

**NUTRITION IN CRISIS SETTINGS AND THE TRANSITION TO A  
DEVELOPMENT-LED RESPONSE**

**Panel Moderator:** *Nabeeha Kazi Hutchins*  
October 18, 2019 - 11:10 a.m.

*Introduction*

**Ambassador Kenneth M. Quinn**

President - World Food Prize Foundation

---

So we're going to bring the next panel up, so I want to make sure when it gets noon... We're a little bit behind on time, but don't everybody rush to go out to go up to get lunch. We'll wait for you. So I know you think, well, we don't go now, we might not get anything to eat. That won't be the case.

So Nabeeha, yes, please come up and bring your panel. Nabeeha Kazi is a dear friend, and she has referred to herself as one of the children of the Green Revolution. And her Dad worked with Norman Borlaug, and we have been collaborators and friends, and again happy 10<sup>th</sup> wedding anniversary to you. Nabeeha is now the recently appointed executive director of the No Wasted Lives, a global coalition formed by U.N. agencies, international NGOs and donors, for coordinated action to end wasting in children. We've got a great panel together. I'll let you introduce them. Over to you, and you get your full time. I told people, don't leave for lunch – stay here. This is more delicious.

---

*Panel Members*

<b>Matt Pakula</b>	Senior Manager for Corporate Responsibility, Tyson Foods
<b>Lauren Landis</b>	Director of Nutrition, World Food Programme
<b>Marc Scantlin</b>	President, Kemin Food Technologies, Kemin Industries
<b>Andre Briend</b>	Adjunct Professor, University of Tampere

---

*Panel Moderator*

**Nabeeha Kazi Hutchins**

Executive Director, No Wasted Lives

---

Good morning. Thank you, Ambassador Quinn, for that introduction and a terrific Borlaug Dialogue. Because of your leadership, Ambassador, and your vision, you not only bring the magic to us that keeps us coming back every October, but you're also keeping Dr. Borlaug's legacy alive and well. So thank you for that.

Ladies and gentlemen, this is the last panel of the Borlaug Dialogue, and then we head to lunch to hear our laureates, Dr. David Nabarro and Dr. Lawrence Haddad. And last night was truly special. It was a powerful reminder of transformation that these two global health leaders have driven and inspired and realized. They've placed nutrition as central to development, and along the way they've made governments come to the table. They've created an environment where civil society, private sector, everyday people to come to the frontlines and make a difference. Lawrence and David have been a true inspiration to me in my career, and I'm really honored to be here today.

So those who work side by side with Dr. Borlaug and those of us who grew up in his shadows and the shadows of his partners in crime, leaders like Dr. Vassal, Dr. Kush, Dr. Rajaram and my own father, Dr. Mujeeb Kazi knew of Dr. Borlaug's dissatisfaction with business as usual. We knew of his impatience and his unrelenting drive to do more and do better and this sense that even if there was all the time in the world, time was still running out. And if something meaningful wasn't done at scale, if something practical, real and selfless wasn't done with knowledge and scientific achievement, then what was the point of it all.

As I reflected upon these past few days, this impatience to do more, to do better, to make it matter are really helpful. And for nutrition we wouldn't be at this moment without David, without Lawrence, without their families and all the individuals who work so hard alongside them to create this unprecedented moment. And this moment forces all to step up to the plate, to step up and finish the job.

As Ambassador Quinn mentioned, I have recently been appointed as Executive Director to the No Wasted Lives coalition. This is a coalition that was founded by tremendous institutions that are working on the frontlines of hunger and malnutrition around the world – Action Against Hunger, Children's Investment Fund Foundation, the European Commission, the Innocent Foundation, the International Rescue Committee, UK Aid, UNICEF and the World Food Programme. The focus of this coalition is to catalyze coordinated global action to scale up prevention, early detection and treatment of wasting in children under the age of five.

The work to be done requires the experience, perspectives, insights, advice and commitment of every one of us. So when we think about finishing the job for nutrition, we must step up efforts to combat all forms of it. After stunting – which affects more than 150 million children around the world, and we have achieved success in reducing those numbers – the most prevalent form of malnutrition is wasting. And wasting is affecting over 50 million children under the age of five, and those numbers are not improving; we're relatively flat.

We've heard a lot about stunting. What is it? I'll try and make it simple. Essentially, a stunted child is too short for her age. In addition to the physical manifestation of stunting, a stunted child's brain development is also compromised. So their ability to learn, earn and thrive at their full potential is also negatively affected.

Wasting is when children are too thin for their height. You've seen it. You've seen it in the photos. You've seen it in what happens in these severe famine emergency crisis settings. And it's devastating. A wasted child's body is literally shutting down because they are too thin, and wasting is the culprit of approximately one million preventable deaths each year for children under five. And there are lifelong consequences to health, cognitive development and economic achievement.

And so while malnutrition that is stark in crisis settings predominantly manifests in wasting, wasting does not predominantly live in crisis settings. So let me say this a different way. Wasting does exist in crisis and emergency settings, but the majority of cases are nonemergency settings. The majority of these wasting cases are in communities that are not defined by war, that are not defined by famine, displacement and violence in crisis proportions. And furthermore, many of these children who are wasted or threatened by it are in the very same communities that face high levels of stunting, anemia, overweight and obesity. I think it's incredibly important to recognize, because relegating wasting to a crisis or humanitarian issue affects our global coordinated response—our response and our funding to not only reduce the rates of wasting but also meet our global health, nutrition and child survival targets.

We have tremendous experiences. We have tremendous learning that we can build from. We also have tremendous evidence of success. And as we bridge this nutrition divide between humanitarian and development and crisis and development, there's huge opportunity to do more and do better. And talking about just that is what we will get to now.

Joining me is a distinguished panel that will be leading a conversation titled, "Nutrition in Crisis Settings and Moving Toward a Development-led Response." So starting from who is closest to me, Matt Pakula. He serves as Senior Manager, Corporate Social Responsibility, for Tyson Foods. He works on shared value and social enterprise projects including Tyson's partnership with One Egg, an organization that provides eggs to children in developing markets by developing a business model approach for smallholder farmers to grow and raise the chickens locally that supply the eggs.

Lauren Landis is Director of the U.N. World Food Programme based in Rome, Italy. During her career, Lauren has worked for the U.S. Government as the Director of Food for Peace, Save the Children as the Emergency Director, and has had various positions at the U.N. over the past 11 years, serving in diverse posts all the way from Chief of Staff to Chad's Country Director. She has experience in both relief and development operations around the world, and now she focuses her attention at World Food Programme, growing its nutrition operations. WFP is also one of the founding institutions of the No Wasted Life's coalition.

Marc Scantlin is the President for Kemin Food Technologies based right here in Des Moines, Iowa. Kemin is focused on ensuring safe and quality food for the world through their ingredients. Kemin has been actively involved in providing financial as well as hands-on research, support to the World Food Programme, in their efforts to provide better quality food to vulnerable communities.

And last but not least is Andre Briend. He is one of the world's foremost researchers on child nutrition in developing countries. He played a key role in the development of ready-to-use therapeutic foods, also known as RUTF, which led to a revolution in the management of severe acute malnutrition, or SAM. Previously at the WHO, he is now Adjunct Professor in International Health at the University of Tampere in Finland and Affiliated Professor at the University of Copenhagen in Denmark. He also serves on the Council of Research and Technical Advice on Acute Malnutrition, known as CORTASAM, which is our technical body to No Wasted Lives.

So, welcome, and thank you for being here. Let's get to some questions. So here's how we're going to do this. We're going to have each of you give a few remarks, a few minutes each. I

have questions for you, and then we're going to open it up to the floor. So please have your smart and succinct questions ready to go.

We'll start with you.

Matt Thanks, Nabeeha. As Nabeeha said, I'm Matt Pakula. I'm from Tyson Foods. And as many of you know, we're one of the largest food manufacturers in the United States, and we are squarely focused on protein, which as you know is a really serious issue in some of these developed markets. So one of the projects that I am working on is with One Egg, and One Egg helps get eggs to kids. And what we've noticed over time is that, if we partner our technical expertise with One Egg and their in-country partners, we're able to develop products that really change the fundamental market dynamics and provide eggs to kids as well as grow the consumption of eggs and chicken locally.

We've been working in Rwanda, Uganda, Haiti and then Honduras, Ethiopia and Nepal. And so our folks actually just got back from Nepal, and I think they've got a short video that we get to share with you about that project right now.

– VIDEO –

Nabeeha Well, it's not a panel without a technical difficulty.

Matt So much for the video.

Nabeeha That wasn't me cutting you off.

Matt That's all right. So the video, what it really gets at and what I think you would take away from it the most, is that when you work with smallholder farmers and you help them achieve the skills to raise the chickens, and you develop that level of expertise for them, you can help them place themselves near the schools so that it's much easier to get the eggs to the kids. And then as they build this expertise, they move from layer birds into broiler birds, and you really expand the nutritional, I guess, opportunities for the community as a whole. And I'll leave it there for now, Nabeeha.

Lauren Yeah, so I'll jump in just tell you a little bit about what the World Food Programme is doing in nutrition. So probably, and I'm looking at one of the former laureates who made it all happen, Catherine Bertini. About 15 years ago maybe WFP really said, "You know, we're pretty good at delivering the right calories where they need to be, particularly in an emergency environment, or we started getting into emergency environments.

The problem is that it's not just the calories, particularly for our most vulnerable populations, the under-fives, and the pregnant and lactating women." And I think that's when we really started to focus on nutrition. Last year, 2017, we did 16.3 million nutrition beneficiaries. Now, you can say, okay, that's a pretty big global player. On the other hand, given the numbers that have been presented this morning – 150 million children who are stunted – it's a drop in the bucket, and

clearly it presents that all of these things need to be done with partners and all the stakeholders at the table, particularly governments.

But just to say that we work in nutrition program in about 54 countries, and out of that 16, about 10.9 is emergencies. So this is a panel about the connection, hopefully, between the emergency and development. But due to the work of Catherine Bertini when she was executive director of the World Food Programme, we took on large scale doing emergency programs. So about 46% of everything we do in nutrition is linked to having a better emergency response. And that means that we do a lot of treatment of children who are wasted, children who are moderately, acutely malnourished. And we also try and prevent children from becoming acutely malnourished. So that's the focus of our emergency work.

But I just want to make sure that, in order to give the big picture, that really these days about 5.4 million of our nutrition beneficiaries are actually in the non-emergency area. And the prevention work we do in this area is the greatest growing sector within the nutrition work of the World Food Programme. And these are things that have been discussed already this week, things like food fortification, putting more vitamins and minerals postharvest into things like rice and other staples so as to prevent those micronutrient deficiencies that affect 2 billion people worldwide.

So a lot of our emergency work focused in East Africa, a lot of our development and prevention work focused throughout. And not to take too much time, the one thing I feel that really helps us focus our attention to make sure we're thinking about this divide is our saying is *Prevention, treatment, prevention*. In other words, we should be looking where children are vulnerable, quickly get in there with our prevention activities, some of which I can talk about if we get another round. And then when they become malnourished, effectively and quickly work on treatment, but don't forget, even when you're working treatment, you've got to go back to the prevention to make sure there's no relapse and to make sure that those communities that are probably still vulnerable are still preventing siblings and those same children from becoming malnourished again. And I'll leave it there.

Marc Just a few words about Kemin. Kemin is a privately held company. We are based actually right here in Des Moines, a worldwide company. We have several disciplines that we focus on. From my standpoint, it's primarily on the human food, which obviously is what's applicable here. We do have discipline in pet food as well as feed ingredients. And we look at the human food and we look at – where do we really play a part? – it is primarily on the antioxidant side, so the overall quality of the food, and then also on the antimicrobial, or the safety side of the food.

So everything Lauren was talking about and what they're doing on the World Food Programme, we're very involved in the quality of that food and the preservation of it, and it's not an easy challenge. We're trying to keep food fresh, and we're trying to keep it fresh for anywhere up to maybe two years. And when we talk about oxidation and we talk about the challenges with oxidation, that's where Kemin really tries to apply their resources. Obviously, we have the private side and we work on that, but we also have the giving-back side where we are again working closely with programs like the World Food Programme where we're really studying what we're

doing with those fortified foods and how we continue to keep the nutrition that's in those foods where they need to be, you know, two years long. And that's again not an easy challenge, and we've been applying some resources to that in the form of scientists. And that's our specialty, and so we need to be doing that. We have scientists that are geared just towards making sure we analyze all the foods that are going into there and trying to make them last longer and keep those vitamins inside of them.

Andre Okay, maybe I will say a few words about the ongoing work on management of severe] malnutrition. What happens now that we are trying to move out of the emergency field, because as you mentioned, we realize most of the kids of SAM severe malnutrition, they'll carry non-emergency context. So once you realize that, you understand the priority is to integrate the treatment into existing health program.

And the program now which I currently use is much simpler to use than those implemented 20 years ago, but still they are rather heavy. So that if what's going on now to simplify the treatment in terms of protocol so that if what's going on to reduce the cost of the program, first trying to reduce the cost of the RUTF itself and also to reduce the dose that is given. The ongoing protocol now, which examines whether you can limit the administration of RUTF just during the first two weeks, one month of treatment and see what is the result, because it's a promising way to reduce the cost.

Another aspect as well to move further to the community and to continue this movement. And one aspect is to test and evaluate the possibility of mother detecting themselves even with SAM by nature of measure of mid-upper arm circumference in the community. And also their efforts to evaluate the treatment of SAM given by CHW with a referral only when there are medical complications. So this is a work in progress, but we realize that now only a fraction of children with SAM do get appropriate treatment, and we need to strengthen our efforts to improve that.

Nabeeha Yeah, that's great. You know, it sounds like we are moving with this recognition that we've got to do more and perhaps differently in some of the non-emergency settings and those issues with cost and access, and how do we scale up and look at new pathways to deliver prevention and treatment services in particular. Because we're only getting to 24% of children who need treatment in those SAM cases, so I look forward to talking more about that.

Nancy, you've noted that the World Food Programme is on the frontlines of so much crisis work. You're seeing the really tough situations, the really heartbreaking and infuriating situations, but you've also noted that you're trying to bridge this divide between a crisis emergency, humanitarian and the development sector. Why is it so important for nutrition? Why is it so important for development as a whole?

Nancy Yeah, I think it was, you know, what was said yesterday by David Nabarro is that one of the most important things we need to do is prevent malnutrition, because it has those very long, irreversible health impacts. I mean, not only if we can prevent malnutrition can we allieve(sic) suffering, you know, there's less pain, there's less

time, there's less cost, and these irreversible health impacts. And it's the right thing to do as well.

So I think it's really important for us to think more and more about—how can we get in there and what is it that we need to do before nutrition attacks? And really the number one focus is, as was said yesterday, getting everyone a healthy diet. It's those lack of nutrients, whether you're undernourished or over-nourished that is incorrect in your diet. Right? We really need to focus on the healthy diet.

But some of the best ways—and I'll just name two or three—that we can really put those prevention techniques in place is to work on the thousand days. I mean, everyone has pretty much heard of the thousand days. If you can really prevent malnutrition by taking care of the mother and making sure that those first two years of life are the healthiest with good breastfeeding and all the other components of a child's early days, that is the best way to prevent malnutrition. So we need to reinforce and really focus there.

But also there are other things that have been mentioned this week that are probably great ways. For example, school feeding. One of the things we've been working on and talking to farmers about—can you grow those healthy crops? We promise to buy those healthy crops and feed them to children in healthy menus in schools. So making sure that at least once a day they've got a full, balanced diet and therefore helping to prevent other things that could happen. And even if you're handing out cash as a part of a social safety net program, can we talk to those retailers in Jordan or wherever that might be providing cash to refugees or at least providing the cash to give through retailers. Can we make sure those retailers are selling healthy foods? Can we give some education to mothers to make sure that they know what to buy in the store so that they can help prevent malnutrition in their children?

World Food Programme is probably one of the largest purchasers of specialized nutrition products. Probably last year we bought over 300,000 metric tons, and these are very, very valuable commodities that are the best at treating children with malnutrition and even preventing. But what I think is really important is we need to also do all of those other things so that we can just help focus on healthy diets as well.

Matt Nabeeha, can I build off that for just a second?

Nabeeha Yeah, absolutely.

Matt So one of our projects in Honduras is looking at the first thousand days, too, and so we're going to look and see what happens when we give the moms the eggs and then continue to deliver the eggs, not only to her and her family but to her new child as well. And so I think I heard when we were in the back over there, the panel before us talking about the impact and how companies aren't really charting that impact maybe as strong as they should. And so with this project in Honduras, we're very close to having a university come in and actually check the work and look at the issues of stunting and look at the nutritional aspects of that particular project. So there's what we think and what we know and what we can prove—right?

Nabeeha Right, you have to prove it.

Matt Right. If we can't prove it, then we have a nice concept, but we don't actually have the results. And so I'm particularly excited to get some results and to be able to prove the value of those eggs in the diet.

Lauren I want those eggs.

Nabeeha Well, and, Lauren, the comment that you just made—I think about it and I hear it. And as you know, we work closely on many of these fronts. But it's so much. There's so much that could be done. In one way, you say, well, that's really overwhelming—there's so many of these pathways and opportunities and touchpoints. On the other hand, it's really exciting because there are so many touchpoints and so many pathways to get the prevention piece right and then also get into treatment for kids who need it. So it's exciting to hear how we need to catalyze all of that action to work towards that one goal of no nutrition in any form.

I'd love to ask Matt and Marc, your perspective from the private sector perspective on this. So my friend, Ruth Oniang'o, said it so well yesterday. She said you have to do business, but you also have to do good. Right? So when it comes to nutrition in either crisis contexts or in development contexts where both of your companies are supporting and working, what does "good" actually look like? What does it look like for you? Is it writing a check toward the NGO? Is it making a one off CSR activity successful to build morale, reputation, etc., or is there far more to this story than meets the eye?

Marc I'll take the first on that if you want. So "good." Well, to me anytime that there is a financial contribution that's made, that's good. I think that's always a good step. From Kemin's point of view I guess we're taking it a little bit further with that and that the ownership of the company is very big that we will get back in the form of not just financial—and we do; we do several bit of financial contributions primarily to World Food Programme as well as Food Prize—but the other part is applying and utilizing resources where our expertise is.

So we talked a little bit about us being a science-based company. We do know the oxidation business. We do know the antimicrobial business, and so we've got to focus not just on the profitability side of the business, but where can we see benefit in these crisis regions. And so we do have full-time employees that we have dedicated just towards the World Food Programme, but they're really there to say, okay, we don't know exactly what is needed. But the World Food Programme can come in and say—this is where our problems are happening. This is where we're having challenges. And we have all these scientists, and they just love to do that—it's a puzzle for them, and they get excited when it's a challenge and it's a unique challenge. And we kind of let them go, and then they can talk to the World Food Programme and say, "Here's what we're finding."

It really does start from the top as well, so our ownership, there's probably, I don't know, eight or ten presidents that we have around the world, and every April we meet for a presidents' meeting. Well, this year the owners, the shareholders, decided that, to make sure we drive the point home of what we are also doing not just to



make money but to give back here, they held the meeting in Jordan. And so part of the meeting in Jordan involved a one-day trip to a Syrian refugee camp. And I talked to Lauren a little bit off stage with this.

What an experience. We got to see firsthand where those challenges were coming from. We got to see firsthand the importance of what we're talking about with the fortified foods and what that does on the war zone. That camp had grown from roughly 2,000 people about, I don't know, seven or eight years ago, to 80,000 people today. And there's no sign that they're going to be able to go back to the Syrian side anytime soon.

But what the programs have been able to do... And I kind of look at this as... We always talk about what's wrong. It's a good example of what is working right. And if we can take what that camp has been able to do and mirror that and replicate what the World Food Programme and UNICEF and all the organizations and how well they're working together, mirror that, it is a good start to say this is what we can do to continue to expand what is working right. They've gone through everything from, okay, how is the food going to come in? So where are the logistics of this food going to come in? What are the nutritional needs, the amount of calories that each of the kids, the adults need? And then how are we going to distribute the food?

So the families there are all given a cell phone, and they can't make calls outside of the base, but they get a message to say – It's your turn to go to the grocery store. When they go in there, they can get all the food that they need. And they have roughly, I don't know, \$27 to \$28 a month, but it's enough. It's enough that they can get the food that's necessary for the amount of people they have in their families. And you worry about, okay, how does that then... How do you handle commerce? How do you handle the transactions? They have been amazing in that the transaction is all done through retina scan. So we talk about, okay, this is a proposition that's being used here that works. We were in there. We were watching how it's done. They go through, they get their food. They then go up, and there's a scan that's done, a retina scan that's done very quickly, and they know exactly how it works.

But through the process we wanted to see, okay, how is the food being handled once it's distributed? So for example in school systems – we got to visit some of the schools there. And to encourage the students in these camps to be able to go, they are using food. What Kemin was able to do was go in and see, okay, what are the food processing lines looking like? How can we go in and help to ensure that the way in which they're processing the foods – and a lot of the refugees are in there working, so they're employed at this – but to make sure that good manufacturing practices that all food companies, Tyson, for example, it's an everyday way of life for them, that we can take those best practices from the private sector and then introduce those into these areas where maybe that's not on the top of everybody's mind.

And so then we also get to say, okay, where are we having some challenges with other foods coming in – vegetables, for example, fruits? All right, fruits are all over the world. How can we preserve that fruit? And we've heard I think a little bit about CRISPR technology. Well, Kemin is working on ways that we can suppress, for

example, the ethylene suppressors within fruit, using what's called methylcyclopropane, or 1 MCP. It's been around, but we haven't been able to find a way to do it economically. We're getting close but to just take it in little pods to be able to ensure that when fruits are arriving that may have departed from Brazil, for example, when they arrive that if we can even get one more week of shelf life when they arrive – that's a huge value and we don't have the waste of that coming in. But I could talk forever about this, so I'll go on.

Matt Well, I guess let me build a little bit on that, too. So there is definitely a place for corporate philanthropy, there's a place for corporate social responsibility connecting philanthropy to your values, attitudes and beliefs in the business. And really the future of this work is in sort of this shared value social enterprise space where you're looking at an under-served consumer and you're developing a product, you're developing a value chain, you're developing an ecosystem where you can help serve that customer in a way that's profitable for your business and healthy for that customer. And so as a company that provides protein, when we look at our projects with One Egg, we think, here are some markets that are going to be really important for us in the future. And when we look at those now, we think, if we're there to help build those farmers' capacity and their ability to raise chickens, our Cobb-Vantress unit will be able to sell chickens into these markets in the future as the technology expands, as the marketplace expands, and as the taste for eggs and chicken grow. And so we see it as being essential, really, to how we develop in some of those markets.

Nabeeha Yeah, I think it's so important that those experiences come to the forefront and we're able to talk about, yes, you know, it is important that there be funding support and some of the other pieces that you might be doing from a CSR philanthropic perspective. But what is going to help us win this is if we have the knowledge and the innovations and the technologies to carry the day. And the more we can be talking and even hearing from private sector on what are those assets that you have with your employees within your halls and your walls that we can be deploying to get to the win that we want to achieve, the better off.

Matt Well, and that's what we've noticed is that the Tyson Food fellows, which are our folks that provide the technical expertise, when they get on the ground, they're able to assess exactly what the situation is and provide the right technical assistance, and the ample supply of labor locally is able to come together in a way that really creates that.

Nabeeha Andre, a question for you. You've been on the forefront of the treatment of wasting and driving these community models of care and management of wasting. So talk to us a little bit further on... You mentioned some of these points in your intro remarks, but how do we balance and better streamline our nutrition response and crisis response in crisis settings and also non-crisis settings? I mean, I understand it's not an either/or, so what exactly is it?

Andre It's two ways of continuum between the emergency and nonemergency situation. And also emergency don't happen in a vacuum. Usually when you have a crisis with a high level of malnutrition, you can be pretty sure that before the crisis there was already malnutrition. So the response to that is to be ready. 20 years ago people

responded to a nutrition emergency. According to the threshold - there were threshold who were predefined and when they were rich, all children with severe malnutrition were treated, at least this was the theory, because by the time the program was setup, the emergency was already more or less over.

So now with the community model, which is more responsive and also which can be used in... which is less resource demanding. There's a possibility to implement treatment, to put in place treatment of management of severe malnutrition in a chronic situation. And then in that case, in emergency, what you have to do is to strengthen these existing component instead of starting from square one. And I think it is the future.

Having said that, I'm all in favor of prevention program, and I think prevention is a hundred times better than cure. But we have to have to acknowledge that, SAM occurs in a context of extreme poverty. And when you look at many communities where SAM occurs, you find that only a small portion of children do get an adequate diet. So whatever you do care as a prevention, there's bound to be some failure. And you need the therapeutic program, treatment program to cover this failure, prevention failure. So how to balance the two is a difficult question. But what they should, and those two should be placed post in emergency and non-emergency where the balance between the two shifting according to this information.

Nabeeha Lauren, did you want to add?

Lauren Yeah, I would agree entirely, but this is a difficult thing to do. And it's difficult because we also have to change some mindsets. You know, when there is a need for treatment, it's usually clearly defined and you run in and you provide that treatment. And it's costly, but you have probably a smaller number of children. Then if you want to prevent malnutrition, then you have to blanket an area and say, provide a treatment commodity or an intervention to a very large number of children. Because you're not quite sure which ones are going to become malnourished. You've just identified where the target population, the most vulnerable, are who are likely to become malnourished. So with that less, slightly less targeted approach, you've got to get as high level of coverage out there, and it's fairly costly. It's only when you prevent them from becoming malnourished that you've actually had your cost savings. Upfront, prevention actually in this way, by providing a treatment commodity, looks more expensive than the treatment itself. So I don't think anyone's actually saying – well, let's wait and see which kids get severely malnourished and then we'll treat them. But the difficulty of knowing how to do both prevention and treatment at the same time effectively can make it costly and therefore a deterrent.

Nabeeha And prevention efforts that will work very well for stunting, which we've done tremendous work on so far, but what's going to work for wasting as well – right? Great.

**Q&A**

Nabeeha Well, we're going to open it up for questions from the audience, so I think there are mics on either side. And please, short, succinct and please state your name and who you're with.

Q Hi there. Excuse me. Tom Steele with the DCI manufacturing. We manufacture ready-to-use food, and I just wanted to say it's a real honor to be in the audience of all of you but particularly Dr. Briend. I just want to... No, I mean, what I want to say is I'm not sure. You highlighted this a bit in your comments, Nabeeha, but Dr. Briend was at the forefront of developing ready-to-use therapeutic food, which has gone on to save the lives of literally tens of millions of children around the globe and millions of children every year. So we all are in a debt of gratitude to you, Dr. Briend. And I look forward to, in the coming years, coming back to Des Moines to celebrate you being a laureate for the World Food Prize.

Nabeeha All right, so no question, but yes, fan club. Great, wonderful, well-deserved. So, Kay, did you've a question?

Q Yes, thanks very much. I'm Kay Dewey from the University of California at Davis and have been working on the prevention side myself a lot. But I wanted to draw your attention to a model that's been tested for integrating treatment and prevention. And I don't know if Shawn Baker is in the room, but I know he was the originator of the idea that Helen Keller International implemented in West Africa. And they evaluated, in collaboration with IFPRI, in what are called the Pro Meas trials, and two of them in Burkina Faso in Mali came out with very positive findings.

So first of all, what this involved was when you're doing screening for severe acute malnutrition, normally people are screened and those that don't screen for SAM are sent home with nothing. So that's a disincentive to even show up for the screening. So what they did was implement, for those who were not severely malnourished, they received a preventive version, which is a small quantity, lipid-based nutrient supplement. It's one-tenth of the quantity of RUTF. And by doing that and then following both groups, those treated and those given the prevention, they were able to reduce stunting in those that got the preventive treatment and increased the attendance at the screenings by a huge percentage. So I think this is one model for integration that we need to think harder about and remember that RUTF is really the sort of most costly and most large quantity, as Andre pointed out. There's a whole range, all the way down to the small quantity versions, that we need to be thinking about in these programs. Thank you.

Nabeeha Great. We'll take a few questions. I hope you... And if there are more questions, we'll take a couple more and then respond, so please, your name and organization?

Q My name is Jenny Ogle, and I work with Kay International now. I just wanted to ask something about prevention aspect. And I wanted to find out if we in the earlier panel, I think that it was Lauren who said we lack data to make the point and show impacts and that kind of thing. But do we have data which shows we've done a cost benefit analysis of what it costs to actually do prevention, I mean, per child, and then what it costs to actually now come and treat? I think that this kind of data really informs how we prioritize and how we design our programs. And so even if we say that it's more difficult or it's more complex to do prevention, if we have the data

which shows what it will cost us at the end of the day to come and to do the treatments, I think that it will help us to make better judgments and decisions.

Nabeeha Okay, great. We'll take one last question, and then we'll address some of the comments and questions. Go ahead.

Q Hello. My name is Julianne Finn, and I'm with the University of Central Missouri. And I was curious how protein is addressed other than eggs in these cultures that are very diverse, religious backgrounds and dietary restrictions because of that.

Nabeeha Thank you. So there were a couple comments, but we've got two questions, one on cost effectiveness, cost benefit and then the question on eggs.

Lauren Could I take the one? I think what Kay pointed out and one of the points that I wanted to make earlier is – look at the need for innovation. We do need new models. We should be trying new models. We haven't got this solved by a long shot. And I think that the more we're able to use some of the innovations that we saw out in the hall today, to really have a greater impact on malnutrition, this is where we're going to get this problem solved. So I had some great conversations talking to students yesterday and some of their research projects, and this is the kind of thing that we need to keep pushing forward.

The other thing we don't have enough of, as was pointed out, is data. There are a number of institutions and a number of organizations, because I've got two staff working on all of the secondary data to look at the cost effectiveness of various models. And so many people have looked at this, but there isn't really truly some comprehensive data that is effective enough to tell us when to use an RUTF, when not to, and what it is exactly under, in a particular context that we need to do. There's a lot of good work that is started, but there's still a lot more work to be done. And I think one of the things we've heard throughout these last couple days is there is tremendous potential out there in the advances in technology that allows us to digitalize data to improve the management and treatment particularly of malnourished children. And one of the things I feel is really important is to use these new technologies along with improved research and evidence gathering so that we can really tell people – here's what it costs. Here's why children relapse. Here's why they dropped out. And here's what it's going to take to bring them back to health. We can do better.

Matt On the egg question, our folks go in with One Egg, and when they do the in-country vetting of the partner there, they're looking for a partner that really understands the cultural specifics that are on the ground, the need; and in many cases the children have never had an egg before, so they're introducing something new. And there is a lot of sensitivity, though, that they bring to that process. And we do take that very seriously.

Nabeeha Any other comments?

Andre Maybe I can comment on my intervention. So when I heard that I saved several million of lives of children, I am a little bit skeptical, and I think this should be qualified. Because we don't know exactly how many lives are saved by the

intervention. We need to control group which is untreated, which is not possible these days.

Nabeeha The good scientist.

Andre I would find it hard to put a figure. I would say many, but I would not say million. I am not playing in the same playground as Norman Borlaug. I'm one category below or several categories below.

And also there is another point I want to mention also, is that it's pretty much a work in progress. Because we have to acknowledge that we treat only a small fraction of children with severe acute malnutrition. And there is one aspect which is rarely mentioned, is that most estimate make up a number of children with some are based on the previous data. But to know the real burden you need to know incidents. And there is one going on, suggesting that you need to correct the current data by a big factor. So maybe the number of children who are getting currently adequate treatment is much smaller than what is currently said.

Nabeeha Because prevalence looks at a moment in time.

Andre Yeah. Now, prevalence is the number of children who are malnourished now. But that child can become malnourished after the survey or before and die and doesn't come up in your statistic. So there is work going on which is led mainly by UNICEF and also the university, Tufts] university in Boston, no Harvard. I get confused. Anyway, and there is a meeting next month which we'll discuss that, and I don't want to give the preview. But what is sure is that we'll have to revise our estimate of children suffering from SAM, and it is still a far unresolved issue in terms of coverage.

Nabeeha So we're approaching time, and there's lunch, but more importantly we have Dr. Nabarro and Dr. Haddad will be speaking. So a short phrase from each of you, and think big. What do we need to do to escalate nutrition progress by 2030 across all contexts for all forms of malnutrition?

Marc I can take it first, because I didn't get to talk the last time there. I was just going to make up a question actually for a man there but... Now, if I had to look at...

Nabeeha One phrase, remember, short, sweet.

Marc My phrase would be—tackle regulation to where it can work for all of us. And the reason is because it is a real problem. I mean, we had this in the private sector...

Nabeeha I'll give you one.

Marc Exactly. I got to talk, so... We have in the private sector and we see it whenever, firsthand, when you're trying to get food into places and we hear silly things like, "GMO can't go in there," and "We don't allow TBHQ to be in here," and we have got so many other problems that the regulation, again, we have it on the business side as well. That's where our focus is. But whenever we have these crisis needs, there has got to be a way to do that better.

Nabeeha Anyone else.

Matt Use business as an accelerator. There's a great opportunity right now in the business community in particular, because of the memo from investors that everyone's probably already familiar with. Because of these situations, right now is the time.

Nabeeha Lauren, Andre.

Andre I wish my colleagues working on prevention would make me able to go to retirement for good before 2030.

Lauren Think diet, you know. If we're going to solve all forms of malnutrition, we've got to think about healthy diets, and we've got to think about nutrition-focused food systems.

Nabeeha Well, thank you all. It's been a terrific exchange. I've certainly learned a lot, and it's clear that addressing malnutrition in all of its forms cuts across many contexts, a culmination of cross-cutting approaches and very targeted approaches. And just as we shouldn't be siloed in our response with the different forms of malnutrition, I think we also can't be siloed in the accountability of combating it in its different forms either, so you do this and we do that. And it's really about coming together and making the systems work as a collective.

A few takeaways from our conversation today. As we tackle malnutrition across the different contexts, we have to build community resilience, share knowledge and technical expertise in more rapid and deliberate ways.

The other takeaway is that we must build domestic capacity and empower countries and communities with the tools and the approaches that will allow them to lead and achieve success on their terms.

And finally, we have to see more money for catalytic transformation to really happen, and we have to see it soon. And I wonder who will step up for that. The clock is ticking, so 193 countries, as you know, adopted those 17 Sustainable Development Goals. And through those goals, we committed, we made a promise that among other things, we would also reach zero hunger, that we would end malnutrition in all of its forms, and that we would deliver health, educational achievement and prosperity to all by 2030. We promised to leave no one behind.

So the commitment to achieve a just, prosperous and nourished world is not only an SDG promise but it's a promise to our world's children and to all of humanity. And as such, we must rise to that challenge in full force. Our time is now. My question is – Are you in?

Thank you so much for joining us. Thank you for our panelists for their leadership and your tremendous expertise. And let us lunch.