



Standardizing Content for Digital Tracking and Decision-Support Tools to Improve Growth Monitoring and Promotion Services

Webinar Transcript

Sascha Lamstein

Great. It's wonderful to be here. I am so pleased to have our speakers today and to welcome all of you, and I hope you find it useful and interesting. I'm going to introduce Elaine Gray. Elaine is a nutrition advisor in the nutrition and environmental health division of the Office of Maternal and Child Health and Nutrition at USAID. She's worked in the Bureau of Global Health at USAID since 2013. In that role, she's coordinated and managed USAID's nutrition projects and investments, including USAID Advancing Nutrition, the project for which I work, and provides technical assistance to several USAID missions.

She also serves as co-chair on the technical working group for the USG Global Nutrition Coordination Plan. She has supported us throughout this long process of assessing the needs of growth monitoring and promotion, identifying what has been tried so far, and developing the guidance package that Christina will be presenting shortly. Before I hand it over to Elaine though, I just want to take the opportunity to introduce Rosie Eldridge. Rosie is a project coordinator for USAID Advancing Nutrition. Over the last year and a half she has provided exceptional support to our team, as we validated and finalized this guidance package.

Rosie took the lead in developing a LinkedIn article on our work and I will put that in the chat for those interested. After Elaine, she will lead us in the completion of a quick audience poll. Now over to you Elaine.

Elaine Gray

Great, thank you Sascha. Good morning, afternoon, and evening to all of our participants and colleagues joining us from around the world for today's webinar. I'm very pleased to open this session, in which the USAID Advancing Nutrition Project will share their work on developing a comprehensive package of guidance for governments and other program implementers, to develop digital tools for child health and nutrition, particularly through the growth monitoring and promotion platform.

We'll also have the great privilege of hearing from additional colleagues and experts today, and their experiences and lessons learned from applying digital tools to enhance nutrition intervention. This represents an exciting and important area of work in global health and nutrition at the intersection of the so-called old and new. On one hand, we have an opportunity to revisit a longstanding intervention, by taking a closer look at growth monitoring and promotion or GMP, a program that is truly a cornerstone of community-based child health and nutrition intervention.

At its best, GMP has been a critical platform for preventing and detecting growth faltering, wasting and other serious health risks for children. It can also serve as an important entry point for other essential health nutrition, and early child development services and counseling. However, just because a program has existed for decades and is a nearly ubiquitous component of health programs around the world, does not mean that it is being implemented optimally or effectively everywhere. On the other hand, in terms of combining with the new accelerations in the advances, accessibility, and ease of digital technology present a spectrum of possibilities to transform and enhance health systems, services, information, and outcomes. Rosie, if you want to advance to the next slide. In 2020, USAID launched a vision for action in digital health, as the agency's first dedicated policy guidance for its investments in digital technologies to support health programs in our partner countries.

This vision as you see here includes four priorities, assessing, strengthening and bridging digital health capacity in countries, working with country governments and partners to advance national digital health strategies. Strengthening digital health architectures in countries, and leveraging global goods to support all of these priorities. We encourage you to read through USAID's vision for digital health as well as a series of technical guidance documents for each of these four priorities that we'll be rolling out this year with the first two available now online.

The vision and guidance documents address the many opportunities afforded to us through digital health technologies as well as the challenges that must be considered and resolved including fragmentation, interoperability, and sustainability. USAID Advancing Nutrition with the contributions of practitioners and experts in countries and in the global digital health field has developed a comprehensive resource for growth, monitoring, and promotion with these critical opportunities and challenges in mind.

We will also hear from our esteemed presenters today about how they navigated these issues, and achieved successes, and lessons learned for future programming. We are especially motivated by our distinguished country representatives, including Ms. Villella from the government of Nepal presenting shortly, and those in our audience who are committed to ensuring the high quality of GMP in their countries to best fit the needs of communities. Aligned with these efforts, we are committed to supporting improvements to GMP and local solutions to strengthen this program as also evidenced in the forthcoming GMP learning agenda developed by USAID Advancing Nutrition with inputs from many contributors.

We invite you to join another webinar through the Child Health Task Force next month to learn more about this agenda for the way forward. Ultimately, through all of our efforts, collaborations, and most critically local leadership, we aim to build on an existing platform to better reach communities with life-saving interventions, integrate today's advances in technology and evidence, and enhance the well-being of children more holistically. With that, I will now pass to Rosie to move us along in our agenda and kick us off with an interactive poll.

Rosie Eldridge

Thank you, Sascha, for the introduction. Thank you, Elaine, for those opening remarks. Before we proceed with the presentations, we would like to take a moment to reflect on all of the very many aspects that must be considered when developing digital health tools. That will bring us to our poll question, which is, what needs to be considered when developing digital tools for GMP and other nutrition services? We please ask you to answer this question by going to the Menti website listed on the slide and entering the eight-digit code that you will see on the screen. Yuritza will be putting the link

in the chat right now. Also, you may use your phone to scan the QR code here up on the slide if you would like to access it via your phone. I will give you all a moment to get over to Menti and start responding to this question.

[pause 00:07:58]

Now, I am going to toggle over to the polls so that we can see the responses in a live time, but please know that you can use the code and the information here in the QR code box to the bottom left to see. Let me see if I can-- so it looks like we have a lot of responses coming in already. Sorry about that. Some of these may include making sure that the tools are available offline. Making sure that the digital architecture that it's already in place is being utilized. We have technical expertise of frontline workers and making sure they understand how to use the tools. [silence] Making sure it is easily implementable and low resource settings.

[pause 00:09:40] The balance between interacting with the digital device and interacting with the client, and making sure that this relationship is established, making sure we have the policies in place for this.

[pause 00:10:16]

Thank you all for contributing to this. We'll be saving these responses as they come in, and we will be able to share them out at the end of the webinar. What else do we have? Considering what population it is that is being served and answering to their needs, scoping the work to understand how tech-savvy the sample population is. Whether the goal of the tool is to track patient records and reporting or whether it is for decision support or all. Whether it's scalable and whether it is culturally appropriate, which is a major part of the guidance package is tailoring it to specific context. Guidance on which international child growth standards to use.

Compliance with regulations and making sure that the current policies are part of the tool. Making sure that we have digital literacy. These are all really great. Thank you all. I see that there are a lot coming in and there's so many factors that need to be considered for this. That'll bring us towards the end of the responses, but please, if you have not gotten the chance to enter a sponsor, or you'd like to enter more, please take your time to do so. You will be able to access the poll throughout the webinar. Thank you all for participating. I will now pass it off to my colleague, Christina.

Sascha Lamstein

I actually introduced her before, but thank you, Rosie. [chuckles] Great job, Rosie. Thank you all. We clearly have a very informed audience. It's excellent. As Rosie said, we'll make sure to save these and share them. I am very pleased to introduce Christina Villella. She is a digital health technical advisor for JSI. She has extensive experience in health informatics and health information systems, project management, and program evaluation. She's the digital health lead for MOMENTUM Knowledge Accelerator and USAID Advancing Nutrition, both of which are USAID-funded.

She's been working with me and our USAID Advancing Nutrition team through the thick and thin, working our way through this process of developing, validating, piloting, and finalizing the guidance package. It has been an enormous pleasure for me to work with her and Rosie on this activity, and so I am pleased to hand it over to Christina to share with you this guidance package that we developed. Over to you, Christina.

Christina Villella

Great. Thank you, Sascha. Yes, as Sascha said, I have been working on this pretty much since the beginning. Sascha and I have truly been colleagues on this activity with great support from Rosie and others at USAID Advancing Nutrition. I'm going to start with a little bit of just brief background on the guidance package, although I think you all covered it well in the poll and Elaine also covered it in her opening remarks. Next slide, please. As Elaine mentioned, at its best, GMP is a platform for monitoring child growth and hoping to catch children before they move into malnutrition, so identifying when their growth is starting to falter so that there can be interventions before they become malnourished.

As Elaine mentioned, GMP is implemented in many different ways across the globe and there's no one standardized approach for delivering GMP. Some of the challenges that health workers face in rolling out the GMP platform are taking accurate measurements of children, their height, weight, and MUAC, mid-upper arm circumference for those of you who are not familiar with MUAC. Then plotting those measurements on growth charts and then interpreting those growth charts to determine whether the child is growing well or whether their growth is faltering. Another challenge is then providing tailored counseling and specific actionable advice to the caregiver and the child to ensure that the child remains on a positive growth trajectory.

Next slide. As Elaine alluded to, there have been many conversations around how we can improve the GMP platform over the last few years, and one of the more recent global consultations on GMP came up with these several calls to action and I wanted to highlight some of the pieces that they mentioned including agreeing on measures of how to determine growth faltering, how to ensure that quality counseling is happening as part of GMP, and how to ensure that we continue to innovate on using data from GMP for accountability, decision making and action. With that background on some of the areas where GMP is trying to improve, we also looked at the digital health landscape.

Next slide. Over the last few decades, there has been an introduction of more and more digital tools into the healthcare system and to public health, and we call that digital health, the use of these technologies within the healthcare space. For the purposes of today's webinar and the content that we'll be discussing, we're really going to focus on the value proposition of using digital health for health workers and health systems. At its best, to actually take Elaine's words, digital health for health workers will mean that health workers have access to more timely and accurate data to improve their decision-making, service delivery, quality, and communication across the levels of the health system.

For health systems because if we are introducing digital tools and GMP, we're not only going to be providing those to health workers but they would also enable health systems to have strengthened communication around challenges in digital health and strengthened reporting and better visibility into systems performance to enable them to improve their decision making regarding allocation of resources and interventions. This is at its best what digital health can do for both health workers and health systems.

Next slide. Taking into account both these streams of work, both the trajectory of trying to improve GMP, looking at the challenges with GMP, and also kind of the momentum behind digital health in the health space. USAID Advancing Nutrition wanted to look at how digital tools could support GMP services to improve the quality of these services. In 2020, USAID Advancing Nutrition conducted a landscape analysis of the digital tools that were being used by health workers for the delivery of nutrition services. Out of the 53 tools reviewed, we found that 28 were used for assessing nutritional status, 29 were used

for counseling and promotion of nutrition-related practices, and 14 were used for the delivery of GMP services.

This highlighted to us that in indeed these digital tools are being used by health workers in the nutrition space for assessing nutritional status, growth and supporting health workers through counseling and promotion. At the same time, WHO has started developing what are called SMART Guidelines and I'm going to leave it to my colleague, Rosemary, from WHO to present a bit more on what those are in a moment. WHO's way of taking their care guidelines and putting them into reusable digital content that can be used to build digital tools that are used at the point of care to deliver services. That sounds very complicated so we're going to break that down as we go through the content of the guidance package. The Digital Adaptation Kits are one piece of these SMART Guidelines that act as a baseline of requirements for software development to develop digital tools for service delivery.

Next slide. The digital tools are those SMART Guidelines and Digital Adaptation Kits are developed for actually a specific type of digital tool called the Digital Tracking and Decision Support Tool. This Digital Tracking and Decision Support Tool, or DTDS, is a job aid that combines an individual's health information with the healthcare provider's knowledge and clinical protocols to assist healthcare providers in making diagnosis and treatment decisions.

What that means is this tool is tracking a client's health record longitudinally, think about maybe an electronic medical record, or a client registry-- not a client registry but a healthcare registry that tracks patient information over time and it combines that information with decision support, and the healthcare workers knowledge and inputs to guide them on how to provide care at the point of care. This is not a data collection tool. The data is entered after a visit. It's really used during service provision. These tools, the goal [unintelligible 00:21:18] to support the improvement of adherence to care guidelines and quality of care.

Next slide. We saw some of the potential benefits for Digital Tracking and Decision Support Tools for GMP. Some of these benefits could be obviously providing the longitudinal history of GMP visits, measurements, and agreed upon goals to help health workers and be able to see the history and see the overall trajectory of a child's growth and health history. It can also guide them through the protocols for measuring growth, for assessing children's behaviors and practices and then guide them through counseling, providing targeted counseling messages, and making referrals.

Of course, because it's a digital tool collecting information, it has the ability to make data more accessible and ease the burden of reporting. It can also provide a level of insight to the upper level of health managers or program managers to see how GMP services are being provided at the point of care and inform them on the outputs and outcomes of that platform. Next slide. All this background in mind, we developed the guidance package for developing digital tools for the delivery and supervision of GMP with the ultimate goal of improving quality and effectiveness of GMP services.

The audience for this guidance package, as Elaine mentions, are governments, ministries of health who are providing these GMP packages, non-governmental organizations supporting governments in providing GMP programs, and software developers who will ultimately be developing these digital tools. The benefit of the package is really that it's a baseline set of requirements for software development that are aligned with best practices at GMP with the ultimate goal of reducing software development time and providing tools that are aligned with global guidance on GMP.

Next slide. These are the contents of the guidance package and I'm going to quickly run us through. Next slide. The first component is the interventions and recommendations. As I mentioned, the goal of WHO SMART Guidelines and Digital Adaptation Kits is to really translate WHO care guidance into digital tools. We did the same thing with this guidance package. We took globally recognized GMP interventions and relevant recommendations and trainings to develop the other components of the guidance package that I will go over in a moment. There is not one GMP guideline at the moment and so we did use a number of different guidance documents that you can see here on the screen.

Next slide. This is just to set the stage for how we were thinking about the workflows and the business processes that go into GMP. We were trying to make sure we were balancing coverage of interventions with the intensity of these interventions. You'll see that there's decision support logic and flows that show how the children are flowing through the different interventions for GMP. Most children are growing well so they would need basic support and the universal growth monitoring and encouragement to keep doing what they're doing. If a child has a possible growth problem, they will need more intensive intervention of targeted assessment and counseling. Children who are malnourished, they need the most intense interventions of treatment and referral.

I'll try and point out where we were trying to balance the coverage and intensity. We wanted to call out that we were keeping this in mind as we developed the guidance package given the feedback we got that GMP, really, a big struggle that health workers have is having enough time to really do that promotion piece with each child and caregiver. Next slide. The second component of the guidance package are the user personas. These are the descriptions of the end users of the digital tool that would be developed for GMP. The descriptions of these user personas go over what are their daily roles and responsibilities, what are the challenges that they face, what are their needs.

The personas we identified for GMP were health workers, their supervisors, caregivers, and data managers, and program managers. With the adaptation of this guidance package, of course, you would want to adapt the user personas to the users within your context. Next slide. I do want to just pause and remind everyone that this guidance package, something I forgot to say earlier, the guidance package is really meant to be about 80% standardized, 20% customizable. We recognize that GMP is rolled out in different ways in every country. Different users are interacting with it. There's different policies, different referral programs.

The idea behind these guidance packages is they're a baseline that then needs to be adapted to the local context, which I will get to in a moment as far as some of the key areas for adaptation. Just keep that in mind as I'm going through this content. The next piece of the guidance package are the business processes and workflows. The business processes are sets of related activities and tasks that are conducted together to produce a defined result. We really broke GMP down into six different business processes. There's set-up, registration, assessment of nutritional status and growth counseling, referral, and then supervision.

Each of these business processes is then visually described in a workflow, and you can see that on the bottom right of your screen. This depicts the different activities and tasks and decisions that need to be made within each of those business processes. Next slide. I'm going to quickly go through what's in each of these business processes, but for more information, please do actually look at the guidance package because they are very, very dense workflows and business processes. I'm just going to gloss over what each one covers.

For set up, this is where the health worker sets up the equipment for the day and is prompted to ensure that the tools are correctly calibrated and set up. For registration, the workflow walks the healthcare worker through registering new and existing clients and searching for their records and making sure that they are up to date. Next slide.

The assessment of nutritional status and growth guides the health worker through the assessment of the child for clinical invisible signs of malnutrition through taking the measurements for height, weight, and MUAC for entering that data and then interpreting the Z-score in the growth charts.

During this workflow, the tool will also flag for the health worker if the child has bilateral pitting edema, it will flag that they need an urgent referral. It will also flag that they may need referral for being severely wasted, severely underweight, or obese. If the child is found to be growing normally, it will flag for the health worker to decide if they want to provide additional counseling and schedule the next visit. If the child has a possible growth problem, it will move them to the next workflow, which is counseling so that they can do a more detailed assessment and then go over guidance for correcting the growth faltering.

Next slide. The counseling workflow is a very, very, dense workflow. It's made up of two components. The first component is assessing the child's practices, behaviors around health status, breastfeeding, feeding, physical activity, and developmental growth to try and uncover why the child may be experiencing growth faltering. The caregiver, then-- oh sorry, the health worker will enter this data into the application patient, and then based on those responses, the application will provide the health worker with items for praising the caregiver on what's going well. This isn't trying to incorporate best practices in counseling. We don't want to just be telling the caregiver what's not going well. We want to start by saying, "Hey, this is what you're doing well." There is decision logic to do that.

Next slide. There's also decision logic to flag areas for concern why the child may be faltering. The application will also provide a list of counseling topics for the health worker to choose what they will go over with the caregiver and then it will prompt them to set goals, schedule the next visit, and move to the referral workflow if an issue has been identified that needs referral. Next slide. The referral workflow guides the health worker through providing referral for the issues that I've already mentioned. It will also have them counsel the caregiver on taking care of a sick child if they were found to be malnourished in the meantime while they're waiting for their referral. It will prompt them to also schedule their next GMP visit so that there is still that scheduled touch base even though they're sending them out for a referral.

Next slide. For supervision, we focus on the observation visits and guiding supervisors through observing a GMP visit and it walks them through a series of questions to ensure that the health worker is providing GMP services according to guidelines. The supervision workflow also reminds the supervisor to give feedback and set goals with the health worker to improve their performance. Next slide. I'm losing track. I think this is the fourth component of the guidance package or the data elements and indicators. These are two pieces. The data dictionary, which is a table of variables and data elements captured throughout the GMP processes.

These data elements are then used for either triggering decision logic or categorizing the child for a certain nutritional status, or they are used in calculating indicators. There's also an illustrative indicators table, which is a standardized table of indicators that are recommended for GMP programs. These should demonstrate the numerators and denominators that can be found in the data dictionary that can

be used to calculate those indicators. Next slide. The decision support logic. This is where, well, the workflows also are the ones that are guiding the health worker to adhere to care guidelines.

Decision support logic is that piece of taking the healthcare worker's knowledge and the inputs of the individual's health and flagging the healthcare worker when there might be a problem, when they may need to pivot in their care. There's a series of what we call decision tables and this is a screenshot of part of one of those decision tables and it shows the inputs and the triggers that then lead to outputs, which are decisions that need to be made and that also guide actions that the health worker should take. This specific screenshot is showing how the application is looking at the various Z-scores calculated to then determine if the child needs an urgent referral because they are severely wasted, severely underweight, or obese.

Next slide. The final component of the guidance package is a module on data use and it's a brief description of how the data being collected by this tool can really be used to get the most benefit out of it for program reporting, monitoring, and supervision. Next slide. As I mentioned, the guidance package is meant to be about 80% standardized, 20% customizable, and adaptable. These are key areas that everyone should take into consideration when they're adapting the guidance package. The first being service delivery policies, protocols, and practices. This is looking at what are your national policies and procedures for GMP. You should ensure that the workflows and decision logic are aligned to those policies.

Sociocultural and political characteristics, this can be things like the reminders that the healthcare worker receives, or the messages and the counseling messages for caregivers that they're appropriate to the cultural context and political context that you're in. The data definitions and standards, you would want to make sure that this tool has the ability to feed into existing reporting systems and other health information systems. You'd want to make sure you're following aligning the data definitions, and also any health information standards that are being used for when you're developing the data dictionary for the tool.

Also, looking at how this tool would fit into the overall existing digital architecture, which actually many of you mentioned some of these pieces in the poll, which I was very excited to see. Then, of course, looking at what are the reporting requirements. All right, looking ahead, we are, of course, going to continue to disseminate this work, share lessons from experiences of adapting the guidance package, and using it to develop tools for GMP. We hope that, of course, that this work can also grow into looking at the feasibility, and evaluating the effectiveness of using these guidance packages to develop these tools, and see if they improve GMP service delivery.

With that, I will turn it over to Sascha.

Sascha Lamstein

Thank you so much, Christina. That was great. Lots of questions came in the chat, Christina. I answered them, but you're welcome to add additional answers. Let's see. Sorry, I'm jumping between screens here. I am very pleased to present Mr. Lila Bikram Thapa. Mr. Lila is the Chief of the Nutrition Section of the Family Welfare Division of the Ministry of Health and Population in Nepal. In this role, he provides overall leadership for the design and implementation of national nutrition policies, strategies, guidelines, protocols, and plans.

Lila has over 30 years of experience working at various levels of the health system in Nepal. I have been fortunate enough to work with him quite closely in taking some of the first steps toward development of

digital tools for GMP in Nepal. I'm honored to have him with us today, and I'm happy to turn it over to you, Lila

Lila Bikram Thapa

Thank you, Sascha. This is my pleasure to speak on the behalf of the ministry of health and population. First of all, thank you so much USAID [inaudible 00:37:37] Advancing Nutrition team for providing me such opportunity to share Nepalese experience regarding the growth monitoring and digitalization of Nepal. Actually, in Nepal, we introduced growth monitoring as a key intervention for nutrition promotions a decade after 1992, while UNICEF launched the child survival and development revolutions. Three decades on the ministry of health and population [inaudible 00:38:25] Nepal's first official growth monitoring and promotion guideline to direct growth monitoring intervention in the [unintelligible 00:38:38] context. Also, National Health Policy highlighted the growth monitoring, a key intervention for promotion of nutrition.

Next. First, before endorsement of growth monitoring and GMP guideline in 2023, growth monitoring and promotion in Nepal consisted of only weight-for-age and just related to counseling. Now, we endorsed the GMP guideline onwards. In addition to weight-for-age, includes weight-for-length, and also include the MUAC assessment for early detection and management of acute malnutrition. We have the two platforms. We are doing the growth monitoring and promotion practice in Nepal from health facility level and outreach clinic.

Next. This is the status of growth monitoring in Nepal. If we see here, the graph from 27, sorry, 76, 77 and recent, we have seen here the decreasing trend, coverage of decreasing trend but unfortunately in the last year, it's decreased than the previous year. If we see here, the register for GMP service, 0 to 23 months of child, now it's 78%, but the problem is the average number of growth monitoring visits. Now, we are struggling how to [unintelligible 00:41:08] a huge challenge since we are introducing the new growth monitoring guideline. If we see here, underweight children, 6 to 23 months are 16% and anaemic are more higher. It seems alarming situation in Nepal. The high prevalence of malnutrition in Nepal is another pertinent region for urgent action to improve the growth monitoring and promotion.

Next. This is the new guideline we have showed here, the GMP guideline, a key approach for the promotion of growth monitoring. This outline the digitalization, a key approach to promote the growth monitoring in Nepal. For the information and communication-related growth monitoring and promotion, suitable technology will be utilized. It has two features. SMS message to caretaker and reminder message to caretaker. Three out of four individuals in Nepal possess the mobile phone. Similarly, 2 out of 3 individuals uses internet. 55% of health facility have the computer with internet access. Is it feasible to introduce in Nepal the digital growth monitoring and promotion?

Next. If we see the supportive policies for digitalization in health sector, we have already endorsed the ministry of health and population, endorsed the national e-health strategy. This strategy, which is comprehensive, a milestone document to facilitate, promote digitalization in the Nepalese health sector. Basically, the e-health strategy aims to strengthen the health and technology linkage and improve the health by working on six major components here. I do not go through all the points. Improved availability and access of general and specialized health care services. Similarly, improve the enabling environment and capacity for the delivery of safe and effective health services and ultimately that enhances access to data and information for effective planning, management, governance, and evidence-based decision-making. These are the six major outcomes of our National e-Health Strategy.

Next, Supportive Policy for Digitalizing in the Health sector. We have the digital initiatives roadmap for the health sector. As I earlier mentioned, the National Digital Health. We have the national digital health platform. Next-generation digital healthcare facilities and electronic health record, mobile health units, and also e-Maternal health. Recently we are into launching the mobile app, My Nutrition Friends [soundcut] where the digital initiative roadmap for the health sector. These are the main points or more main initiative or roadmaps for the health sector through, we can use and we can utilize and we can move ahead.

Next. The workshop on digital tools for growth monitoring and promotion. We had organized the workshop with the support from USAID advancing nutrition as Sascha and other shared, which was 29 and 30, April 2023, this year. In that organized workshop, we had discussion. I have not gone through all the point and in that workshop we had the specific objective to prioritize the adaptation and to the guidance package workflow to facilitate the development of digital tool in Nepal. After that workshop, we're working on the next system.

Yes. Next. These are the points workshop on the digital tools for growth monitoring and promotion. Introduction to the guidance package for developing the digital tracking and decision support tools for growth monitoring and promotion services. Guidance package for the developing digital tracking and decision support. Then how to use and read the guidance package and adapting the workflows, review and how and adapting the data dictionary and analysis of the strength, weakness, opportunities, and the threats of digital GMP tools.

Finally, identify the immediate way forward for developing the digital tools. Therefore, yes. Next. Based on the above mentioned criteria, above mentioned slides, the digital, the GMP, where next steps in Nepal we're highlighting based on the consensus among the workshop with participation and part of the decision with our section, with our division, we have visualized the next step for digital growth monitoring tools in Nepal.

We have highlighted the strengthen health system capacity for delivery of GMP services. Similarly organized the awareness campaigns and discussions to promote the growth monitoring, GMP and promotion of, as I earlier mentioned, My Nutrition Friend. Nutrition application and mobile of digital platform. Review and discuss and finalize the Digital Tracking and Decision Support tool through the MIYCN technical working groups. Obtain approval from the Ministry of Health and Population to initiate this software development based on the final set of tools and prepare the joint plan to develop, pretest and pilot the digital GMP tools in some places.

Engage the global actors involving in the development and the use of tools for the delivery of growth monitoring and promotion. Advocate for the continued strengthening of the digital health ecosystem to the Ministry of Health and Population and other line ministries as directed by our eHealth strategy. Yes, next. Thank you very much. Sascha, this is over to you.

Sascha Lamstein

Excellent. Thank you, Mr. Lila. We really appreciate it. I gave you a little extra time in part because we've been able to answer questions. If you haven't noticed already, we're answering questions as we're going along. Hopefully, we might have a little less time for question and answer.

Lila Bikram Thapa

By the way, in my room light is off.

Sascha Lamstein

Oh goodness. Okay. I'm glad to be able to continue.

Lila Bikram Thapa

It's okay. I'm waiting. Hopefully, it will come back.

Sascha Lamstein

Okay, very good. Thank you. I will now turn it over [unintelligible 00:52:10] coming here to Rosemary Muliokela. I hope I said that right, Rosemary. Rosemary is a digital health expert with experience in design, strategic digital health, governance, research and implementation. She's led the setup, design and implementation of several m-health and digital health solutions for HIV AIDS, maternal health, and non-communicable diseases. She's helped develop digital health strategies and coordination frameworks in collaboration with the WHO, the African Development Bank, and others.

She is currently a consultant for the Department of Sexual Reproductive Health and Research of WHO. Christina had the opportunity to hear Rosemary speak at a digital health conference last year. Since then, Rosemary has generously shared her insights into how a guidance package or a DAK like ours might be adapted and used. We're fortunate to have her with us today. Over to you, Rosemary.

Rosemary Muliokela

Thanks, Sascha, and greetings to everyone. Thank you so much for having me. I just wanted to send a special shout out. I think I've seen some names from our country partners from Zambia and Ethiopia, thank you so much for joining. We can go to the next slide. I think Christina has provided a little [soundcut]

Sascha Lamstein

Oh, goodness, I think we just lost her. Let's just give her a quick moment to see if she reconnects. I wonder if the electricity went out in Nepal and Zambia, at the same time. Oh, looks like you're back, Rosemary.

Rosemary Muliokela

Yes, sorry about that. I'm not sure what happened. It always happens on digital meetings. Anyway. Just to start off with the vision for this work, the smart guidelines, DAK implementation work that we've been working in several countries. We're currently working in Zambia, Zimbabwe, Malawi, Ethiopia, Ghana. The vision for this work is really that WHO envisions this future where everyone has access to these guidelines for use really at the point of care, the public health guidelines, clinical health guidelines and data use guidelines. Next slide.

I think we all understand the process of how guidelines are developed. WHO produces these global guidelines, and at the country level, these are adapted. We know that this process is a long journey. It takes time. It's very resource-intensive. Within that process, particularly when you're translating these narrative guidelines into digital systems for digital systems, there's a lot of chance to actually limitations in the fidelity of the content because of the several consultations that it goes through different stakeholders trying to figure out what should go where?

Then you find that even the systems that are existing currently in some of the countries, you find that there's some gaps that certain components of a guideline maybe were not included in because of the process and because maybe that even a standardized process wasn't there before. I think the process that we're mainly familiar with is where the narrative guidelines are produced and then countries then adapt them to their local context and in that process as well, that can be lengthy as mentioned earlier.

Then you also have the issues around siloed programming of guidelines that make this very difficult to integrate. Next slide. [silence] We can go to the next slide. Here, just highlighting the challenges again, going back to why the smart guidelines and DAKs and really this journey, the transition from paper to digital. I think we realize that even at the point of care, I think it's not really just using the paper registers, it's really more than that.

It's also using the paper guidelines themselves that they can be very difficult to use. From experience, we've seen in a lot of facilities that sometimes because of the clinicians, they have long lines. It's very difficult to always go back and turn a page in a paper guideline to see, "Oh, what am I supposed to do?" Putting everything in one place in a composite place where you have all the guidelines, again, similar to what I think the guidance packages that Christina presented earlier, really taking advantage of all the living guidelines that are available and put them in one place to make it easier for clinicians to access. We can go to the next slide. I think we understand really what the challenges are with paper-based systems. The clerical burden is difficult for clinicians, even doing the reporting becomes difficult. This slide here really shows the different layers of the smart guidelines. The main focus that we're going to talk about today is really the digital adaptation kits, which I think also Christina referred to earlier a little bit, and this is the focus really of my presentation, but to show you and give you this context that the DAKs, the digital adaptation kits, which I'll go to in a second, are really part of the five layer framework, smart guidelines framework that WHO developed in 2021.

This was really to ensure that countries are facilitated with a way to really translate these guidelines and have a starting point to design systems for their own setting for specific programs. WHO only has maybe three right now, but more in development. I think my colleague Tigi has put that in the chat. The first one is the narrative guidelines. I think we know what these guidelines are. These are the ones that are used in the facilities at the country level paper-based, your PDF.

Then moving from the L1 to the L2, which is the digital adaptation kits, making it operational and moving to the digital stage now is we got the actual guidelines and pretty much tore them up into components that are easily digestible within digital systems and came up with the L2 with the digital adaptation kits, which I'm going to get into in a second. Then you have the L3, L4, and L5. L3 is making these guidelines machine readable, what is the code that is there.

Then we also have customizable software, which WHO developed an app actually based on the antenatal care DAK. These countries can get and customize to their setting. We're doing this research in Zambia and Rwanda, and we're getting ready to deploy that application shortly. Then of course the L5, which is advanced analytics. Next slide.

What are digital adaptation kits? Again, Christina I think alluded to this, I'm not going to spend a lot of time, but basically, these are digital guidelines. They really provide you a starting point for how to design your system and what you want, like the minimum content in your system based on the generic WHO guidelines, and they're customizable at the country level. I'll get into this in a second, in the next slide, where we talk about the processes, but basically you have your generic digital guideline that is broken up into digital pieces that can be put into a system and then customizable for any system.

They're software-agnostic, it's really clinical content that also has decision support functionality algorithms that can be put into a system. It really does provide this bridging resource. Content developers can look at this from the program side. It also helps facilitate for the software developers, well, they can also look at this as well as you have your health information folks look at this for the data application purposes. It's really a focus on the content, and it's [unintelligible 01:00:27]. [soundcut] Go to the next slide. These are the main components and Christina, I think alluded to some of these, and a country doesn't have to adapt all of these, you can adapt, in certain countries they're only may be

looking at the core data diction. I think, again, I won't spend much time on this because Christina did mention this, but these are basically the eight components that you need to develop a specific system. I think for me personally, the most exciting one has always been the decision support logic. Because this is really aligning what is the clinician supposed to do and really guiding the clinician through the process of taking care and providing that client-centered care. Most of these settings, clinicians are so overwhelmed that just a simple reminder actually makes a difference. The core data elements, that is your core data dictionary, and I think, again, Christina referred to this in her presentation. This is really, again, that content. What is the country collecting data on for that particular system? Over to the next slide.

Why are we doing what we're doing? This work, we started in 2021, just when the smart guidelines were developed, and then we wanted to see with the digital adaptation kits, what is the level of contextualization that is needed to be able to implement this in varied and complex digital and program landscapes. Can we develop a replicable process? Also can we develop really also a package for how can countries actually ingest the DAKS?

How can they use the DAKS? How can these be implemented in the country to standardize the content, to improve quality of care? What is the impact? Do DAKS even have an impact on service delivery and data flows, et cetera. Some of this we're going to really be getting from a very close research we're doing in Ethiopia and Ghana, but also the implementation work that is happening in Zambia, Malawi, and Zimbabwe. Next slide.

These are the processes that we came up with at the country level. Again, these have also been changed, modified, they have evolved in each country that we have worked in. Initially when we were really starting this process, these were the three to four main steps when we were introducing the DAKS. It has been through a broader initiative, the Together for SRHR initiative as well as the implementation research work that we're doing.

We really wanted to see how can we demonstrate the impact of DAKs to improve SRH outcomes. SRH is being really used as a use case here for really other use cases. Just to show how does this work?

Obviously we begin with stakeholder orientations. Really first we begin with country assessment. This is where we're assessing the program and the digital landscape. Where are they in the guidelines? As you know, digital adaptation kits, these are guidelines.

Are they up to date? The WHO guidelines are up-to-date. How do we align them? If they're not up-to-date, how can this process then catalyze the updating of the narrative guidelines. We have also seen this as a lesson learned in some of the countries that we're working in. What is the system? Is there a system? Does the system actually have adapt domain in it? Then we have all of these results and at a stakeholder orientation begin discussion.

The stakeholder orientation engagement really goes out throughout the process. Then after that we have a content review and alignment workshop. Again, this process could be multiple layers of content review. It's really looking at what is in the generic DAK and what is in the country protocols and clinical guidance, and what is the standard practice of country level and how can we put those together. It's really going through the DAK and making modifications, removals of what doesn't align at the country level. This with an implementation team that has been developed during the stakeholder orientation of multi-stakeholders. These are the digital focal points program, as well as the partners that are supporting the digital system in-country. At the end of the Step 2, what you have is an adapted country package that you have customized and contextualized for that setting.

Then the next step is really doing the software planning, doing the feasibility of the system and now getting ready to deploy. In most of the countries that we're working in we are mostly at Step 2. Some

countries have gone a little bit further and we will be getting ready to deploy soon. Most countries are now finalizing their packages. In Ethiopia and Ghana, we are doing all the three DAKs, HIV family planning, and ANC. In Zambia we're doing ANC, in Zimbabwe we're doing ANC, and Malawi is doing ANC. These are just really just starting points for countries. Once they get a hang of the process, they will be able to move on to the other DAKs and do that implementation. Next slide. I just wanted to show some of the early lessons that we're getting. Really the smart guidelines and DAKs were also developed to put governments at the front seat, driving the seat for their digital transformation and really being able to determine the content for their systems because a lot of times sometimes you have a lot of vendors going to countries and bringing systems and a lot of times governments don't even know what is in that system.

In this one here, this is a workshop in Zambia, it really was like a refresher course on, oh, this is what we're supposed to be doing, this is actually in our guidelines, we really should be following this process. It may be longer, but at the same time, once we get a hang of it, we'll be able to actually follow the guidance. They really appreciated the fact that the process, or once they have a DAK-enhanced system, that's going to actually help them comply with the guidelines.

Next slide. [silence] This one here refers to data ownership. I think I referred to this earlier, where sometimes the people that are receiving the systems don't know what data is in the system. Again, helping them determine the content, but also owning that content and really facilitating that local ownership and sustainability and really utilizing the system and going back to to the previous slide as well, just also encouraging the users to actually be able to use the system because actually know what's going into the system. This was at a workshop in Malawi.

Next slide. [silence] Then this one is to do with really the business process documentation. I think what we found and just using Zambia as an example is that sometimes, the business processes, documentations maybe in different places because the different partners that are developing and supporting systems. Sometimes those are difficult to access, but I think from the software development side, we were hearing that they really appreciated the process and wanted to see how they can actually even adopt this as a standard process because it was so easy to follow. It was very structured for them to be able to translate the content into a system.

Next slide. [silence] Then this is just a prototype of an example from Zambia of how the system would look like if it's enhanced with a DAK, with decision support prompts over there so this was from one of the workshops that we had. I think that should be the last slide. Thank you so much for listening. Oh, there was one more slide, sorry about that. Essentially, I guess this is what we want to do. Want to make sure that we are maximizing the use of digital guidelines irrespective of the digital system and ensuring that the WHO guidance that you have quality content within your system to really improve the healthcare quality at the primary healthcare level. Thank you.

Sascha Lamstein

Next slide. Thank you so much, Rosemary. I am loving these presentations. We are running low on time in terms of having time for our Q&A. I just want to remind people to engage in the question and answer chat or in the regular chat. Please enter your questions and your comments and anything you want to share. There may be a little less time for the regular Q&A so we'll do it a little bit more virtually. Because I definitely want to hear, I think we have a really great example here and I want to give Lakshman the time that he needs to present.

Lakshman Sivasubramanian, hopefully I got that right a little bit, Lakshman, is the senior director of partnership for Dimagi in India.

He's worked on a wide range of nutrition projects in India, working with the Tata Trusts on food fortification with UNICEF on a CMAM pilot program with the World Bank on a multi-donor trust fund under the National Nutrition Mission or the government of India, and with various other NGOs and private sector partners. Dimagi has developed and rolled out digital tools for the delivery of nutrition services, including growth monitoring and promotion in several countries.

I hope you will find their experiences and lessons learned as valuable as we have. They have, Dimagi, Lakshman and his colleague Neelima have been incredibly helpful for us as we've been developing this guidance package. Without delay, Lakshman, over to you.

Lakshman Sivasubramanian

Yes, thank you, Sascha. Thank you for the introduction and greetings to all of you who took time to join this webinar. I'll introduce today Dimagi's nutrition solution or what we call as the Digital Tracking and the Decision Support solution. We have incorporated few of the tools of the guidance package, and I'll share today some of the challenges and some of the success stories of how we have implemented this solution.

Next slide, please. As you all know, Dimagi is the creator of CommCare. CommCare is an open-source digital platform for developing Android-based mobile applications. It's a digital public good, registered in the digital square registry as a DPG or a digital public good. One of the important feature, it's a no-code application. When I say it's no code in the sense that you don't need to need know any software skills to develop a mobile application using CommCare.

One of the very important feature of CommCare is its longitudinal tracking and a powerful case management, and which is very, very important for nutrition interventions. We have used CommCare for developing the solution. Next slide, please. As we all know, nutrition is a critical part of health and growth development and we all also understand that to improve nutritional indicators there are overlaps both on the side of nutrition-specific interventions as well as nutrition-sensitive interventions. Most importantly, one of the things for improving nutritional indicators is how quality of services are delivered by the last mile community worker or the frontline worker. Hence Dimagi has attempted to create a nutritional digital tracking tool with the frontline worker as the focal point, which also includes a division support tool as a job aid to enable them to deliver quality services at the last line.

Next slide please. Just introducing you to the solution. What we have done is basically looked at all the critical stages of nutrition cycle, right from adolescence to mothers to children. Again, from adolescence to mothers, we have broken up into different stages of motherhood basically right from pregnancy where you have a lot of related to antenatal checkup. Then post birth is about postnatal checkup. Then also for infants, a newborn, right up to six years of age. This is how we have broken up the final end citizen for this solution.

Based on that, end user or end citizen who's going to be the beneficiary, we have divided into several stages or modular way of care in terms of what are the requirements during pregnancy, what are the requirements during adolescence, what are the requirements in terms of a newborn? What are the requirements in terms of tracking, growth monitoring, some of the counseling requirements, home-based care, all these have been put into several modular form so that any intervention in nutrition, which are taking specific details, they can take up only those modules and implement those modules. As you know CommCare already has the feature of being offline capable. It works without internet, it can work in lower resource settings. It's multilingual, it crosses all language barriers. For all the counseling and some of the capacity building of frontline workers, it can incorporate a lot of multimedia. It can incorporate photographs, it can incorporate counseling videos, it can show GIFs which enable endline care in a much better way.

Next slide, please. Some of the challenges which we face during implementing or during developing of the solution. First it starts with the user persona, one of the most important things we understood is understanding the profile of the user. In this case, understanding the local end user which is the frontline worker and very specific to them, the users and the mobile application workflows needs to be designed. That was one of the most important understanding for us.

Based on these understandings and their limitations, we developed a specific user persona workflows and the mobile applications. Further to that one of the important things was taking user feedbacks and documenting those feedbacks and post documentation of these user feedbacks, one of the important challenge was how do you incorporate those feedbacks into the technicalities of the mobile application. These were some of the challenges which we faced. We therefore understood the user better and incorporated a lot of these changes so that there could be usability.

The second part of the challenge we faced was in terms of the digital application itself. Because considering the scope of the work and the load on the frontline workers, you need to have some tradeoffs in terms of how much of data and how much of work you want to load and how much of application workflows you need to put it on the frontline worker versus the quality of data. Therefore there has to be that tradeoff so that there is acceptability by the frontline workers. There is also a lot of usage and deployment, therefore there can be a lot of quality of data coming in.

The second one is in terms of the decision processes. Some of the protocols were to be standardized so that once a protocol is put in into the application, irrespective of the frontline user, they are able to get the standardized quality of service at the last mile and standard of quality of reporting back into the system. The last one was on data reporting. One of the things we had seen with the data reporting is each of the users require different sets of data.

For example the frontline user, they require a quick summary of what are their daily tasks, what are their activities, have they completed, not completed? For a supervisor it's a combination of prioritization of tasks plus little bit of team management summary dashboards. Little more as you go up the ladder to the administrators and the health officials which was more of analysis of some of this data in an aggregated form, release of graphs or in terms of the indicators so that they will know what is moving and accordingly take course corrections.

Next slide, please. While there were a lot of learnings for us when we implemented these solutions, I would specifically stick to two important learnings purely from a technical side, purely from a digital application point of view. One is having the design of the mobile application which is very tuned to the user. When we look at the user-centric design, what we have done is putting in all this multilingual availability and most importantly the incorporation of the local dialects so that the end user is very comfortable using some of them and then are incorporating and able to quickly go through the workflows.

The second part is using lot of icons so that they may not read the texts. Based on the icons, they know what workflows to be done, what needs to be done, what decision support needs to be done and therefore it was an easy workflow and a job aid tool for them. Therefore user-centricity was very keen for them for deployment and usage. The second critical, learning for us was having minimal entry of text.

To reduce the burden of the frontline workers on using a digital application, most of the workflows were using radio button or drop-down selections. They just need to select from the existing options and keep moving. It's very easy for them to go through the application. These are two important learnings which we incorporated into our solution from a digital point of view. Next slide, please.

The Dimagi's nutrition solution or what we call as the digital tracking and the digital support system incorporated some of the GMP guidelines. We wish to incorporate some more of these guidelines as we continue to move so that we can have more and more standardization. To very specifically talk about one or two use cases of how these standardizations helped us. For example, I'll take the example of quality registration.

When registration is done in terms of say a two-week-born child, so once the quality of registration is done in terms of the date of birth and all the details are entered in, so that triggers a decision support logic. When the frontline worker selects this individual, the application automatically knows that this individual who has been selected is a two-week-old infant. Then accordingly, workflows related to what are the questions related to be asked specific to the caregiver, what are the growth monitoring indicators to be done in terms of weight, height, and other things. Only those specific decision support logics turn up.

The linkage of each of these different processes to a decision support and therefore a data indicator is very important and some of this we have incorporated into this tool. Next slide, please. Currently, we have two geographies of implementation of this digital solution. One is in Ivory Coast, wherein the focus is on children 0 to 5 years and pregnant women, wherein some of the modules of that has been used. Specifically in India, there is in two geographies which is being used and which is focusing only on children 0 to 6 years. It's going to cover 30,000 children over the next couple of years. Yes, that's it from me. Thank you so much. Thank you for your time. Over to you, Sascha.

Sascha Lamstein

Great. Thank you so much, Lakshman. I hope you all could see the value of those experiences. Monique, I see that you have other experiences and are asking for sharing. I fully agree. I hope that we can continue to share and stay in touch and share these examples. We did though now it's a couple of years old. I put it in the chat, but the landscape analysis that we did and Christina mentioned summarizes some of the other experiences using digital tools for this area of work for nutrition, whether it's for growth monitoring and promotion or for other nutrition services more broadly.

Quite honestly, I think that we are coming to a close. A lot of questions have been entered and answered in the Q&A chat or in the Q&A box. I think that I will just wrap up at this point because we only have a minute left. I just want to thank all of you for participating, for asking such good questions, for sharing your experiences in the chat. I really hope you'll take a look at the guidance package and consider using digital tools or Digital Tracking and Decision Support tools to strengthen the quality of growth monitoring and promotion services.

As a reminder, the guidance package that we developed, which is similar to the digital adaptation kits that WHO has developed, they are not the actual tools. Those will need to be developed in each country. Based on the country context and the country needs, some questions have come up about integration with immunization services. I think that's a great idea, but not something that can be decided globally for every country. That's really something that needs to be done at the country level to ensure interoperability that the systems can communicate.

I think without much delay I think Yaritza has put in the chat where you can find additional information and where the slides will be posted and the recording will be posted and eventually transcripts that will take a little bit longer, but transcripts will also be posted. I think that's it. I'm not sure if anybody else, Christina, I see that you put on your video. I'm not sure if you wanted to add anything or any of our speakers wanted to add anything before we close out, but on my part, thank you very much. Christina, take a moment if you would like.

Christina Villella

Oh, no, I just wanted to thank everyone for participating and especially thank our speakers as well for the really wonderful presentations. I think that really helped to tie the theory into practice and implementation. Thank you.

Sascha Lamstein

Yes, thank you. Thank you so much. All right. Have a good evening and a good day, depending on where you are. Thank you. Namaste and goodbye.

Lila Bikram Thapa

Okay, have a good day. Namaste, see you.

Sascha Lamstein

Thank you so much. Bye-bye everybody.

Lakshman Sivasubramanian

Thank you.

Rosemary Muliokela

Bye. Thank you.



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