

Nutrition Research Roundtable Meeting Report

On April 20, 2018, the U.S. Agency for International Development (USAID), through the Food and Nutrition Technical Assistance III Project (FANTA), convened a roundtable in Washington, DC, bringing together global nutrition researchers from academia and other institutions and USAID staff (see Appendix 1 for a complete list of participants) to review the conclusions of recently completed USAID-funded FANTA-led studies on the prevention of stunting, propose programming recommendations based on these studies, and outline research priorities for the reduction of stunting through a multisectoral approach. The studies reviewed included the Preventing Malnutrition in Children under 2 Approach (PM2A) studies in Burundi and Guatemala, implemented by FANTA partner International Food Policy Research Institute (IFPRI), and the Rang-Din Nutrition Study (RDNS) in Bangladesh, implemented by FANTA partner University of California (UC), Davis. Professor Reynaldo Martorell, from Emory University's Rollins School of Public Health, moderated the meeting.

After a welcome by FANTA project director Sandra Remancus and opening remarks by USAID Senior Nutrition Advisor Omar Dary and USAID Nutrition Advisor Judy Canahuati, the meeting began with two presentations providing an overview of the findings of the studies.

IFPRI Senior Research Fellow Jef Leroy presented highlights from the PM2A studies. All the studies' findings can be found [here](#) on the FANTA website.

In Burundi, the evaluation of *Tubaramure*, a USAID Title II development food security activity following the PM2A model, found that the intervention, when implemented for the first 1,000 days (i.e., from pregnancy until the child is 2 years of age), led to significant improvements in the hemoglobin and anemia status of children under 2 and of mothers of children under 2, as well as in child language development and in child stunting.

In Guatemala, the evaluation of *PROCOMIDA*, another USAID Title II development food security activity following the PM2A model, found that the version of PROCOMIDA that provided corn-soy blend (CSB) as an individual food ration targeting pregnant women and children under 2, alongside either a full or reduced family ration of rice, beans, and oil, and the version that provided micronutrient powder (MNP) as an individual ration, alongside the same full family ration, resulted in significant reductions in child stunting. However, the version of PROCOMIDA that provided CSB as the individual ration alongside the full family ration also resulted in increases in child and maternal anemia, as well as increased maternal weight.

UC Davis professor Kay Dewey presented highlights from the Bangladesh RDNS on small quantity lipid-based nutrient supplements (SQ-LNS). The study found a significant impact of SQ-LNS given to pregnant women on birth size, including reduced newborn stunting and small head size. There was also a significant impact of SQ-LNS given to pregnant and lactating women and to children from 6–24 months



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on child growth at 18–24 months, which was still evident at ~4 years among girls and among children in food-insecure households. Both SQ-LNS and MNP had an impact on child development at 18–24 months, still evident at ~4 years. Finally, the study found a significant impact of SQ-LNS and MNP on iron status and iron deficiency at 18 months; the effects were strongest and most consistent when LNS was given to both the mother and the child, and the reduction in overall anemia was significant only in that group. All the findings on LNS and MNP can be found [here](#) on the FANTA website.

Discussants Maria Elena Jefferds (Team Lead of the International Micronutrient Malnutrition Prevention and Control Program [IMMPaCt] at Centers for Disease Control and Prevention), Judy Canahuati, and Lynette Neufeld (Director, Knowledge Leadership at GAIN) reacted to the presentations. Their comments touched on a variety of points, which included:

- For large and sustainable impact on food security and nutrition, individual interventions of a limited duration and geographical scope (multisectoral as they may be) do not seem to be enough. Instead, we need large community transformation and industrialization, as was the case for Brazil and China.
- It's important to target interventions efficiently (by food security status or other indicators) so that the most vulnerable are not left behind, and so that programs are cost-effective.
- Stunting is a double-edged sword: efforts to address it have helped bring attention to nutrition, but it has also resulted in the nutrition community designing programs that aim to reduce stunting, when stunting is merely one indicator of a larger challenge, which is having healthy children growing to their potential and thriving.
- Communicating such research findings to policymakers is not an easy task; we need a set of coherent messages from these studies that stimulate action.
- Summarizing the findings of such studies, even to a scientific audience, is difficult, and the traditional tool of meta-analysis is not useful in such cases, as the contexts are very different, and, even more importantly, the interventions are not comparable. We need to think about generalizing and summarizing the findings by context.

A rich open discussion followed the panel's reaction. The points raised in the discussion centered around three main themes:

a- Measuring the impact of nutrition interventions: is stunting the right indicator?

Several participants mentioned that stunting is slow to improve despite well-designed and well-implemented interventions, but that should not discourage those of us who work in nutrition. In fact, stunting may not be an adequate indicator for the impact of nutrition interventions. Despite the fact that stunting is an easy indicator to measure that economists have endorsed (since it's easier to measure than poverty, and is considered a proxy for poverty), we need better indicator(s), and we need to use careful, nuanced language when presenting stunting results. We don't want to come across as a fragmented nutrition community that doesn't know what it wants, and we don't want to lose political momentum around nutrition. One alternative/complement to measuring stunting is measuring diets, but measuring diets is complex and costly, and dietary diversity is not precise enough.

b- Impacts from nutrition interventions that are important to measure and share: empowerment, self-efficacy, early childhood development

Participants agreed that several important impacts of nutrition interventions are often not measured or presented and discussed enough. These include impacts on: household food security, women's empowerment/self-efficacy, effects on early child development, and many other outcomes along the path to reduced stunting, such as dietary adequacy.

c- Potential to respond, context-specificity, and targeting

Participants also discussed the observed heterogeneity in responses to comparable nutrition interventions and attributed the heterogeneity to the target population's potential and ability to respond to the interventions. For instance, in Burundi, it was only in the households of a slightly higher SES that there was an effect on stunting. This was explained by the ability of children in those households to positively respond to the intervention, i.e., their bodies were able to effectively absorb and utilize the nutrients for better growth. In the worst-off households, however, many factors hindered the possibility of the intervention having an effect. This spoke to the importance of context, and of understanding the etiology of the nutritional problem that an intervention is aiming to address in a particular setting, before designing an intervention.

Other topics raised included the need to understand the relationship between infections and inflammation and nutritional status, including dental infections; the need to evaluate the effect of co-locating interventions from different sectors (for example agricultural interventions and health interventions implemented in the same communities); and the need to better understand the effect of integrated WASH and nutrition interventions.

Divided into small groups after the open discussion, participants brainstormed about what has been learned so far from the USAID-funded studies and others on the reduction of stunting and other nutrition outcomes, what can be recommended for interventions aiming to reduce malnutrition, and what more needs to be learned. Participants shared several lessons and thoughts:

- The need to be patient for results and findings of studies
- An appreciation for the complexity of nutrition and the importance of the context in which nutrition interventions operate
- Significant nutritional improvements across contexts, locations, and of varied magnitude and scope, have been made as a result of nutrition interventions
- Gains made in the prenatal period are more likely to be sustained in the postnatal period if there is a postnatal intervention
- The importance of targeting pregnant adolescents
- There is solid understanding of a significant bi-directional relationship between inflammation and nutrition, and infection control/prevention should be considered for a nutrition intervention to be successful
- Nutrition interventions need to watch for unintended consequences (e.g., increasing the rates of overweight and obesity), and may benefit from having messages address healthy vs. unhealthy snacks

- Behavior change communication is a crucial aspect of nutrition interventions that needs to be well-designed and tailored to the target population's ability to comprehend nutrition-related messages and to act on them
- Advocacy efforts focused on nutrition need to be well thought out, with a successful example being Mexico's focus on human capital development, which brought together actors from different sectors including health, education, and social development
- There is a need to invest comprehensively across several sectors in smaller geographical areas to be able to reach the tipping point needed to make a difference

Reynaldo Martorell offered some reflections to summarize the day's discussions. In addition to several points raised during the discussions, he reminded participants that in addition to reductions in stunting, anemia, and other outcomes of nutrition interventions, child development is the ultimate concern, with children growing up to be smart and productive members of society. In terms of stunting impact, the USAID-funded studies found an impact of around 2 percentage points reduction in stunting per year, but it's not clear how sustainable that effect is. Professor Martorell argued that a sustainable reduction of even 1 percentage point per year would be very encouraging. He concluded from the studies that the full 1,000 days is the right age group to target, in addition to the preconception stage (which needs to be understood better) and a special focus on adolescent pregnancy.

Finally, USAID's Omar Dary offered some closing remarks. He reiterated the group's conclusion that stunting is an indicator/marker of suboptimal conditions for development, and not a marker that nutrition interventions can easily change. It can be useful to monitor the stunting levels in a community, but we shouldn't expect dramatic changes in stunting as a result of nutrition interventions. This is because the etiology of stunting is complex, for instance, in addition to food/nutrient intakes, health (including infection and inflammation), has an effect on stunting, as do environmental factors such as altitude and exposure to aflatoxins. Dary also pointed out that chronic undernutrition and stunting are not synonymous and should not be used interchangeably. He argued for finding and using other indicators when measuring success of nutrition programs, including behavioral indicators, nutrient intakes, and biomarkers (including of anemia). In terms of programmatic implications, he concluded that coverage is important, that postnatal efforts are important to sustain impacts seen in the prenatal period, that we need to smartly target programs to better use resources, that attention should be given to healthy diets and the avoidance of junk foods, and that, although the first 1,000 days from pregnancy to 18–24 months postpartum are critical for nutrition interventions, we need to work across the life course.

Appendix 1. Consultation Participants

First Name	Last Name	Affiliation
Jean	Baker	Independent consultant
Reena	Borwankar	FANTA/FHI 360
Alfred	Boyo	USAID/Uganda
Judy	Canahuati	USAID/FFP
Omar	Dary	USAID/GH
Kathryn	Dewey	UC Davis
Maria Elena	Jefferds	IMMPaCt/CDC
Karin	Lapping	Alive & Thrive/FHI 360
Sarah	Leonard	USAID/BFS
Jef	Leroy	IFPRI
Chessa	Lutter	RTI
Zeina	Maalouf-Manasseh	FANTA/FHI 360
Reynaldo	Martorell	Emory University
Erin	Milner	USAID/GH
Lynette	Neufeld	GAIN
Sandra	Remancus	FANTA/FHI 360
Marie	Ruel	IFPRI

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