

## Preface

The decision to publish "Tackling Malnutrition of Children under Six – Evidence from Two Micro Studies" was taken in view of the need felt during the last two years of strenuous advocacy with the Planning Commission by the Right to Food Campaign and Jan Swasthya Abhiyan, of which Mobile Creches was a part, to influence the policies of the 11<sup>th</sup> Five Year plan towards Early Childhood.

Mobile Crèches has 40 years of experience in working with young children of rural migrants on big construction sites in Delhi, Mumbai and Pune, and also with children of women working in the informal sector living in urban poor settlements. In both situations, children are born and reared in circumstances of utmost difficulty for both woman and child – no family support systems for childcare, uncertain wages, poor or no availability of potable water, sanitation and health care. It goes without saying, Maternity Entitlements are unheard of and there is no evidence of the existence of crèches where women can leave infants when they need to return to work – often within two weeks of child birth. These are all familiar elements in the crucible in which the bitter alchemy of malnutrition, morbidity and mortality are brewed and therefore relevant to the situation the country is seeking to tackle.

Mobile Crèches field workers, under the guidance of committed health care professionals, have over the years, struggled with the survival of infants, patiently fed weak children, battled with infections, worked with families to overcome superstitions, built support for better child care practices and used easily available nutritious food to coax change. They have been able to establish the importance of feeding, growth monitoring and engagement parents as an effective approach to respond to severe and moderately malnourished children. However, despite years of convincing and obvious successes in the field, Mobile Creches experience had no empirical evidence to prove that the approach had an impact, largely because of its inability to capture data due to the high mobility of the construction workers.

In 2003, faced by the large numbers of neglected children in a new Resettlement Colony, Madanpur Khadar, Mobile Creches decided to intervene with a home-based strategy which would enable outreach to more children than possible through a centre-based strategy, and this time, to carefully document the findings. Led by Dr Vandana Prasad, a Paediatrician and Health activist, who has worked closely with Mobile Creches, an action research was designed and carried out with an experienced in-house team. This strategy evolved from the learnings of decades of experience derived from running day care programmes for children in urban poor settlements and construction sites.

While evaluating this strategy to impact malnutrition, survival and development, we also decided to simultaneously look at data derived from the Mobile Creches daycare centres. The Daycare Programme provides a comprehensive programme of care, health and nutritional inputs along with parent counselling. It was felt that a look at the two approaches – that of Madanpur Khader and that of the centre-based comprehensive strategy of Mobile Creches, would be valuable at a time when India was facing widespread malnutrition issues, and would feed into advocacy efforts to influence policy for a more effective, holistic approach to tackle the increasing incidence of malnutrition.

The action research in Madanpur Khader has been infinitely valuable for Mobile Creches, both for the above advocacy and also because it has strengthened its capacity to reach out to larger numbers, change childcare practices, and make economically weak communities proactive for the health of mother and child. Awareness of communities regarding State services and interest in accessing them

and making them deliver was a clear objective of the action research, and, it is gratifying to see it has taken root in the communities with whom we work.

We gratefully acknowledge Dr Prasad's role in guiding this process and in analysing and presenting the data of the two case studies. We also acknowledge the disciplined team of field workers who built rapport and systematically tracked children in all weathers, door to door, recording, persuading and taking the strategy forward.

We hope the Case Studies will help to carry the advocacy process forward towards a more sound State policy for the care, well being and holistic development of young children.

## Tackling Malnutrition of Children under Six Evidence from Two Micro Studies

### Introduction

In the last few years, there has been a great interest in the recalcitrant status of malnutrition amongst Indian children<sup>i</sup>. As a result, activists, experts and related government agencies have been involved in a number of consultations to arrive at policy and programmatic packages that will show a speedy and significant impact on malnutrition<sup>ii</sup>. Much, also, has been published on status, causes and strategies related to malnutrition, as well as on the various programmes that are intimately connected with these, such as the ICDS.<sup>iii</sup>

While there seems to be broad consensus on the factors and strategies that are likely to impact malnutrition significantly, there are also significant differences in the value placed upon individual strategies, their relative importance and their impact. Amidst this debate, there are some who have consistently held the position that it is not one or the other strategy, but a *comprehensive* set of multi pronged strategies in their entirety that are likely to have the speediest and most significant impact. Very simply, these integrated strategies focus on the public provision of Care (including crèches where required), Nutrition Education (Breast Feeding and Nutrition Counselling), Food (of good quality, sufficiency and diversity, locally procured and culturally acceptable) and Health Care (through convergence with the NRHM) This position still lacks widespread political and policy support though it has also been held that all these are well within the capacities of the government to implement, especially in the context that 'money is not a limiting factor'<sup>iv</sup>. However, in the recent past, the point has received a patient hearing at Planning Commission and other government fora. There seems to be a willingness to invest in these strategies, *provided* the costs are borne out by benefits and *provided* there is evidence, national and international to support this hypothesis.

However, therein lies the difficulty. Both national and international evidence is hard to come by for the following reasons: India is fairly unique with regards to the status and causation of malnutrition of its children - a problem that persists despite the rapid (but quite iniquitous!v) economic growth of recent years; no other country is quite able to fulfil the criteria for good comparison, and also, because malnutrition itself is so inter-sectoral and multi-factorial. Programmes run in other countries to tackle malnutrition have, quite logically, been geared to their own conditions, and none have had the comprehensive and integrated nature of the ICDS, which, in India comes closest to holding the mandate that many feel is required to tackle malnutrition in this country.

The ICDS programme, conceptually fairly akin to the above mentioned set of strategies, has *only just* received the thrust and support it needs, more than three decades after its inception. Not having ever done the job as it should have been doing, it can hardly be used to evaluate the prescribed set of strategies it purported to utilise. There are small non - governmental agencies involved with child care and nutrition programmes using multiple strategies, but few have the technical know how or documentation that can be used to provide the required 'evidence'. Unfortunately, for reasons unknown, the large international agencies that function as the technical experts of the world do not seem to have invested in large scale studies that would either 'prove' or 'disprove' the hypothesis of using the entire set of interventions together rather than evaluate each on its own and that too, piecemeal.

## **The Food Component**

In particular, there appears to be a tension between the strategy of public supply of 'good food' (as defined above) along with age appropriate nutrition counselling as opposed to the combination of nutrition counselling and micronutrient supplementation, leaving the access to food to the family's own devices. At the heart of the debate is the tension between viewing micronutrient deficiencies as being part and parcel of malnutrition caused by lack of access, affordability to good quality diverse food, and its treatment as only a medical phenomenon requiring intervention through drugs and special nutritional supplementation. Much evidence has been presented that micronutrient deficiencies exist even amongst the non malnourished as well as amongst better to do populations. While this is valid, there is also evidence that the degree of micronutrient deficiencies remain much more severe amongst the poorest quintiles, and that, in general, well nourished children are far less likely to face micronutrient deficiencies than malnourished ones. Considerations of social justice and equity also compel us to think first of the poorest quintile of the population that suffers the largest burden of malnutrition, and for this, the comprehensive package of services being espoused in the Mobile Creches Study seems most logical.

In recent years concerns about the influence of profit making agencies upon 'technical' bodies who provide technical support to the government have also raised questions regarding biased nature of their technical advice. Many of the strategies suggested by these bodies, depend upon the provision of industry based products like nutrition supplements, therapeutic foods and fortified foods –such products as would require relatively centralised procurement and distribution, with its attendant risks of corruption,<sup>vi</sup> as compared to the notion of 'good quality food' which should be made available at village level and requires only minimal processing. This would, in turn support the concept of community participation and fosters local agricultural produce as well as local economies.

## **The Care (including health care) Component**

Regarding the Care Component, many campaigns are pushing for comprehensive child care services including pre school, health care and day care as an essential service to poor women and children, as a 'right', as well as an intervention in malnutrition. However, policy and support for such a strategy of overall care, in terms of the necessary infrastructure, budgetary allocations as well as human resources has remained highly inadequate. Even those policy changes that have resulted from the recommendations of such groups have steered clear of agreeing to provide extra workers and provision of land and space at the requisite budgets in ICDS.

Nonetheless, the 'technical' challenge to those who espouse the comprehensive strategies to prove impact and efficacy still remains.

In this context, the results of two micro studies- Action for Young Children ( Madanpur Khadar ----, 2004-07, and Impact of Mobile Crèches Programme on Malnutrition, 2006-07, are being shared in the hope that they will provoke larger organisations with more competence and capacity to take up this particular challenge of supplying 'evidence'.

The first Study carried out in a Resettlement Colony ( Madanpur Khader) in Delhi was set up to study the impact of intensive nutritional counselling on infant and young child feeding (IYCF) in the belief that, as suggested by the Lancet series' on child

survival and child undernutrition<sup>vii</sup>, expected gains in breast feeding and complementary feeding *would result* in similar gains in the status of malnutrition. The Lancet series<sup>viii</sup> has also been widely interpreted in India to suggest that the attention to supplementary nutrition through the ICDS is misguided<sup>ix</sup>, and has detracted from better strategies such as nutrition counselling, and we were keen to study the positive impact of nutrition counselling *in the absence* of supra-family services of provision of general care and food.

To our chagrin and surprise, this hypothesis was not borne out. That is, despite fairly significant impact on behaviour vis vis IYCF, malnutrition *did not improve*, and even seemed to worsen as the children grew older. This, despite the fact that the population selected, would not be recognised as being 'the poorest of the poor' as they do not fall in the "BPL<sup>1</sup>" category and live in a Resettlement Colony of New Delhi. This is a category that and for whom, many technical experts consider, access to sufficient food for the under twos would not be a problem. Of course, it could be argued that, had the observed impact on IYCF not happened, the situation of malnutrition would very likely be far worse.

Though we were not able to do a causal analysis of the drastic situation of malnutrition - poverty, living conditions (specially water and sanitation), inadequacy of health care, and the lack of energy, motivation and time of the carers (specially mothers) seemed to be key factors. Dietary recall invariably suggested that children were fed poor quality food infrequently, only partially as a result of lack of information, but also significantly as a result of lack of affordable care arrangements and lack of money to purchase high quality food.

The second Study presented built upon this work. It looked at a more *comprehensive* input in terms of nutrition education, care, supplementary feeding as well as health monitoring and basic health care. Study II, based within a cohort of malnourished children on construction sites, showed significant positive impact within the short span of a few months, which was reflected in the shifts in grades for the better. It is the hopeful results of that, which the author wishes to present with the understanding that not many studies are available which actually connect strategies for malnutrition to impact indicators at the moment.

These two micro Studies are presented in the hope that their results will provoke larger organizations with more competence and capacity to take up the challenge of supplying "evidence" on this urgent issue. We also hope that these Studies will provide hope and some assurance to those who believe that the overall rights of the child to enough wholesome food, and support to families to provide basic loving care and good quality health care must provide the over riding framework for any supplementary technical intervention, *if at all required*.

### **Case Study I: Madanpur Khadar Study: Study of a Community Health Worker Based Intervention in Early Childhood Care and Development in An Urban Resettlement Colony<sup>x</sup>**

Mobile Crèches, an NGO working for early childhood care and development (ECCD) amongst poor urban communities in slums in Delhi, had been using and assessing various centre based interventions in child care, development, health and nutrition for over 40 years.

Various studies done during this process, however, reinforced the fact that information and skills related to ECCD continued to be poor amongst the urban poor with resulting negative impact upon the care and health of the very young child. This

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<sup>1</sup> Below poverty line

was further exacerbated by severely inimical socio economic and environmental factors such as the lack of adult carers at home as both parents of the nuclear families went to work, leaving their young in 'sibling care', extreme relative poverty and instability of livelihoods, resulting migration, very poor water and sanitation conditions, exploitation by private health care providers and unresponsive and inaccessible public services. The main strategy used by the organisation has been to provide support in the form of centre based crèches, pre school services and school support services, as well as some community based dissemination of information related to ECCD through mothers' meetings, use of folk media etc. However of late, many new strategies were being tried to get beyond the direct running of centres by supporting communities to use public resources as well as their own to achieve the same goals.

The location chosen for the above strategy/Study was the new resettlement colony of Madanpur Khadar. Briefly, when the sprawling hutment colony in the Nehru Place area was uprooted, families were sent from there and other parts of the city like Mayur Vihar, Alkananda, Lajpat Nagar, Gautam Nagar etc. Madanpur Khadar is located adjacent to the Madanpur Khadar Village separated by Yamuna distributory. The area is now referred to the JJ Colony housing a huge population of about 45,000 people divided in to various blocks.

The water supply in the area has very high fluoride content and was not appropriate for drinking. In addition to it there were problems of electricity and transport facilities. Only one primary school was catering to the entire population. There were no childcare facilities for young children of working women who travelled long distances for work.

The intervention started with a range of activities which included:

- Assessing the status of basic services
- Building relationship with the community
- Identification of the problems of women in caring for young children
- Capacity building of local women to start home-based crèches.

In an in-house assessment of the work after two years in Madanpur Khadar, it was felt that enough broad based activities had been undertaken in the area and, while continuing such activities, the time was ripe to work intensively on a small group of about 250 families so that behaviour change may be effected and results of proper care of mother and infant could serve as a demonstration of good practice. Since this 'one to one' household level strategy had never been used in MC, it was decided to see it as a piece of 'action research' for organisational learning and potential replication if found useful.

### **Methodology and Process**

It was thus decided to embark upon three modalities of intervention in favour of ECCD:

1. A planned, systematic, 2 year long household level community health worker based action research (2004-2007)
2. Liaison between the community and health and other related services, as well as to create pressure groups for sustaining and improving this relationship (2003 – ongoing)
3. General community level sensitisation on ECCD issues and widespread dissemination of information to provide and overall favourable environment and support for the previous two interventions (2003 – ongoing).

The 'action research' would 'walk' with women from pregnancy to the time their children were 18 months old to see what practices were being followed in child care, nutrition and health, to make positive interventions and to measure their impact.

The basic method was to be a series of home visits at specified periods with specific observations and tasks to be done at each visit. Each visit would be supported by material, which is referred to as 'form' in subsequent discussions.

About 20 meetings and interactions were held in the community to explain the objectives of the study. A household survey was then conducted in blocks A1, A2, and B.1 and pocket C, which had a total of 10,000 population to gather baseline information on health, nutrition and childcare practices during previous pregnancies and with previous children. 270 families were identified during the course of the survey where there were pregnant women and /or young children.

Thirteen forms were developed for the study. The primary purpose of the tools was to support the programme of intervention. However, they would allow measurements of various processes and impact at various stages of the process. Each 'form' for example, comprised of information on what to see, what to do, what to measure and some key messages relevant to that particular form.

Form 1: socio-economic/ background information.

Form 2: based on practices during previous pregnancy.

Form 3: practices during present pregnancy.

Form 4: just after birth.

Form 5: 15 days of age.

Form 6: at the age of 1 and half months.

Form 7: at the age of 2 and half months.

Form 8: at the age of 3 and half to 4 months.

Form 9: at the age of 6 months.

Form 10: at the age of 9 months.

Form 11: at the age of 12 months.

Form 12: at the age of 18 months.

These forms accompanied a growth chart<sup>2</sup>, for easy monitoring of growth of the children at regular intervals.

The total number of families included in the survey varied considerably through time from less than 200 to over 300 mostly due to migration and due to addition of families from another site for organisational reasons.

Simultaneously, two other significant processes were embarked upon in the same area as discussed above:

1. Environment building, sensitisation and capacity building on ECCD issues with the community in general and women's groups in particular, using folk media.
2. Building community pressure for better services related to ECCD; in particular, the ICDS and the servicing PHC at a nearby village.

### **Key Results of Household Level Intervention**

The key results of the household level intervention through the team of health workers and supervisors / trainers were as follows:

1. On the whole, baseline figures of antenatal care showed improvement after intervention with only 9% women receiving no antenatal care as compared to 23% and 58% receiving partial care as compared to 36%.

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<sup>2</sup> We used the UNICEF growth chart.

2. There was a significant decline in home deliveries without trained birth attendants from 47% to 21%. There was an increase in home deliveries with TBAs from 21 to 44% and a slight (insignificant) increase in institutional deliveries from 32 to 35%.
3. Interestingly, of the children born, 51% were female and there was no evidence of sex selection.
4. There were distinct gains made as a result of the intervention as compared to the baseline on early bathing of the neonate and immediate bathing was reduced to half, from 70% to 35%.
5. About half the babies born received prelacteals despite advice to the contrary and this figure showed no change as compared to the baseline.
6. There was a significant improvement in the percentages of babies who received colostrum, from 46% to 70%.
7. Complete immunisation at 12 months was at 87% as compared to 63.2% for Delhi (NFHS III). Three doses of DPT in children aged 12-23 months was 100% as compared to 72% (NFHS III), measles immunisation at age 12-23 months was 85% compared to 78% (NFHS III)<sup>3</sup>.
8. Exclusive breast feeding at 6 months was only at 37% compared to 34.5% for Delhi as per NFHS III.
9. However, many women went on to give nothing but breast milk for varying periods of time after prelacteals were given. Of children who received prelacteals first and then were breast fed, 61% of children received breast feed without any other top feeds till 6 months.
10. Out of the children who did not receive prelacteals, 77% received exclusive breast feeding for 5-6 months.
11. It appeared that the message to introduce complimentary food at six months was widely and well received with 80% children receiving it as compared to the baseline of 49%.
12. Despite these gains, 67% of children were malnourished at 18 months. (Delhi data for NFHS III lies at 33% for under threes).
13. Knowledge of diarrhoea management and skills for delivering oral rehydration increased from 32% at the beginning of the exercise to 80% at the end.
14. Ability to recognise pneumonia increased from 53% at the beginning of the exercise to 89% at the end.

The community processes resulted in the allocation of an extra ANM to this area for ANC and immunisation as well as the operationalisation of 53 ICDS centres where previously none had existed.

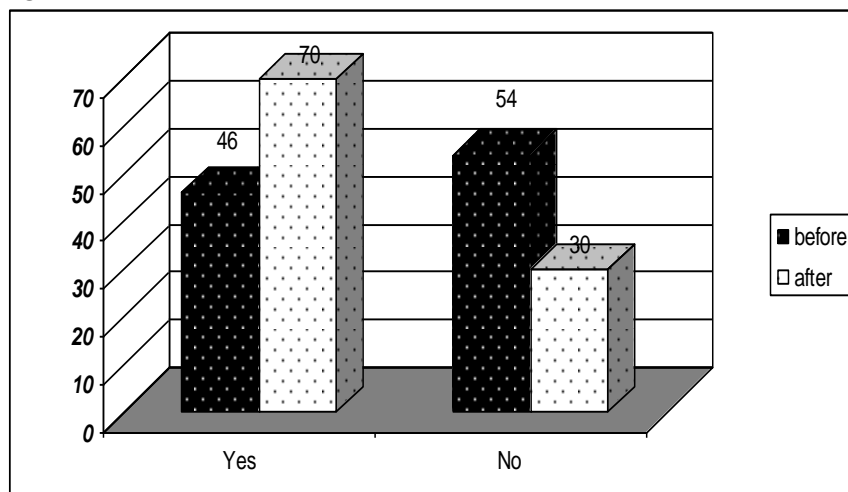
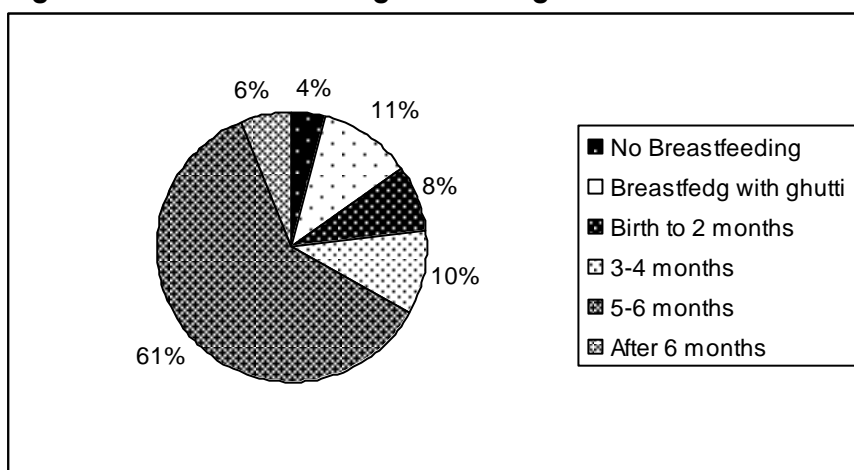
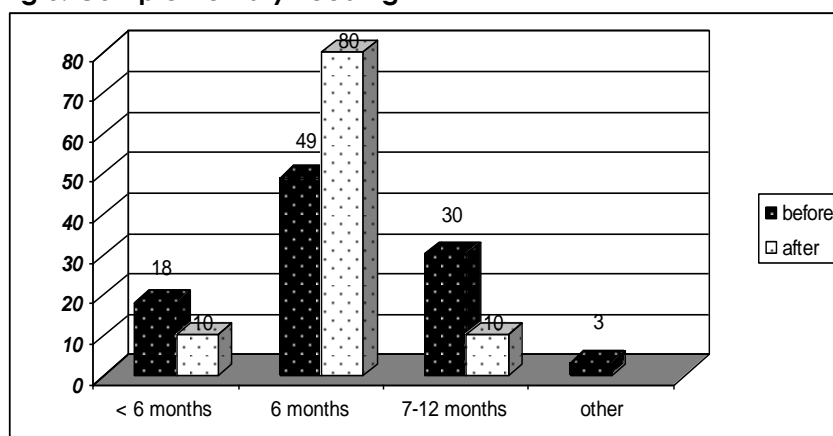
## Conclusions

Gains on immunisation and management skills for common diseases were appreciable. Moderate impact could be seen on colostrum feeding and delaying the first bath of the child. The impact on starting complementary feeding at 6 months was good at 80% as compared to the reported 49% with the previous child.

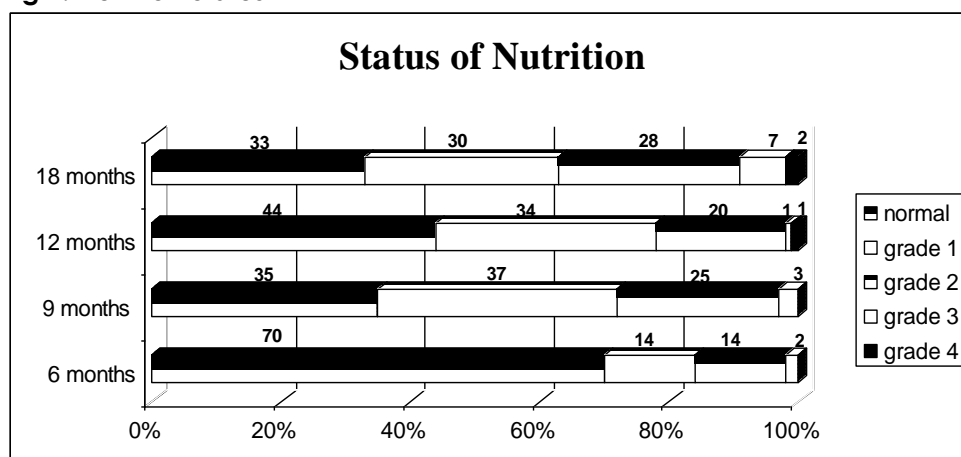
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<sup>3</sup> The baseline for the data being presented was based on recall of practices with the last born child. However, it was not possible or considered feasible to get baseline data for such specific fields such as details of immunization or exclusive breast feeding. Thus comparisons were made with the NFHS III data.



**Fig. 1: Colostrum Intake****Fig 2: Exclusive Breastfeeding After Giving Prelacteal****Fig 3: Complementary Feeding**

However, little impact could be made seen on issues such as exclusive breast feeding and prevention of malnutrition. (It is worth noting that if the giving of prelacteals was discounted, exclusive breastfeeding in the subsequent period for 5-6 months went up substantially to 61% from a reported 44% in previous pregnancy.)

**Fig 4: Nutrition Status**

The ICDS services in the area could be increased and improved towards the latter phase of this exercise. However, apart from the immunisation services of the ANM, general child health services remained extremely poor. No major intervention was either planned or made on the overarching determinants of child health and nutrition such as poverty or status of the involved women. However, some efforts are being made to mobilise women and organise them into SHGs. Some efforts were also made to improve the quality of water with poor results.

*Obviously, more needed to be done to make an impact on malnutrition, than the strategies being practiced and studied during this action research.*

#### **Case Study II: Mobile Creches Study -A Study of The Impact On Malnutrition Of Comprehensive Crèche - Based Services For Children Under The Age Of Three**

Mobile Creches has traditionally run a comprehensive service of centre-based child care services on construction and slums and resettlement colonies that delivers care, nutrition, learning activities and basic health care (including deworming, iron and vitamin A supplementation, care of common childhood illnesses, health check ups, growth monitoring and health education) as well as direct interventions in malnutrition through supplementary nutrition (provision of breakfast, lunch and evening snack at the centre).

##### **The Package of Intervention**

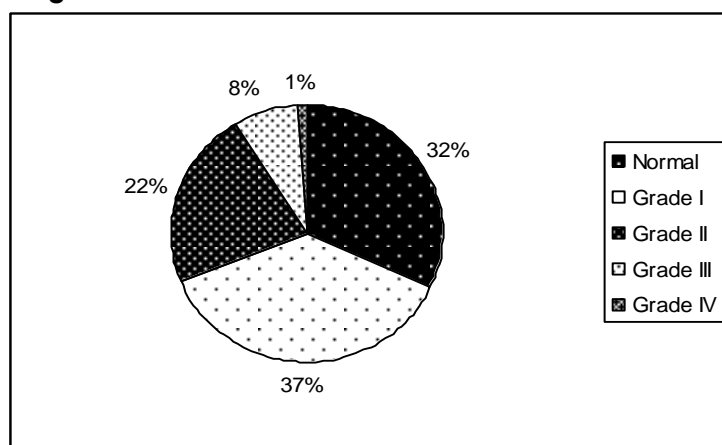
- 8 hour crèche
  - Worker child ratio 1:10 for crèche; 1:25-30 for older children
- 2 meals and 1 snack
  - Expenditure per child on SNP Rs. 8 per child
  - 6m to 1 yr – 550-600 kcal; 15 gms of protein/day
  - 1 to 3 yrs - 600-625 kcal; 15 gms of protein/day
- Growth monitoring
- Health check-ups
- Immunisation
- Deworming
- Management of minor illness
- Referral services
- Vitamin A and iron supplementation
- Stimulation activities for under threes
- Pre school education and assistance for school entry
- Health and nutrition counselling

Mobile Creches covers at a time about 1500 children through the above programme. However, the population of children is in constant flux particularly on construction sites due to migration from one area to another. It was decided to study the impact of the service provided by Mobile Crèches (which can be considered an extended, improved version of the ICDS, albeit running at higher cost, and also a representation of the set of strategies being discussed in terms of the proposed restructuring of the ICDS) upon the most vulnerable population of children of construction workers within a period of six to twelve months to evaluate impact on malnutrition itself, rather than its many determinant processes. The results are as follows<sup>xi</sup>:

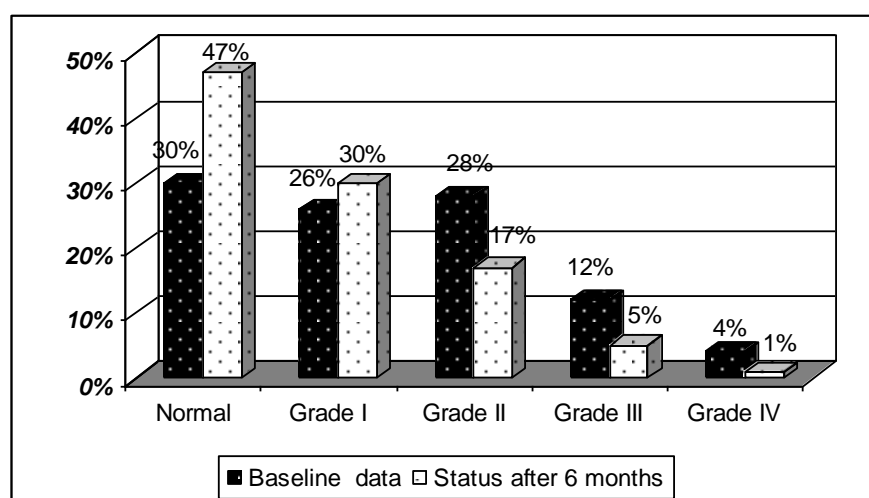
752 children of ages upto 3 years from 21 centres of Mobile Creches were studied from April 2006 to March 2007 for their status of nutrition at entry into the programme.

Among the 752 children, 205 children continued to avail services at the 21 Mobile Creches centres for the next 6 months to one year. Table b) compares the baseline and end-line nutrition grades of these 205 children.

**Fig 5a: Status of Malnutrition**



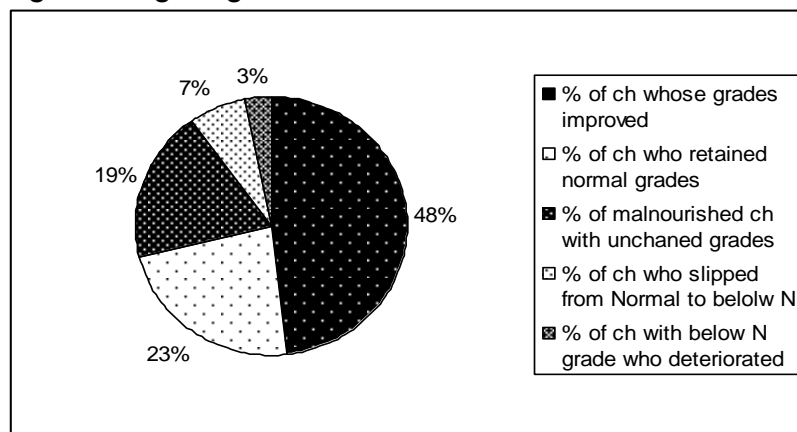
**Fig 5b: Comparison of baseline status and status at the end of six months, of 205 children staying 6 – 12 months**



The findings on changes in grades for each child as an impact of programme intervention were an eye opener. 23% children were found to have retained normal

grades and 48% of the children had improved their grades. In other words, 71% of the children had moved up or retained normal grades. Among the rest 10% showed deterioration – 75% of these children deteriorated from Normal Grade to malnourished and 25% children deteriorated from below-normal category to further downward grades.

**Fig 6: Change in grades observed in children**



Further detailing these important findings on the 205 children who stayed in their respective centres for a period of 6 months to 12 months, we find that 76% of normal grade children retained their grades, 8% deteriorated to Grade 1, 11% to Grade 2 and 5% to Grade 3.

- Of the 54 children found in Grade 1, 61% improved their grades and achieved normal grade, 37% remained in Grade 1 the rest 2% deteriorated to Grade 2.
- Among the 58 children found in Grade 2, 22% attained Normal Grade and 45% improved their status and achieved Grade 1. 26% remained in Grade 2, 5% deteriorated to Grade 3 and 2% (one child) to Grade 4
- During baseline survey 25 children were found in Grade 3. 16% of them attained Normal Grade, 32% became Grade 1 and 36% Grade 2, 16% remained in Grade 3. However, there was no deterioration noticed.
- Six children were found in Grade 4 of whom 3 children improved their grades to Grade 1 and 3 children became Grade 2. Here also, like Grade 3 cases no deterioration was noticed (no child died).

The following table captures detailed information on change in grades :

**Table 1: Improvement, Constancy, Deterioration**

Retention at Improvement grades	Normal or in nutrition grades	Unchanged grades, below normal	Deterioration from normal to below normal	Deterioration within below normal grades
Normal to Normal 23%		G1 to G1 10%	Normal to G1 3%	G1 to G2 0.5%
G1 to Normal 16%		G2 to G2 7%	Normal to G2 3%	G2 to G3 2%
G2 to Normal 6%		G3 to G3 2%	Normal to G3 1%	G2 to G4 0.5%
G2 to G1 13%				
G3 to G1 4%				
G3 to G2 4%				
G3 to Normal 2%				
G4 to G2-3 1%				
G4 to G1-3 2%				
Total 71%		Total 19%	Total 7%	Total 3%

It is very evident that the status of individual children is in a state of flux and fairly rapid and extreme changes of grades can be seen within short periods of time. Thus, they need close monitoring and swift action. This also highlights the need to prevent slippage from normal whereas currently, the focus in the ICDS is very much on the severe grades of malnutrition and Grade I and Grade II are hardly considered malnutrition at all.

It might be argued that to wait six months for a child with severe malnutrition to improve is too risky and an approach that offers more rapid improvement like the use of ready to use therapeutic food (RUTF) may be preferred<sup>xii</sup>. While this may be so, it should be noted that the Mobile Crèches programme, apart from general instructions to provide more oil and greater frequency of feeding for severely malnourished children, as well as occasional use of home made 'mixes' like the Mysore mix, Hyderabad Mix, SAT Mix etc<sup>4</sup>, does not exclude the possibilities of homemade or centre made calorie-dense foods for such children. Moreover, there is much work to suggest how locally produced natural therapeutic foods like green leafy vegetable powders (GLP) can fulfil the micronutrient gap and obviate the need for pharmacological or commercial supplementation<sup>xiii</sup>.

It is also clear that once severely malnourished children are out of the woods, continuing intervention with food supplementation of the kind used for this study offers sustainable maintenance as well as further steady gains.

It should also be noted that the programme follows government recommendations in vitamin A as well as iron supplementation. The study did not measure the impact of this package on micronutrient deficiencies. One can only assume that the gains in general nutritional status combined with micronutrient supplementation can only have better impact on child health than gains in micronutrient status alone.

## Conclusions and Implications for Nutritional Services For Children

The ICDS programme has been the sole service delivery mechanism for children under six for a number of years. This has classically dealt with malnutrition by offering a very poor quality supplementation largely with some cereal though it offers the potential to provide exactly the comprehensive care required by this issue. Recently, under the National Rural Health Mission (NRHM), the ASHA scheme has offered a community based health activist who, along with other tasks, carries also the mandate for IYCF counselling with families, as well as assistance in antenatal and postnatal care along with the ANM<sup>xiv</sup>. A patchy and tiny service is added through the Rajiv Gandhi Crèche Scheme that allows partial support for crèches to be run by NGOs. In terms of maternity entitlements that would hypothetically allow a woman to stay home to breast feed – for the informal sector, there are practically none. Notably, however, Tamil Nadu government has started the Muthulakshmy Reddy Scheme that provides a wage replacement of 1000 Rs per month for 6 months during late pregnancy and post delivery. It is also worth noting that the Central Government has announced two years of paid leave for all women central government employees to take care of children till the time they are 18 years of age (applicable to two children)! This provides a good comparison to the growing inequity in terms of these rights between the government controlled organised sector, the private sector which evades these obligations, and the uncovered informal sector.

As a policy recommendation, the 11<sup>th</sup> Plan<sup>xv</sup> recommends a combination of maternity entitlements, crèches, intensive breastfeeding and nutritional counselling and better nutritional supplementation in order to combat childhood malnutrition.

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<sup>4</sup> SAT stands for Sree Avittom Tirunal Hospital, Thiruvananthapuram, where this cereal – protein mix was devised. Available for Rs 8 per 100gms

However, the ultimate policy that will govern and direct these services and programmes is still not resolved. In particular, there is a raging debate on what kind of SNP will actually prove to be of benefit. Meanwhile, there are still some who insist that the (lack of) availability of food is not an issue for the under twos.

These two studies, in juxtaposition, indicate the usefulness of breastfeeding and nutritional counselling as well as its limitations in the absence of the other components of general care, health care and nutritional supplementation. They also highlight the quantifiable and positive impact of providing good quality supplementary nutrition, that does not however, rely on pre packaged food or highly processed food ('dalia', soya snacks and other locally procured jaggery-peanut snacks; chikki, are the furthest the Mobile Creches programme goes). This impact seems to encompass even the situation of severe malnutrition though it is slower than other documented impact using highly expensive and imported RUTF such as 'Plumpy'nut'<sup>xvi</sup>.

The costs of these interventions are well within sustainable limits and there is an additional socio - economic benefit of not disturbing accepted cultural practices, and actually supporting local agricultural practices, markets and economies.

The reasons why these logical, common - sensical and time tested interventions have not found acceptance yet in the policy environment for malnourished children may have to be looked for in the politics and hegemony of centralised technological and medicalised responses to social and economic phenomena like hunger; and its sanitisation and diminution to terms of reference that prefer to deal with units of nutrition rather than the rights of poor children to the best of care possible within the country to any other child.

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