



## Program Packages for Frontline Nutrition - How to Choose Them and How to Use Them

### Webinar transcript and web links.

#### Yaritza Rodriguez

Hello and welcome everyone. Thank you for joining us in today's webinar. We'll start in just one more minute. I'll give people more time to join. Thank you.

Hello everyone. Thank you for joining today's webinar, talking more about Program Packages for Frontline Nutrition Services: How to choose them and how to use them.

I am Yaritza Rodriguez. I am the Knowledge Management Program Coordinator with USAID Advancing Nutrition, the Agency's flagship multi-sectoral Nutrition Project.

Before we begin today's presentation, I want to mention that today's webinar is being recorded. Now, I will quickly review the connecting environment and set a few norms for the webinar. Today's webinar will be moderated by Sasha Lamstein, senior Technical Advisor with the USAID Advancing Nutrition Project. After the introductory remarks, we will have three presentations followed by a panel discussion, during which speakers will address your questions. Please submit your questions in the chat box where the moderators will be collecting them for the session. All participants will be muted for today's webinar. If you are joining us via a telephone line, please remember to mute yourself as [] participants and panelists. Make use of the chat box on the bottom right side of your screen to introduce yourself, ask questions, or ask for help on connection during the presentation. If you are experiencing difficulties, our technical support staff will respond to your questions privately. We will collect and save your questions from the chat box for panelists to address during the discussion period. Your experience today may be determined by your[] internet connection and computer equipment. I will briefly go over a few troubleshooting issues if you're have technology challenges today. If you lose connectivity, or cannot hear, close the webinar. Reenter the meeting room using the link provided to you via email. Use the browser that is not Google Chrome. It's recommended that you either download the Audio Wizard App or join via Internet Explorer or via Firefox. Please, again use the chat box to ask for Tech support I for assistance. They will start a private chat with you and try to work for your issue.

I am now pleased to introduce Dr. Sasha Lamstein under the USAID Advancing Nutrition Project. Dr. Lamstein is leading efforts to strengthen the delivery of nutrition services through the revision of preservice channels, the use of digital tools, and the strategic collection and adoption of service delivery packages. Prior to this, under the USAID-funded SPRING project, she conducted SPRING evaluation of the community

infant and young child feeding (C-IYCF) counseling package in Nigeria, an effort to increase the attention given to adolescent growth nutrition.

Over to you Sasha.

## **Sascha Lamstein**

Good morning and good afternoon to everybody. Thanks for joining us. Before I begin, thanks to our colleagues from USAID Advancing Nutrition for helping with this webinar, Yaritza and Kelly, in particular, and also some colleagues from the USAID who have supported us during this work, and all of you for joining us. We have an exciting group of contributors today. So I would first like to introduce ... I'm going to go through the introduction, and then I'll turn it over to our colleagues represented today.

So, first I'd like to introduce Laura Kiige. Laura is a nutrition specialist working with UNICEF Kenya's country office. She is responsible for maternal, infant and young child nutrition programming. She holds a Master of Science degree in nutrition from the University of Nairobi. Prior to UNICEF Kenya, Laura worked with the Kenyan ministry of health for more than five years, in various capacities, ultimately taking on the role of program manager of Infant and young children nutrition.

We're also joined by Dr. Ezekiel Mupere. Dr. Mupere is a pediatrician and medical epidemiologist. He's also a teacher, researcher, consultant and public health practitioner in African child's health, nutrition programming and field epidemiology. Dr. Mupere holds a Masters and PhD in epidemiology and biostatistics from the [ ] University. He's the head of the Department of Pediatrics and Child Health, and a senior lecturer at Makerere University.

We're also pleased to welcome Kelsey Grey. Kelsey is a MAMI, or Management of at-risk mothers and infants specialist, with ENN responsible for managing the update of the MAMI tool (pathway for care), a key programming resource to identify and manage at-risk mothers and infants under six months of age. She joined ENN from the London School of Hygiene and Tropical Medicine where she completed her Master of Science in Nutrition and Global Health and subsequently worked as a Research Assistant.

Following the presentations, Dr Marko Kerac will join as well to help answer any questions. So Dr. Kerac is a Clinical Associate Professor and Program Director for the Nutrition for Global Health Masters of Science at the London School of Hygiene and Tropical Medicine. He has been working on MAMI since 2008 when he was the lead researcher on the original MAMI report in collaboration with ENN, ACF and UCL. He currently co-leads the MAMI Global Network and is Chief Investigator on a cluster trial of the MAMI approach in Ethiopia, working with GOAL Ethiopia, ENN and Jimma University.

So I will now... I'm going to change my slides, and now I will give a short introduction before I continue on.

So, just as a brief introduction, USAID Advancing Nutrition is USAID's flagship multi-sectoral nutrition project. First, I'll first explain who we are, and we build on the Agency's past nutrition investments to consider our multifactorial nutrition strategy where supported by a number of partners, JSI, HKI, Save the Children, IMCI [ ] the African Leadership Program at North West University in South West Africa. USAID

Advancing Nutrition undertakes a range of nutritional activities to achieve three goals:

- we're seeking to do high impact interventions and services,
- we seek to strengthen country commitment and capacity for nutrition programming,
- and generate evidence and facilitate learning and innovation for improved nutrition.

So, this is just one of the areas that I am presenting today. Then we have many other areas of work that we do. So as we all know why we are here today, inadequate nutrition, suboptimal care, poor feeding practices for children under five at higher risk of disease and mortality. There are also a number of service delivery packages that have been developed to address the nutrition and health needs of children.

These packages, that you see here, are often delivered outside the health system, silos rather than harmonized within the delivery of other health services that are part of the health system. So just sort of to explain... I've been in the nutrition world for quite a while, and about a year and a half ago, I attended a conference, and was reminded again of some of the other packages which are not part of nutrition packages, but really [] in my opinion, they're addressing nutrition as well, as part of an integrated holistic approach. In particular, I was reminded of IMCI and ICCM, and just sort of thinking again about all these different packages, and of all of these ones that are out there and are integrated that we could use, and the countries could use, whether it's the country or the government or implementing partners. So we wanted to help, and my hope was to be able to help government and non-government implementing agencies and program managers how to harmonize those packages, and use them, or combine them or adapt them to sort of do a better job of putting them all together, and harmonizing them, and rolling them out nationally. That was my hope, so that it could be more harmonized, so you don't have one package in one place and another package in another. So, we reviewed six of the prominent globally recognized service delivery packages, surveying them, you're probably familiar with, but these are the six we focused on.

So, we first looked at the Community based infant and young child nutrition counseling package, which is for community health workers and volunteers and was developed by UNICEF and published in 2012... the latest update was in 2012. []

We also looked at the Essential Nutrition Actions and Essential Hygiene Action Framework that was published in 2015, and includes the training for health care providers and managers, as well as one for community workers, and was developed by a number of... CoreGroup, HKI, JSI, and then also, WHO I think was involved. Let's see... ... and the next was... I'm putting that's wrong... the Community-based management of acute malnutrition [] which was published in 2018, and includes management of ... so this is an important point and this is why we brought on Kelsey. When this was published, this incorporated that MAMI tool that I mentioned before and Kelsey will speak about a little bit later on. So in its design for healthcare providers and managers, it was published by FANTA in 2018. The next was the NACS package, which is a nutrition counseling report that includes training for facility-based health

care providers, and another training for community volunteers. It was published by FANTA, with the help of USAID and published in 2016. Hopefully, all of these are familiar to you, and if they are not, good to be... to take a look at them.

So, IMCI, which has been around for a long time is for facility-based healthcare providers and was published by WHO []. And one of the things we found as we were doing so many iterations of this, and updates, and addendums that it is a little tricky. But IMCI is probably the one that's best integrated into the health system at this point.

Next one we looked at was Caring for newborns and children in the community package. So this is a WHO and UNICEF package. It includes three different courses: one is for caring for the sick child that was published in 2011. Another is caring for the newborn at home, which was published in 2015, and the final one is caring for child's healthy growth development, which was published in 2015. It's for community health workers and their supervisors. And finally... I think we might have missed a slide. There is Integrated Community Case Management (ICCM), we included it and reviewed it, but it doesn't actually have its own training package. It refers to others, so it refers to the Care of Infant and Children the community courses. So we're more focused on these others. So we wanted to understand these different packages, and try to understand what they include and what they don't include. Of course, I'm sure you're thinking they are all different packages and they have different target audiences, different some of them are focused solely on children under two, some are for all life stages. Others are more focused at the facility level and others are just definitely at the community level. Others provide treatment services where others are more focused on the counseling and the prevention. So they are a little bit like apples and oranges as they say, but I still thought that it was important to review them and get a sense of what they include, particularly in terms of nutrition, and you know sort of how they approach rolling-out the services in a country. So one of the areas we looked at was the health... essentially the WHO health system building blocks, but we sort of adapted them to think about nutrition a little bit. So we looked at the spanning of these packages to see the extent to which they address service delivery, workforce, equipment and supply, information systems, financing, and leadership and governance. I'm not going to say a lot to mostly to sort of wet your appetite and have you look at the report that will be out shortly, and we'll keep you informed on our website, not quite yet but it should be soon. So mostly I just want to say that as you look at this, you can see the darker colors are where we found that the package did more to address these areas. And to some extent, it was expected, right, that the C-IYCF package does less, because the C-IYCF package does less in terms of equipment and supply, because there's really less equipment and supplies needed for the C-IYCF package, because it's really about just counseling and you know community mobilization. So some of these things we ought not to judge too hard, but just have a sense of what they do and don't do. And the others I wanted to show you, what we looked at is the training packages themselves, and what the providers, whether it's a volunteer or a health worker, what they are trained to promote in terms of behaviors, in their counseling fashions or in their support groups, whatever they need, what they are trained to promote. So again, the darker color means that sort of more topics were covered. We'll go into much more details in our report, but that just gives a general sense of which packages cover which areas. And you'll see, perhaps not surprisingly, that one of the areas that is not covered by many, except for the CNCC, is caring for newborns and children in the community package, the WHO and UNICEF

package. The practices for social, emotional, and cognitive development of infants and young children were not covered very much. So that sort is a focus on ECD and nurturing care that was not covered very much.

So, I'm going to stop there and let you look at the screen. Please pay attention and we'll keep you posted on when the report comes out. So this is what we did, and then we turn to our speakers today to hope that they can explain a little bit more about how different packages were selected, how they were adapted, how they were integrated into the health system a little bit more.

So, I think without delay... please if you have questions, put them in the chat box, and we will make sure to answer them at the end, or comments as well please. So without delay, I would like to turn it over to Laura, who will be speaking about her experiences in Kenya.

Laura, you are on mute... your turn.

### **Laura Kiige**

Thank you so much for this opportunity. I want to talk about the infant and young child feeding counseling cards in Kenya, how we did the adoption, the adaptation, the harmonization and institutionalization. This is followed from the infant and young child feeding counseling cards that came up in 2013, as you have just noticed, and we've had to adapt the same for use in the countries that we're going to explain here. I must say that one of the reasons as to why it's needed to be adopted is because we noted that in the country, nationally, there are very few children that are getting the nutrition they need to survive, grow and develop. Yet we know what the needs are and how the needs can be met. I must say that one of the documents we've used is the UNICEF Programming Guidance on improving young children diets, even the complementary feeding times. And it tells us about the needs for us to address infant feeding from the food system, the health system, from the water and sanitation system, from the social protection system. And also to ensure that they get the adequate food, the adequate services, and adequate philosophies that are key to them to get the nutrients that they require. So we know what needs to be done and where it needs to be done.

But having known that, we also noted that as a country, that we have ... the community level, the households, the mothers and caregivers have a lot of questions that are unanswered. And this is because we have a series of sources of information. We have information that go to the mother from the nutritionist, from the occupation developers, [] from the doctors and nurses. We have so many sources of information for the mothers, even sometimes on television, on print media, on radio. And mothers get confused on what is the most accurate of this information because there is a tendency to have information that vary in their consistency, and also some of which is not accurate. So this is always a question for the Maternal Infant and Young Child Nutrition Technical Working Group on how we communicate with consistent and accurate messages to mothers and caregivers, and make sure that the same message is sent from the healthcare workers irrespective of whatever date they were trained for there's always an update. And also the same message is going on media and the ones they're getting from one on one when they have visited the health facility. When you are thinking of this, this is when we came up with infant and young child feeding counseling cards, which we got to have one the cards that would be instrumental or

that would be going to what the thinking process is, because already these cards were in use in some projects within the country. So having that in mind, then we looked at the infant and young child feeding counseling cards, and we thought also of what we need to change, what we need to adapt to make it good enough for us, and we noted a few things that needed to be addressed on issues like cultural sensitivity, because we noted that some of the things that are in IYC feeding counseling cards would not work for Kenya. So in Kenya for example, to tell you mother-in-law “No, don’t give this”, there’s a better way you can tell whether you’re talking to the child need less milk only for the past six months. We also looked at what were the harmful practices within the country because we had heard a series of knowledge, attitudes, behaviors, practices being carried out. So these were specific things that we wanted to study: the use of feeding bottle, the use of food when the baby is born [] then, we had to adapt the IYC counseling cards. We also looked at the nutrition counsels that were on the counseling cards. Some of them could not acceptable at the community level. We needed to make them more palatable for the community in Kenya. The aspects of child stimulation also came up very handed, because in the country, we felt there is a lot of ignorance on responsive feeding consent, so we actually made some adaptations here and there to the counseling cards to fit with the illustrations in the country. But we also noted here that the counseling cards had a separate counseling card in a key message booklet. And there are times when you go to a community and you only see the counseling cards, and you are struggling to look for the key messages booklet. So we felt we needed to have on package, so that a community or a volunteer gets a copy for example has all the information that they need. Then we also noted... we needed to add a bit of the content that was relevant to the country on what we had learned on the various aspects that we thought were key, on aspects of food systems. We felt we needed to promote the small animal breeding and also the published mental []. We also felt the developmental milestones were key for that mothers in the household level are able to monitor the development of their children, so that at the end of the day, they take their children to the healthcare providers in good time and not having them go very late. So that’s some of the things that we thought were key. And going from the essential nutrition action packages, we also looked at the aspects of handwashing that are key and child stimulation. How do we address the issue of child development, because there was some of the aspects that we felt the country needed from our team perspective.

So how did it go about the process? It was really a long process. The first things was to do a consensus building, looking at what are the gaps in the country, what needs to be addressed and why we need to address it, what are the possibilities of addressing this. So we had a series of consensus meetings whereby we came up with a number of additions of what needs to be done and what needs to be addressed. From there, we were sure of what we needed to do. We held a series of workshops here and there, and also multi-sectoral meetings, because we felt that within the health sector, we were not going to be provisioned to address aspects of small gardening, kitchen gardening, keeping of live small livestock and all that. So we needed to have some experts in given areas, who is an expert in water and sanitation. Then there needs to be needed to be a board, so we had to come up with a multi-sectoral kind of team that would develop the content and also give the evidence. Of course evidence was based on many other packages, the UNICEF, the WHO, the Package for IYC nutrition, the other packages, and the counseling part that already was there, the guidance known

that was there. So we had to look at the series of these packages, the book of guidance that had been updated, for example, on infant feeding in the context of HIV. So once we were sure of the content, then we sat down and engaged a graphic designer to try and put whatever the technical content was into graphics. That took us also a bit of time, because we needed to be sure that whatever was treated really talked about all the aspects that we are talking about, all the technical content that we are referring to in the counseling cards. When that was done, we took the counseling card that he had come up with through a piloting. It was done in 8 of the 47 counties in the country, and this was a comprehensive side of the pilot. Thereby, we had very clear terms of reference for the piloting, a clear protocol on what to do and also a multi-agency, because we wanted to be so sure that everyone is on board as far as the aspects of IYC feeding in the country are concerned. We took the pilot to different contexts, because we wanted to know the thinking of the local population, we also wanted to know the thinking of the various religious groups, about the Christians, how do they think about these illustrations, how about the Muslims, how about the Hindus and other religions. We looked at the illiterate and also the literate because we wanted to have illustrations that can speak or can be used by a village that is illiterate because across the country, we have some parts of the country where villages are illiterate, and also for the literate. How do they get the content? How do they understand it? And not just the literate but also the levels of education. Does it speak to a primary school graduate or does it speak to a university graduate. What do they think we should change in the content? And to the various sectors, the education sector, is it appealing? Does the content agree with the education system? How about the agriculture sector? And the water and the sanitation sector and health? Just to be very sure that we got the input from all of them. Then once we got the changes from all of them do to the content development again and the illustrations adjustments, in line with what we had learned from the pilot, but at the same time also, giving it a national-level outlook, because we wanted the counseling cards to be used across the country. And when this was done, we took the cards to various committees to various levels to our level. There were young child and infant technical working group, we have the steering committee, and also the Nutrition interagency coordination committee for nutrition, which is key to ensure that it is a nationally accepted document for the country. For harmonizing and institutionalizing the card, one of the things that was very helpful was to make sure that everybody was on the decision-making table, because there are many organizations that are working in the country in terms of the government itself: the Ministry of Health, the Ministry of Agriculture, the Ministry of Education were part of the system, and also the various UN actors: the UNICEF, the WFP, the FAO were on the table, and then international NGOs: Concern, Feed, Action against Hunger, the organization Save the Children, and all those were on the table. And also health institutions, the African Population for Health Research and a few others because we wanted the content to be obvious for the various training institutions, and the hospitals themselves where we presented to see if it is possible for them to say yes to the counseling card at the end of the work.

Once the counseling card was done, there was also the thinking of how do we ensure that the content of this counseling card gets to the community. So we had the Baby Friendly Community Initiative that was used for this, whereby we have the training done by the health workers, and then we have the training for the community health

volunteers. And then the communities got a copy of the maternal IYC nutrition path, and then, there's also a program that looks at the assessment in the monitoring of the maternal, infant and young child, one that is happening at the community level. So this MIYCN counseling card is kind of a tool that is used by the community health volunteers for their day to day work.

So how is this card used? The card is used in various ways in maternal, infant and child health and nutrition initiatives. So we have in the workplaces, where there is the most workplace support for the feeding, and in areas where we have group discussions at the community level, and just to note that these group discussions happen both involving the women and also the men, and also the bigger community, because they're all key for addressing infant and young child feeding. They are used for interpersonal communication and at the health facility, they are also used for the BFHI. They'll be used for training mothers in the maternity, in the antenatal care, and also at the mother and child health clinics, and also used in the various training institutions. Just to note, one of the universities in the country has made this available for every doctor who works in that institution to work in infant and young child feeding. []

So this was not without challenges. One of the challenges is the frequent changes in the guidelines development, for example, IYC feeding in the context of HIV. We have an unmet demand thus far that addresses the aspect of the printing of the counseling card, and also the MIYCN in the context of COVID has become a challenge because we are still trying to understand better to make sure that the community of volunteers are able to go to the communities.

Some the results some of the communities confess: "What I see, even the health of my children has started to change. Since these teachings started coming in, when the mothers were trained, some started to adhere to the teachings, how to take care of the baby from when you give birth to up to 6 months and continue. And I can see the health condition of children has really changed as a result of these trainings."

These are some of the results that we have noted. Thank you. So over to my colleague for the next presentation. Thank you.

### **Sasha Lamstein**

Thank you so much Laura. That was fabulous. We have lots of questions that have come in, and keep on coming. So we're going to move on to Dr. Mupere and we'll answer some of your questions at the end.

### **Ezekiel Mupere**

Thank you very much for the kind introduction. And I'm pleased to share the Uganda experience on adaptation on addressing malnutrition in Uganda. Broadly, I'll give the background about the nutritional state or malnutrition in Uganda and how the country, in terms of governance, has been addressing malnutrition in general, and then I'll focus on malnutrition packages in Uganda.

In brief, malnutrition is a major public health problem in Uganda with a huge burden among the under 5 and other age groups, with poor outcomes with high diseases and mortality. There is a decreasing trend in stunting and wasting as reflected in this figure, from 45 to current 39 using the national survey of 2017. We should have an alarming



number of stunted children, around 2 million because of high population growth. And also, the under-five 4% of these suffering from malnutrition combining acute and severe malnutrition. Mortality in children with SAM ranges from 10 % to 22% depending on the level of facilities, because of access, coverage, quality of care issues, and also anemia with a prevalence of 51%. []

Overall, the country and the government in general recognizes the nutrition is very key in terms of health of children and other age groups. And so nutrition is also recognized in the Constitution. Food and nutrition policy recognized food for all as a human right. Uganda is signatory to the Millennium Declaration to alleviate immediate, underlying and basic causes of malnutrition. And also joined the SUN Movement in 2011 in an effort to promote a multi-sectoral approach.

Uganda recognizes optimal nutrition is closely intertwined with health, agriculture, gender, education, and other sectors, and is essential to the country's social and economic development. In 2011, Uganda implemented UNAP which was developed to scale the sector upwards.

And these achievements have been achieved over the last 2-8 years, from 2011-2018, show there has been in reduction in stunting from 38 to 29, a reduction in underweight pregnant women to 7.2 and also, and also vitamin A deficiency from 33 to 9. But of course several are still low, in red, such as underweight prevalence in children and exclusive breastfeeding reflected in red.

*Malnutrition is a major public health problem in Uganda with huge burden and poor outcomes in children < 5 years*

### **Dr. Mupere**

Uganda Government recognized the important role of nutrition in the health of children and other age groups

Food security and nutrition included in the constitution, 1995

Food and Nutrition Policy recognized food for all as a human right – FANTO 2010

Signatory of the Millennium Declaration to alleviate immediate, underlying and basic causes of malnutrition.

Uganda joined the scaling up Nutrition (SUN) Movement (2011) to promote a multi-sectoral approach

Recognize optimal nutrition is closely intertwined with health, agriculture, gender, education, and other sectors, and is essential to the country's social and economic development

Roll-out of the Uganda Action Plan 2011-2018 (UNAP-I) – specific and sensitive interventions.

Attention was critical in 2003-4 to address high burden in Northern Uganda with support of UNICEF and Valid International – using a community therapeutic approach

Two key nutrition service integrated within the Ugandan health system

Integrated management of acute malnutrition (IMAM)

Nutrition assessment, counseling and support (NACS)

Both IMAM -NACS interventions seek to:

Detect, treat, and prevent acute malnutrition in children, adolescents and adults, and inclusive of people living with HIV/AIDS (PLHIV)

Utilize similar health service delivery points, health staff and supplies

Protocols and training packages for IMAM-NACS approaches have been in existence since 2010 and have undergone a series of revisions to address the management of acute malnutrition among all populations

Process of integration coverage and sustainability have been donor dependent

Guideline and policy development well supported at national level

Coverage scale-up and sustainability limited to vulnerable regions – refugee host districts or regions and regions with high burden.

In-service capacity building, commodity and logistics, supplies has varied from district to districts and by regions and dependent.

#### IMAM AND NACS INTERVENTIONS

Guidelines have four main components:

Inpatient therapeutic care (ITC) and outpatient therapeutic care (OTC) for the treatment of SAM

Treatment of MAM with supplementary feeding programs (SFPs) and without, and

Community outreach

Community outreach component involves early detection of SAM clients at the community level to enable early referral and increase the number of SAM cases accessing quality treatment

IMAM uses nutritional products to treat clients, including Formula 75 (F-5), Formula 100 (F-100), and ready-to-use therapeutic foods (RUTF)

NACS approach targets HIV clients detailed in IMAM guidelines

HIV clients undergo a nutritional assessment and are provided with nutritional counseling tailored to the outcome of their assessment

Clients also provided with nutritional support typically in the form of RUTF to help stabilize and improve their nutritional condition

Clients suffering from or who are at risk of food insecurity are linked with food security and livelihoods programs within their communities

IMAM / NACS Assessment: leadership and governance

Knowledge about IMAM/NACS at the national level was strong among actors engaged in nutrition activities

Limited roll-out of behavioral change communication and advocacy to sub-national level where decision makers in local government, the DHOs, and facilities can be targeted.

District level leadership and governance to nutrition were strong in select districts with nutrition problems – Karamoja and supported by implementing partners

Inconsistency of work plan alignment to UNAP among ministries, implementing partners, DHOs, and facilities highlighting the gap between national-level coordination efforts and actual coordinated implementation at the district and facility levels.

#### IMAN AND NACS Assessment: Workforce

Uganda health system has limited health resources

Systems for building and strengthening workforce competencies need strengthening

Nutrition content including in pre-service curriculums for health workers needs to be updated

In service training needs to be accompanied by strong mentorship, coaching, and support supervision

#### IMAN / NACS Assessment: Financing

Resources for health programs are limited

Nutrition actors need to accurately plan and advocate for a share of these limited resources

Nutrition does not have its own budget line anywhere in the health system but considered part of PHC budgets

Guidance need to be provided to both national-level and district actors on how to plan and budget for nutrition

Work planning for nutrition should be encouraged at all levels so that it can inform the planning and budgeting process

#### IMAN / NACS Assessment: information systems

MoH does not systematically analyze and disseminate information from IMAM/NACS reporting

Timeliness of reporting and the use of reporting data was low

#### IMAN / NACS Assessment: supplies and equipment

Procurement delay, poor estimation of orders, late orders from facilities, and poor record keeping all contributed to shortages and waste of medical and nutrition commodities products

Gaps between implementing partners that procure RuTF products and the planning for supplies at the MoH and facility levels

Limited involvement of the national authorities, NMS and NPS personnel, in management of RUFT supplies

IMAN / NACS Assessment: Service delivery

Availability of IMAM/NACS is not reported frequently at those lower levels

Low levels of NACS were found to occur at the lower-level health facilities reducing the success of other nutrition interventions

Level of input from community-level limiting awareness and ownership of services, and contributing to higher service utilization rates

Minimal community level efforts to coordinate IMAM/NACS outreach

Minimal social mobilization and BCC for nutrition interventions

Availability of QI national trainers was less certain

Recommendations for adaptations in addressing acute malnutrition

Strengthen stakeholder involvement in planning, coordination, and implementation to leverage on limited resources – sector, departments and partners

Organize and implement a comprehensive system for capacity development of personnel throughout their career

Efforts should be made to streamline forecasting, purchase and distribution of nutrition commodities and supplies through the national supply chain to ensure that adequate, appropriate, and quality supplies are available to facilities

Establish and strengthen nutrition information sharing platforms at different levels with various nutrition stakeholders

Efforts should be made to develop harmonized behavioral change communication and social mobilization materials for nutrition aligned to the National Nutrition Advocacy and Communication strategy and standardized for use by all nutrition partners.

Acknowledgments

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USAID FHI 36 FANTA III Project Team

USAID Advancing Nutrition Webinar organizing team

Thank you, over to the next presenter.

**Sasha Lamstein**

Thank you so much, Dr. Mupere, that was great, the systems approach to analyzing the work. So now, I would like to turn to our final presenter, Kelsey Grey. We'll manage the questions at the end. Thank you Kelsey.

**Kelsey Grey**

Hi everyone. It's a pleasure to speak with you today about our work of restructuring the MAMI tool into an integrated care pathway. I'd just like to start with a few key messages that I'd like you to take away from this presentation. Primarily, the importance of looking at entire "systems" of care rather than just isolated parts, moving away from talking about individual tools and looking at integrated care pathways. The importance of integrated care pathways for translating guidelines into straightforward protocols that frontline care workers can use, and the importance of user testing and feedback to ensure that program packages actually facilitate patient care without increasing health worker burden.

MAMI stands for the Management of At-risk Mothers and Infants under six months. And the vision is that every infant under 6 months, at every community, and health service contact, is nutritionally assessed and appropriately supported to survive and thrive.

So MAMI is a holistic community-based approach that aims to support infant feeding and maternal well-being in order to reduce the risk of adverse outcomes among infants under 6 months. So at its core, it provides support for infant feeding, particularly breastfeeding, and maternal well-being. Health workers were trained in the MAMI approach. However, it also provides... it leverages existing services, and creates links between different programs that support infants and mothers, so for example early childhood development, mental health, nutrition programs such as IYCF, and different health services and social services.

Just to see for a minute where does MAMI fit in health systems? So, to take a public health view, you see that MAMI really fits between IYCF and inpatient clinical care. In terms of the level of disease prevention, IYCF for example, is a blanket approach that targets all mothers and infants, it provides one-to-group contact and it really aims to prevent disease before it occurs. MAMI sets a secondary level of prevention by detecting diseases early or risk, and then providing appropriate intervention to prevent further deterioration. And it's targeted. So it's only for infants and caregivers with identified risks, but no complications. Then we have clinical or inpatient that sets the tertiary level, which is really about managing disease after it's been established, and preventing progression.

So to give you a quick background on the MAMI approach, in 2007, it was emerging that frontline workers were really lacking guidelines on how to manage at-risk infants under 6 months who were presenting to their programs. They didn't know what to do with them, so anyway, it was not an approach that was tailored for this age group. Later research showed that there was a large burden of wasting among infants under 6 months, and yet, national guidelines still focused on inpatient care only, knowing that there was poor compliance with referrals for a variety of reasons, and there was no guidance on outpatient care. Through the work of the MAMI-SIG and other actors, in 2013, the WHO SAM guidelines included guidance for infants under 6 months for the first time, and it recognized that uncomplicated cases of infant malnutrition could be managed as outpatients, but there was no specific guidance on how to operationalize the guidelines. So there was a need to translate the guidelines into field level approach that front line workers could use to inform the guidelines. So in 2015, the first version of the MAMI tool was developed. There was a review of national CMAM guidelines

that showed that actually there had been very little uptake of implementing outpatient care for infants under 6 months. At the same time, the evaluation of the first tool showed that it just needed to be simpler and more user-friendly. So in 2018, we had the second version released which is still in use. But nonetheless, it is still perceived by health workers as being too extensive for routine use, and needs to be broken down a bit. That brings us to why we're developing and breaking down the tool, restructuring it into a MAMI care pathway, which we'll test in RCD and Ethiopia later in the year.

So, some of you may have seen this already. This is the MAMI tool version 2. So it draws on different lessons from CMAM. It uses a checklist approach, so health workers can work through and note key problems as they go to their assessments, and not only assess, but to classify infants in terms of their level of risk and to manage their issues in a tailored approach, because it allows you to select which areas you are going to focus on for that particular mother and infant pair based on the issues they're having. And it draws on IMCI and the latest WHO SAM guidance to facilitate health workers who are trained in IMCI approach in a familiar style, and of course to incorporate WHO guidelines.

So we began our transformation from the MAMI tool to the MAMI care pathway by doing a scoping review of different patient management tools, for example, IMCI, group monitoring tools, etc. because we just wanted to get a sense of which ones had evidence of effectiveness, which ones had been widely taken up, and what approach should we use in our formation of the MAMI care pathway. So, some key findings. Although a lot of the tools appear to be logical and intuitive, they're adopting very little evidence of their effectiveness available, although we did find fairly strong evidence from the use of integrated care pathways that showed improved service quality and improved service efficiency without adverse consequences for patients. We thought that this was a good approach. We also found qualitative findings on multiple tools that showed that tools actually added to the health worker burden rather than facilitating patient care. So it really emphasizes the need for user testing and feedback at the field level.

So briefly, to just touch on what are integrated care pathways? They are task-oriented care plans which detail essential steps in the care of patients with a specific clinical problem and describe the patient's expected clinical course. So, just to highlight the key aim, it's really to facilitate the introduction of high-level guidelines and systematic audit, so assessing quality, and in a practical sense, they should be in a format of sort of an efficient structured format for recording key clinical data, for example, a checklist of actions, a flow chart of exactly what's happening at each step, there should be paper-based required minimal free texts. I'll leave it there.

I just wanted to highlight here, in a key paper published in the BMJ in 1998, Campbell integrated 12 steps in ICP development and approximately, we are at points 7 to 10 at this stage with MAMI. So, developing an ICP which specifies elements of care detailed in local protocol, the sequence of events, and the expected patient progress over time. We are in the process of developing documentation for the ICP. And next step to come is educating staff either at the country level or at the proper field testing in the use of ICP and going on to pilot and implement.

So very briefly, I just want to touch on the AGREE instrument, which is a tool used by the WHO and which stands for the Appraisal of Guidelines for REsearch and Evaluation (AGREE). It provides a framework to assess the quality of guidelines, and provides a methodological strategy for the development of guidelines to ensure quality. It focuses on 6 domains: looking at scope and purpose, stakeholder involvement, etc. and scoring guidelines in different areas. One thing that we saw when we did the assessment an assessment of different guidelines, looking how well they had integrated the MAMI tool at this point for the few countries that had, and sort of overall finding that the guidelines for MAMI had not been incorporated at a very high quality in the few countries that had, which is not a criticism, it's just to say that there's been limited time to incorporate them, and we want to improve the quality with which many guidances incorporated international guidelines. And we're hoping that by using an integrated care pathway, that's where we can go.

I know this is small for you, but I just wanted to show you a draft of where we're at with the MAMI care pathway. So, we developed this visual for the pathway, this flow chart to represent the MAMI care with collaboration from different stakeholders with implementation experience, clinicians, researchers, because we wanted to get the diverse views on what was the best way to communicate what happens in the MAMI approach. We really wanted to ... We've worked intuitively with a visual designer, involved many iterations of feedback, worth looking at the details, to get something that represents the best as possible, sort of different MAMI situations, acknowledging that there's always going to be the need for local adaptations to happen within programs, and that we're hoping to accommodate. For example, having those materials available online, and you know, upon request, having the ability to edit them and making them appropriate to your program.

So we're just zooming for a moment to give you an example of how this works. So for example, online on that format, the user will be able to go on the pathway and click on the distant tool buttons here, and be linked directly to that tool. So for example, if we need the assessment tool, there will be links there, and the counseling cards will be there. Otherwise, in a practical sense, it might be printed out in a standing slip chart sitting in a MAMI service area of [] for example. So, here is an example of the draft of what this might look like. So just trying to break down what was previously a 4 page continuous assessment tool into very simple steps that health workers can use to see what they should be doing at each point, what they need to be checking, and the different pathways that are leading infants and mothers to different outcomes. So the next step for this is to be confirmed or finalized with input from all our stakeholders. The visual designs need to be cleaned up, then it needs to be field tested to make sure it resonates and reflects field level use, and then it will be revised again later.

So again, just to touch on the key messages here, it was just the importance to focusing on entire systems or care instead of rather than just a single tool because then, obviously the rest of the system gets lost, and we don't provide the best care. And then these integrated care pathways are useful tools for translating guidelines into straightforward protocols, and can emphasize the importance of user testing to make sure that program packages actually facilitate patient care, and the health workers have the motivation to really [] them up because they simplified the job rather than adding to their burden.

Thank you so much, I'll hand it back to Sascha

□

Thank you so much Kelsey, that was great □ I'm so pleased, and I'm just happy to have the chance for us to share, and I really appreciated the comments and other thoughts that have come through the chat. So please keep it up. Keep on sending your comments and questions. So I'm going to lead us into some questions. We've received quite a few, I'll take them in order to see who best might respond to them. So Laura, I have a few for you, just to get you ready. Yes, and keep the questions coming in. So the first one for you Laura is from the Kenya IYCI package we shared. It looks like a really thorough process was done and it would be great to learn from that. □

### **Laura Kiige**

Thank you for the question. Yes the package can be shared for Kenya.

### **Sascha Lamstein**

Fabulous. Is there a link that we can share Laura on the chat here, or what would be the best way to get that?

### **Laura Kiige**

We can share with the team through a link

### **Sascha Lamstein**

That's good, we will do that then. As I mentioned, it think Kelsey posted we will be sharing the recording from this, so we'll make sure to get the material up there as well.

Ok, another one for your Laura. Monika stressed that will the Kenya experience on maternal, infant and young child nutrition through multisectoral approach be shared? So sort I think that the emphasis Monika is putting is on the multisectoral approach.

### **Laura Kiige**

As far as I am concerned, we yet don't have a clear write up of what we can share on this. □

### **Sascha Lamstein**

And then Peggy Koniz Booher commented that with the impressive list of collaborating ministries, UN agencies and NGOs, who participated in the adaptation process, she asks: do you have plans to update the IYCF package at some point in time?

### **Laura Kiige**

The package was developed from 2015 to 2017 and we did a fast update last year because we wanted to capture the guidance from infant feeding in the context of HIV. As it is of now, we have not foreseen or planned to update ... the plan to update will depend on a few factors, on a few guidance that come up. What I know is that for example with COVID, we now came up □ about infant feeding, maternal nutrition, and complementary feeding in the context of COVID. So I don't want to promise when



exactly it will be done, but what we need is to keep updating as we get new guidance from Global and HQ level.

### **Sascha Lamstein**

I am aware that in nutrition there are efforts to develop counseling cards and key messages and [] she can put a chat in here, but efforts to develop counseling cards related to early childhood development and nurturing care, that would be a nice adaptation or addition to the IYCF package. So I don't think they're out yet, but folks can stay tuned for when they will be out, as well as counseling cards related to COVID as you mentioned Laura, those cards have been developed. So we can look to the Advancing Nutrition website. Perhaps, Peggy you can put in the link, just so people could see those for inclusion in packages or extension of packages.

Two other questions for you Laura that are related. One is, I'll read both of them at once. One is: Is there any study about CHWs views and usage of these counseling cards? I think there was an answer that Dari provided ... what was his name, I'm forgetting now... a link to an article, and then related, has there been any evaluation on the impact of the use of the counseling cards by various groups?

### **Laura Kiige**

[] We use counseling cards for behavior change communication. One example of that was one of the studies that you did ([]) so we don't have very specific studies but we have studies that tell us how it can be utilized and what it can bring on the use of [].

### **Sascha Lamstein**

Fabulous, great, thank you. I invite folks to look... there have been a couple of links shared in the chat that provided some additional studies on the impact or feedback on those counseling cards as well. Right, I think that's all I have for you Laura. I'm sort of doing it in order. I hope that makes sense for everybody. A few questions came in for you Ezekiel, not specifically actually for you, I think others are welcome to answer. Laura, Kelsey or Marco if they have any thoughts. Asia Asim: How IMAM has been integrated into the health system and does CMAM exist in Uganda? So I think Ezekiel can answer that.

### **Ezekiel Mupere**

Yes, CMAM exists in Uganda, and in Uganda we don't call it CMAM, we call it IMAM, or Integrated Management of Acute Malnutrition, so we don't call it CMAM but Integrated Management of Acute Malnutrition

### **Sascha Lamstein**

And to what extent is it integrated with the other services you mentioned? That's my own addition to the question.

### **Ezekiel Mupere**

Yes, thank you. IMAM or integrated management of acute malnutrition has the same care point, the same health service providers and the same supplies that they use within the health care system within the facilities. The other staff that provide other

services are the same staff who are supporting the management of acute malnutrition. We have [] from national level facilities to community level. We also have focal persons []. It's not only within the nutrition unit. We have outpatient and a number of these are integrated with other service provision. For example, we have outpatient, so in times of screening or assessing, this is done in the outpatient setting. Similarly, we have committees not only supporting nutrition, but they also support other health packages. So each program, once it's established, the focal committee links to the facility on training these. The gap we have is widespread coverage across the country. That's where we have a challenge.

### **Sascha Lamstein**

That's a challenge, doing things that are scaled. Madukar asks a question I suspect is a tricky one. He asks about the MSNP after 2016 in Uganda. Is there a second phase? Or where the new plan is at? The previous one ended in 2016.

### **Ezekiel Mupere**

Actually, the country plan was not enough. The country recently updated the UNAP tool developed in 2016 and it runs from 2018 to 2025 and indeed, the government is engaging all the government sectors in [] even sectors that have not been brought aboard. And also in this, from the top level, we have also governance coordinating committees governing different sectors. And also within each sector, they are also taking committees to ensure moving forward in the next 5 years. Similarly at the logistics level in terms of implementation [] So we have a full UNAP strategy or action plan.

### **Sascha Lamstein**

Thank you, Fabulous. Right now, I'm going to turn it over a few questions to Marko and Kelsey. Thank you so much Ezekiel. That's great to hear about the follow-up of UNOP. Thank you Marko I was going to ask you if you could tune in on a question that Pat Mac Mahon asked on how are the packages integrated into the new Global Action Plan on wasting that was recently published by the UN and partners?

### **Marko Kerac**

Thank you very much and thanks again for sharing about MAMI. Great questions.

So, as you know, in the Global Action Plan on Wasting, infants under 6 months are specifically mentioned as a priority area. I just want to flag the history of MAMI. We did actually go from the management of acute malnutrition to the management of at-risk. So, MAMI is in the actual plan already. There are ongoing plans to the evidence base behind what we actually do, base because I think a lot of things make empirical sense about the support programs that are mentioned about more kind of support given both to the mother and the child. But what countries are looking for is actually is hard evidence of what works. We're just in the planning phase of a randomized trial in Ethiopia, and the WHO is also planning collaboration with Gates, a multi country study looking at growth failure in infants under 6 months. I think as a reminder what we need to think about is what anthropometric failure means. Just to be clear, what we're trying to do is really treat the associated mortality and morbidity associated with anthropometric failure. So we're not trying to get children to taller, longer or heavier,

just for the sake of it. Whether people are big doesn't matter. What matters is the associated health and well-being. It's an important reminder that it's that risk, the association that really matters, not anthropometry that is a proxy measure. And the reasons why we switched to at-risk is that we realized that wasting, as defined as low weight was actually not a good marker of risk. Number one, because it's complex and time consuming to do it, it rarely happened in the community. Secondly, when it happened, the quality was suboptimal and there were, especially in the measurement of length, lots of mistakes being made. And thirdly, if we look at the association of waist for length, waist for age, and mid-upper arm with mortality, actually it's an anthropometric indicator. So we're very much moving towards other indicators, and specifically moving towards weight-for-age and also mid-upper arm circumference as a marker of risk in infants under 6 months. And a part of the implications of that it aligns us a lot more with nutrition, because a lot of the things that we found in the years of MAMI is that the strength of THEMA for example was that was quite a vertical program very focused, but now there is a bit of  integrating it with health. So we're taking a slight different approach with MAMI and try to integrate it with nutrition and quite a vertical program, and what we're trying to do with MAMI is integrate it with health a lot more, and that includes aligning weight for age, and growth monitoring programs with IYCN a lot more. So, yes it is in the Global Action Plan. There are plans for some randomized trial evidence en route but I think we need to think about what the anthropometric indicators are already telling us with a focus on the mortality, morbidity we really care about, and not wasting per say.

### **Sascha Lamstein**

Fabulous, thanks Marko, that's great. And I appreciate the question in part because ... I have to admit that I have not fully braced myself on the Global Action Plan.  Finally, there are so many packages out there. We don't want to recreate or create new packages, you know, new training programs. We thought of the whole process of getting them, and getting the influence of many different technical experts and then create new ones. And I think that we have a lot out there already that we want to just adopt them or expand them or work to see that they fit within a new framework

### **Marko Kerac**

Absolutely, and I think as background to the Global Action Plan on wasting, it think it is important to see that they are a lot more conversations going on in the background about better ways of conceptualizing it. We are in an area where there is risk of tribalism between the stunting community, the wasting community, etc. and they have many common underlying determinants. So, there is also... we are thinking a lot more about the associated risk. What we're tracing is the risk. And I think I like your point. And I think it's an important one about trying things different. Communities are not trying to reinvent things. And the next question that Pat has about Reaching Maternal Health Uganda, which is very much the next step. And we're realizing more and more what is happening in publications both in the short term, but interestingly in the long term. That's part of the agenda that needed to come as well.

### **Sascha Lamstein**

Marko, do you actually want to take that next question? Or should we let Kesley do it? I'm not sure which of you prefer...?

## Marko Kerac

The next question is about the high rates of wasting at birth (] MAMI for at-risk mother, whether it's high rates of wasting for underweight or low birth weight. There's a problem with small infants, and with vulnerable infants. And absolutely, there's a need to think about where do we start? There needs to be more in strengthening antenatal care and bringing more support during the antenatal phase. There's the evidence about breastfeeding support and I can see that Ritu is online and asks questions. Perhaps she could talk about the reviews she's done on the program on supporting breastfeeding that starts off with interventions in the antenatal phase better than those []. Yes, absolutely, there's a need for antenatal interventions. But also thinking further back, there's also a need to think about adolescents and vulnerable boys, vulnerable girls, actually get them into preadolescence and into adulthood in the best phase possible, with optimally nourished parents, when you think of a whole lifecycle approach. That's one of the nice things that the Global Action Plan does, it emphasizes the lifecycle. Some areas are more sensitive than others. But they're all important.

## Sascha Lamstein

Yeas, that's another area that we're working on. Great. Kelsey, did you want to add anything to that?

## Kelsey Grey

Thanks, I think Marko pretty much captured what I was going to say.

## Sascha

Ok, great. Another question for you. Ritu asked if you could elaborate on the approach used to develop MAMI care pathway.

## Kelsey Grey

Sure, sounds good. Sascha has been involved in the process because she was really trying to challenge... Just to get a sense of what the best options were in terms of ... you know based on evidence in the literature, then we did some learning about ICPs just to get a better sense of how it worked, how it would look like, and of course at the same time, we had interconnections with Marko and []. So we have a great range of MAMI stakeholders, who are very responsive. So we've really had, you know, roughly calls every 3 weeks to get them all together. At that point, I would present a draft. We did have some baseline drafts that GOAL in Ethiopia had developed. So we started with that as a baseline and worked towards transforming those into an ICP. And that's really been an iterative process with the whole group. I really needed to work as a coordinator to bring everybody together and incorporate input from everybody. We also had sub-groups on maternal and mental health, and early child development. So that's been great because the smaller groups were specialized in these areas and were able to provide input on what would be the best approach to use in these areas. Yes, it's really been an iterative process and obviously it takes a lot ... it just takes time and a lot of people with diverse knowledge on the same page, and then boil that down into a concise, clear tool that frontline health workers can use in simple ways to make their job easier.

## **Sascha Lamstein**

I have a question. To what extent has the tool been digitized? Changing it into a digital tool? Trying it with Ipad or something like that.

## **Kelsey Grey**

In the coping review, we did look at electronic patient management tool and really the evidence of them, certainly in low resource contexts and almost equally in high resource was not great, just in terms of ... it's not necessarily facilitating things especially in contexts where they still rely on a paper system, and ultimately, everything has to go into papers. [] Yes, we do this electronic tool, but then we have to reproduce it in paper version for our record, because the records are digitized. So it's really duplicating work. But I think you know in the future, that's definitely something that, as technology becomes more accessible, that's definitely something to consider. But we figured at this point, you know at the field level, it was not a practical approach. However obviously, the tool will be digitized in the sense that it will be available online. The links of the tool will be embedded. Anyone using that format that's available, but at the same time it should be effective and available evenly in paper-based format so that it can be implemented even in the most remote world context where you don't have necessarily access to digital media. Thanks

## **Sascha Lamstein**

Great, thank you. We only have a few more minutes, and I appreciate [] Marko, you wanted to add something, and I think you can take the final word unless there are any other comments from our other speakers? I wanted to say thank you to everybody who joined and to our speakers. Go ahead, Marko, take it away.

## **Marko Kerac**

Thank you everybody for the questions. I hope it's not the final word, but just another thought about the lifecycle approach, which rightly comes up in the Global Wasting Action Plan. One of the other things we've been working on looking at the long term impact of child's undernutrition, and there is emerging evidence that nutritional status in pregnancy has big impacts, not only in the short term ... in terms of the mortality and morbidity risk in infancy and childhood, but also increases risks of NCDs later in adulthood. And there's also increased recognition that also, in utero in early life, in the first years of life, what happens has long term implications. So that's also another key in NCDs to explore. We need to really focus on the at-risk because some the interesting evidence we are realizing is that bigger is not always better, and sometimes in the nutrition community we want children and infants put on weight, as fast as possible, as quickly as possible, and that may not have a survival advantage, but it may actually have long term disadvantages in terms of NCDs, so we do really need to move to that at-risk model, and yes focus on the short term implications, but also increasing the awareness, as well as building bridges between health, mental health, communities, and childhood also. We need to be building bridges between the NCD community, because what we do in childhood has big long term impacts as well. So big thanks to everybody on the seminar, and great to hear what others have been doing in that respect to make these bridges in the longer term. Thank you

## Sascha Lamstein

Thank you Marko. Laura I would love to give you a chance... we do have more questions but I think out of respect to people's time we need to wrap it up. So I think we need to stop for now. Just a huge thank you to everybody. I hope we can have more of these kinds of conversations. It's kind of a dream for me to share experiences between each other, and each other's work, and try to avoid duplicating efforts, if that's possible. Sorry Yaritza, I said that you could go next, but I have to jump in.

Sorry, Yaritza take it away to close it out please

## Yaritza Rodriguez

Thank you so much Sascha, Kesley, Ezekiel and Marko for a great discussion and to all our participants for their thoughtful comments and questions. In a few days you will be receiving an email with a link to this webinar recording and the documents that we shared. Also, you will be able to find the different sources on the USAID Advancing Nutrition Website when it is updated. Thank you all once again and have a great rest of your day, evening, afternoon or morning. Thank you, take care everybody.

## Shared web links:

- ENN's MAMI website where MAMI Tool V2, research, meeting reports etc can be found: <https://www.enonline.net/ourwork/research/mami>
- The latest meeting report from the MAMI-SIG (December 2019): [https://www.enonline.net/attachments/3418/MAMI-SIG-meeting\\_2019.pdf](https://www.enonline.net/attachments/3418/MAMI-SIG-meeting_2019.pdf)
- A book chapter on MAMI written by Marko and Marie in: Karakochuk, CD; Whitfield, KC; Green, TJ; Kraemer, K, (eds.) The Biology of the First 1,000 Days: <https://researchonline.lshtm.ac.uk/id/eprint/4646996/>
- MAMI program adaptations in the context of COVID:
  - <https://www.enonline.net/mamiinthecontextofcovid19>
  - <https://worldnutritionjournal.org/index.php/wn/article/view/731>
- Link to Current IYCF and COVID-19 Counselling package developed by UNICEF, USAID Advancing Nutrition, and the IFE Core Group: <https://www.advancingnutrition.org/news-events/2020/04/24/infant-and-young-child-feeding-recommendations-when-covid-19-suspected-or>
- Effectiveness of the baby-friendly community initiative in promoting exclusive breastfeeding among HIV negative and positive mothers: a randomized controlled trial in Koibatek Sub-County, Baringo, Kenya. Int Breastfeed J 15, 62 (2020). <https://doi.org/10.1186/s13006-020-00299-4>

- BFCI experience with MOH and UNICEF, and they did use the MIYCN cards at the community level:

<https://onlinelibrary.wiley.com/doi/epdf/10.1111/mcn.12747>



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