

How Should India Approach The Management Of SAM?

A Position Paper

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The numbers of children who are currently suffering from malnutrition in India is an extremely serious matter of national shame and distress. Not only has this situation persisted for far too long, it remains intractable even during the recent phase of rapid economic growth. Of late, there has been intense debate and discussion on how to best intervene to make a change that is both substantial and rapid, and various groups of experts have presented strategies to policy makers as to the steps that need to be taken for both preventing malnutrition and treating its most severe forms.¹

This position paper responds to a particular strategy that has been introduced at state level without due process of discussion on its repercussions and implications; namely, the use of imported Ready to Use Therapeutic Foods (henceforth RUTF) for the management of Severe Acute Malnutrition (henceforth SAM).

The current situation is this –

1. A product called Plumpy Nut has been imported for distribution to children with SAM in several states, including Madhya Pradesh, Jharkhand, Orissa, Bihar and Maharashtra under the aegis of UNICEF and through the mechanism of Nutrition Rehabilitation Centres (NRCs). There is a proposal to make it the “prescribed treatment” for SAM.
2. This product is imported from a company called Nutriset in France. If produced in India, it would cost approximately US \$ 40 or approximately Rs. 2000/- per child per treatment²
3. Plumpy Nut efficacy has been demonstrated in other countries such as Malawi, Niger, Ethiopia, DR Congo and Mozambique in conditions of disaster and famine.
4. The studies demonstrating the efficacy of Plumpy Nut have been primarily conducted in disaster situations, where other community-based treatments for SAM have not existed, eg. refugee camps, famines, etc. There are few studies comparing the impact of Plumpy Nut with other specific community-based treatments for SAM developed from local indigenous foods.

In juxtaposition of these facts –

1. The guidelines for community and home-based treatment of SAM formulated by a large group of experts and supported by the Indian Academy of Pediatrics recommends the use of home-based food (modified from the family pot). It

¹ Working Group for Children Under 6, Strategies for children under six; special article, Economic and Political Weekly, December 29, 2007

² 1 sachet is 92g. Treatment for SAM requires 90 sachets per child of 10kg. (Nutriset site http://www.nutriset.fr/index.php?option=com_content&task=view&id=30&Itemid=28). Each kilo of RUTF, costs approximately US \$ 4. (Power point presentation by Steve Jarrett, UNICEF, 20th September 2008: Ready-to-Use Therapeutic Foods (RUTF): Addressing the situation of children with Severe Acute Malnutrition – Production in India).

specifically warns that commercially available international RUTF may not be suitable, acceptable, cost effective and sustainable³.

2. Many locally produced/produced foods that are culturally acceptable and relatively low cost have been used for SAM in India for many decades by reliable academic and medical institutions as well as by non governmental groups. The following table gives details of some of these mixes

Name of Mix	Composition and Calorific Value	Developed by	Locally prepared by	State
Davangere Mix	Laddus made of Equal quantities of groundnuts, roasted Bengal gram, jaggery and ragi. 100g. gives 400 calories and 15g protein	Medical College, Davangere	Women's groups	Karnataka
Shakti Nutrimix	Rice, Wheat, Whole gram (chana), Ground nut, Sugar, Salt, Cardamom, Black pepper, vitamins and minerals. Each 100 g. of mix provides 10.4g protein, 5.3g fat, and 402 calories	Shibpur People's Care Organisation, 23/1 Baze Shibpur Road, Shibpur, Howrah/Village and PO Tapan, Dt. Dakshin Dinajpur,	Women's groups	West Bengal
Nutrimix	Wheat (400g), rice (400g), grams (75g), Moong (75g), groundnut (50g);, sprouted, dried, roasted and powdered. 2 heaped spoons in glass of water or milk with sugar twice a day	Development Research Communication and Service Centre, 58A, Dharmotala Road Bosepur, Kasba Kolkata - 700 042	Women's groups	West Bengal
Nutrimix	Wheat/rice and Bengal gram/ Moong in ratio 4:1. Used for treating SAM, for preparing F 75, F 100, as starter and catch up foods. Each 100 g cooked provides 120-150 Kilocalorie and protein 2-3grams. Can be made more energy dense by adding seasonal fruits, and micronutrient rich by adding Electrolyte Mineral Solution	CINI (Child In Need Institute), Kolkata	Women's groups	West Bengal
LAPSI	Green millet, peanut, jaggery. Successfully used for quick recovery from SAM	Bharat Agro Industries Foundation and CAPART		Maharashtra
SAT Mix	Roasted and ground rice, wheat, black gram and sugar in ratio 1:1:1:2.	Sree Avittom Thirunal Hospital		Kerala

³ Gupta, P., Kapil U, et al, "National Workshop on "Development of Guidelines for Effective Home Based Care and Treatment of Children Suffering from Severe Acute Malnutrition", Indian Pediatrics, Vol. 43, February 17, 2006.

	Provides 380 calories per 100g.			
MIX		National Institute of Nutrition, Hyderabad		Andhra Pradesh
HCCM (high calorie milk)		Christian Medical College, Vellore		Tamil Nadu
Sattu Maavu ⁴	Wheat flour 42%, Maize flour 10%, Malted Ragi flour 5% Bengal gram flour 12%, Jaggery 30% Vitamin Premix 1% 100g. provides Protein 9 to 10% and Calories 360	Nutrition Monitoring Programme (state programme)		Tamil Nadu

N.B: Shelf life is not a necessary condition for these locally produced ready to eat foods as they are prepared in quantities needed by local women's groups under the supervision of the respective hospital or NGO.

3. Several experiments are on using modified family foods to treat SAM. Jodhpur Medical College has been using a mix of energy dense khichri, milk, raar, dal, sugar, fruit, fruit juice and egg to treat SAM both in institutional and home settings. This is in the process of analysis and documentation. In Tamil Nadu, the Direct Nutrition Programme gives a mix of 80g rice, 10g. dal, 2g. oil, 50 g. of vegetables and condiments at a total cost of Rs. 1.07 to each child between 2 and 4 years of age. This provides 358.2 calories and 8.2g protein per child.⁵ The Sattu Maavu listed in the table above is given as complementary food for children between 6 and 36 months of age and pregnant and lactating women, and costs approximately Rs. 15 per kilo. Other experiments by NGOs such as Mobile Creches have used common foods including eggs, soya products and milk for demonstrable impact at a cost of Rs 8 per child per day for full day-care nutritional facilities⁶.
4. These foods have been completely ignored in the haste to introduce Plumpy Nut, which, though an efficacious formula, seriously disturbs the concept of self reliance in food security and creates an unnecessary dependence upon a product upon which families and communities have little control.
5. Alternate foods listed above have many additional advantages –
 - a. They promote local agricultural practices as they use millets and locally available foods
 - b. They promote local livelihoods amongst the very families what may be harbouring children with SAM in a milieu of general poverty and food insecurity thus conferring more than food supplementation – an opportunity

⁴ Anuradha K. Rajivan, "History of Direct Nutrition Programmes in Tamil Nadu", <http://www.righttofoodindia.org/data/anuradha.pdf>

⁵ Ibid

⁶ Working paper Mobile Creches, Impact Of Strategies For Children Under Six On Malnutrition; Evidence From Two Microstudies, 2008

- to raise economic status. They may use the agency of existing women's groups and SHGs as well as small scale industry
- c. By being much more decentralised a process, they allow greater community participation and control.

Evidently, though there are few formal studies documenting their efficacy there are some, along with plenty of anecdotal evidence of success. The very fact that these pre existing attempts have not been properly studied, analysed and documented by research and expert bodies on nutrition is a matter of concern. It is hard to explain why it has been permitted for a somewhat alien product to be introduced at such large scale without investigating the relative merits and demerits of the ready to use foods that we have been using in such prestigious institutes as mentioned above. It would not have been either difficult or time consuming to study these further for a few months before arriving at a suitable strategy for SAM that includes supplementary food.

Perhaps it leads us into our long standing recommendation and demand, that the country needs to develop a well discussed and debated policy of child nutrition rather than have to combat each contingency as it arises.

This policy necessarily needs to keep in mind that supplementary nutrition is *one*, though important, part of the multi pronged strategy to bring about overall food security for children and families, and the best SN would be one that promotes self reliance, decentralisation, community participation and is low cost and culturally acceptable. An imported or centrally prepared very expensive food that displaces other locally producible options can hardly hope to fulfil these criteria and should be abandoned in favour of the 'right' product. Adequate thought, planning and research should go into developing such policies rather than succumbing to various pressures in haste and allowing unsustainable processes that may prove difficult to reverse and will cause long term harm to the very communities and families whose children we aim to 'treat'. We also need to continuously remind ourselves of the comprehensive set of strategies that will bring about the ultimate goal of child health, nutrition and well being through services of general care, health and nutrition in an environment of overall food, economic and social security.