Summary of Food Assistance for Nutrition Evidence Summit
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### Acronyms

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<tr>
<th>Acronym</th>
<th>Description</th>
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<tr>
<td>ACDI/VOCA</td>
<td>Agriculture Cooperative Development International/ Volunteers in Overseas Cooperative Assistance</td>
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<td>ACF</td>
<td>Action Against Hunger</td>
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<td>CaLP</td>
<td>Cash Learning Partnership</td>
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<td>CMAM</td>
<td>Community Management of Acute Malnutrition</td>
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<td>ComPAS</td>
<td>Combined Protocol for Acute Malnutrition</td>
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<td>CRS</td>
<td>Catholic Relief Services</td>
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<tr>
<td>CSB</td>
<td>Corn-Soy Blend</td>
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<tr>
<td>EED</td>
<td>Environmental Enteric Dysfunction</td>
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<td>FANTA</td>
<td>Food and Nutrition Technical Assistance</td>
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<td>FAQR</td>
<td>Food Aid Quality Review</td>
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<td>FHI 360</td>
<td>Family Health International 360</td>
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<td>FSQA</td>
<td>Food Safety and Quality Assurance</td>
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<tr>
<td>GMP</td>
<td>Good Manufacturing Practice</td>
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<tr>
<td>HACCP</td>
<td>Hazard Analysis Critical Control Point</td>
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<td>HAZ</td>
<td>Height-for-Age Z-score</td>
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<tr>
<td>icddr,b</td>
<td>International Centre for Diarrhoeal Disease Research, Bangladesh</td>
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<td>IFPRI</td>
<td>International Food Policy Research Institute</td>
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<td>iLNS</td>
<td>International Lipid-Based Nutrient Supplements</td>
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<td>IRC</td>
<td>International Rescue Committee</td>
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<td>IRSS</td>
<td>Investor Responsibility Support Services, Inc.</td>
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<tr>
<td>LNS</td>
<td>lipid-based nutrient supplements</td>
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<td>MAM</td>
<td>Moderate Acute Malnutrition</td>
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<td>MINIMOD</td>
<td>Micronutrient Intervention Modeling Project</td>
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<td>MSF</td>
<td>Médecins Sans Frontières</td>
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<td>MUAC</td>
<td>Middle-Upper Arm Circumference</td>
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<td>NIH</td>
<td>National Institutes of Health</td>
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<td>PBOM</td>
<td>Pinch-Bottom Open Mouth</td>
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<td>PM2A</td>
<td>preventing Malnutrition in children under 2 years of age approach</td>
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<td>R4ACT</td>
<td>Research for Action</td>
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<td>REFANI</td>
<td>Research on Food Assistance for Nutritional Impact</td>
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<td>REFINE</td>
<td>Research Engagement on Food Innovation for Nutritional Effectiveness</td>
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<tr>
<td>RTI</td>
<td>Research Triangle Institute</td>
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<td>RUTF</td>
<td>Ready-to-Use- Therapeutic Food</td>
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<td>SAM</td>
<td>Severe Acute Malnutrition</td>
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<td>SBCC</td>
<td>Social Behavior Change Communication</td>
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<td>SC+</td>
<td>Super Cereal Plus</td>
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<td>SPRING IYCF</td>
<td>SPRING’s Infant and Young Child Feeding Image Bank</td>
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<td>SPRING</td>
<td>Strengthening Partnerships, Results, and Innovations in Nutrition Globally</td>
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<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
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<td>UPS</td>
<td>United Parcel Service</td>
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<td>Acronym</td>
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<td>USAID</td>
<td>United States Agency for International Development</td>
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<td>USAID/ BFS</td>
<td>USAID’s Bureau for Food Security</td>
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<td>USAID’s Office of Food For Peace</td>
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<td>USAID/OFDA</td>
<td>USAID’s Office of US Foreign Disaster Assistance</td>
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<td>USDA</td>
<td>United States Department of Agriculture</td>
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<td>USDA/AMS</td>
<td>USDA Agricultural Marketing Service</td>
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<td>USDA/FAS</td>
<td>USDA Foreign Agricultural Service</td>
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<td>WASH</td>
<td>Water, Sanitation, and Hygiene</td>
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<td>WFP</td>
<td>World Food Programme</td>
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Ye Shen
@Yeah_Shen

Glad to see the abundant interest in using robust cost-effectiveness evidence for food assistance policy decisions at the #evidence4nutrition today!

Katherine
@Katherine_1951

Delighted to be part of the @FoodAidQuality #evidence4nutrition summit. Looking forward to discussing new data and evidence to inform quality food security programming.

Photo Credits: Adam Lowe
Introduction

Humanitarian needs are on the rise. There are more than 800 million people experiencing chronic hunger and a projected 76 million people in 45 countries requiring emergency food assistance in 2018.1 The re-emergence of famine, the scale of ongoing humanitarian crises, and continuing intractable malnutrition around the world significantly strain our ability to address the needs of the world’s most vulnerable. Humanitarian players must be confident in the evidence of what works best in each context. To achieve impact at scale, there must be an understanding of the most cost-effective options. As resources are scarce, it is critical to maximize the impact of every dollar the U.S. Government spends. Field research and industry innovations are needed to allow the U.S. Government to respond more effectively to the world’s food aid needs, induce change, and lead to more resilient communities.

To facilitate sharing of, and dialogue on, the current state of evidence regarding food assistance for nutrition programming, an Evidence Summit was organized by the Food Aid Quality Review (FAQR) project and USAID’s Office of Food for Peace (FFP) in Washington D.C. on June 27th and 28th, 2018. The 2-day event served as an opportunity to share evidence relevant to policy and programmatic decision-making, and identify critical evidence gaps. Over 250 researchers, policy makers, and representatives from donors, industry, and implementing partners participated.

The Evidence Summit consisted of presentations, panels, lightning talks, demonstrations, discussions, and poster/table displays covering:

- Current evidence on food assistance programming that has maternal and child nutrition or micronutrient deficiencies as explicit outcomes of interest
- Future needs for assistance on development of nutritionally-enhanced products and programming, and optimizing resource allocations
- Cost-effectiveness research
- Innovations in packaging, ingredients, formulations and processing of food aid products
- Research methods and metrics to determine nutrition impacts, cost-effective operations, and additional ancillary goals
- Food aid supply chain optimization
- Food aid safety and quality

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**Priority Actions:**
In an effort to support the Sustainable Development Goal of Zero Hunger and the Global Food Security Act aimed at reducing global hunger and improving nutrition, the dialogue at the Evidence Summit led to consensus on the following five priority actions:

1. **More funding is required for careful studies that document best practice for food assistance in all humanitarian contexts, with particular attention to measurable impacts on maternal and child nutrition.**
   - Invest in rigorous research that generates policy-relevant cost-effectiveness evidence.
   - Advocate for ensuring value for money for food assistance and nutrition programming.
   - Conduct research in emergency settings and on the continuum from emergency to development contexts.

2. **Metrics of nutritional status need to go beyond physical growth of children to include brain development, gut health, and body composition to provide a physiological understanding of malnutrition.**
   - Plan for rigorous programming evaluation and invest in good data monitoring systems.
   - Develop metrics and field-friendly techniques to measure outcomes such as body composition, nutritional biomarkers, cognitive function and long-term productivity.
   - Consider cluster-randomized designs, mixed methods, and direct observation.

3. **Multi-sectoral and multi-institutional collaboration and communication must be enhanced. No one donor, government or agency can effectively operate alone.**
   - Implement innovations using a ‘systems thinking perspective’, considering feasibility across stakeholders, beneficiary perspectives, and varied implementation contexts.
   - Fuel collaboration and optimize funding by defining and prioritizing common problem sets.
   - Reduce barriers to using local production and get more private sector investment in food aid.

4. **Innovations should be promoted in product formulations, food packaging technology, food safety quality, and food aid supply chain optimization tools.**
   - Prioritize prevention-focused food safety and quality systems to help provide the best possible products and nutrition to the target recipients.
   - Include metrics for determining acceptability of products using lab testing (nutrients, microbiological, contaminant), organoleptic evaluation, packaging exams, and stability studies.
   - Prioritize packaging technology field testing (or tests that mimic field conditions) prior to adoption for food aid products.

5. **Investments should increase in advanced data systems to capture reliable and comprehensive food assistance trends.**
   - Shift from execution to better planning within the food aid supply chain: use optimization tools to select foods, vendors, transporters.
   - Analyze data for insights, paying attention to both large and small details and gains.
Evidence Gaps:
The Evidence Summit elucidated seven key areas where there is a gap in the current evidence:

1. **Nutrient-specific requirements and overall quality**: Important questions regarding food aid composition remain - including both the nutrient-specific requirements for malnourished children, and the overall quality of products to ensure nutrient absorption and utilization.

2. **Programming design and implementation**: Need to raise the bar on evidence – including effective design of programming and optimal implementation.

3. **Optimal combination of food assistance modalities**: Further evidence generation is needed in different modalities making up the food assistance ecosystem. These can work together and complement each other to support improved nutrition outcomes. Examples include: the addition of WASH interventions, SBCC, cash transfers, agricultural development.

4. **Product formulation, dosage, and packaging**: Gaps persist in research on cost-effective product formulation and packaging, including ingredients, formulations, dosage, and local production.

5. **Combined and simplified treatment of acute malnutrition**: There is a lack of evidence related to an integrated protocol/product for treatment of SAM and MAM.

6. **Emergency contexts and nexus between emergency and development**: A divide persists between research on emergency contexts and development contexts, and what data is needed to make decisions about programming across this divide as well as how to best transition food assistance from an emergency to development response.

7. **Better (new) metrics are needed for measuring nutrition**: Moving beyond standard growth measurements to assess nutrition and considering the role of cognitive function, body composition, and gut quality.

Ways Forward:
The Evidence Summit concluded that **great progress has been made**. The humanitarian communities have never been more effective at preventing deaths. Yet, nutrition continues to be an outlier as stunting has risen in some countries and wasting is a growing problem in parts of Africa and Asia. There have been great advances in the tailoring of food aid products and the evidence-base of what works in certain contexts, but individuals are not thriving, therefore, collective learning must continue. Evidence generation, sharing, and collaboration have big impacts on how the U.S. Government thinks about this problem. Full transparency is needed around what products can accomplish and expectations must be set appropriately. Research to enhance what is known today to ensure better nutrition outcomes for the world’s most vulnerable in the future.

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**Patrick Webb gives opening remarks. Photo: Adam Lowe**

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*Let’s not always wring our hands about not achieving the best when we are achieving a lot. But we still have a lot of work left to do. We need funding, coordination, transparency, and full achievement of what products promise.*

-Patrick Webb, Tufts University
Opening Remarks and Keynote Addresses

The Evidence Summit commenced with a series of welcomes and a keynote address. Patrick Webb (Tufts University) set the scene by providing some welcoming remarks on the importance of the Summit. Elizabeth Brown (FFP) highlighted the relevance of the Summit to the current and future work of FFP. The first keynote address was provided by Thomas H. Staal, USAID Counselor. He reminded participants that FFP serves a much greater role than simply handing out food aid; they are the largest provider of emergency assistance and therefore have a large role to play in supporting evidence generation. Mr. Staal asked that there be greater focus on the gap between crisis and development aid, especially as the need for emergency assistance has increased and changed to resemble longer-term crises with longer-term impacts on health and nutrition. Finally, he commended the strong partnership between FFP and FAQR which represents the focus on evidence and research.

The second keynote was provided by Roger Thurow, a senior fellow at the Chicago Council on Global Affairs and author of The First 1,000 Days: A Crucial Time for Mothers and Children—and the World. He provided a perspective on the importance of evidence in journalism in a time of increased “fake news” and recounted his experience in the field collecting stories to bring awareness to the first 1,000 days and the need for food assistance. Mr. Thurow reinforced the point that nutrition is not sufficient on its own and must be interwoven with other humanitarian sectors. He called for a future agenda focused on bipartisan partnerships, longitudinal research and improved data metrics and numbers. Lastly, he reminded the audience of the importance of stories from the field and explained how those can sometimes have the greatest impact as they have the potential to outrage and inspire people to action.

“Nutrition has to be at the top of the international development agenda. We can’t just feed the world, we have to nourish the world.” -Roger Thurow, Chicago Council on Global Affairs
Plenaries

Plenary Session I: Food Assistance for Nutrition: Where do we stand on current evidence?

Patrick Webb (Moderator), Nancy Aburto, André Briend, Melissa Chapnick, Mark Manary, Steve Collins

This first plenary set the empirical foundation for the Evidence Summit, with experts reviewing the current uses of food aid for nutrition, what we have learned and still need to learn about the nutritional effectiveness of these products, and scientific controversies in the field. Participants gained an understanding of the importance of investing in research focused on food aid effectiveness, the evolution of food aid products and their use for malnutrition, and the remaining gaps in the evidence base around use of food aid.

Six speakers and panelists, representing private and public agencies around the world, focused their presentations and discussion on the evidence around food aid in a variety of contexts, and the remaining gaps in the knowledge base. Patrick Webb (Tufts University) introduced the plenary and gave background on the history of food aid/assistance, and why evidence in this field is vital. He noted that the scope and type of research on food aid/assistance has changed over the last few decades, moving away from composition of foods toward cost-effectiveness of the programs. André Briend (University of Tampere and University of Copenhagen) gave a presentation on the formulation of food aid, what nutrients are needed by malnourished children, how food aid has tried to meet these needs and what needs are still unmet or unclear.

A key issue highlighted by Dr. Briend is that the precise nutrient requirements of malnourished children are still not known. In addition, the requirements need to take into account what is actually absorbed by the child after consumption.

Nancy Aburto (WFP, Rome) reviewed the existing evidence which has the most consensus: about the use of food aid for preventing and treating severe acute malnutrition (SAM), moderate acute malnutrition (MAM), stunting, and nutrient deficiency in development and emergency contexts. She noted that overall, food assistance does have the ability to address malnutrition but can also have benefits outside of nutrition.

“There’s a clear need to act, food assistance is part of that action. It works to treat wasting and promote healthy growth. As part of comprehensive programming, food assistance impacts nutrition and makes a difference in communities.”

-Nancy Aburto, WFP
The three speakers were then joined for a panel discussion by three other researchers: Melissa Chapnick (Washington University in St. Louis), Steve Collins (VALID Nutrition) and Mark Manary (Washington University in St. Louis). During the panel discussion, Dr. Manary raised the importance of getting recognition of the need for food aid at all levels but especially among the individuals who require assistance understanding that this is valuable for them to engage in.

Ms. Chapnick noted the positive shift away from a nutrient-specific focus toward overall quality of foods, for both treatment and prevention of severe acute malnutrition. Dr. Collins brought up the politics of food aid, the difficulty of getting new, innovative products to the market and the need for reducing barriers to using local production and getting more private sector investment in food aid.

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**Plenary Session II: Evidence on Interventions and Program Components Beyond Effective Food Aid Products: Behaviors, Environment and Modalities**

*Erin Boyd (Moderator), Ilana Cliffer, Deanna Olney, Beatrice Rogers, Blake Stabler*

This second plenary session focused on the evidence base on factors external to the food aid products themselves which influence the effectiveness of food aid. These factors include practices related to the sharing, diversion, preparation and consumption of the foods; the home and community environment; and delivery modalities (e.g. cash, vouchers, food). During the session, speakers and participants explored how programming decisions and considerations such as social behavior change communication can be the vehicle through which these influential factors can work to the advantage of food aid programs.

Moderated by Erin Boyd (USAID/OFDA), Ilana Cliffer (Tufts University) spoke about home use of food aid products, using the FAQR field trial in Burkina Faso as an example and highlighting other current literature. She discussed sharing and diversion of food aid products away from the intended beneficiary, consumption of the products by the beneficiaries, preparation of the products by the caregivers, and displacement of complementary foods and breastfeeding. Blake Stabler (Cash Learning Partnership–CaLP) presented on how delivery mechanisms can influence program effectiveness. He explained that there is a limited
but growing body of evidence on the impact of cash or vouchers on nutrition outcomes, but a moderate body on food security outcomes. Deanna Olney (IFPRI) then presented on whether or not there is a role for WASH interventions in food aid programs. She discussed studies focused on the relationship between WASH interventions and different nutrition related outcomes and concluded that from the available studies reviewed as part of her presentation, WASH interventions (household-level hand-washing and treatment of drinking water) did not reduce diarrhea, were unlikely to reduce stunting, but may reduce anemia. After the three presentations, Beatrice Rogers (Tufts University) joined the panel for a question and answer session.

Three key takeaways from this plenary session were:

➢ Quality of programming and household use of food products matter at least as much as the composition of the product itself.
➢ There is strong need to study how nutrition can be better integrated into multipurpose cash assistance and holistic humanitarian programs, and how aid providers can adapt to make nutrition a priority as affected populations gain a greater voice in what assistance they receive.
➢ There is significant need for additional research that goes beyond household level hygiene and sanitation, to understand what is needed to reduce the fecal-oral route of disease transmission (and associated nutritional impacts) in children under two years.

“Quality of programming and household use of the food products matter at least as much as the composition of products being programmed.”

-Ilana Cliffer, Tufts University

“Size and seasonality of cash transfers influence outcomes. High transfer amounts that contribute to household economy have a higher chance of improving nutrition status”

-Blake Stabler, CaLP
Plenary Session III: The Future of Food Assistance Evidence

Elizabeth Brown (Moderator 1), Erin Boyd, Saskia de Pee, Kerstin Hanson, Diane Holland, Melanie Thurber
Saul Guerrero (Moderator 2), Zeina Maalouf-Manasseh, Amy Mayberry, Rufino Perez
Brian Bacon (Moderator 3), Diane DeBernardo, Omar Dary, Daniel Raiten

The final plenary session served as an opportunity to reflect on the evidence presented over the two days of the Evidence Summit. Through a series of three panel discussions, representatives from key agencies involved in food assistance for nutrition policy making, programming and research discussed the evidence gaps identified and how to ensure that necessary resources are available to achieve long-lasting impacts in food assistance for nutrition.

The session began with a first panel “Reflecting on the Evidence Presented.” Moderator Elizabeth Brown (FFP) asked representatives from agencies with global mandates in food assistance for nutrition to address the evidence shared which most resonated with them over the two days of the Summit. Erin Boyd (USAID/OFDA) spoke to the need to make programs simpler in order to increase reach, accelerate scale up and ensure quality. She also noted the increasing evidence related to malnutrition prevention. Melanie Thurber (FFP), Saskia de Pee (WFP) and Kerstin Hanson (MSF) touched upon the importance of considering context in how evidence of success or failure is interpreted, how evidence is adapted and operationalized.

*The evidence reinforces that a perfectly-designed product is of little use if it does not reach the correct beneficiaries. Dr. Hanson also highlighted the evidence pointing to the importance of nutrition beyond infant and young child feeding, focusing on both adolescents and pregnant and lactating women. Diane Holland (UNICEF) noted that the evidence presented highlighted the “elegant ecosystem” of food assistance for nutrition and that the multisectoral nature of the field requires a range of expertise and the ability to “speak each other’s language.”*

The second panel of the session “Research Gaps and Priorities,” moderated by Saul Guerrero (ACF) focused on current research priorities. Rufino Perez (FFP) and Amy Mayberry (No Wasted Lives) both mentioned a continued need for scientific and applied research related to food science for food aid products including products, ingredients, formulations, dosage and local production.
Ms. Mayberry also noted the lack of evidence related to an integrated protocol for treatment of SAM and MAM. Zeina Maalouf-Manasseh (FHI 360/FANTA Project) spoke about the divide between research on emergency and development contexts, and what data are needed to make decisions about programming across this divide. Dr. Manasseh also addressed the continued need for evidence generation on metrics for measuring nutritional status, noting that we still know little about how to truly measure a “thriving individual who is contributing to society” which is the ultimate goal of food assistance for nutrition interventions.

To give visibility to the research agenda on food assistance for nutrition going forward, panelists proposed ensuring that the research outcomes are clear, including what the research agenda is and what the barriers are to addressing this agenda. It is also important to continue to sensitize the community to the evolving nature of evidence and the need to allocate funds properly to allow for growth and innovation, along with appealing more to the private sector for research support.

Audience questions also illuminated that little is done to gather beneficiary input and understand what is needed from their perspective.

"It’s never going to be a static conversation, it needs to be a revolving conversation about what the priorities and barriers are as the agenda shifts. We need to articulate the outcomes we are trying to impact, while remaining flexible.” -Amy Mayberry, No Wasted Lives

In the final panel of the session, “Supporting New Evidence,” representatives from U.S. Government agencies active in interagency harmonization efforts around food assistance quality and research made the case for why investment in research on food assistance for nutrition continues to be critical. They explained the role of U.S. Federal Government collaborations in supporting ongoing research. Moderator Brian Bacon (FFP) was joined by Elizabeth Brown (FFP), Diane DeBernardo (USDA/FAS), Omar Dary (USAID/Bureau of Global Health) and Daniel Raiten (NIH).

In their remarks panelists focused on the need to fuel collaboration and ensure funding by defining and prioritizing common problem sets, generating and sharing the necessary data to secure resources to research and address these problems, and using agencies’ varied areas of expertise to collaborate and address problems efficiently and effectively.

Panelists also highlighted the fact that existing collaborations on priority setting, like the U.S. Government Nutrition Coordination Plan, as well as ongoing collaboration with research institutions, implementing partners, U.N. agencies and private industry has been effective in moving the research agenda forward.
Panelists noted that the continual evolution of science necessitates continued investment in food assistance for nutrition research but also requires ongoing flexibility from U.S. government agencies to stay informed regarding new evidence and to evolve their thinking based on the most recent science.

The key message emerging from the final plenary session that much has been achieved in the realm of food assistance for nutrition. Key research questions have been answered but as the focus of food assistance for nutrition moves from feeding individuals during a limited period of time to nourishing and sustaining individuals over the long term, the research questions and evidence need to support policy and programmatic decisions which change and evolve.

Resources are needed to assist in addressing these new research priorities. Collaboration is critical to securing these resources and ensuring that these questions are answered.

Concurrent Sessions

**Concurrent Session: Applying Cost-Effectiveness in Research for Food Assistance & Nutrition Programming: Research Methods and Policy Applications**

Natasha Lelijveld, Deana Olney, Beatrice Rogers, Jennifer Rosenzweig, Stephen Vosti

Drawing from findings and experiences of researchers working on evaluating the cost-effectiveness of food assistance and nutrition programming, the session aimed to cover the following themes of cost-effectiveness research methods and policy applications:

- The value of incorporating cost-effectiveness in research to inform food assistance policy and programming decisions;
- Research considerations and methods to assess cost-effectiveness: study design, data collection, data analysis, and robustness check;
- Interpretation and translation of cost-effectiveness evidence to facilitate engagement in policy and programming discussions; and
- Gaps and challenges in generating cost-effectiveness evidence.
Jennifer Rosenzweig (WFP) introduced the session drawing from WFP Nutrition’s perspectives and attempts on gauging cost and cost-effectiveness of WFP programs. The first presenter, Beatrice Rogers (Tufts University), spoke about the cost-effectiveness research methods and lessons learned from the FAQR field studies in Burkina Faso and Sierra Leone. Stephen Vosti (University of California, Davis) presented results from a variety of cost-effectiveness field research and modeling such as the International Lipid-Based Nutrient Supplements (iLNS), The Micronutrient Intervention Modeling Project (MINIMOD), and Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) projects. Natasha Lelijveld (The Hospital for Sick Children) described the cost-effectiveness and cost-efficiency research considerations in Community Management of Acute Malnutrition (CMAM) programs based on No Wasted Lives’ Combined Protocol for Acute Malnutrition (ComPAS) cost-effectiveness study as well as the International Rescue Committee (IRC) CMAM programs cost analyses. Finally, Deanna Olney (IFPRI) presented results from the IFPRI/Food and Nutrition Technical Assistance (FANTA) III cost/cost-effectiveness study evaluating the “Preventing Malnutrition in Children under 2 years of Age Approach (PM2A)” which was conducted in Burundi and Guatemala.

Presentations and discussion during the session recognized that investing in rigorous research which generates policy-relevant cost-effectiveness evidence and encouraging the appropriate use of cost-effectiveness evidence in policy and program decisions are necessary to maximize impact/value for money of food assistance and nutrition programming.

Session presenters drawing lessons from their teams’ own cost-effectiveness experiences all pointed to a variety of important cost-effectiveness research methods considerations during study design, data collection and analyses, and results visualization and interpretation. In particular, costing perspectives and components/categories, measures/indicators of success, impact or effectiveness, uncertainty/sensitivity analyses, cost-effectiveness research planning and reporting were emphasized. Existing challenges in conducting and interpreting cost-effectiveness research were also raised by presenters and reflected in the audience questions. Discussions on robust cost-effectiveness research methods must continue.

“Policy decisions depend crucially on cost-effectiveness evidence. Robust cost and impact estimates are needed to make better food assistance programming and policy decisions.”

-Beatrice Rogers, Tufts University
This session began with a presentation by Michael Joseph (Tufts University). Dr. Joseph opened his talk by laying out high-priority challenges related to nutrient bioavailability in food aid. Dr. Joseph presented seven novel solutions to address these challenges:

- Incorporating diastatic malt as an ingredient to improve energy density, starch and protein digestibility
- Incorporating defatted wheat germ as an ingredient to improve protein quality
- Compacting Fortified Blended Flours (FBFs) to improve shelf life
- Blending vegetable oils or using canola oil to achieve an improved omega fatty acid ratio for potential immune and neurocognitive development
- Using synthetic amino acids to provide highly bioavailable forms of limiting and/or lacking amino acids
- Adding yeast cell wall to bind mycotoxins
- Adding oligosaccharides as a prebiotic as a possible means to improve beneficiary gut health

These suggested solutions have been endorsed by FAQR on two bases: 1) being cost-effective; and 2) being relatively easily adopted by food aid product manufacturers. Some of the suggestions presented could be implemented without any delay (i.e. adding diastatic malt and defatted wheat germ), whereas the remaining suggestions require further analysis and field trials before being incorporated into food aid products.

“Adding diastatic malt improves protein digestibility, increases energy density without increasing volume of the foods and reduces phytates. The benefits outweigh any additional costs.” - Michael Joseph, Tufts University

After the presentation, a panel of experts including Quentin Johnson (Quincan, Inc.), Omar Dary (USAID), Paul Alberghine (USDA), Gaurav Patel (Abbott Laboratories) and Juan Andrade (University of Illinois at Urbana-Champaign) provided their reactions to the recommendations. The panelists were in agreement that all of the suggestions have promising potential to improve the nutritional quality and cost-efficiency of food aid products.
This session investigated some important program design considerations in making food assistance programming decisions, with emphasis on exploring the roles of donors and implementation partners and the challenges in integrating activities which complement food assistance. Specific considerations which were covered in relation to nutrition outcomes included:

**WASH**, **agricultural development**, **maternal and child health and nutrition**, **disaster risk reduction**, and **natural resource management**.

After an overview of existing scientific literature for each of the five aspects, a panel of implementation partners, donors, and policymakers discussed successes, lessons and challenges, drawing from their respective organizations’ experiences in integrating complementary activities in food assistance programming.

Heather Stobaugh (RTI International) presented an overview of research evidence for each of the five covered complementary activities and gave recommendations in relation to programming and policy decisions. The major part of the session was a panel discussion among donors/policymakers and implementation partners. This panel discussion was moderated by Judy Canahuati (FFP). The panelists began by discussing how to integrate complementary activities in food assistance programming, including barriers and challenges that organizations face in implementing evidence for complementary programs, what motivates and dissuades design teams to propose a complementary activity in a program design and what other complementary programming components should be taken into account or further researched. The panelists included Nancy Aburto (WFP), Sally Abbott (USAID/BFS), Jennifer Burns (CRS), Kathryn Reider (World Vision), Adam Reinhart (FFP), as well as Heather Stobaugh (RTI). Following this discussion, panelists took additional questions from the audience. These questions raised issues related to the implementation quality in research, the use of existing programmatic data, and the link between maternal mental health and nutrition.

The overview of scientific literature in the presentation suggested the need to appropriately produce and interpret relevant research appropriately in order to strengthen support for policy and program decisions related to integrating complementary activities into food assistance and nutrition programming. This was further elaborated during a panel discussion by some of the panelists and the audience. A lack of existing evidence, especially robust scientific evidence with evaluation of implementation quality, as well as a lack of understanding of impact pathways to explain research results, were found to be common in the areas of complementary activities covered in this session. Thus, it is important to incentivize research in this area to ensure appropriate study questions and
outcomes, rigorous study design, and considerations of program implementation quality.

Furthermore, implementation partners, policymakers, and donors on the panel provided practical insights drawing from their organizations' relevant experiences on incentivizing and operationalizing integration of different technical sectors. Many panelists pointed out the practical challenge, including the fact that different technical sectors speak different languages and have different sets of objectives. In order to sensitize other sectors with a nutrition lens, it is also important to speak in other sectors’ languages and address their respective goals. Panelists gave examples of factors at organizational, program and local levels which had facilitated coordination and collaboration across sectors and led to inclusion of nutrition in the past, and especially emphasized the need to have institutionalized systems and mechanisms in place. The use of adaptive management to continually enhance program quality should also be a priority.

Challenges in program integration related to SBCC implementation quality, local capacity building, and bandwidth, understanding of context, community engagement, long-term program sustainability, and the humanitarian-development nexus were also brought up during the panel discussion.

**CONCURRENT SESSION: RAISING THE BAR ON FOOD AID RESEARCH: CHALLENGES AND METHODOLOGICAL CONSIDERATIONS TO GUIDE POLICY AND PROGRAMMING**

*Tahmeed Ahmed, Laetitia Ouedraogo, Beatrice Rogers, Jennifer Rosenzweig*

This session reviewed the research methods and approaches which have been used in recent years to study food aid, discussed key issues and challenges in study design and data collection methods, and addressed some methodological considerations in examining the impacts of food aid products on nutrition outcomes in real-world programmatic contexts. The goal was to understand how to move from the current research landscape to "best practices" in order to generate more useful information for policymakers and programmers. This session was facilitated by Beatrice Rogers (Tufts University) and included presentations and a panel discussion by: Laetitia Ouédraogo (Institut de Recherche en Sciences de la Santé, Burkina Faso), Jennifer Rosenzweig (WFP) and Tahmeed Ahmed (International Centre for Diarrhoeal Disease Research, Bangladesh—icddr,b).

Beatrice Rogers commenced with a presentation on findings from the recent FAQR/REFINE methods scan. She discussed the types of food aid studies conducted over the last seven years since the start of FAQR and identified three main challenges in conducting research on food aid for nutrition: 1) vulnerability to bias; 2) lack of comparability between studies; and 3) lack of generalizability. Each of the three panelists presented on strategies for improving the quality of food aid research and specific examples from their experiences. Dr. Rogers then facilitated a discussion.

“We need to work together to create consensus on best practices for protocol development, outcomes measured, and reporting of outcomes” —Laetitia Ouédraogo, IRSS
There were several key takeaways:

- In terms of design, it was noted that programs should prioritize and plan for rigorous research and evaluation from the start and also consider cost analysis. The importance of cluster-randomized designs, mixed methods and direct observation was highlighted; alternatives were considered for situations when more robust designs are not feasible.
- The importance of partnerships was also highlighted. Programmers and researchers should be prepared to adapt to implementation realities. There should be good data monitoring systems in the field to minimize missing data and loss to follow-up. There was consensus that researchers need to agree on the questions they’re trying to answer, have clear definitions of indicators and develop some common guidelines.
- Lastly, it was stressed that food aid research should be conducted by "researchers who know the context as well as the trade" and local interventions should be promoted. To learn from the research, negative findings also need to be included in the literature.

**CONCURRENT SESSION: IMPROVED PACKAGING FOR OPTIMAL PROTECTION OF FOOD AID PRODUCTS**

*Vance Fortenberry, Quentin Johnson, Rufino Perez, Shane Prigge, Jo Ann Ratto Ross, Ricky Speck, David Silver*

This session, chaired by Quentin Johnson (Quican, Inc.), highlighted current challenges with food aid packaging and discussed ways to reduce food aid losses, optimize transport and storage, and preserve the integrity of food aid products from production to distribution in an effort to improve cost-effectiveness. Suppliers presented technologies they developed to address some of the issues with the packaging of FBF. In a panel, food aid stakeholders and packaging researchers discussed the future of food aid packaging research.

Vance Fortenberry (ProAmpac) presented their hybrid, pinch-bottom open mouth (PBOM) bags as a more resistant alternative to the multiwall paper bags for the packaging of fortified flours. This new bag has better puncture resistance, a design that minimizes corner breakage and has the potential to reduce infestation. David Silver (Didion Milling Inc.) presented changes they made to the packaging of SC+ to improve efficiency. They highlighted the possible savings associated with different transport modalities (rail car vs. trucks), the strength of different stacking patterns and the pros and cons of palletization. Shane Prigge (WFP) presented WFP’s efforts to improve food aid packaging and their recent activities around packaging testing and re-engineering. He stressed the importance of conducting field visits, gathering data and considering how the foods will be used in the field.

In the second half of the session, a panel including Shane Prigge (WFP), Rufino Perez (FFP) and Jo Ann Ratto Ross (U.S. Army Natick Soldier Research, Development and Engineering Center) discussed the future of food aid packaging. They shared their thoughts on the constraints particularly important for food aid...
packaging, including costs and prioritization of functionalities. They also discussed the evidence needed to prove the suitability of a technology for the packaging of food aid products and emphasized the need to demonstrate food safety and to conduct field testing. Finally, participants were asked to state what they thought the next priorities in food aid packaging research should be, and the following topics were mentioned: improved performance requirements, partnerships between all stakeholders to achieve common goals, sustainability, understanding the fitness for use, and overall supply chain efficiency.

“In packaging, we want to understand the whole life cycle of a product and foresee the greatest barriers in the life cycle to try to overcome them.” – Vance Fortenberry, ProAmpac

The session demonstrated that packaging technologies can play a significant role in the efficiency of food aid programs. It also highlighted current gaps in knowledge and the need for more research on food aid packaging.

There should be efforts to obtain quantitative and qualitative information on packaging-related incidents in order to build cost-effectiveness analyses and accurately assess the potential gains of switching to alternative technologies or modalities. In addition, the constraints specific to the food aid supply chain must be considered when developing food aid packaging and the packaging technologies must be submitted to field testing/tests that mimic field conditions when their performance is tested in the U.S. prior to adoption for food aid products.

**Concurrent Session: Metrics of Food Aid Effectiveness for Nutrition: Beyond Z-scores**

*Tahmeed Ahmed, Carlos Grijalva-Eternod, Jukka Leppänen, Mark Manary, Daniel Raiten, Susan Roberts, Irwin Rosenberg*

This session focused on metrics of nutrition and health beyond traditional anthropometric z-scores, which can be used to give a more comprehensive picture of current health status and future outcomes. In a series of short presentations, six experts described the importance of and measures for body composition, nutritional biomarkers, environmental enteric dysfunction (EED) and neurocognitive tests.

Irwin Rosenberg (Tufts University), moderated the session. Daniel Raiten (NIH) set the stage for the session, describing the difficulty of relying on single measures to draw conclusions about functional roles of nutrition. Also key is recognizing that nutrition is a biological variable—that food does not equal nutrition, i.e. what is actually absorbed and utilized by the body. Dr. Raiten emphasized that we need more measures of nutritional status but we also must understand what we’re actually measuring. Susan Roberts (Tufts University) then discussed the importance of body composition to determine the type of weight gain (fat or lean) during an intervention, which can have short- and long-term consequences. According to Dr. Roberts, all of the current body composition measures for the field have problems, so she uses a combination of traditional measures (MUAC and
Carlos Grijalva-Eternod (University College London) presented on a newer measure of body composition called bioelectric impedance vector analysis, which is a field-friendly technique that identifies the quality of body composition rather than quantifying fat and lean mass as other measures do. However, more research is needed to interpret the data and use it for assessing nutritional status and outcomes. Mark Manary (Washington University in St. Louis) described the issue of neurocognition in malnourished children, saying that despite restored anthropometry, children treated for malnutrition do not regain neurological function at the same pace. Jukka Leppänen (University of Tampere) presented on one measure of neurocognition involving infrared eye tracking technology which can be used in the field. Tahmeed Ahmed (icddr,b) discussed the implications of EED in malnutrition, to which 40 percent of stunting is attributable; there are many potential biomarkers but more work is needed to define and scale them. Also, the microbiome may play a role in the etiology and treatment of malnutrition.

Key takeaways from the presentations and panel discussion were that the case needs to be made for nutrition as a biological variable, much more than simply what we eat:

We need better indicators to capture the health and wellness of the population; single metrics often need more context to interpret. We are just starting to understand the role of inflammation in nutrition, but we need robust, simple biomarkers to measure EED. As there are multiple ways of measuring the same general category of outcomes (such as body composition and neurocognition). Since there are multiple ways of measuring the same general category of outcomes (body composition, neurocognition, etc), in choosing a metric for our programs and interventions, we should consider the importance of accuracy, but remember that lack of precision is less concerning since it can be corrected with large sample sizes, but we cannot get rid of bias.

**Concurrent Session: Food Safety and Quality Is More Than Procurement Compliance: A Systems Approach For Ensuring Product Quality In Food Aid**

Richard Boyd, Odile Caron, Quentin Johnson, Maria Kasparian, Mark Moore, Rufino Perez, Shane Prigge, Nina Schlossman

The Food Safety and Quality Assurance (FSQA) session, led by Quentin Johnson (Quican, Inc.) and Nina Schlossman (Global Food & Nutrition Inc.) gave an overview of the importance of food safety and quality in treating and preventing malnutrition in the humanitarian context, with the end goal of providing the best possible products and nutrition to the target recipients and end users.
Ensuring quality throughout the supply chain requires harmonized efforts and interactions among all key players

Through working groups, the food safety systems approach incorporates harmonized food specifications and qualifications to unify elements and ensure their consistency throughout agencies. Industry and vendor meetings with suppliers and the U.S. Government, and harmonization working groups, including USAID, USDA, WFP, UNICEF and MSF, are beneficial in terms of unifying standards and systems for global procurement.

Shane Prigge (WFP) introduced the target recipients and detailed examples of fluctuating contexts in which humanitarian assistance is needed. Mr. Prigge also presented WFP’s use of local production and sourcing as an area in which future products may be able to expand, but detailed some of the difficulties considering related cultural uses and adaptations. Odile Caron (MSF) presented on the identification of food aid products fit for purpose, their characteristics, nutritional properties, packaging and labeling, shelf life, microbiology and contaminants, the processes and practices for quality assurance, and administrative needs for suppliers. Allowance for the specifications to evolve is essential to reach the appropriate balance between prescriptive requirements and flexibility for suppliers. Richard Boyd (USDA/AMS) focused on the desired elements needed from a supplier and food safety regulations for auditing and monitoring production. The inclusion of metrics for determining acceptability of products using lab testing (nutrients, microbiological, contamination), organoleptic evaluation, packaging exams, stability studies, GMP, and HACCP. Rufino Perez (FFP) highlighted the shift to prevention-focused FSQA. Being prevention-focused is cost-effective but difficult to measure in terms of determining what did not happen.

The use of process capability monitoring as a tool is critical in a prevention-focused approach to food safety and quality.

Communicating expectations and engaging with suppliers is essential for compliance with regulation, ensuring best practices, and encouraging partnerships. Next steps will be to determine how to establish a management system to incorporate future improvements into the existing food safety systems as science and technology advance.

Maintaining the mechanisms and systems of collaboration between the current stakeholders on FSQA with enough flexibility to accommodate new specialized foods and products is important moving forward.
CONCURRENT SESSION: OPTIMIZING THE FOOD AID SUPPLY CHAIN: FROM PROCUREMENT TO DISTRIBUTION

Hemant Bonde, Ozlem Ergun, Charles Ibaale, Richard Lankas, Jack Levis, Gregory Olson, Koen Peters, Benjamin Safari, Stephen Vosti

The goal of this session, chaired by Stephen Vosti (University of California, Davis) was to highlight the importance of optimizing the food aid supply chain to improve the cost-effectiveness of food aid programs. Gregory Olson (FFP) opened the session discussing the ongoing shift from execution to better planning, which could lead to savings for USAID. The session included two panels: in the first one, Koen Peters (WFP), Ozlem Ergun (Northeastern University), Hemant Bonde (Capgemini) and Jack Levis (UPS) discussed the impact of supply chain decisions on the cost-effectiveness of food aid programs and operations. A second panel, composed of Benjamin Safari (CRS), Richard Lankas (World Vision) and Charles Ibaale (WFP) focused on the “last mile” of delivery. They discussed challenges and opportunities in the “last mile” and highlighted the need for tracking, oversight and distribution network structure.

In the first panel, WFP and FAQR presented Optimus and the FAQR Supply Chain Optimization Tool, two tools aimed to assist in making cost-effective decisions. They highlighted the importance of cross-functional efforts to identify the best systems. UPS provided insight from the industry, demonstrating the impact that even small gains can have when applied to the entire system. Capgemini shared their supply-chain expertise and emphasized that data sharing must be a priority. The panelists explained the potential for significant cost-effectiveness gains by optimizing supply-chain decisions.

In the second panel, CRS reminded participants of the importance of going to the field to develop an understanding of the local environment and culture and of what it really costs to move foods through the “last mile,” and emphasized that all the delivery options should be considered. WFP and World Vision then presented the tools they have developed to optimize the “last mile.” WFP’s LESS is a mobile application which uses QR (quick response) codes to capture all WFP food movements, thus improving oversight and tracking in the “last mile.” World Vision’s Last Mile Mobile Solution simplifies and standardizes beneficiary registration, distribution and monitoring. The panelists discussed how these tools can lead to significant efficiency gains.

Using optimization tools to select foods, vendors, transporters, etc. increases the cost effectiveness of the systems and ensures that the right commodity reaches the right beneficiaries at the right time and at the best price.

"Data that doesn’t produce insight are just entertainment. Insight that doesn’t lead to better action is just trivia." -Jack Levis, UPS
Supply chain decisions have an important role to play in the cost-effectiveness of food aid programs, and there are tools being developed to help stakeholders assess the cost-effectiveness of different scenarios, including WFP’s Optimus and the FAQR’s Supply Chain Optimization Tool, and to streamline the “last mile,” whether it is by improving tracking of the foods (by using WFP’s LESS) or by improving beneficiary and distribution management (World Vision’s Last Mile Mobile Solutions). Analyzing data for insights, paying attention to both large and small details and gains, trusting modeling and believing in innovation for cost-effective food aid delivery were the main insights from this integrated session. The panelists all demonstrated that data analytics is the future of supply chain optimization and that focusing on better planning could lead to significant cost-effectiveness gains.

“Making sure the beneficiaries receive the right food at the right time is a very cross-functional effort. Yet the nutrition people don’t always talk to the shipping people, who don’t always talk to the procurement people, and so on. We need to bring everyone together.” -Koen Peters, WFP

Closing Remarks

Closing remarks were offered by keynote speaker, Representative Jim McGovern of Massachusetts, Patrick Webb (Tufts University) and Brian Bacon (FFP).

Representative McGovern provided a strong message to participants regarding the continued importance of food assistance for nutrition and a call to action, as conflict, natural disasters and climate change necessitate ongoing efforts to improve the quality of food assistance for nutrition across products, programs, processes and policies. He also called attention to the fact that “extreme hunger and extreme food insecurity are the greatest threats to our national security” and that in view of this we must work to “find the political will to end hunger,” which includes providing necessary funding and flexibility to implement evidence-based food assistance for nutrition policy.

“We know why there’s a rising number of hungry people in the world—war, natural disaster and climate change—something deeply disturbing is happening and we need to respond. This should be a clear call to action.” -Representative Jim McGovern of Massachusetts
Patrick Webb (Tufts University) offered thanks to the participants of the Evidence Summit, noting that the community has achieved a great deal and has come a long way in food assistance for nutrition research. But he also provided a call to action, stating that we must be honest about what we know and what we do not know, plus acknowledge that we can and will do better.

_There must be full transparency of what products can accomplish, but also transparency that success is not always achieved._

He said that we have a lot more to learn about how to help them achieve their goals, especially from the beneficiary perspective. Dr. Webb also noted that good, rigorous, evidence is clearly in high demand, from politicians, governments, institutions, and implementing agencies. He encouraged participants to view evidence as a water glass that must be constantly replenished, and it is the responsibility of all stakeholders to ensure this replenishment is achieved.

"At the end of the day, we’ve tactically acknowledged that we’re doing an amazing job in extreme conditions. We can always do better; we will do better. We’re gradually moving from feeding people to nourishing them.” -Patrick Webb, Tufts University

Brian Bacon (FFP) shared his closing reflections, noting that the Evidence Summit provided a unique opportunity to bring together the diverse group of stakeholders in food assistance for nutrition. While the community has made great progress, the impact of global hunger remains daunting and therefore interventions must be context adaptive in order to use resources in the most optimal way.

_Mr. Bacon reiterated USAID’s commitment to practice based on rigorous evidence and noted that evidence generation, sharing, and collaboration have a significant impact on how the U.S. Government thinks about this problem set, identifies crucially-important questions, and ultimately devotes resources in ways that benefit the largest number of people in need._

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An excellent turn out of participants at the Evidence Summit. Photo: Adam Lowe
Annex I. Special Sessions

**SPECIAL SESSION: POSTERS AND DISPLAYS SESSION**

Fifteen posters and fifteen display tables were setup during the Posters and Displays Session. This session provided Evidence Summit participants with an opportunity to learn about current activities and innovations in food assistance for nutrition. Organizations and activities represented included innovations in food aid product formulations explored by the University of Illinois at Urbana-Champaign, TyraTech Inc., Kansas State University, Edesia, Tufts University, JUST Inc., MANA Nutrition and USA Rice; innovations in food aid packaging, safety and quality presented by TekPak Solutions, Fritz Water Vest, Didion Milling Inc., Greenwich University, and Global Food and Nutrition; and program and activities related to food assistance for nutrition presented by USAID, Project Concern International, FAQR, R4Act, CRS, ACDI/VOCA, Save the Children and The Sackler Institute for Nutrition Science. The posters and displays session provided a key opportunity for networking and conversations with other participants regarding areas of mutual interest in food assistance for nutrition.

![Participants engage with presenters at the diverse posters and display session. Photo: Adam Lowe](image-url)
This session provided an opportunity to highlight new evidence in food assistance for nutrition. Presentations were delivered through a series of short, concise presentations. Dani Van Liefde (Washington University in St. Louis) introduced a study from a school feeding program in Ghana investigating the impact of added milk protein and micronutrients on cognition in school-age children. The study compared three different supplements, each with micronutrients and milk and/or rice protein added, against a control of just micronutrients with sugar. Results showed that children receiving the 8.8 grams of milk protein and micronutrients did demonstrate improvements on cognitive test scores and increases in fat-free mass but not in height-for-age z-scores (HAZ). The additional cost of this supplement would be $0.06 per child within the current context of $0.25 spent per child by the Ghanaian Government on school feeding.

Susan Roberts (Tufts University) presented test results of a novel supplementary food formulation in children aged 15 months to 7 years in Guinea-Bissau. The novel supplement emphasizes polyphenol-rich ingredients both for cognitive effects and as a source of micronutrients with the hypothesis that the new supplement will improve cognitive function as well as body composition, anemia and brain blood flow relative to traditional breakfast. This efficacy trial compared the novel supplement against SC+ and a traditional breakfast. The trial found that the novel supplement did show multiple benefits in both brain health and growth.

Andrew Seal (University College London) shared results from the Research on Food Assistance for Nutritional Impact (REFANI) study on unconditional cash transfers and malnutrition risk in three settings: Niger, Pakistan and Somalia. The study’s primary question was whether or not cash-based interventions can protect nutritional status in children in crisis. The study found that diet diversity in children increased due to cash transfers but that cash and voucher transfers were only effective at reducing acute malnutrition in some contexts, with a small effect size. However, in Pakistan, they did find that cash and vouchers can increase mean HAZ and reduce stunting, with moderate effect sizes. Therefore, they concluded that cash-based interventions are a useful tool in humanitarian response but are unlikely to achieve nutrition objectives on their own. Full study results are available here.

André Briend (University of Copenhagen and University of Tampere) presented results from the TreatFood project in Burkina Faso which looked at the impact on weight gain and hemoglobin status of corn-soy blend (CSB) versus lipid-based

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nutrient supplements (LNS); milk versus soy protein; and dehulled soy versus soy isolate. Findings indicated that like well-nourished children of the same age, children gained fat free mass, even when receiving LNS. Children also had a higher fat-free mass index with LNS. He indicated that concern regarding increased risk of obesity and chronic disease with food supplements including LNS in children with MAM is not supported by the data from this study. The study found no clear effect of milk compared to soy or of soy isolates compared to dehulled soy. Finally, LNS led to significantly higher hemoglobin concentration. Full study results are available here³.

Steve Collins (VALID Nutrition) spoke to the importance of locally-produced supplements through results of an efficacy study of a soya, maize, sorghum (SMS) ready-to-use therapeutic food (RUTF) with amino acids made in Malawi. Results showed that the SMS RUTF had recovery rates equivalent to peanut-milk RUTF and superior anemia impact. The SMS RUTF recipe is lower cost to produce due to its use of local crops, and VALID argues that it has the added benefit of decreased environmental impact and greater sustainability due to its ability to be produced locally. Full study results are available here⁴.

### SPECIAL SESSION: TOOLS AND RESOURCES ROUNDTABLE

This session featured 14 roundtables highlighting different tools/resources developed to make food assistance for nutrition more effective and cost-effective. Areas of focus include the selection of more efficient food assistance programs, improved logistics and the selection of more efficient products. Participants rotated to a different roundtable every 20 minutes and had the chance to learn about five different tools/resources and how to use them to make their work more effective. Discussions at the roundtables also focused on how to use the tool/resource, what existing needs this tool/resource addresses and how these tools and resources can be used to optimize food assistance programming from the perspective of policymakers, donors and implementing partners.

The tools/resources highlighted are listed below; additional information on each is available here⁵.

- FAQR Decision Support Tool
- NutVal
- WFP Fill the Nutrient Gap
- WFP SCOPE CODA
- IRC SCAN Model
- REFINE
- Nutrition Program Design Assistant & Guide to Anthropometry
- TOPS Tools
- SPRING IYCF Image Bank
- Commodity Management Toolkit
- WFP Optimus
- WFP LESS
- World Vision Last Mile Mobile Solution
- FAQR Supply Chain Optimization Tool

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³ [http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002387](http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002387)


⁵ [https://foodaidquality.org/evidence-summit-tools-resources-booklet](https://foodaidquality.org/evidence-summit-tools-resources-booklet)