5	6.8
Madhya Pradesh	31	25.1	21.7	27	18.3	17.5
Maharashtra	25.8	20.7	13.4	17.5	13	10.4
Orissa	44.6	41.8	23	39.8	28.3	16.7
Punjab	7.5	3.2	3.2	5.5	2	2.5
Rajasthan	17	10.2	4.3	12.4	7.1	3.2
Tamil Nadu	50.4	35.6	36.3	42.5	29	29.1
Uttar Pradesh	9.6	1.8	1.3	7	0.6	0.7
West Bengal	23.1	9.7	14.3	19.3	7.7	10.8

Note relates to children <6 years of age and living in an area covered by an AWC.

3 The only variable that is highly significant and has a positive impact on nutritional status is if the child received early childcare at the AWC. Maharashtra (50 per cent), West Bengal (39 per cent) and Chhattisgarh (37 per cent) reported the highest percentage of children receiving early childcare/pre-school. These states are among the top five performers in reducing undernutrition. This strengthens the argument for focusing on these services.

4 Children who were measured at an AWC were significantly more undernourished. This suggests that these children were measured because they were undernourished.

5 A child who had diarrhoea or fever/cough and was treated at an AWC was likely to be less undernourished than a child who was not treated or a child who was treated elsewhere.

Critics argue that if after 35 years, the ICDS has not shown results it should be wound up. Our results show that even in areas that have the worst chronic poverty, there is hope.

3 Design, policy and delivery issues

What are the lessons from this? What are the triggers for change? What does it take to free India's children from the bondage of malnutrition? Based on the authors' own field

Table 4 **States ranked by performance of AWC, improvement in nutritional status of children and poverty ratio**

	Children underweight (%)				Ranks		
	Persons below poverty line (%)	NFHS-3	NFHS-2	Improvement (NFHS-2–NFHS-3)	Improvement (NFHS-2–NFHS-3)	Performance of AWC	Poverty ratio
States with poverty ratios higher than the national average							
Orissa	39.9	44	54.4	10.4	1	3	17
Jharkhand	34.8	59.2	54.3	-4.9	15	9	16
Bihar	32.5	58.4	54.3	-4.1	13	17	15
Madhya Pradesh	32.4	60.3	53.5	-6.8	16	4	14
Chhattisgarh	32	52.1	60.8	8.7	3	1	13
Uttar	25.5	47.3	51.8	4.5	6	15	12
Maharashtra	25.2	39.7	49.6	9.9	2	5	11
States with poverty ratios lower than the national average							
West Bengal	20.6	43.5	48.7	5.2	5	7	10
Tamil	17.8	33.2	36.7	3.5	7	2	9
Rajasthan	17.5	44	50.6	6.6	4	13	8
Karnataka	17.4	41.1	43.9	2.8	8	6	7
Assam	15	40.4	36	-4.4	14	14	6
Gujarat	12.5	47.4	45.1	-2.3	12	8	5
Kerala	11.4	28.8	26.9	-1.9	11	11	4
Andhra	11.1	36.5	37.7	1.2	10	10	3
Haryana	9.9	41.9	34.6	-7.3	17	12	2
Punjab	5.2	27	28.7	1.7	9	16	1

Note Percentage of population below the poverty line in India is 21.8 per cent (2004–5).

experiences and reports of innovative and successful interventions in different parts of India and abroad, we suggest below what it will take to script a new destiny for India's children.

3.1 Focus on children under two years

Child malnutrition is mostly the result of inappropriate infant and young child-feeding and caring practices, and begins in the first two years of life. The current programme does not focus on children under two, when nutrition interventions can have the most impact. The focus must be on children under two.

3.2 Outreach

The ICDS scheme should changed from a centre-based to an outreach-based approach. An advantage of this is that the entire family is sensitised and counselled. The *mitanins* in Koriya district of Chhattisgarh, for example, visited each household and weighed children under five in front of their whole family. The nutritional status of the child and the significance of each grade of malnutrition were explained to the household. The *mitanins* counselled both parents on ways to combat malnutrition. With the involvement of the entire family, the messages were more likely to be followed.

Diarrhoea and respiratory infections contribute to poor appetite and malnutrition. Nutrition Rehabilitation Centres should be available at Primary Health Centres for children suffering from Grade 3 or 4 malnutrition, and their mothers. AWWs should be responsible for identifying and referring such children to the rehabilitation facilities. Financial provision should be made to support families during rehabilitation. The children and their carers should be entitled to enhanced food rations under the Supplementary Nutrition Programme.

3.3 Two-worker norm

AWWs are overburdened and each AWC should have two AWWs, and an *Anganwadi* helper. The second AWW should take care of children under two and pregnant or nursing mothers, in collaboration with the village health worker, known as the ASHA (Accredited Social Health Activist). Priority should be given first to the most deprived 100 districts of India, and gradually second workers should be posted to every district.

3.4 Improve reporting

Most Indian states have a computerised ICDS monitoring system, but the information is not used for corrective action or analysis. Each AWC reports on the numbers of malnourished children category-wise, but these figures are neither verified independently nor used to assess the effectiveness of the programme. AWWs have too many registers to complete and are reported to be under pressure to enter 'correct', rather than accurate data. This explains why the overall percentage of malnourished children under three is under-represented as only 8 per cent (with 1 per cent of children severely malnourished), as against 46 per cent reported by NFHS-3. This reduces local accountability and ownership of the problem.

There should be greater transparency of district and centre records that should be put on a website, and there should be frequent field inspections by an independent team of experts.

3.5 Ban packaged food for the 3–6 year age group

This has led to massive corruption and has been justified in the name of micronutrients. However, micronutrient supplements in the absence of adequate proteins and calories will not produce the desired outcomes. Industrially packaged foods are often rejected by children, and fed to cattle. This is the experience of 'India Mix' supplied by the World Food Programme in Rajasthan and Uttarakhand. In other states, the contract for preparing packaged foods is given to the contractor who offers the lowest tender, and then supplies cheap unpalatable products. His contract is ensured by the bribes that he offers to everyone involved.

Young children can only eat small quantities and need fat rich, energy dense food to obtain the necessary calories. In the absence of oil supplies, there is almost no fat content in the food being given, although children under three should get 40 per cent of their calorie requirement from fats. If the energy density or the amount of food per meal is low, more frequent meals may be required. India must refrain from expanding the fortification of food. Attempts must be made to satisfy children's calorie and protein needs through locally prepared food, including oil, eggs, vegetables, milk, fruits, etc. Centralised kitchens should be permitted in cities where schools have no place for cooking, but each child must get a hot cooked meal.

ICDS should learn from the success of the midday meals programme that runs fairly well even in states not known for efficiency. For children under three years, nutritious and carefully designed locally prepared take-home rations based on locally procured food should be provided. Before inviting financial bids, states must invite technical bids so that unscrupulous elements who supply packaged food through bribes are eliminated.

3.6 Increase the involvement of panchayats/mothers' groups, etc.

The scheme will improve when *panchayats* (village councils) and other community groups are involved and control the programme, including the selection of workers. Wherever the community has been involved, results have improved. In Chhattisgarh, for example, nutrition monitoring committees were formed in hamlets. These consist mainly of tribal and *dalit* women. The *mitanins* share the data on child malnutrition with the committee. This allows the community to monitor the nutritional status of children by weighing them every six months (Garg 2006). In Orissa, one study showed that women were encouraged to raise issues regarding the functioning of the AWC, and the

frequent absence of the AWW in the *panchayat*. This made the AWW more accountable to the *panchayat* and led to a positive impact on the performance of the AWC (WFP 2008). In many states, *panchayat*s successfully run the midday meals programme for school children.

3.7 Involving and promoting women

The involvement of women, including those from marginalised communities, has a multiplier impact on outcomes. Women should be better represented among supervisors, CDPOs and other ICDS staff above the AWW level. States, such as UP, Bihar and Jharkhand have only women as Supervisors and CDPOs, however, there are many vacancies which limit their effectiveness. In Bihar, 74 per cent of the Supervisors' posts are vacant. In most states, avenues for promotion for AWWs and Supervisors are limited, and stagnation sets in mid-career. All Supervisors should be selected from eligible AWWs, and can then be promoted.

3.8 Improve women's mobility

State governments should give interest-free loans to CDPOs and Supervisors to buy motor-bikes, provided they have a licence. Driving courses for women staff should be provided. As a practical and long-term solution, the government should encourage school girls to learn how to ride bikes and later scooters.

3.9 National Rural Employment Guarantee Act (NREGA)

To increase the numbers of AWCs, 'construction of AWCs' should be added to the list of permissible works under NREGA. Additional funds could be mobilised from the Backward Regions Grant Fund. In order to improve the motivation of *panchayats* to use NREGA funds for this purpose, the state government might start an incentive scheme, or fix a quota out of its own contribution. These buildings should be constructed in settlements which are inhabited by currently underserved SC/ST populations.

3.10 Grading AWCs

GoI should introduce accreditation of AWWs, based on well-defined and transparent criteria through a consultative process by involving *panchayats*, mothers' committees and community groups. Some pilots have been undertaken in HP and Orissa, which recognise and reward good performance.

3.11 Learn from international experience

Thailand succeeded in improving child nutrition between 1980 and 1988 and reduced child malnutrition (underweight) from 50 per cent to 25 per cent. This was achieved through a mix of interventions including: intensive growth monitoring and nutrition education, strong supplementary feeding provision, iron and vitamin supplementation and salt iodisation, along with primary healthcare. High rates of coverage were ensured by human resource intensity. The programme used volunteers (one per 20 children), and involved local people. Communities were involved in needs assessment, planning, programme implementation, beneficiary selection, and seeking local financial contributions but central government controlled resource allocation, to ensure a coherent national programme.

The lessons from Thailand are relevant for India today because levels of *per capita* GDP, the proportion of women in the agricultural workforce and child malnutrition rates around 1980 in Thailand were similar to those in India in 2009.

3.12 Re-examine the role of the Ministry of Women and Child Development (MWCD)

When the MWCD was established, it was expected to take an overview of the problems of women and children, and monitor the activities of other Ministries, such as health, education, labour, drinking water and sanitation that deliver services that impinge on children's welfare. It would develop systems to inform GoI, for instance, how and why children were malnourished. Instead the Ministry confined itself to dealing with ICDS without monitoring the other inputs needed to reduce malnutrition. This defeated the purpose for which the Ministry was created. The MWCD should monitor children's access to health, water and sanitation, and how these influence malnutrition. Continuous measurement of the critical inputs will put pressure on other Ministries to improve vital services.

4 Summing up

The multidimensional nature of malnutrition must be reflected in ICDS implementation: food intake is only one determinant of a child's nutritional status. It is however necessary, as it attracts families to other components of the programme. In addition to supplementary feeding, state resources should be directed

towards improving the delivery of other ICDS services. Supplementary feeding should be used strategically, as an incentive for poor and malnourished children and their mothers, so that they receive health and nutrition education interventions.

The constraints to child survival and wellbeing are rooted in bad policies, faulty project design, lack of appropriate M&E, and poor governance. Action is needed on all fronts. Merely increasing the number of ICDS centres will not reduce child malnutrition. Without a major shake up in policy and an improvement in the effectiveness of its implementation, India's attainment of the MDGs looks extremely unlikely.

Notes

1 The analysis covers the 17 major states in the country. The major states are defined as those that have a population of 20 million or more.

2 Details of the index and of the regression given later are not discussed because of constraints of space, but are available from the authors.

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