

# **Starved for Attention**

## **The Neglected Crisis of Childhood Malnutrition**

A meeting to spotlight the urgent need to scale-up effective interventions - NYC 2008

September 11-12, 2008, Columbia University, NYC

### **Symposium Summary**

Doctors Without Borders/Médecins Sans Frontières (MSF) and Columbia University's Institute of Human Nutrition (IHN) brought together nearly 400 experts in nutrition, including health professionals, academics, aid workers, policy makers, representatives from Ministries of Health, lead UN agencies, the private sector and activists from around the world, to explore ways to improve the effectiveness of current food aid and nutrition programming targeting the malnutrition hotspots of the world. At a time of rising food prices and food insecurity, the meeting united around a common theme of the urgent need to scale up efforts to prevent the deaths, illnesses and disabilities caused by malnutrition every year.

### ***Pre-meeting public symposium***

On the evening prior to the official symposium launch, a public discussion was held on realizing the right to good nutrition in high-burden areas, including the relationship between food insecurity and malnutrition and the role of international nutrition and food aid, moderated by Dr. Ronald Waldman, Mailman School of Public Health with a panel that included Biraj Patnaik, Principle Advisor, Office of the Commissioners to India's Supreme Court, Dr. Milton Tectonidis, MSF nutrition advisor; and Dan Maxwell, Tufts University.

*Thursday September 11, 2008*

Participants were first welcomed by Dr. Richard Deckelbaum, Director, Institute of Human Nutrition, Columbia University who spoke about the critical importance of sound early nutrition for health, motor and cognitive development as well as the devastating worldwide cost of the crisis of undernutrition. Dr. Christophe Fournier, President of MSF's International Council introduced the objectives and rationales for the meeting and MSF's nutrition advocacy, speaking about the call from Doctors and teams working in the malnutrition hotspots of the world where countless children were dying and suffering from the consequences of malnutrition in silence. He called for a sense of urgency from participants to identify how strategies and practices to improve the effectiveness of programs in high burden areas, could be rapidly implemented

The first keynote address on "The Right to Food and Nutrition" was delivered by Biraj Patnaik, Principle Advisor, Office of the Commissioners to India's Supreme Court, who spoke of the civil society campaign in India and its efforts to realize the right to food by creating entitlements for all citizens to support the right to nutrition. He described the

importance that the right to food movement is placing on diet quality in nutrition programs and of the human face of malnutrition – describing the hardest lesson that he saw mothers teach their children in India as being that of how to live with hunger.

Next Stephen Lewis, Co-Director of AIDS-Free World, delivered the second keynote address of the meeting titled “Mobilizing Political Will to Address the Crisis of Undernutrition”. He challenged participants and the nutrition community to demand that key UN agencies with responsibility for treating and preventing malnutrition – most importantly UNICEF and the World Food Program, accept and act on that responsibility. Drawing on the successes of AIDS activist and civil society, he urged that the voices of malnourished children be heard and that the neglect of malnutrition by the international community be reversed.

Session 1 on meeting the Nutritional Needs of Developing Children in High-Burden Regions was chaired by Dr. Joia Mukherjee, Medical Director, Partners in Health. The session began with a presentation by André Briand, Department of Child & Adolescent Health and Development, WHO, on the nature of malnutrition in high burden areas and on the neglected role of food and diet quality in nutrition programming and interventions for these areas. In particular, he examined the UNICEF conceptual framework and argued that the proximal determinants of nutritional status – food security, care practices and environment/health services were not equally weighted in the causality of poor nutrition but that food quality and limited access to nutritious food was the dominant factor. The failure to understand this fact had in his opinion led to limited attention on addressing dietary deficits in food aid and nutrition programming.

Kay Dewey, University of California-Davis discussed the importance of the complementary feeding period from 6 – 24 months when the incidence of growth faltering peaks in many regions. She spoke of the need to complement breast milk with an age appropriate energy and nutrient dense diet. She presented the findings of an extensive review of interventions for complementary feeding and the beneficial impact of supplements in food insecure populations – compared to education based strategies alone.

Abigail Perry, Save the Children-UK, then presented findings of a study examining the minimum cost of a healthy diet and the implications for low-income families in high-burden areas. The five country studies conclusions were that the cost of a nutritious diet was beyond the means of many or most low income households in high burden settings. She concluded with the need for safetynets to support these families secure a nutritious diets.

Lisa Fleige of the DC based group SUSTAIN then discussed specific issues related limitations of current food aid targeted at children - 6 and 24 months. The presentation discussed findings of a taskforce review of fortified blended flours (FBF), specifically Corn Soy Blend, the mainstay of US Food Aid and the basis of many national supplementary feeding programs targeting mothers and children. She discussed the inadequacy of current formulations of FBFs for children 6-24 months in terms of energy density (the consistency of FBF porridges becomes too high for young children if the WHO recommended energy density is to be reached); protein content and quality (soy formulations used have low PDCAAS scores in terms of protein quality); have poor

quality fats and low fat content; and contain antinutrient factors that limit absorption of micronutrients.

The session concluded with Professor Mike Golden, University of Aberdeen, reflecting on historical developments in nutrition argued of the need to recognize the central role of poor diet quality, particularly deficiencies in type 2 micronutrients (those essential nutrients not associated with specific deficiency syndromes but critical to healthy appetite, growth and development). He ended with a cautionary note and a call for a regulatory body to be established to ensure the nutritional quality and content of supplemental foods was maintained given the increasing interest in ready-to-use supplements.

Session two of the meeting chaired by Dr. Mark Manary, Washington University School of Medicine, examined effective Nutrition Strategies for High-burden Regions. The first presentation reviewed the nutritional outcomes of the Progresa/Oportunidades program in Mexico, model of conditional cash transfer programs for health, nutrition and education being widely implemented in Latin American countries. The presentation developed by Dr. Juan Rivera, Nutrition and Health Research Center, National Institute of Public Health, México, was delivered on his behalf by Dr. Manary. The presentation discussed the rationales of the Progresa program introduced in 1997 and its design with cash incentives for health, nutrition and education as well as a nutrient fortified milk-based supplement (Nutrisano) for mothers and children 6-24 months. Evaluations of children who had been in the program for 2 years demonstrated improved growth and reduction in anemia. The program documented an impact of over 1 cm in height among children who were exposed to the program before 6 mo of age and who belonged to the lowest socioeconomic status and a reduction of anemia (20% reduction) after just 1 year of program exposure. Additionally, “comparison of dietary intake in children who did not consume the supplement (Nutrisano), that is who were exposed to the cash but not to nutrisano, with those who received both (cash and nutrisano) and to the control, it is clear that the dietary effects were restricted to those consuming the supplement”.

Dr. Manary then introduced presentations examining the use of fortified spreads in high burden, resource limited settings. His introduction discussed his own work with the use of ready-to-use milk-based energy dense spreads in the treatment of severe acute malnutrition in the community and some of the reasons for their high effectiveness rates. These benefits were due to the fact that they were energy dense and provided a full complement of nutrients including those in animal source foods, in a way that could be easily be utilized in resource limited settings – not requiring refrigeration or preparation.

John Phuka, College of Medicine of University of Malawi discussed a study using the blanket use of a fortified spread in children 6-18 months in Malawi that led to a reduction of severe stunting compared to corn soy blend. Seth Adu-Afarwuah of UNICEF presented a study from Ghana where the use of a fortified spread in young children 6-36 months led to improved growth and developmental outcomes. For example, twice the number of children that received the supplement were walking at one year compared with those that did not.

Finally, Dr. Susan Shepherd, Nutrition Advisor, MSF Access to Essential Medicines Campaign discussed a large scale operational intervention in a region of Niger with high rates of malnutrition where the blanket distribution of a ready-to-use supplemental food to all children 6-36 months, reduced the seasonal peak in severe wasting

The final session of the day was a high level panel discussion on implementing policy reforms to reverse undernutrition in high-burden areas, and strategies to improve the effectiveness of international food aid and nutrition programs targeting undernutrition. The session chaired by Professor Patrick Webb of Tufts University began with short presentations to frame discussion including one by Dr. Ian Darnton-Hill, Senior Advisor on Nutrition, UNICEF on the Ending Child Undernutrition and Hunger Initiative (ECHU/REACH). The presentation included estimates of the cost of scaling up nutrition interventions in high burden areas including an estimate of \$79 per household for direct nutrition interventions including education, nutrient interventions and treatment and supplementary feeding programs of \$7.9 billion worldwide for 100 million families in high burden settings.

The second presentation by Saskia de Pee, Nutritionist for the World Food Program discussed the development and use of optimal foods for young and malnourished children. Strategies to improve current food aid products for children 6-24 months as well as new products including micronutrient powders and RUFs. The presentation also included a discussion of relative costs.

Dr. H.A.P. Kahandaliyange, Secretary of Health, Sri Lanka presented an overview of strategies utilized in Sri Lanka to reduce child mortality and stunting rates. In addition to free health care and free education, in the 1970s Sri Lanka instituted a supplementary feeding program for families below the poverty line that provided a fortified supplement containing milk for pregnant and lactating women and all children 6 to 12 months and up to 24 months for growth faltering children. The program utilized a dairy containing fortified supplement as a result of surveys in the 1970s that indicated less than half the children had access to animal source foods, the majority of protein being derived from plant based sources.

Meera Shekar, Lead Health and Nutrition Specialist, World Bank then discussed the need for broad based strategies for nutrition and for the need to consider cost-effectiveness of programs. She highlighted the fact that the majority of malnutrition was in the South Asian region and that issues specific to this region (in particular the relatively higher rates of low birth weight) needed to be considered in the development of policies. Additionally she noted that many in high burden areas, malnutrition cut across socioeconomic groups and thus private sector approaches were in comparison to targeted interventions for the lowest income groups. Finally, she questioned the cost-effectiveness of ready-to-use therapeutic foods for the treatment of severe acute malnutrition, quoting UNICEF figures of \$60 for product and \$60 for programs per treatment, as representing a high cost.

Dr. Jean-Hervé Bradol, Research Director and Former President of MSF-France presented data based on MSF's experience in Niger that showed the implementation of the UN recommendation for the treatment of severe acute malnutrition was not possible in a high burden setting. He then highlighted the move to a blanket distribution of RUF

supplement to all children in the region as reducing the seasonal peak in malnutrition, but as transforming the program from a medical/curative intervention where significant resources went to staff and programming versus the blanket intervention where most resources went to food supplements for children.

Professor Webb then moderated a panel discussion with the Hon. Nimal Siripala De Silva, Minister of Health and Nutrition, Sri Lanka, Werner Schultink, Chief, Nutrition Section, UNICEF Dr. Martin Bloem, Chief of Nutrition, World Food Program, Dr. Francesco Branca, World Health Organization, Meera Shekar, Lead Health and Nutrition Specialist, World Bank, Dr. Jean-Hervé Bradol, Research Director and Former President of MSF-France.

Panelists discussed the tensions between targeting the most vulnerable versus the need for broad based interventions that reached all the population, the need to understand the complex causes of malnutrition and implement a comprehensive list of interventions versus the need to identify practical intervention points that can reverse malnutrition in the worst affected areas and break the intergenerational cycle of malnutrition. The question of cost-effectiveness as the basis of identifying policy solutions was raised but also challenged by others who identified the success of HIV/AIDS activists who mobilized significant new resources by demanding the needs of people living with HIV be addressed, rather than focus solely on cost-effectiveness.

The day ended with a concluding address by Dr. Steve Collins of Valid International. Dr. Collins raised a cautionary note of the need to be very clear and specific about what interventions were addressing including the need to distinguish between interventions for wasting and stunting and the need to develop evidence for recommendations. He highlighted the need to provide equal attention to programming issues and community acceptance of programs in addition to products and therapies.

Finally Nicolas de Torrente, Executive Director of MSF-USA concluded the first day with a call for a focus on pragmatic and practical strategies and a challenge to utilize the second day of the meeting to develop concrete plans towards implementation.

*Friday September 12, 2008*

After Ann Veneman, Executive Director of UNICEF, delivered a keynote address on “Finding practical solutions to treating and preventing malnutrition,” participants broke up into three working groups.

### **Working Group 1**

“What to do When: Improving Food Aid for Targeting Malnutrition”

The objectives of Working Group 1 were to discuss ways to address the following:

- How to better mobilize food aid and food resources to target undernutrition
- How commodities can better meet the nutritional needs of children under 2
- In addition to emergency assistance, how can food aid address the situation in high burden regions with chronic undernutrition

- How supplementary nutrition programs can target young children and pregnant/lactating women.
- How can food aid be reformed for effectively and efficiently meeting nutritional needs?

Following an introduction by UNICEF's Bruce Cogill, Dan Maxwell of Tufts University presented a start-up presentation on "Program Quality and Policy Impediments: Using Food Aid to Address Malnutrition." He touched upon issues related to Targeting; Timing; Analysis Capacity; Using the appropriate mix of inputs; and linking short-term and long-term responses.

His analysis focused on how current US Food Aid practices led to under-coverage over time in Ethiopia and how delays constitute an "exclusion error." Concerns about analysis and response raised practical questions regarding the appropriate mix of inputs (e.g. food or something else? If food, how best to provide?) In trying to link short-term and long-term responses, he identified policy impediments that led to inefficiency and inflexibility. A Government Accountability Office (GAO) report (*Foreign Assistance. Various Challenges Impede the Efficiency and Effectiveness of U.S. Food Aid*, 2007) found, for example, that only \$0.35 of food is delivered for every \$1.00 spent. And as budgets increased from 2002-2006, food deliveries went down 43%. The inflexibility meant that it was difficult to adapt to rapid onset emergencies, and that perhaps more flexible assistance (cash or local/regional purchase) may be warranted.

Following a lively discussion, the group agreed on several Outcomes and Recommendations.

1. Based on existing evidence, in particular presentations from Day 1, we must increase blanket distributions of supplemental RUFs to under 2s in areas with high prevalence of undernutrition and high mortality
2. We therefore need to aggressively advocate for USAID, EU and other funding sources to implement more programs on a much larger scale that meet optimal nutrition standards (animal source foods for under 2s) in high burden areas.
3. As demonstrated by the representatives from Sri Lanka, it needs to be recognized that addressing childhood malnutrition is first and foremost a state responsibility, even in impoverished areas. As such:
  - Governments must recognize the crisis
  - Countries with capacity need to devote resources to addressing under 2 nutrition
4. Above and beyond the treatment of SAM: Food items that are nutritionally appropriate for under 2s must be incorporated into food baskets when food aid is delivered. To achieve dietary diversity, it appears that animal source foods are a necessary component. We need to recognize that the special set of nutritional needs for under 2s includes the nutritional status of mothers and households.

5. Those involved in ordering food aid who may not have nutritional backgrounds need clear tools to determine what foods are appropriate for under 2s. There should be clarification on what commodities absent from today's food aid commodities list are appropriate for under 2s, so that clear demands and requests can be made from all levels e.g. country level aid implementers.

6. A prerequisite for overcoming constraints in current food aid policy is to call for greater flexibility in using donor funds (e.g. unrestricted funding)

- A voluntary code will be useful for donors, agencies and national programs regarding optimal standards of food assistance for under 2s
- Monitoring, reporting and evaluation for vulnerable groups and specifically under 2s is needed

In addition to actions with immediate implications, the group also discussed longer-term goals:

- Internationally, we need to aim to have sufficient resources to address this crisis (e.g. ECHUI's recommendation of 3-8 billion dollars per year)
- For US food aid, the reality is the farm bill has just been reauthorized for 5 years and cannot be undone. In 2-3 years, clear financial targets, policies, and asks are needed for the next reauthorization of the farm bill.
- On the US side, we don't have to wait for the next farm bill. We need to develop clear short term financial and policy targets to push for resources from other appropriators, e.g. foreign operations legislation, etc.
- As part of an advocacy strategy:
  - Clear language/terminology is necessary
  - More motivation is necessary at the country level (implementers, national programs, etc.)
  - More cooperation is needed within the medical, programmatic and policy fields
- The group committed themselves to following up on these issues and to clarify these recommendations.

## **Working Group 2**

### **“Complementary Food Supplements”**

The first start up presentation was given by Dr. Kim Michaelson and Dr. Mike Golden. Recent studies have shown that the strongest evidence that cow's milk stimulates linear growth comes from observational and intervention studies in developing countries. Many observational studies from well-nourished populations also show an association between milk intake and growth, and these results suggest that milk has a growth-stimulating effect even in situations where the nutrient intake is adequate.

The WFP's Shane Prigge and Saskia de Pee then discussed their goal in making a local Ready to Use Food for Children (RUFC) in India. They wanted to develop an appropriate product for infants and young children aged 6-23 months that could be provided in blanket feeding programs to address moderate malnutrition. The team utilized locally available raw ingredients to make a product that is safe and ready to use in either a single

serving ration or jar (1-2 week ration) that had a long shelf-life, low water activity, and did not require cooking. In addition to describing the formula, the steps taken to developing RUFs included: Identifying capable producers; producing pilot batches; conducting extensive laboratory testing on the RUFs and preliminary acceptability trials and adapting product taste to the local preference

Issues encountered included: Oil separation; oil stability; viscosity and stickiness; primary and secondary packaging. The way forward for them was to finalize the product formulations and packaging, conducting a formal acceptability trial with mothers and infants as well as efficacy and effectiveness studies for both preventive blanket distributions and more targeted supplementary feeding for treating moderate malnutrition.

Per Ashorn and John Phuka then described the formula of the product that showed drastic reduction of severe stunting in Malawi. They further noted that raw ingredients make up two thirds of the national production cost of RUFs, almost half of which is (imported) milk powder. Steve Collins followed with a presentation on the nutritional support to HIV positive adults using chickpea/sesame/maize recipe RUFs, including the increased cost of using a RUF.

The final presentations included Dr. Mark Manary and Dr. Richard Deckelbaum commenting on the inclusion of new ingredients in infant foods Marie McGrath and Kay Dewey discussing the issues around communicating with families for optimum nutrition; and David Clark describing how RUFs fit in with the Breast Milk Substitute Code.

Working Group 2 delivered the following conclusions to the plenary session:

#### Continued Breast Feeding

- The group recognizes that breast milk is an essential food up to 24 months of age. All programs to promote healthy complementary feeding should incorporate effective elements to promote breastfeeding.
- Marketing and promotion complementary foods can and must comply with the international Code for breast milk substitutes and the Operational Guidance document for Emergency Relief (IFE core group).

#### Animal source foods

- All successful complementary feeding programs have included animal source foods.
- Comparative studies suggest inclusion of animal source foods is associated with better growth and development.
- There is uncertainty as to how much animal source food is enough to promote health.

#### Alternative recipes for RUF

- There is the possibility of reducing cost, and thereby increasing availability, for RUFs used as complementary foods by using legumes, such as soy, as a component.
- Trials with peanut/ soy pastes have been successful as complementary foods

- New formulations of ingredients, such as new soy technologies, may improve currently available foods
- More research is needed on the acceptable levels of antinutrients in such foods

#### Delivery Systems

- Having the right food is clearly not enough.
- Identifying malnutrition through widely available screening tools such as MUAC, can be used to augment coverage.
- An additional conference and resource bank is needed about the implementation of successful programs that result in improved complementary feeding.

#### Product safety/ standards

- A body of work on the standards for and safety of infant formulas/ foods has been compiled by IOM, this provides a platform on which to evaluate newer complementary foods, such as those RUFs.

#### Communicating with families

- Addressing the obstacles to good child feeding practices should engage the whole community
- Choosing strategies that include locally available elements (foods and practices) are easier to implement

#### Networking

- Governments and local authorities are essential stakeholders in efforts to improve complementary feeding.

The outcomes and recommendations from Working Group 2 included:

#### 1. Animal source foods

- The group agrees that complementary foods—those tailored specifically for the needs of infants 6-24 months of age—should be added to the food basket. Current knowledge is that children in this age group need animal source food, and actions should therefore be taken to include it into the food basket. Animal source food should be provided as part of RUF or FBF. Questions on needed quantities remain. There is possibility for future development of alternatives that replace animal source food.

#### 2. Establishing standards

- The group recommends the WHO to establish standards on specialized food products for the malnourished (severe and moderate) that must be met before approval for general distribution. Exceptions for the use of untested foods can be made where there are grave emergencies and no other approved foods are available.

#### 3. Breastfeeding is basic

- The group agrees that complementary feeding should be provided in a way that supports and does not undermine efforts to promote exclusive breastfeeding until 6 month of age and continued breastfeeding until at least two years of age.

### **Working Group 3**

“The scale up of production and distribution of RUF products: Models of production, quality assurance and distribution systems”

The first start-up presentation by Stephen Jarrett described the need for better projecting demand, models of projection, and ways to match supply to CTC rollout and demand. Derek Stavely of Valid International then discussed ways to support and promote local models of production, including the barriers faced with the humanitarian production model for RUFs. MSF’s Guillaume Sauvage followed with a start-up presentation focused on establishing appropriate quality standards, for both local and regional producers. A representative from Meds and Foods for Kids then outlined concerns of small-scale producers. Ellen ‘t Hoen of the MSF Access Campaign then outlined the real or perceived patent barriers to scaling up and diversifying production, and Stephane Doyon of MSF discussed different strategies to reduce the price of RUFs and whether it was possible to forecast a price reduction for these products.

Working Group 3 made the following recommendations to the plenary session:

#### Recommendation 1: Demand forecast and financing

- Present demand is seasonal.
- Financed by emergency funds
- National demands – programs needed to drive forecast and financing request
- Need more stable mechanism for financing

#### Recommendation 2: Revisit standards

- Ensure standards are appropriate (doable locally, not too restrictive, but ensure safety)
- Share and clear protocols needed for acceptability studies, clinical trials for new recipes
- WHO: to call an expert panel to review standards (nutritionist, food technologist, microbiologist)
- Establish country mechanism to ensure protection against fake products (food and safety board)

#### Recommendation 3: Create a patent pool

- RUF should be considered as a public good (New RUF should be in principle develop under open source)
- Existing patent holders are encouraged to agree to non exclusive open license (for example through patent pool)
- Financing of R & D (children should not pay indirectly for that)