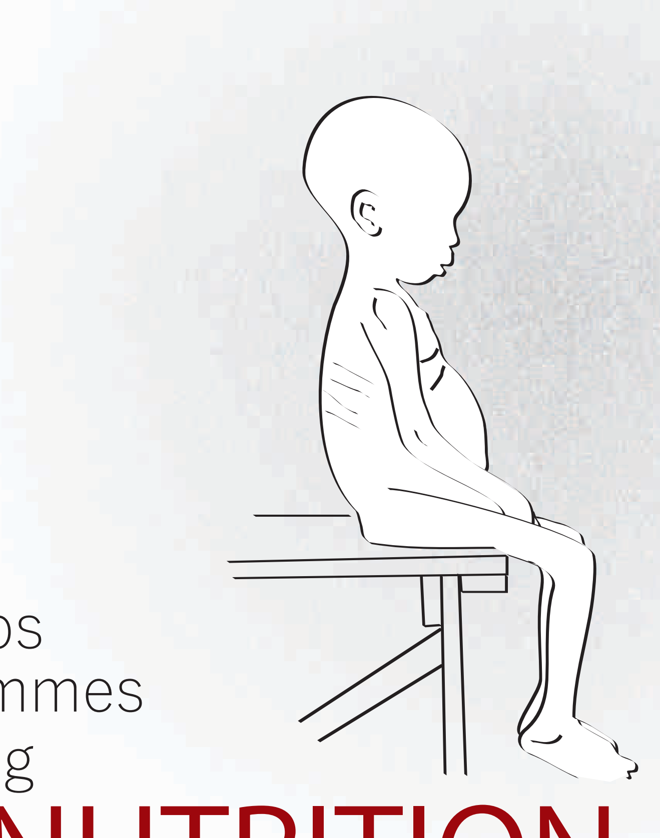


Major gaps in programmes for tackling MALNUTRITION among children below three years of age

Summary of study report coordinated by Nutrition Rights Coalition, Maharashtra

Background-

To avert malnutrition among children, it is essential that children get regular, adequate food with all the required nutrients. It is also necessary that illnesses among children are treated promptly to prevent weight loss ensuing from this illness. Thus the role of public systems such as the public distribution system and the public health system is crucial to address malnutrition in a community. In addition, the Integrated Child Development Scheme is being implemented in India for four decades now, which specifically focuses on supplementary nutrition for children below six years of age.

Given the significant prevalence of malnutrition in Maharashtra, Government of Maharashtra has implemented special programmes like Rajmata Jijau Maternal and Child Health & Nutrition Mission. Despite the claims regarding considerable reduction in prevalence of malnutrition in the state, field experience indicates that there is still a long way to go for reducing malnutrition especially for the children

less than three years of age.

These years are critical years of human life since maximum brain development takes place by the age of three years and hence it is crucial that the nutritional needs of children in this age group are addressed fully. Lack of nutrition in this age group results in failure to achieve the growth potential for these children.

In this context, various social organizations including the Nutrition Rights Coalition in Maharashtra undertook a study to understand the gaps in implementation of key services under Integrated Child Development Scheme (ICDS), Public health system and Public Distribution System in context of severely malnourished children in the age group 1-3 years.

Given the critical importance of the first three years of life, various social organizations in Maharashtra undertook a study to understand the gaps in implementation of key public services related to the children below three years of age.

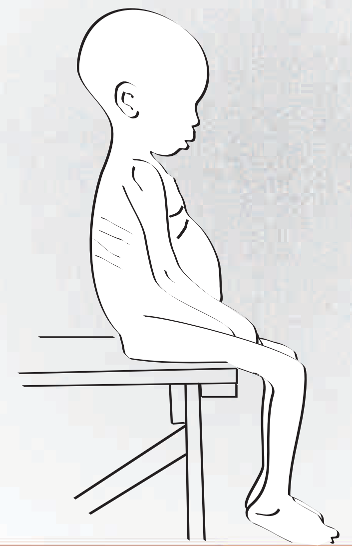
Data for this study was collected in two phases. In the first phase, trained field investigators gathered data from Amravati, Nandurbar and Gadchiroli districts. In this phase, information was sought from 31 children between one to three years of age, who were registered as Severe Underweight (SUW) in the anganwadi register. In the second phase, activists from various organizations who are associated with coalitions like Jan Arogya Abhiyan and Right to Food campaign, Maharashtra gathered data from Beed, Palghar, Thane, Amravati and Pune, covering 24 children including children from cities like Mumbai and Nagpur. Overall, this study covered 55 children including both phases of data collection.

To study the gaps in implementation of entitled services, mothers/care takers and service providers were asked about service delivery to these children in the last 3 to 6 months period. One of the important differences in the data gathering in the two phases was that in the first phase actual heights and weights of the children were measured by the investigators, whereas in the second phase, the records from anganwadi registers were noted by the activists.

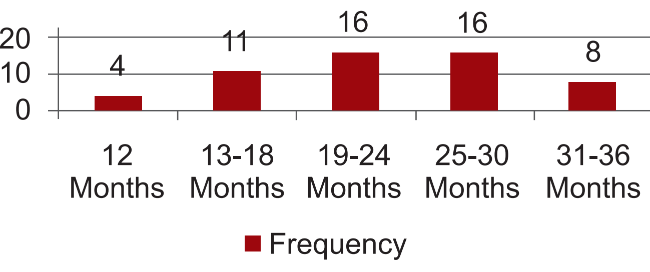
Profile of children-

A total of 55 children between one to three years of age who were identified as SUW by the ICDS were covered in this study in two phases. Age group wise classification reveals that most of the children were in the age group 19 to 30 months i.e. from one and a half to two and a half years. *(See Graph:1)*

Out of 55 children in the study population, 34 were male and remaining 21 were female.



Graph : 1 - **Age group wise classification of studied children**



A. Findings from analysis of phase I data

I. WHO standards not being used for identifying malnutrition:

As per the current guidelines, it is necessary that malnourished children should be categorized using 3 criteria viz. weight for height/ length, Mid Upper Arm Circumference (MUAC), and edema (swelling on feet). According to this classification, children are labeled as SAM (Severe Acute Malnutrition) or MAM (Moderate Acute Malnutrition). However, in all the areas covered under study, it was seen **that only the criterion of weight for age is being used to identify the malnourished children.** Thus in the anganwadi register, children are labeled as Severely Underweight (SUW) or moderately underweight i.e. MUW using growth charts. It is necessary that children are labeled as SAM/MAM since, the services such as VCDC and admission to NRC are provided only to SAM/MAM children.

II. Under reporting of severe Malnutrition-

Since height and MUAC are not being used as the criteria for estimating the level of malnutrition, children who are in SAM or MAM category are not being identified properly. In the present study out of 31 children, only one child was labeled as SAM in the Anganwadi records. Actual height and weight of the children measured during fieldwork revealed that **there were six more children who had SAM but were not detected as such as by the AWW.** Another nine who were actually MAM were also labeled as SUW. This flawed method of labeling malnourished children is leading to denial of essential services such as VCDC or referral to NRC for malnourished children.

Action point

Start measuring height and MUAC of all children in Anganwadis and categorise them appropriately using all the three criteria as per WHO standards, not only weight.

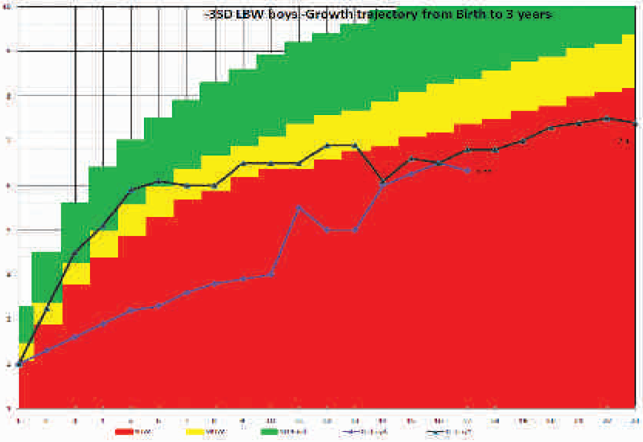
III. Children continuing in undernourished status for prolonged duration

For the 31 children covered in the first phase of the study, monthly records of the weight of the children were noted from the AWC register since the birth of each child.

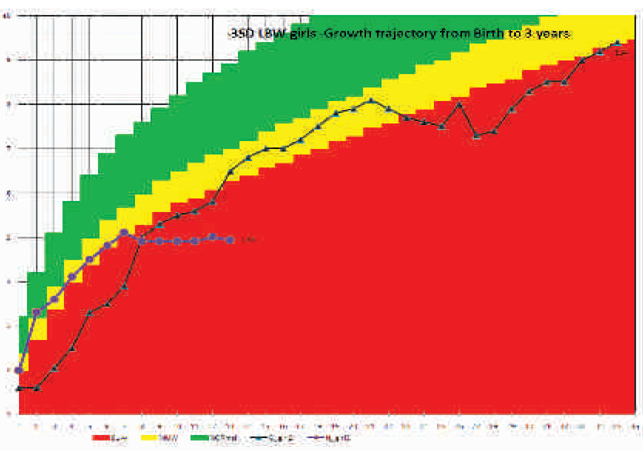
The growth trajectories of these children revealed that **out of 31 children, 18 had started their life journey with low birth weight.** Given the critical importance of first 1000 days' period for growth and development of children, these children had lost the opportunity of adequate intrauterine development. Out of 13 children who had normal birth weight, **two became severely underweight by the age of six months. Both have remained in this category till the time of study.** For one of the children, this duration of continued underweight is almost of two and a half years. In case of six children, the decline in weight has been gradual i.e. they were born with normal birth weight but subsequently their weight did not increase as expected, and they landed up in severe underweight category. Plotting of these weight records reveals that **four children have been in SUW category since birth.** These children had low birth weight to begin with, even later they could not catch up with this failure in gestational period. Out of these four children, one child was 19 months old and still severely underweight at the time of study.

(See Graph 2)

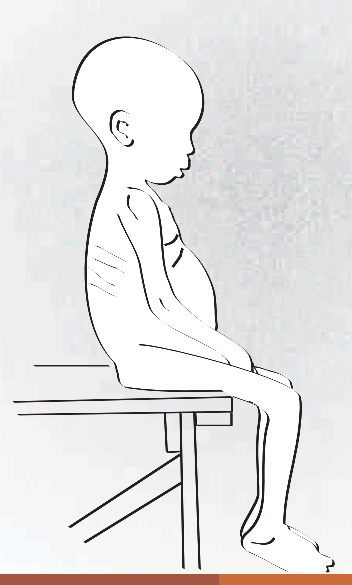
Growth trajectories of selected boys who had birth weight less than 2000 gms



Growth trajectories of selected girls who had birth weight less than 2000 gms



Children continuing to be malnourished for prolonged duration reflects that there have been no effective efforts to identify the faltering of weight on timely basis. As per the current set of services, additional measures are taken only after the child falls into SAM category, indicating that effectively the current ICDS programme waits for a child to land in SAM to take any action beyond the routine!

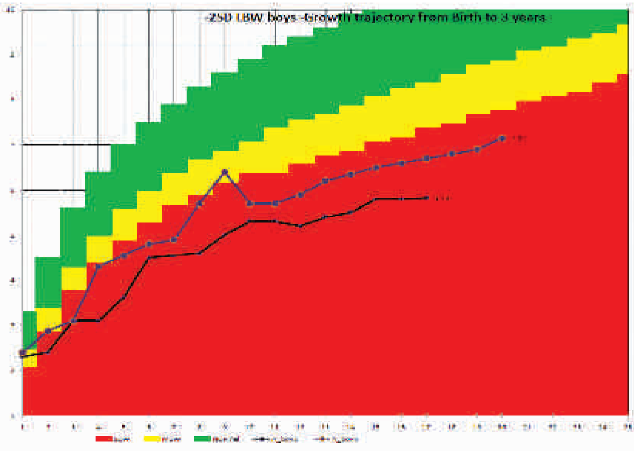


(See Graph 2)

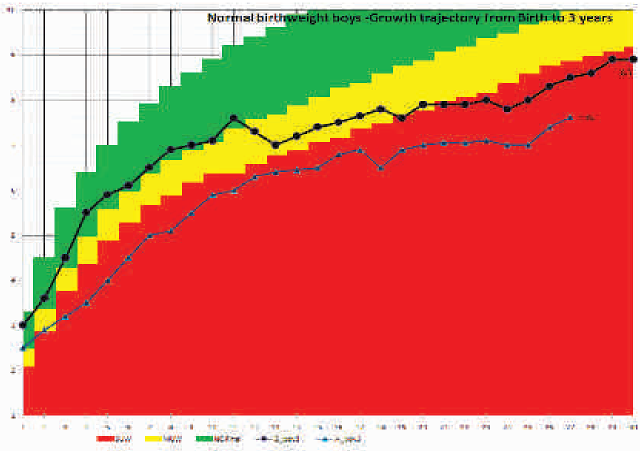
Growth trajectories of the children in the study

It is a matter of grave concern that there seem to have been no effective efforts by ICDS to identify the faltering of weight on timely basis. As we understand this is a serious gap in the current design of ICDS program. The AWW does not get training to pick up weight faltering. Neither is she directed to record it, nor does she actively follow up the child whose growth has faltered. One of the important objectives of a programme like ICDS ought to be prevention of malnutrition; however, as per the current set of services, additional measures are taken only after the child falls into SAM category thus the prevention aspect is being largely overlooked, indicating that effectively the current ICDS programme waits for a child to land in SAM to take any action beyond the routine! For example, presently the VCDC is made available only for SAM children, whereas previously it was meant for MUW children as well. This limited protocol is proving very detrimental as the continually faltering

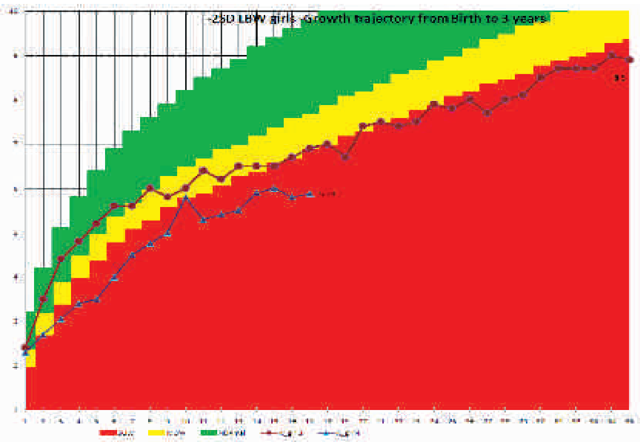
Growth trajectories of selected boys who had birth weight less than 2500 gms but more than 2000 gms



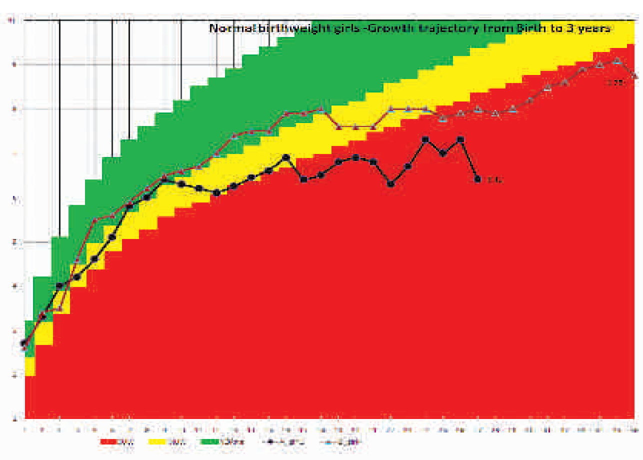
Growth trajectories of selected boys who had normal birth weight



Growth trajectories of selected girls who had birth weight less than 2500 gms but more than 2000 gms



Growth trajectories of selected girls who had normal birth weight



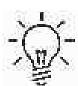
growth charts of these children disclose.

Due to inadequate efforts by the Government systems, these children have not received adequate care from the system in the critical developmental phase where growth is most rapid, so that they could make up for the loss in this crucial stage.

All the children who are born low birth weight should be followed up regularly. The anganwadi worker should provide individualized nutritional counseling to the mothers, emphasizing the need for breast feeding and prompt treatment in case of illness. Weight should be monitored regularly and in case of unsatisfactory weight gain, top feeding should be recommended. All the care required in giving top feeding especially the need for maintaining hygiene should be carefully explained to the caretakers.

When the child is around six months of age, the counseling sessions should include information about complementary feeding practices. Individualised counseling sessions should be held with the caretakers of the child. These sessions should include information about the appropriate weaning foods and also the demonstrations to prepare these foods.

Regular visits to the household of underweight children by the anganwadi worker are necessary to ensure that complementary feeding has been initiated.



Audiovisual material in local language should be used during these nutritional counseling sessions. The food items

prepared during demonstrations should be made using locally available ingredients which are culturally acceptable.

To implement all the above recommendations, **it is highly desirable to appoint an additional AW linked worker in each village, focussed on under 3 children,** who will exclusively focus on nutritional counselling and ensuring that age appropriate feeds are given to children under -3 in general, and specifically to the children who are malnourished.

B. Findings from combined analysis of phase I and Phase II data

Except the actual recording of weight and height, all other questions pertaining to service provisioning by ICDS and health department were common in both the phases. Hence, the following section presents the information emerging after analyzing the data related to children covered in both the phases together.

> In some places, the ICDS workers have received orders for not using electronic scales. Shockingly, in some of the anganwadis in urban areas, there were no weighing machines.

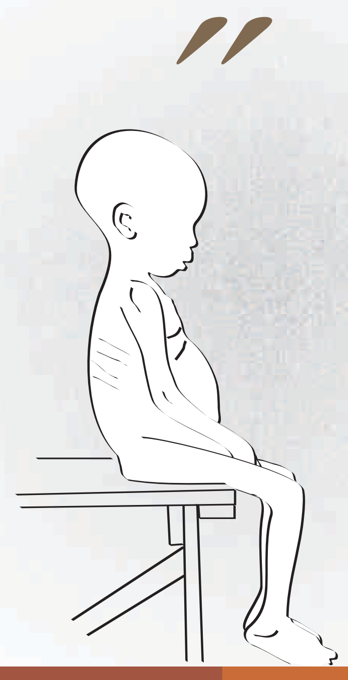
1. Major gaps in ICDS services

a) Non-use of electronic weighing scale

In **two third of the studied cases (39/55), the Anganwadi workers were not using electronic weighing scales** though it is the most accurate machine. Lack of electricity and lack of training were the reasons given for non-use of electronic weighing scales. In some places, the ICDS workers have received orders for not using electronic scales.

Shockingly, **in some of the anganwadis in urban areas, there were no weighing machines**. Lack of availability of such basic equipment reflects the inadequate resources available for tackling child malnutrition.

Equip all the anganwadis in rural as well as urban areas with basic infrastructural facilities and equipment such as functional weighing machines so that they can deliver the required services.



b) Lack of appropriate and adequate supplementary nutrition

Under ICDS programme, children in the age group 6 months to 3 years are entitled for Take Home Ration (THR), however the scheme also talks about giving THR in the form that is palatable to the child.

Currently, only in Amravati district, cooked food is given to the children in this age group instead of THR. In all other areas, additional three packets of THR are given to the children who are in SUW category. This is the only specific nutritional supplementation offered to the children

Sangram is 34 months old and weighs only 5.8 Kilos. Sangram falls into SAM category and needs urgent attention, yet no such special care was being given to him. Sangram's family background reveals that his parents work as an agriculture labourer. The family does not have a ration card, and hence the family has to buy food grains from open market. At this age, Sangram still is being breastfed three times a day. Sangram is taken along at the place of work by his mother. Sangram's mother was informed by AWW that she has to feed Sangram frequently and importance of hygiene. Complementary feeding was started very late at the age of 2 and half years, indicating the lack of information about the need for complementary feeding.

Given the severe undernourished status, Sangram needs to be given treatment in NRC, however it was seen that Sangram was advised to go for VCDC where he didn't go. He was given additional THR packets; however the mother reported that it is not consumed since it tastes bad. The mother suggested that the taste of THR needs to be improved. In last one month, Sangram reported illnesses such as diarrhea, fever and skin infection. Out of these three episodes, two were treated in private clinic. Overall Sangram's case reveals neglect from all the public systems, contributing to continuation of severe malnutrition.

(Beed District)

below three years of age who are severely underweight. Yet, it was seen that **in most of the areas, children were not eating THR because it was unpalatable. In the daily diet records not a single child enrolled in this study had mentioned about consumption of any preparation made up using THR.** Mothers reported that the taste of the THR is awful and hence children don't eat it.

Provide appropriate cooked food to all children below three years of age, instead of THR.

c) Delayed commencement of complementary feeding

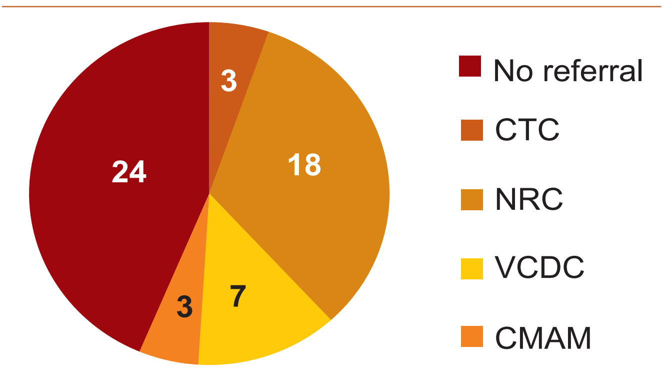
In the studied population it was observed that **in most of the cases (32/55), complementary feeding was delayed.** Mostly, semi solid preparations made up of rice and pulses were used to initiate complementary feeding. However, in several cases it was also seen that the complementary food items included ready to eat food items like biscuits and chivda, which are not healthy.

d) Referral to nutrition centres- a major gap in the ICDS programme

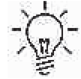
Children below six years are referred to health services for two purposes one is to seek treatment for illness from the nearby health centre, and other is to address severe malnutrition through admission into nutrition rehabilitation centres. When children are ill they are referred to nearby PHCs. When they are malnourished but not seriously ill they are referred to village level VCDC for correction of malnourishment. Children who are severely malnourished and ill are referred to Nutrition Rehabilitation Centers at District Hospitals or at Sub District hospitals.

Since there is erroneous labeling of the children in the present study, **out of 55 children, 24 were not referred to either VCDC or NRC**. Hence these severely malnourished children did not get any treatment and nutritional correction, simply because they were not categorized as SAM, since no attention is given to their categorization using WHO criteria. ***(See Chart : 1)***

Chart : 1 - **Referral to Nutrition Centre**



Out of the 18 children who were referred to NRC, only six children sought treatment in NRC. The main reason for low uptake of NRC is long distances that have to be traveled (since now NRC is available only at District or Sub District Hospital).



In the current service design, the prevention aspect is being overlooked, where the faltering of the child has not being adequately addressed through any action like effective dialogue with mothers/care takers, regular health check up of children, meticulous growth monitoring and subsequent actions, adequate and appropriate supplementary nutrition etc.

In reality, children who are in SUW/ MUW category are also in equal need of attention. This gap in the design of the ICDS programme needs immediate attention so that children in SUW/MUW category should also get additional attention in the programme.

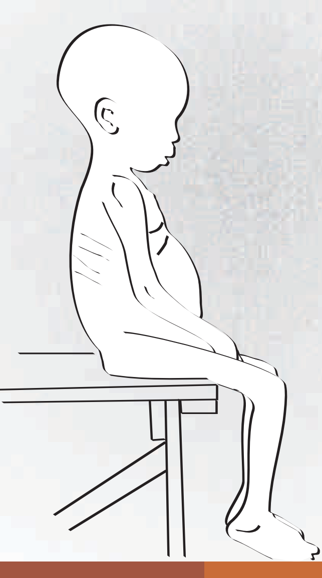
As soon as there is drop in weight of any child for any reason, start with VCDC and continue till the child comes back to normal category.

Nutrition Rehabilitation Centres to be operationalised at PHCs and Rural Hospitals in each block, which would be far more accessible to parents of severely malnourished children and hence would be better utilised.

e) Ineffective communication by Anganwadi workers regarding under-nutrition and measures to overcome this

In the interviews, though the Anganwadi workers had said that they have routine conversations with most of the mothers or caretakers (39 out of 55 mothers), in reality it was seen that these conversations happen very infrequently, sometimes once in six months or so. It is unlikely that such occasional conversations would have any positive impact on improving the nutritional status of the child.

It was also seen that no special meetings were convened to talk about nutrition related issues; in fact such conversations were done in a very casual manner. For example, the anganwadi worker spoke briefly about these issues while she had gone to inform mothers about the 'Mata Sabha'. One message that was given by most of the anganwadi workers was that the child needs to be fed frequently; a few others also spoke about hygiene and need for treatment.



As per the guidelines, Anganwadi worker has to make 2-3 home visits per day to share information about health and nutrition care. In the study, it was seen that the anganwadi workers had not kept records of home visits. In very few cases, any home visit had happened in the previous month. Issues related to diet, hygiene was mostly discussed only during Village Health and Nutrition day[1] and in the meetings of Mata samiti[2] . Due to time constraints, some of the mothers can't attend these meetings. Hence, these meetings can't be a substitute for home visits.

1 : VHND- A village health nutrition day organised at AWC once in a month to promote health seeking behaviour and to communicate with community for behaviour change towards better health outcomes

2 : Mata samiti- Mothers committee formed at AWC to monitor supplementary nutrition provided by Anganwadi services.

Regarding the measures to overcome malnutrition, the mothers were occasionally informed that the weight is reduced due to illness and the child needs to be fed frequently.

2. Major gaps in Health services

a) Lack of regular health checkups of children

As per the guidelines, a medical officer of the nearby health facility should visit the Anganwadi once in three months and in case of malnourished children, one visit per month is recommended. But in the study it was seen that the checkups of these children were conducted mostly under Rashtriya Bal Suraksha Karyakram[3]. These checkups happened quite infrequently, there may not have any impact on averting malnutrition.

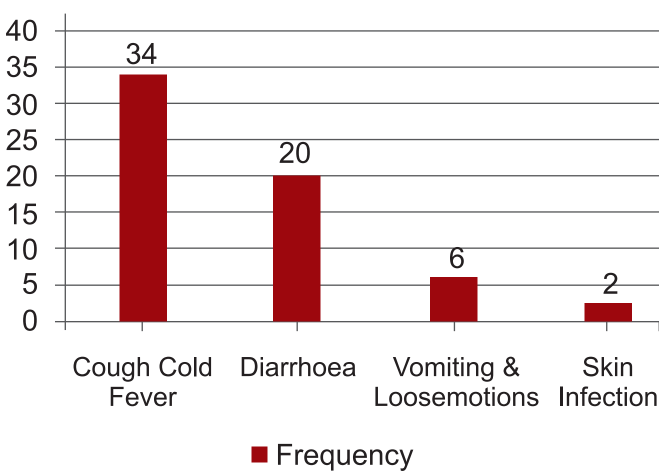
Out of 55 children, care givers of 29 children reported that there were no medical checkups in last three to six months period. In case of four children, the check up was done quite long back; hence the mother could not recall exact time of check up.

All children should be screened at least once in three months by medical officers. Children with recurrent health problems should be adequately treated. Children who are underweight should be checked once in a month by the medical officers.

b) Inadequate referral for illnesses

A total of 62 different episodes of illness were reported by these 55 children in the last one month period. Out of them, majority reported respiratory tract infection and the second commonest health problem was diarrhea. ***(See Graph: 3)*** **Considerable numbers of episodes (28) were treated in private health facilities** indicating additional financial burden to the families which are already in low socio-economic group. In urban areas, the utilization of private health facilities was quite high. This may be linked with inadequate availability or responsiveness of public health services.

Graph : 3 - **Types of illnesses reported**



3) Lack of coordination between Health system and ICDS

In the present survey, it was evident that there were significant coordination gaps between the health system and ICDS, which had resulted in denial of services such as NRC to the malnourished children. This lack of coordination is evident from the fact that regular checkups were not being conducted by the health department, and also children who were referred to NRC did not always reach these centers due to varied reasons like unavailability of transport within a given time etc.

Strong convergent governance and accountability mechanisms need to be operationalised to ensure that various departments coordinate their efforts and close various gaps in provisioning. Taluka / Ward and District / City level 'Health and Social service councils' should be constituted with involvement of elected representatives, officials of various relevant departments and broad range of civil society and community representatives as forums to ensure effective convergence in a rights based framework.

3 : Rashtriya Bal Suraksha Karyakram- Initiative aiming at early identification and early intervention for children from birth to 18 years to cover 4 'D's viz. Defects at birth, Deficiencies, Diseases, Development delays including disability.

The responses of the service providers depict that they aware about the social factors responsible for malnourishment of children like frequent migration, lack of adequate parental time, lack of hygienic practices etc. However, at the policy level, these factors for malnourishment are not adequately addressed. Moreover the parents/mothers of the child are held responsible for poor nutritional status. The actors in the system are not acknowledging their role in reducing malnutrition in children, and thus they are not taking adequate steps in alleviating malnutrition. This victim blaming approach may also be deterring mothers in seeking advice from these functionaries

4) PDS not fulfilling the needs of the families, especially in urban areas

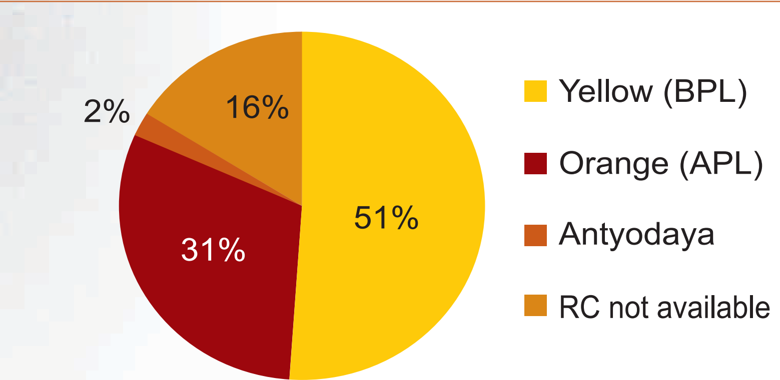
In rural areas, most of the families reported of use food grains from the fair price shops, however in urban areas non-availability of ration cards creates problems in accessing services under PDS. In the study, it was seen that most of the families residing in urban slum areas had their ration card on the address of their native place and thus they were not able to get food grains in the place where they had migrated. Those who were getting food grains from PDS also complained about irregular supply and poor quality of food grains.

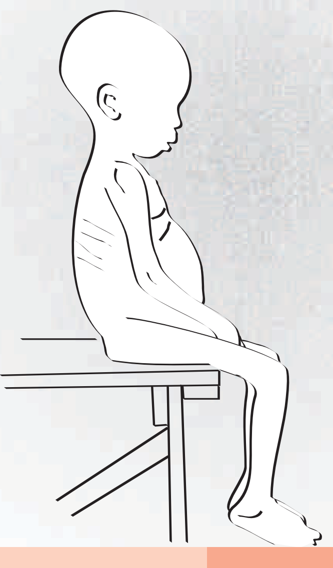
5) No specific policy measures to address social disadvantages of malnourished children

Most of the children (44/55) included in the study belonged to lower socio-economic class, which underscores the barriers faced in claiming entitlements for the undernourished child. Responses from service providers revealed that they were aware about the factors responsible for malnourishment of children like frequent migration, lack of adequate parental time, lack of hygienic practices, age gap between two births etc. However, at the policy level, these factors for malnourishment are not adequately addressed. For example, in Nandurbar district most of the children migrate with their parents and it was noted that during this period their nutritional status deteriorated due to illness, lack of food availability. The study reveals that there is no special program design that allows services to reach out in continuous and effective manner even after the child has migrated with parents. This is of paramount importance to restore the health and nutritional status of these children.

Children should be entitled for ICDS services universally and not only in the village of residence. Whenever any child migrates with his/her parents to a new area, he/she should be registered by the

Chart : 2 - **Type of ration card**





Case study from urban area

At the time of survey, Vihaan is 20 months old. He is residing in one of the slums in Mumbai city. His mother is non literate. Vihaan's mother has given birth to three children in a span of 4 to 5 years. Her first son was born prematurely and weighed only 950 gms at birth and died within 3 days. Vihan's birth weight was around 2.5 kgs. Vihaan's grandparents as well as aunt are suffering from Tuberculosis. Vihaan's family has migrated to Mumbai and hence can not avail services from PDS as their ration card has been issued from their native place. This compels the family to buy food grains from open market. The anthropometric measurements of Vihaan confirm that he belongs to the category of Moderate Acute Malnutrition. Vihaan was given complementary food from the age of 7th month. But it was reported that THR was not consumed and hence additional packets which are entitled for malnourished children were not taken by the family. Vihaan's mother suggested that he should be given cooked food instead of THR. In reality, since Vihaan belonged to MAM category, he should have been covered by VCDC, however, in none of the cases studied from Mumbai, was there any evidence of availability of VCDC/NRC. Nutrition related counseling was not being given by the anganwadi workers in this area. Vihaan reported three episodes of illnesses in past three months, all of which were treated in private hospitals.

The migratory status of Vihaan's parents makes their status precarious as they are not entitled to access the PDS system. Repeated deliveries have led to malnourishment of Vihaan's mother, resulting in low birth weight babies. Further, consumption of inadequate food has resulted in poor nutritional status of Vihaan. Repeated illnesses have led to deterioration in his nutritional status. In this situation, there is dire need for timely treatment and adequate nutrition; however in absence of public systems, Vihaan and his family were not getting these services.

All the 8 cases from Mumbai city reveal weak presence of public systems such as PDS, ICDS or health system. Similar findings were reported from the slum areas in Nagpur city as well.

new anganwadi and should start receiving the entitlements. One mechanism to ensure service delivery to migrated children could be computerised record of the children present in the villages and ensuring eligibility for entitlements in real time manner. ***(See Chart : 2)***

6) Lack of accountability mechanisms

Presently, there are no generalised accountability processes to ensure the proper functioning of ICDS. The internal accountability mechanisms are not proving effective in ensuring responsive delivery of the services satisfactorily under ICDS.

- Implement community based monitoring programme for ICDS services. Existing Mata samiti can be converged with VHSNC and be given additional training and mandate for community monitoring.
- Regular external audits of anganwadis should be conducted by the Health and Social service councils, and the anganwadis where more children are found malnourished should be identified for additional actions required.
- Regular review of nutritional status of children in a particular area should be linked with village level action plans, plus individual action plans for children who have remained underweight for more than three months. This planning may be done by the VHNSC, based on relevant training being given.

Urgent actions required for overcoming malnutrition among children below three years

1. Actions required for overcoming gaps in the ICDS program

- **Provide appropriate cooked food instead of Take Home Ration to all children below three years of age.**
- Appoint an **additional Anganwadi linked worker in each village** who would be dedicated to providing services for the children below three years of age. She would exclusively focus on outreach based nutritional counseling and ensure that age appropriate feeds are given to under 3 children in general and specifically to the children who are malnourished.
- Start measuring height and MUAC of all children and categorize them appropriately using WHO standards (SAM, MAM) and not only weight for age.

- All the children who are underweight should be referred for attention by the health system. The children should be categorized using height and weight. All the children who are in SAM/MAM category should be appropriately referred to VCDC or NRC. As soon as there is drop in weight of any child for any reason, start with VCDC and continue till the child comes back to normal category.
- All the children who are born low birth weight, the children who falter in weight gain, the children who are ill, and the children at mile stone stage like in seventh month should be followed up carefully by AWW. Regular, detailed and individualized nutritional counseling should be done for households of such children which may include importance and methods of complementary feeding, early referral of an ill child to health facility etc.
- At around six months of age, the counseling sessions should include information about complementary feeding practices. Individualised counseling sessions should be held with the caretakers of the child. These sessions should include information about appropriate complementary foods and also demonstrations to prepare these foods.
- Open crèches in each village/urban settlement where adequate nutrition should be provided to the children during the period of the day, when parents are away for work
- Children should be entitled for ICDS services universally and not only in the village of residence. Whenever any child migrates with his/her parents to a new village, he/she should be registered by the new Anganwadi and should start receiving the entitlements. One mechanism to ensure service delivery to migrated children could be computerised record of the children present in the villages making them eligible for entitlements in real time manner and at any location.

2. Action for overcoming gaps in health services for under three children

- All the children in Anganwadis should be screened at least once in three months by the medical officers of PHCs.
- Children with recurrent health problems should be adequately and immediately treated. Children who are underweight should be checked once in a month by the medical officers.
- Nutrition Rehabilitation Centres to be started at PHCs and Rural Hospitals in each block, which would be more accessible and better utilised.

3. Strong convergent governance and accountability mechanisms be operationalised, to ensure that various departments coordinate their efforts and close various gaps in service provisioning.

- Taluka / Ward and District / City level 'Health and Social service councils' should be constituted with involvement of PRI members, officials of various departments and broad range of civil society and community representatives as forums to ensure effective convergence of services in a rights based framework.
- Implement community based monitoring programme for nutrition related services. Existing Mata samiti can be converged with VHSNC and be given additional training and mandate for community monitoring.

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