Data for Infant and Young Child Feeding and Minimum Dietary Diversity for Women: Understanding New Guidelines, Evidence, and Survey Tools

Webinar Transcript

Yaritza Rodriguez

Welcome to the Webinar on Data for Infant and Young Child Feeding and Minimum Dietary Diversity for Women and Understanding New Guidelines, Evidence, and Survey Tools. My name is Yaritza Rodriguez. I'm a communications officer with USAID Advancing Nutrition, and I'll be going over a couple of things to just give an overview of the Zoom platform before we get started. First of all, if you have any questions or issues during today's Webinar, please reach out to myself by sending a direct message to tech support in the chat box or by emailing info@advancingnutrition.org.

Next. If at any point you're unable to hear the speakers, check to make sure you've connected your audio by clicking on the headphones icon in your Zoom controls. Send a message as I mentioned in the chat box to everyone, to introduce yourself to all the other participants to send in your comments or questions for the panelists today, or again, to ask for tech support. In addition, please keep your video off and keep yourself muted while others are speaking during today's presentations and panel discussion. We thank you for your consideration.

Next slide. You will see that we will enable the closed captioning feature to start viewing subtitles on your screen during today's meeting, please click the closed caption icon and then select show subtitle. If you're unable again, to hear the presenters or see the presentations, please try leaving the meeting and joining in again using the link sent to you in your registration confirmation email for this Webinar or if you're not able to join through your computer, please call in to hear and continue participating using the phone number in the registration confirmation email. Finally, please note that today's webinar is being recorded.

All right, now it's my pleasure to introduce today's moderator Chris Voglian, from USAID Advancing Nutrition. Chris is a technical advisor with the Food Systems team at USAID Advancing Nutrition. He's a public health dietician who's working to further the field of agricultural nutrition and health to advance sustainable food systems in low and middle and high-income countries. Chris has given over 80 academic presentations, both domestically and internationally, published numerous peer-reviewed research publications, and has served as a research fellow for the Academy of Nutrition and Dietetics and Bioversity International. Over to you, Chris.

Chris Vogliano

Yes. thanks so much for the introduction Yaritza and it is an absolute pleasure to be here today. I know I'm personally and professionally so excited to be moderating today's webinar focused on sharing information around the updated IYCF and MDDW guides. I'm here to share information about data

collection used to calculate the indicators within these updated guides. We'll also learn about the importance of cognitive testing findings, as well as the importance of making context-specific adaptations to ensure accurate data collection. All that said we have a very exciting and action-packed agenda, so I would like to go ahead and get started.

I'm going to begin by introducing our first speaker, Vrinda Mehra. Vrinda Mehra is a physician and a public health professional with expertise in data analysis and monitoring of child nutrition. As a statistics specialist within the division of data, analytics, planning, and monitoring at UNICEF, Vrinda has led to the development, expansion, and maintenance of UNICEF's global databases on Infant and Young Child Feeding and contributed to the methodological work in this area, including the updated guidance on the IYCF indicators.

Before UNICEF Vrinda has worked with academic universities where she supported the evaluation of maternal, newborn, and child health and nutrition projects and published several papers, so we're excited to have you and, and over to you, Vrinda. Thank you.

Vrinda Mehra

Thanks, Chris. Good morning, good afternoon, and good evening to everyone. In this presentation today, I will provide a brief overview of the updated guidelines for measuring IYCF practices, including the recommended set of indicators and data collection methodology.

Next slide. To give some background, the expanded set of breastfeeding and complementary feeding indicators were first published in 2008 with an accompanying operational guidance document being released in 2010. Following the decade of experience with this original set of indicators, UNICEF, and WHO organized two technical consultations in 2017 and 2018, essentially to revisit and assess the existing set of indicators and propose additional changes and new indicators as needed. As a result, the updated guidance document was published in April 2021, which recommended a total of 17 IYCF indicators.

Next slide. The guidance document includes details related to indicator definitions, data collection methodology, it also provides example standard questionnaires which can be adapted to different country contexts and includes SPSS and data analytical codes. Next slide. Now I will briefly go over the recommended set of indicators which can be classified into four major categories. Category one as shown on this slide includes indicators which have been retained as before without any changes. These include a number of indicators, especially around breastfeeding, such as children ever breasted, early initiation of breastfeeding, exclusive breastfeeding under six months, so on and so forth.

Next slide. The next category of indicators includes those that are no longer recommended for data collection through household surveys and have been deleted in this updated guidance document. These indicators are no longer recommended either because they were difficult to communicate, difficult to interpret, or also they were hard to operationalize through household surveys. These examples—

Yaritza

Vrinda, you're on mute, sorry.

Vrinda

Can you hear me?

Yaritza

Yes.

Vrinda

Okay. Sorry. These examples include duration of breastfeeding, predominant breastfeeding, consumption of iron-rich foods, et cetera. Next slide. The next set of indicators include indicators that have a revised definition compared to those published in the 2008 guidance document. We now have an indicator assessing continued breastfeeding among children aged 12 to 23 months of age, which basically replaces two previous indicators that assessed continued breastfeeding at one year among children, 12 to 15 months of age, and at two years at 20 to 23 months of age.

Now this change was largely proposed to allow for sufficient sample sizes and make meaningful comparisons between different subgroups and subpopulations. Next slide. One of the biggest change in the updated guidance document is the revision of the indicator definition for minimum dietary diversity. As you may know, the previous definition required a child to eat foods from four out of seven food groups to meet the minimum dietary diversity and these seven food groups did not include breast milk. As a result, the previous definition favored or advantage the non-breastfed child as it allowed breast milk substitutes to count, but not breast milk and therefore the breastfed children did not receive a point.

Also at the global level, this definition was problematic as countries having a higher prevalence of breast milk substitutes ended up having a higher prevalence of dietary diversity as well. With this revision, breast milk is now included as the eighth food group and a child now only meets MDD if having foods from at least five out of these eight food groups. Next slide, please. The indicator definition of minimum meal frequency has also been revised. I would like to note that the definition in case of breastfed children remains exactly the same and the change is only noted in case of non-breastfed children.

As you can see on the right side of this slide, initially, as per the previous definition, the non-breastfed child could meet minimum meal frequency if they were having any combination of solid or milk feeds across the continuum and the extreme right-hand side, a non breastfed child, 6 to 23 months of age could be meeting minimum meal frequency only if they were consuming milk feeds, which is not a recommended practice. Next. However with this definition, the non-breastfed child now only meets minimum meal frequency if they have at least four feeds and one of those for milk or solid feeds is a solid semi-solid feed.

Next slide. Now, this slide is only for reference to make sure that changes in minimum dietary diversity and meal frequency have resulted in the revision of minimum acceptable diet. As you know that minimum acceptable diet is a composite of these two indicators and since the definitions of the parts of the indicators have changed, minimum acceptable diet has also been revised. Next slide. The next set of indicators are the newly recommended indicators among children under two years of age. One of the indicators is exclusive breastfeeding in the first two days after birth, which measures the percentage of children born in two years who were exclusively breastfed following two days after their birth.

Now, this is recommended as feeding newborns anything other than breast milk has the potential to delay their essential contact with the mother and establish breastfeeding over the long run. Next slide.

The next indicator is mixed breast and non-breast milk feeding under six months of age. It measures the percentage of infants under six months of age who are fed breast milk and formula or animal milk during the previous day.

This indicator is useful for advocacy by documenting the extent to which other milks are supplementing breastfeeding. Next slide. The guiding principles for feeding breastfed and non-breastfed children state that meat, poultry, or fish be eaten daily or as often as possible. As a result, the updated guidance now includes a new indicator assessing egg and or flesh food consumption among children 6 to 23 months of age during the previous day. Next slide. Another major update is the recommendation of the first ever set of indicators to assess unhealthy eating among children 6 to 23 months of age.

These include sweet beverage consumption, unhealthy food consumption, and zero vegetable or fruit consumption. Next slide. Sweet beverage consumption is being recommended as WHO guiding principles for complementary feeding advice against giving sweet drinks as they contribute no nutrients other than energy and may displace nutritious foods in this age group. Sweet beverages include commercially packaged or produced beverages such as soda pop, sport drinks, chocolate, and other flavored milks. I would like to note that it also includes 100% fruit juices as consumption of free sugars from 100% fruit juices has been shown to be associated with dental caries as well as fruit-flavored drinks.

It includes any homemade drinks to which any kind of sweetener has been added. Next slide. With dietary pattern shifting towards higher consumption of added sugars, refined carbohydrates, and unhealthy fats, there is now a recommended indicator to assess unhealthy food consumption among children 6 to 23 months of age. The idea here is to measure the consumption of selected sentinel unhealthy foods, which are most commonly consumed in a majority of countries. These include foods such as candies, chocolates, other sugar confections, frozen treats such as ice creams and gelatos, cakes, pastries, and other baked confections and chips, crisps, et cetera.

Next slide. The last indicator to measure unhealthy eating practices among children 6 to 23 months of age is zero vegetable or fruit consumption and it measures the percentage of children who did not consume any vegetable or fruit during the previous day. Next slide. Now in the following slides, I would be going through some details related to data collection methodology. Do note that all of these IYCF indicators are recommended through collection through household surveys only and not through any other means of data collection. The IYCF indicators that I just talked about are based on two types of recall events.

There are indicators that are based on recall of practices immediately following the birth of a child and these include indicators such as ever breastfed, early initiation of breastfeeding, et cetera. Here the respondents are women of reproductive age who had a birth in the last two years and questions are asked about all live births and it does not matter whether the infant was dead or alive at the time of interview. On the left-hand side is the standard recommended questionnaire that is included in this guidance document which helps to assess these indicators.

Next slide, please. The next set of indicators are the current breastfeeding and current complementary feeding indicators. These include indicators such as exclusive breastfeeding, minimum dietary diversity, continued breastfeeding, et cetera. All of these indicators are based on a 24-hour dietary recall, which is the recall of what a child was fed in the day before the survey, the last 24 hours. Now in this, a list-based method is recommended to record the beverage intake. We recommend the list-based method because beverages are easy to forget, such as a mother may not really recall water to be mentioned during surveys. However, foods fed to a child may be recorded using open or list-based recall.

What I mean by open recall is that a survey data collector would be asking a set of probing questions which would help the respondent to recall how the child was fed in the previous day. Whereas in list-based recall, there are a predefined set of questions and food categories that the surveyor goes through and then the respondent answers whether the child was fed foods in those specific categories or not. I would like to note that the beverage and food list must be adapted to represent the most commonly consumed items by infants and young children. These questions are asked to mothers or caretakers of all living children 0 to 23 months of age in a household.

Next slide, please. Again, this is for reference purposes but to show that these standard questionnaires are included in this guidance document. There is an example questionnaire based on open recall as well as an example questionnaire based on list-based recall or food groups. I think that's the last slide from my end. Thank you all. Next slide, please. Thanks. Over to you Chris.

Chris

Great. Thanks so much, Vrinda Brenda for that exciting update on the IYCF indicators. Our next speaker is Giles Hanley-Cook. Giles is a nutrition and statistics consultant in the food and nutrition division for the Food and Agriculture Organization of the United Nations or FAO. He is also a nutritional epidemiologist affiliated with the Department of Food Technology, Safety, and Health at Ghent University in Belgium. Giles was a lead contributor to the updated FAO guidelines for the measurement of the minimum dietary diversity for women or MDD-W indicator among women of reproductive age. Over to you, Giles.

Giles Hanley-Cook

Thank you, Chris, for the very kind introduction. Good morning, afternoon, and evening to you all. It's great to see so many colleagues joining from around the world. Today my presentation will focus on the minimum dietary diversity for women indicator. As Chris mentioned, this is better known as MDD-W and in particular on the recently updated MDD-W user guide and how to move forward with the indicator. Next slide, please. MDD-W was developed in response to the demand for a dichotomous indicator that reflects a minimally acceptable level of dietary diversity in the context of advocacy, efforts, and cross-sectoral communication.

MDD-W was validated to reflect dietary micronutrient adequacy among women of reproductive age and is defined as the proportion of non-pregnant or lactating women aged 15 to 49 years of age who consumed food items in a minimum quantity of 15 grams from at least 5 out of 10 predefined food groups the previous day and night. These healthy food groups include starchy staples, pulses, nuts and seeds, dairy, flesh foods, eggs, dark green leafy vegetables, other vitamin A-rich fruits and vegetables, other vegetables, and other fruits. Next slide, please. MDD-W data which consists of a numerating a minimum of 17 more disaggregated food groups is collected at the individual woman level. However, MDD-W is interpreted at the population group level. To clarify, a group of women of reproductive age with a higher prevalence of achieving MDD-W is a proxy of better dietary micronutrient adequacy among women of reproductive age in the population. Moreover, groups of women of reproductive age who consume at least 5 out of 10 food groups are more likely to consume at least one animal source food, and either pulses or nuts and seeds, and two or more fruit or vegetable food groups.

Next slide, please. Therefore, MDD-W can be used as a proxy to describe one important dimension of women's diet quality in national and sub-national assessments in both urban and rural settings in low and middle-income countries. Furthermore, due to the simplicity of the indicator, and the relatively low

additional resource requirements for data collection, MDD-W is suitable for integration into large-scale, multi-topic surveys such as the demographic and health surveys and Gallup World Poll. Moreover, MDD-W targets can be set and the prevalence of women of reproductive age achieving MDD-W can be compared to previous assessments as long as methods are consistent, and the timing of repeated surveys account for seasonality.

To illustrate the latter, the figure on the right represents data from a longitudinal follow-up study among women in rural Burkina Faso which shows the MDD-W prevalence so on the Y-axis can fluctuate substantially over the course of a year. MDD-W is also particularly relevant for monitoring and evaluation in the context of nutrition-sensitive policies, programs, and projects outside the health sector. For example, in agriculture, education, or social protection, especially when the design, activities, and the theory of change indicate a potential to increase women's dietary diversity. Next slide, please. Here we can see a brief overview of key milestones pertaining to MDD-W.

The first user guide was a result of the development and validation of the MDD-W indicator. As touched upon more recently, in 2021, the FAO updated its online available user guidelines, which include new evidence on the validity of proxy data collection methods. Over the course of the next two years, FAO will be advancing and expanding the uptake and evidence phase of MDD-W but more on that later. Next slide, please. Current and previous MDD-W guidance identified two data collection approaches for MDD-W namely list-based or open 24-hour recall.

Now, neither of these proxy methods required estimation of portion sizes although careful considerations are made with regard to the minimum 15-gram threshold for a food group to count towards the indicator. Both dietary assessments as many will know have their advantages and disadvantages. For example, an open recall is deemed more intuitive for the enumerator and the respondent includes probing questions and therefore likely leads to a more complete recall and includes information within food group variety. However, as compared to the list-based recall, it requires more proficient enumerators and longer training time.

It's also more challenging to program into computer-assisted personal interviewing software. Next slide, please. As far back as 2014, consensus was reached among global experts that evidence was required on the most complete and accurate data collection methods for MDD-W. The FAO received funds from the German Federal Ministry of Food and Agriculture to conduct research to fill this knowledge gap in Cambodia, Ethiopia, and Zambia. Research partners included Ghent University in Belgium, the University of Zambia, the Royal University of Agriculture in Cambodia, and the Ethiopian Public Health Institute.

Next slide, please. The preparatory phase of the study included collating information from existing local food consumption surveys, focus group discussions with key informants, local nutritionists, and health workers, and using seasonal calendars to identify the food items to be included on the food list for the list-based recall. For the open recall, capacity development workshops were held to train enumerators on the principle of not counting foods usually consumed daily in less than 15-gram edible quantities. In the context of this study, all dietary assessment tools were pilot tested among about 50 women in each country and subsequently adapted where necessary.

Next slide, please. To examine the measurement agreement between these proxy methods and the way food record which we use as the reference methods for individual dietary intake, a non-inferiority study was designed. On the first day of the study, weight food record data was collected for approximately 430 women in Cambodia, 430 women in Ethiopia, and 430 women in Zambia. The prevalence of women consuming individual food groups and achieving MDD-W was calculated. On the subsequent day, women were randomly allocated to receive either the open recall in the morning and the list-based recall in the afternoon or vice versa.

This was used to estimate MDD-W prevalence by the proxy methods on the date that the weighed food record was conducted. Next slide, please. This study indicated that the list-based method and open recall methods over-reported the proportion of women achieving MDD-W, this was by about 16% points from the list-based method and about 10% points from the open recall as compared to the weighed food record of course. Although the open recall performed consistently better in all three of our study countries, operationalizing MDD-W through proxy methods should always consider potential trade-offs between accuracy and simplicity and is dependent on the study setup.

Moreover, as will become evident in subsequent presentations, substantial efforts have already been undertaken to standardize and validate nationally representative food lists around the globe. Next slide, please. To summarize, FAO has updated user guidelines include recommendations based on the scientific evidence available at the time of writing and extensive inputs from the technical advisory group, global development partners, and current users via our listserv, so I can also advocate for everyone who's interested to enroll in at Listserv. A non-exhaustive list of key new features includes using computer-assisted personal interviewing in survey design and administration.

Guidance on how to manage, analyze, interpret, and present MDD-W data. The last but certainly not least, extensive guidance on data collection using the two non-quantitative methods. For the open recall, this includes training enumerators on the minimum 15-gram quantity threshold and the preparatory development of a food list to aid with categorizing foods into the correct MDD-W food groups. For the context-specific adaption of the list-based method recommendations are made to ask closed-ended questions without exclusion messages, and including only a limited number of foods per food group to minimize respondent burden.

Next slide, please. FAO recently received funding from GIZ to advance and expand the uptake of the MDD-W indicator. FAO's work will focus on two main components, capacity development, and generating new evidence. The former includes a forthcoming open-access course on MDD-W on the FAO e-Learning Academy. Whereas the latter aims to validate MDD-W food group cut-offs among other population groups and to use FAO's multicountry study data to investigate the sources of food misreporting from proxy methods. We hope FAO's efforts and those of other institutions help in achieving our common goal to improve dietary quality around the world.

Next slide, please. I warmly welcome anyone to contact me or my colleagues at FAO regarding their work related to MDD-W. Thank you very much for your attention. Back to you Chris.

Chris

Great. Thanks so much, Giles for the excellent overview, the updated MDD-W guide. As a reminder, if any guests have questions for the speakers, please place them in the chat. I'm now pleased to introduce our next speaker Sorrell Namaste, who is the Senior Nutrition Technical Advisor for the Demographic and Health Surveys program, or DHS, in which she provides technical assistance for the implementation of population-based surveys. Sorrell has experience in survey data collection and applied research with specific expertise in nutritional assessment. Over to you Sorrel.

Sorrel Namaste

Good day, everyone and thank you for the introduction, Chris. I'm happy to share with you today the results from our DHS pilot on cognitive testing of dietary questions. Next slide, please. For those of you who are not familiar since 1984, the DHS Program has assisted host countries in the collection, analysis,

and dissemination of data on population, health, and nutrition. Next slide. DHS has standard survey questionnaires which are revised approximately every five years to meet existing and emerging data needs while maintaining data quality. We have recently updated the DHS standard questionnaire that is used to collect data and DHS surveys.

We do collect all the IYCF indicators and as of this last round of DHS we also collect MDD-W and all forthcoming surveys. Next slide. Given that we recently made revisions to the questionnaire to inform whether this questionnaire was operational in the field. We conducted a pilot in Uganda. The aim was to cognitively test select questions on many different topics, including nutrition to pilot the new CAPI data collection application, and to explore procedures to support interviewer data quality. We also nested a study on hemoglobin measurement into the pilot.

For nutrition questions, we included five research questions in which we did cognitive testing. The first was on how does a short versus a long introduction for child and women dietary questions affect response processes in a multi-topic survey? The second question was why do respondents mention or not mention certain liquids or foods? The third question was, do respondents understand key terms and concepts for certain liquids and foods? The fourth question was, does social desirability bias influence how respondents answer certain questions? Then lastly, the fifth question was, are respondents able to identify and understand questions on nutrition interventions?

On this slide, those highlighted in red are where we made modifications to some of the DHS standard questionnaires, which you can find on our website. Today, I will be diving specifically into the dietary question findings. Our aim was for the questions to be both operationally feasible while still being aligned with the IYCF and MDDW guidelines.

Next slide. The pilot was designed to mimic a DHS-like survey. We performed approximately 1,000 questionnaires given to respondents in an urban part of Uganda. We then conducted 19 nutrition cognitive interviews with respondents, and we also held focus groups with the interviewers.

Next slide. I don't have time to get into all the findings, I'm just going to highlight a few for the liquid questions and for the food questions. One of the highlights for liquids was around yogurt. Prior to the new IYCF indicator guidelines, there was a single question on yogurt consumption. In a new guide, it was recommended to separate this into two questions, one on liquid yogurt and one on solid yogurt. The reason for this was the need to include a follow-up question on Sweden yogurt for the new indicator on Sweden beverages. What we found in the pilot was that respondents were unable to distinguish between solid and liquid yogurt.

A quote that represents this was, I don't know, it's difficult because it confuses yogurt. There's no yogurt drinks and yogurt. What we decided to do is to keep the liquid, so if we kept the liquid and solid questions separate, we'd actually end up doing double counting and this could have a large influence on the indicators. Thus, what we decided to do was ask one umbrella question on liquid and solid yogurt, and then follow-up questions are asked on whether it was consumed as a drink and whether it was sweet. Next slide. A highlight for some of the food questions that are being asked both for IYCF and MDD-W is on the use of an open-ended versus closed-ended format.

The open-ended format asks about a type of food followed by some example food items. The closed-ended format asks about a discrete list of food items. On this slide is an example of an open-ended versus a closed-ended format question. Just to note, this is all using the list-based approach not the open recall. If you asked a closed-ended question with the list-based approach, you would say, for example, banana, orange, tangerine, avocado, pineapple, apple, melon, or watermelon, and you would continue with the second question of guava, fene, soursop, owelo, jumbula, ejuga, or raspberries.

If you were to use an open-ended question for asking about other fruits, you would say any other fruit, such as banana, orange, pineapple, watermelon, owelo, or other fruit. There are pros and cons to each of these approaches. The main benefit of the closed-ended approach is to avoid misclassification of foods. However, underreporting can occur if the question does not include all the food items consumed by the respondent. The open-ended format has the advantage of reducing survey burden because the closed-ended format often requires more questions to capture the commonly consumed food items.

An example of some frustration by our interviewers is they reported that with so many liquid and food questions you're just having to say no, no, no, and the questions just keep coming. Next slide. To better understand these pros and cons during the cognitive interviews, we asked respondents the open-ended questions for dark green leafy vegetables, other fruits, and other vegetables. They were then asked what food items they would think of when asked this question. Out of 19 respondents, this table shows in the top row, the number of respondents that named foods that were directly in the question asked.

The second row shows the number of respondents that named food items that would correctly belong in this food group but were not listed in the actual question. The third row shows the number of respondents that named food items that do not count in the food group. The second row could indicate that some foods may be missed in the closed question format. The third row indicates an issue with misclassification. For instance, a few respondents reported cabbage for dark green, leafy vegetables, and a few respondents reported sugarcane for other fruits. The misclassification was especially high for other vegetables.

However, how the questions are ordered in the questionnaire may reduce this misclassification. Most of the other vegetables reported by respondents were already asked earlier in the questionnaire as part of the vitamin A-rich food group questions. Definitely, there's further research that is needed on this to weigh the benefits of using the open versus the closed question format. What did DHS decide when weighing the evidence for our surveys? We decided to retain the open-ended questions for all the vegetable and fruit questions.

This was really driven by the importance of keeping the length of the survey manageable in a multi-topic survey where we have around 700 questions being asked of respondents and also wanting to avoid inflating the new zero fruit and vegetable consumption indicator that has been released by WHO and UNICEF for children. Next slide. Another interesting finding for closed versus open-ended questions is for the sweet food question that is used in calculating the new unhealthy foods indicator.

We found that respondents in Uganda frequently misreported fruit when this question was asked using an open-ended format, which does not count as unhealthy food. DHS decided to use a two-part closed-ended format to address this. Next slide. Social desirability bias was looked at for liquids other than breast milk consumed in the first two days of life, soda consumption, and meat consumption. Results were mixed on all three topics. For instance, one respondent said, "Yes, they'll say the truth because no one forced them and it's not a crime." Another respondent said the opposite, "No, because people don't want to say that their children take soda."

The issue of social desirability bias can be addressed through building interviewer respondent rapport, and can also be taken into account when interpreting the indicators. Next slide, please. What were our key takeaways? We found conducting cognitive testing to be critical in informing survey question-wording. Revisions to questions were made, especially for the questions that are used in the calculation of the newer dietary indicators around the unhealthy eating and drinks and also the zero fruit and vegetable consumption. We really hope more research in diverse settings will be conducted on this topic and that there's an overall uptake of this type of research for questions on other topics.

I think that often we really don't think about how the data is being collected. We really are just focused on using the data and I think a really rich area for research to really improve the valid of what we're collecting would be to focus more on the implementation of the surveys themselves. Next slide. Before I hand it back over to Chris, here are some resources available on the DHS program website. Information on the status of DHS AID surveys is available. You can see when data will be released on the new IYCF indicators and on MDD-W for a given country.

It takes about two years to do a DHS survey, so it's going to be a little while until you start seeing the MDD-W, but it will be coming out increasingly the next couple of years. We also have a tool called STAT compiler, that you can use to build custom tables, charts, and maps from thousands of indicators across 90 countries, based on DHS data. We have revised STAT compiler to align with the changes in the global guidelines for the IYCF indicators. You can also access DHS data collection tools, which we do regularly update. One of the tools is the DHS standard questionnaire, where you can see the modifications from today's presentation reflected.

Lastly, we have a free eLearning course on nutrition indicators collected in DHS surveys. You can register for this course on our website, and upon completion receive a certificate. Next slide. Thank you for listening. I'd love to hear from any of you, so just reach out via email.

Chris

Great. Thank you so much, Sorell. Very interesting findings of the cognitive testing. Thank you for that overview. I'm now excited to introduce our final speaker, and following our final speaker, we will have time for Q&A with all four speakers. Please continue to add your questions to the chat. Our final speaker is Anna Herforth. She is the Principal Investigator of the Global Diet Quality Project, building survey tools and indicators for diet quality monitoring. As a senior research associate at the Harvard Chan School of Public Health and a visiting senior researcher at Wageningen University and Research.

Within this project, she has developed and led the adaptation of survey questions for use in the collection of data to formulate the IYCF and MDD-W indicators, a process I personally have been involved with working on question adaptations in many countries. This is an opportunity to share that the Diet Quality Questionnaire or DQQ used to calculate the MDD-W has been launched on the Global Diet Quality Project website. Now the companion questionnaires for the infants and young children are coming out soon, and we will see some examples of those today. Over to you, Anna. Thanks.

Anna Herforth

Thank you very much, Chris, and everyone for the opportunity to contribute to this really important webinar and discussion. I'm going to pick up right where Sorrel left off, on how adapted survey questions result in more consistent and accurate data for the indicators as defined in the measurement guides we've heard about. Sorrel talked about cognitive testing results from one country in Uganda, and in this effort on global adaptation, we have many, many more examples similar to the findings that Sorell presented from the Uganda setting. Often the cognitive findings can be different when you talk to different people in different places. I'll share some of those today. Next slide.

The Global Diet Quality Project has undertaken a comprehensive and consistent effort to produce adapted list-based questions and ready-to-use questionnaires to collect accurate, valid, and comparable data for the MDD-W, also for the WHO healthy diet recommendations, which we're not talking about

today, but are important for risk of non-communicable disease from diets and for the WHO and UNICEF IYCF indicators in the new questionnaires that are just coming out, as Chris mentioned.

Next slide. Why was this effort needed to undertake these adaptations instead of just leaving adaptations up to everyone to do for themselves? One reason is that open recall as has been discussed is just not an option for many users. Sometimes it is an option, but when there are not trained nutritionists in a given setting, such as in agriculture programs or if it's a large-scale survey such as the DHS, the Gallup World Poll, and other national surveys, if we're talking about countries taking up the MDD-W measurement in their own surveys, sometimes the open recall is not an option. It requires adaptation of the list-based questions, but that really requires a lot of expertise.

It's not a trivial thing to do. It requires not only nutrition expertise, but also survey design expertise in designing questions that everyone understands in the same way that don't cause confusion, and that requires local knowledge and cognitive testing in smaller or larger ways. We've done a comprehensive and systematic adaptation for each country that this has never been done before. What we have in the example questionnaires that are in the guides are very helpful. Often those questions are best guess formulations for what is thought to represent the food group but without the benefit of country-specific adaptation built-in.

We have undertaken this effort to move towards an evidence-based adaptation for each place informed by many key informants from each country. Next slide. To give an example of a standard best guess question formulation, this is one of the MDD-W questions, which was published in the previous MDD-W guide before the FAO revision. The best guess question for vitamin-A-rich fruits was, yesterday did you eat any fruits that are dark yellow or orange inside like ripe mango or ripe papaya? We did cognitive testing on this in several country settings, but also a couple of weeks ago asked this very question to a group of nutrition practitioners and followed up to say, if you said yes to this question, what was the item that you ate?

Next slide. What we found was that even among practitioners who are familiar with MDD-W, we got a variety of responses. We did get correct answers, mango, papaya, passion fruit, which also fits in the category. We also got a number of incorrect responses. Oranges makes a lot of sense to answer this question, that way, even light yellow fruits like apples, pineapple, and then carrots, which is orange, but not a fruit. For this reason, this was a really big learning of when open-ended questions are asked, you are relying on the interpretation of the respondent.

This is why as Giles mentioned, the FAO guide recommends the use of sentinel foods and closed-ended questions to limit the misclassification and ensure that everyone understands the questions in the same way. Next slide. This is another example of a standard best guess formulation for the IYCF indicators, on the milk question, yesterday did the child have milk from animals such as fresh, tined, or powdered milk? What we see is that this question works as intended in some settings, and in other settings, it doesn't.

In several places, powdered milk tends to mean infant formula, which is not intended in some places tined milk t has all kinds of meanings in different places, sometimes as intended, sometimes infant formula, sometimes sweetened condensed milk, which should be excluded from the category, sometimes just simply not understood. Milk from animals also sometimes cause problems and confusion. It was meant to separate plant milk, but sometimes those are just not available or are known at all. This standard best guess formulation also requires adaptation.

Next slide. We have had the generous support of USAID, and the EC and BMZ, and GIZ to talk to people. Literally, we've done Zoom calls all around the world to talk to people and adapt the questions, ensuring consistent meaning and comprehension of making these question adaptations available to

everyone to ensure consistent implementation of data collection when using the list-based approach. We did this both for adults to measure the MDD-W and other diet quality indicators and also for IYCF.

Next slide. We took a standard approach to the adaptation process. You can find the standard approach described on the website dietquality.org, and the approach is aligned with the two guides that we've heard about. It's aligned with the FAO MDD-W guide and also the UNICEF, and WHO IYCF indicators. Our purpose in these key informant interviews, which we did was to identify the country-specific liquid and solid foods of the most commonly consumed items in each place called the sentinel foods that represent the vast majority of people consuming the food group, and also, how they're called so that we use the right terms when we are talking about specific food items that we mean to everyone to understand in the same way. We also do probing about foods that are likely to have been consumed in amounts less than 15 grams. We have a standard approach to treating inclusions or exclusions. When an item is likely to be consumed by most people in a small amount, we would simply exclude it from the question.

The process is that we start with desk review using surveys that have been previously done to start identifying country-specific food items that we call a zero draft. We then take this to key informant interviews, ask for feedback, ask a lot of probing questions, and then at the end, underwent a process of harmonization across regions to ensure that we don't miss items just because of different processes in different countries that we follow up on any items that came up in neighboring countries and make sure whether they should be included or not in a specific place. Next slide.

When we conducted the key informant interviews, each interview took about an hour and a half and involved really a form of cognitive testing in each place. For example, we would often have a draft question and check it. For example, if I said, "Yesterday did you have noodles," and you had pasta, would you say yes to that question, or do we need to add the term pasta? Is that a different food item, so that it's clear we're including it?

We would pretend that we're an alien dropping down into the setting and just ask, "What is cheese? When I say cheese, what does that mean?" In Cambodia, the answer to that question is not a dairy product. It's something else entirely that's made from fish, most commonly, and so we need to check our own assumptions about what we think the item means and ask people what they hear when they hear the item.

We ask people if they understand common terms. Infant formula is one that we may think everybody understands but it is not the case, and people call that different things. Again, the issue of excluding foods consumed in small amounts. We do careful testing to exclude those foods so they're not reported in the list-based approach. Next slide.

We then, at the end, again, went through this process of harmonizing the food items that we identified across countries. This is just an example pulled from our-- We mapped out different food items that came up within each region, so here we see the Central African region, and checked that in the same region we'd made sure to ask whether common food in neighboring countries was present or not.

Not all countries have the same foods, obviously, that's why we do the adaptation. Just to make sure we had not forgotten or missed something. If something was coming up in all the neighboring countries, we'd go back and check, is this really not present, or did we just forget to talk about it? Make sure that the food items are harmonized across countries. Next slide.

This overall process was really a collective global effort. It was an inclusive and participatory effort including over 750 key informants around the world. Overall, it took more than 2,400 hours, 300 days of person time to adapt and harmonize these food lists for 105 countries carefully and consistently. This

effort was done with a lot of collaboration from DHS. Thanks to **[unintelligible 00:54:04]** from FAO, WHO, and UNICEF, who a lot of in-country people either themselves were key informants or recommended their contacts. Several other organizations helped to have the correct helpful contacts in each country to adapt these questions. We could not have done it alone, very participatory to get the local knowledge that was needed. Next slide.

All of this systematic work to produce the country-adapted questions have resulted in diet quality questionnaires, which are available for anyone. They're ready-to-use questionnaires that can be downloaded. We have the diet quality questionnaire, DQQ, for the general population, which can be used to calculate the minimum diet diversity indicator for women. Then the companion IYCF questionnaire, which has the same food items for aligned data across the life course, plus the additional questions or the additional complementary foods that are common and necessary for the IYCF indicators. Next slide.

All of the adult questionnaires are available for download at dietquality.org. Next slide. These were launched in December at the Nutrition for Growth Summit. If you go to the middle button on DQQ tools and data, you will find the list of countries and be able to download the adapted questions. Here's an example from Ethiopia. If you go to the purple tab on diet quality indicators, it shows you how to use the questions to calculate the indicator. Here are which question numbers to add up to come up with the MDDW. Next slide.

We have also just posted some initial country adaptations for the IYCF questionnaires here. Next slide. If you go to the DQQ tools and data, you'll find them. In the next slide, you can see an example of the IYCF questionnaire, which is again for Ethiopia. You'll find that they have the same food items for the food groups. Then, in addition, there are all of the IYCF-specific questions. Previous slide, please. You will see in the first several questions we have, they're numbered in the same way. I think we went by them, but it's okay. They're all numbered. You can find them on the website. They're numbered in the same way, previous slide, please, as the IYCF guide from WHO and UNICEF. You can use those numbers to calculate the IYCF indicators. You can go to the last side now.

There's a bit of a delay. Sorry about that. I just want to say a big thank you to our funders and collaborators. Especially, I want to thank the really amazing adaptation team who's done so much effort to ensure we heard everyone's voice in coming up with these questions that we treated them in the same way. Thanks to Chris, Kristina, Betül, Andrea, Cecilia for all of your work on the adaptations and our global network of key informants. Some of you I see here on the call, I recognize your names from helping with the adaptations, so big thank you to all of our supporters who made this possible. Thanks a lot. Back to you, Chris.

Chris

Great. Thank you so much, Anna, for that wonderful overview of the DQQ. Such exciting presentations and an action-packed hour. Now it is time to transition to the panel discussion. For this portion of the webinar, I invite Vrinda, Giles, Anna, and Sorrel to start their videos. Over the next 25 minutes or so, I'll be posing a series of questions to our panelists. If there's a question anyone in the audience would like to ask them, again, please add that to the chat and mention the speaker's name by the question. It looks like everyone's on video. Great.

The first question we have is for Vrinda. Given that the indicator definitions of several existing IYCF indicators have been revised in the updated guidance, what are the implications for comparability of data over the years, and how can we address them? In addition to that, there's, I'm trying to combine a few

questions here, what would you advise regarding the comparisons of the IYCF indicators of the 2010 and 2021 guidelines for MDD? Over to you, Vrinda. Thank you.

Vrinda

Thanks, Chris. Yes, as I mentioned during my presentation, a number of indicators have been revised, but the good news is that they do not require any additional data element to be collected. All of the indicators can be actually reassessed and recalculated from the data that has already been collected throughout these surveys.

To just put it in perspective, for MDD, the additional food group is breast milk. Even in the 2008 questionnaires and the surveys that have followed since then, the status of breastfeeding status was always collected in household surveys with a question about, was the child fed breast milk yesterday? We could use that question to recalculate MDD based on this new definition and actually all of the UNICEF global databases which are housed on data.unicef.org have actually recalculated and we have country-level time trends for all of these revised IYCF indicators on our website, and countries can go look at their estimates based on these revised definitions. Thanks.

Chris

Great. Thanks much, Vrinda. The next question we have is for Giles. What are the remaining evidence gaps related to the MDD-W?

Giles

Thank you. I think I touched upon them briefly in my presentation that I think there is some need to validate food group cutoffs among other population groups to expand the use of MDD-W beyond nonpregnant and lactating women of reproductive age. I know there's ongoing efforts from other institutions to validate MDD-W among pregnant women, among preschool children, and also potentially among adolescents. I also saw on the chat that there was someone interested in men. I think this is also indeed a population group that could be assessed with-- the data that's necessary is out there I imagine.

I think also there would be some research needed on synergies between indicators, so potentially, how could the Food Insecurity Experience Scale, FIES, does that capture similar people? I think that would be another interesting research topic to look if there's complementarity, synergy, or overlap between indicators. I think also, with the wealth of data on MDD-W that will be coming out of DHS but also other large-scale surveys, I think there's some need to also assess how sensitive MDD-W is to change. I think also the Ukrainian war is an example of how something like an MDD-W indicator could be looked at to see if it captures changes in diets across time.

I think also an interest would be about sources of bias because I know Anna's done a lot of work on that. I think FAO's multi-country study could also be used to assess is there some confusion based on particular food groups? Are people reporting food items they didn't consume? Were there some food items included on food lists that led to this misclassification? I think those are four key points that I think work could be done on. Thank you.

Chris

Great. Thanks so much, Giles. The next question we have here is for Sorrel. What is the DHS process for using the adaptations that have been developed through the Global Diet Quality Project? Oh, you're on mute, Sorrel.

Sorrel

Thanks, Chris. That's a great question. The work that's been done through the Global Diet Quality Project has brought us leaps and strides beyond how we used to do adaptations. The DHS used to do some adaptation to the questions, but it was really a few words here and there, talking to maybe one or two nutritionists when we were designing the questionnaire adaptations. DHS surveys typically have limited adaptations. You might change a certain drug or a vaccine schedule. For nutrition, we were also doing limited adaptations. What Anna's work has allowed us to do is to really bring in these very in-depth key informant interview information and use those adaptations going forward.

We don't use the exact same adaptation that's done through the Global Dietary Quality Project. We take a modified version of select questions from the Diet Quality questionnaire. We then share that adaptation with our implementing agency that we are working with for that country and they'll provide further feedback on that adaptation. We often go back to Anna to discuss those recommendations and then if needed, we do make further modifications to the adaptations. In some cases, we also make changes at the survey testing. We do a pretest design phase and also sometimes at the training stage as well. Thank you.

Chris

Great. Thanks so much, Sorrel. Next question is for Anna. Anna, is it valid to ask only about a short list of foods and the adapted questions, and doesn't it leave out some foods that some folks might be eating?

Anna

Yes, thank you. It does leave out some foods that people may be eating and that is okay. We want the questions with the sentinel food items to capture the majority of people who consume the item in the food group. Remember, we are doing a population-level indicator of food group consumption to construct high-quality indicators. We want to include the items which are most commonly consumed and capture the vast majority of people in the setting that have consumed anything in that food group.

Just to take an example, I'm sitting here in the United States, in the US. If we want to measure the white starchy roots and tubers category, there are many different white starchy roots and tubers, but if we simply ask about potatoes, did you eat potatoes yesterday? We capture over 95% of people in the United States who had any item in that category. Just using that as a principle, in each of the food groups, there is a relatively short list of food items that capture almost everybody. In some food groups, it's larger than others. In those fruits and vegetables category, we have had to use more than one question to include all of the most common food items, but in the other food groups, seven or fewer items generally captures almost everybody.

We have looked at this using dietary intake data from several countries. One example that is published is the study from China, which I am putting in the chat. China is a very diverse, very large country where

we were concerned that is it possible to capture what most people eat in the country in a short question? In fact, it is, and we see this in the data. When we look at the cumulative percentage of people who had the food group after a short list of food items, it does capture almost everyone and in almost every province as well. You can read that evidence there in the paper. We are trying to reduce the misclassification it seems to be feasible to do. Thank you.

Chris

Excellent. Thanks for that. Great answer, Anna. The next question we have is for Vrinda. We know that infants move in and out of exclusive breastfeeding through the first six months of life. This would not be captured with data from only yesterday. Is there any discussion on capturing this fluctuation?

Vrinda

Thanks, Chris. I would just like to say this question about exclusive breastfeeding has been repeatedly asked, and we understand that it is a proxy to assess the practice of exclusive breastfeeding in the last 24 hours, and in some cases, it may over-represent or under-represent based on how the child was fed yesterday.

I would like to note that questions that are based on retrospective recall and would be asking questions about at what stage the child stopped breastfeeding and at what stage or at what age the child first was introduced to anything other than breast milk, these are the commonly used retrospective questions that we have seen in different types of surveys. When we looked at the data, they are associated with a very big data heaping, especially on completed months like three months, six months, which, of course, brings the validity and the precision of that estimate into question.

Also, at the global level, we have UNICEF and WHO have established an independent group of nutrition technical advisors, which advice on nutrition monitoring at all levels. We had brought this question even in front of that group, where we had taken an exercise to look at exclusive breastfeeding estimates based on retrospective recall, and the decision and the consensus from the group was to go along with this current indicator, which although is a proxy but uses a slightly lesser recall period of just 24 hours. Thank you.

Chris

Great. Thanks so much, Vrinda. So many good questions. Hopefully, we get to them all. Giles, this one is for you, a question on the MDD-W. It the MDD-W better at detecting a dietary micronutrient inadequacy for certain micronutrients and worse of for maybe other micronutrients? If so, what micronutrients are more difficult for the index to detect inadequacy? Combining that with another question that an audience member asked, how can we evaluate the vitamin A status with this indicator since this vitamin is very important for our country? Over to you, Giles.

Giles

Thank you for those great questions. Diet Diversity for Women was actually validated for overall micronutrient adequacy of the diet. That's really the premise behind Diet Diversity is not to maximize a single micronutrient, but to really diversify the diet for the range of micronutrients to be consumed.

However, I am aware that this was actually assessed by micronutrients but maybe I'd like to take that question offline and maybe present some documents. I think this was done during the very first phase of the MDD-W development and validation.

Going back to the vitamin A again, the 11 micronutrients which MDD-W was combinedly validated for what all determined as being key micronutrients that were inadequately consumed in low and middle-income countries which included vitamin A. However, I think it was quite clear that some food groups like the vitamin A-rich fruits and vegetables, of course, are included in those 10 fruit groups because they are likely to contribute to maximizing the intake of vitamin A for example. I don't think the idea behind MDD-W, this is, of course, my opinion, is to really look at one specific micronutrient. It's really to improve dietary diversity and then the associated micronutrient adequacy over the 11 micronutrients that were included in the validation. I hope that answers the question.

Chris

Yes. Thanks, Giles. This next question is actually for Vrinda and Giles so maybe we can start with Vrinda and then follow up with the Giles. Is there a recommended time and space between data collection for the IYCF and MDD-W? Is it annual, every two years, more than two years, and also, do you have recommendations on the best season to collect these data? For example, during the lean season or during times of abundance. Over to you both, thanks.

Vrinda

I'll go first. Just to note that the IYCF guidance document does recommend a periodicity and that periodicity is about three to five years because we do not see these estimates of infant and young child feeding practices changing on an annual basis or at a much more rapid basis, so it is three to five years.

Just in terms of seasonality, again, the guidance document does note that seasonality may have an effect on the type of food groups that are available but we do not recommend a specific season, whether it's in season. The only thing to make note of is that when you are planning surveys at country level, caution should be taken that you are planning a during the same time each time you have a survey or when, or if that's not possible to adhere to the same calendar events, then you while interpretation of data, you take that into account that seasonality may have an effect and may be able to explain a higher or lower prevalence of MDD. Over to you, Giles.

Giles

I have quite little to add to that because I think it's very similar to what MDD-W proposes apart from that there is no specificity on how long the timeframe should be between every round for MDD-W because we recommend that it still really depends on the study objectives, for example, a baseline, and end-line survey. However long that is, the timeframe between that I think we don't specify exactly how long that should be, but indeed, ideally, you would collect data, if possible, at the national level across seasons for repeated survey round. If that's not possible, indeed, it's very key to collect data within the same season because there's ample evidence that data diversity does fluctuate across lean and plenty seasons but I don't have much else to add to that.

Chris

Great. Thank you. Next question is for Anna. One audience member was wondering if there are plans in the future to improve the diet quality questions to capture the amount of foods rather than just yes or no, so rather than just qualitative being quantitative. Over to you Anna?

Anna

That's a great question. Of course, right now, the way the indicators are constructed that we've talked about, they are just yes or no questions so that we use the food groups in order to create indicators of diet quality without looking at quantities. However, there is some work that is going on in terms of how in some cases, food group diversity can actually proxy for quantity. In a similar way, as food group diversity in the MDD-W proxies for quantitative nutrient intakes, we're also looking at that concept in terms of fruits and vegetables.

We have some preliminary validation results in a couple of countries that in the DQQ, there are six different fruit and vegetable groups which get collapsed into MDD-W groups. For example, if you were to consume three out of the six groups, it may be more likely to have consumed the minimum of 400 grams of fruits and vegetables recommended by WHO. That requires ongoing validation but that's some initial results. We have a similar validation study going on for sweets.

There are a number of sweet food and beverage items in the questionnaires.

If there's two out of five of those items consumed, it may be more likely to have exceeded the dietary recommendation, the guideline from WHO on limiting sugars to less than 10% of dietary energy. We are looking at diversity of food groups as a proxy for other quantitative elements of the diet and there will be more work to do, much more research to develop that. Thanks.

Chris

Great. Thank you, Anna. The next question is for Sorrell and maybe Anna too if you'd like to add on. The question is around how to handle mixed dishes within data collection. The participants said in some areas food groups aren't consumed individually. Any thoughts on how to measure MDD and MAD using mixed dishes? Thank you.

Sorrel

It's a great question. We did look into this some during cognitive testing. It's very hard for respondents to understand this. We do have, in the introduction to the dietary questions, instructions to count anything that was included in a mixed dish when the questions are asked. Then how it's handled in the adaptation, and I would love Anna to add on to this, is we really take out those main ingredients and put them into the adaptation and essentially ask the respondents to report if they had something that was in that dish within each of those questions. I don't know if Anna you have anything you'd like to add to that?

Anna

Yes, we did like you said Sorrel, the instruction includes instructions for the respondents to consider items that are in a mixed dish and not only by themselves, so we do rely to an extent on understanding that instruction. In some cases, the adaptations will specify specific formulations of foods that may have been forgotten. Maybe instead of saying chickpeas, we might say chickpeas or hummus. Or instead of saying just red bell peppers in one country where it's used in a paste similar to hummus where red bell peppers or harissa in certain countries.

We try to get at things that could be easily forgotten, but otherwise, it's one of the challenges of trying to get a snapshot of what people are eating. There is going to be misclassification and questions in any survey research questions. We just try to minimize it and get a pretty good pulse on what the food groups that are consumed and remembered. Thanks.

Sorrel

I think just maybe to add exactly to what Anna said, I think we're so worried about getting it exactly right and the fact is food consumption patterns are complicated. Not only do we have culture diverse settings, but even what one individual eats in one setting is a complicated thing to capture andso we have to recognize that really this is a proxy for what's going on and it's probably a pretty good proxy. We are able to look at things over time and between countries and within a country but you're not going to get perfectly what people eat through this survey-based method. If that's what you're looking for, then you're really looking for different types of research studies and applications. Thanks.

Chris

Excellent. Thank you both. The next question is for Vrinda and Giles. Maybe we can start again with Vrinda and go to Giles following. Do you recommend distinct analysis for list-based versus open recall? They can give potentially different results since one includes suggestions. Over to you, Vrinda.

Vrinda

Right now, we don't have a lot of studies. Yes, there is anecdotal evidence that maybe asking questions based on open recall and less based recall may result in slightly different estimates but there are not a lot of rigorous research studies that have evaluated that. In terms of data analysis, we still prescribe the same standard methodology because at the end of the day, those are analytical codes and you are looking at the percentage of children who had foods from at least five out of those eight recommended food groups. I would say at the level of data analysis, there is no difference. Thanks.

Giles

I agree. At the level of data analysis, there's no difference. With MDD-W as described in the updated user guide, a lot of the priority phases of both list-based and open recall are quite similar in the sense that what is suggested is that there's not a need to do a lot of post hoc classification of food items into the food groups by external people that, of course, in the large scale survey you would like the enumerators themselves if you're using open recall to be able to do that.

Actually, there's a suggestion that you already developed extensive food lists and that enumerators are trained on the idea of the usual amount should be above 15 grams or equal 15 or more grams for a food item to count. In that sense, there's no difference in the way the data is analyzed. The only difference, of course, with the open recall, is that you have the availability to look at which food items were consumed within a food group. Whereas of course with the list-based where you have a yes or no, it's really more general and specific to the food group. Otherwise, there's very little difference between the two methods in that sense.

Chris

Great. Vrinda, just a quick question for you around Plumpy'Doz, the food take. In some settings, the supplement the Plumpy is the only food taken by children 6 to 23 months in some targeted districts. Where does this food Plumpy'Doz fit into the eight food groups?

Vrinda

Sure. Thanks, Chris. It is similar to what Sorrell and Anna were talking about in terms of mixed dishes. The idea is that any type of supplementary food aid, aid items, or food supplements that governments may be giving out at the country level, they should be categorized based on their primary component. For example, if Plumpy'Nut is peanuts, so it'll go into the pulses, nuts, and seeds category. If in some other places that is more a starchy staples cereal-based supplement, then that goes into the cereal category. At the end of the day, again, these supplements should be categorized based on their primary component and categorized as such in those food groups. Thank you.

Chris

Great, thank you. This question is maybe for anyone who wants to answer. How's that? It's actually around the 15-gram topic together with the IYCF and MDD-W and potentially, with Sorrell and Anna's work. How is this measured and what is the rationale around the 15-gram consumption? Let's start over here and maybe if we want to start with Vrinda, that's okay with you?

Vrinda

Sure, I can go first because for me it's easy. For IYCF children under two years, there is no minimum quantity required. Any quantity or food counts more so because there are research studies that show that having a cut-off of a minimum quantity does not really improve the score that is the dietary diversity score. At least in that younger children age group, there is no minimum food count that is being recommended.

Chris

I agree. Giles, do you want to add to that?

Giles

Yes, the minimum 15 grams is really an artifact of the validity studies that were done from the MDD-W in that sense that consuming anything below the 15 grams was artificially inflating MDD-W data diversity scores so that they didn't have strong test characteristics that was the MDA so the mean probability of adequacy which was the outcome of that study. They really just through validation found that exclusion of foods that are consumed more as condiments or should really improve to predict the performance of the data diversity score.

Now, I know this has then led to a lot of issues, indeed, in how to operationalize that but it is necessary to really exclude. During, of course, list-based development which I'm sure Anna will elaborate on, and also during the open recall methods it is specifically mentioned that this is something that should be explained to enumerators when an open recall is given, that you shouldn't count food items that are usually consumed in small quantities in that setting. Then of course, on the list-based method, there should be no food items included in the food group list that are usually consumed in small amounts. I think this is really where that came from. Yes, it's difficult to work around but it was a validity study, and that's what came out.

Chris

Thanks, Giles. Sorrell and Anna do you have comments?

Sorrell

Based on the Uganda cognitive testing, we looked into it and we do include instructions on this, again, before asking the questions and we found participants vaguely understood the concept of condiments. The issue, however, though, was their judgment on what qualifies quantities was really not well understood whether it was one little bite or whatnot. We really didn't see a way to get around this other than, again, through the adaptations and then also recognizing that there's going to be some error inherently in what's being collected. Over to you Anna.

Anna

To elaborate on that, again, in the instructions, if you tell people, "Please don't include things consumed in small quantities," you're again relying on their judgment on what does that mean? Which is going to be understood differently. One way we get around this in the list-based method is to simply not include things that are consumed in small quantities.

For example, what we see, and this is one of the reasons to use standardized adaptations because if there's an issue, it's not a trivial process to do a good adaptation. What we've seen a lot of times in say for the other fruits category that people would suggest or report, lemons. Lemons are another fruit but usually, in most places, lemons are not consumed as a fruit that you eat whole in a large quantity, it's rather a flavoring. In the list-based questions we just simply do not ask about lemon, and then people will not report it.

We do deal with the 15-gram issue in that way. We cannot deal with the 15-gram issue in foods such as carrots where you could eat larger than 15 quantities, or you could have it as an ingredient in a stew and it turns out to be a low quantity. We're not going to exclude carrots just because sometimes it's

consumed in small quantities. We only exclude foods that are almost always consumed in small quantities. The issue still remains but it is mitigated by the adaptations excluding typically small amount foods.

Giles

If I could just add to that as well, some work that we've done has also shown that a lot of the error is just inherent also to the fact that it's a recall, people reporting things that they didn't consume at all. This is also not just a problem with the development of the list-based method or all the open recall, it's also inherently the fact that people sometimes just report or misreport food items that they consumed which we cannot remove at all even if we develop better tools.

I think this is also important to know that a lot of focus is always put on that minimum quantity, but in fact, like Anna said, if you develop things well, this can I think be removed. Quite a lot of that error can be removed, but social desirability or social approval bias during enumeration cannot or can be limited but it's always going to be there and these are proxy tools so we'll always have these errors.

Chris

Great, thank you all, and that's a good final question to end on. We are at time. I wanted to thank all of our speakers: Vrinda, Giles, Sorrell, and Anna for providing their expertise over the last 90 minutes focused on the updates of the IYCF and MDD-W guides, cognitive testing findings, and importance of context-specific adaptations. There's a lot of information shared as we know, so please feel free to revisit this webinar after today's event, the link will be provided shortly.

I also wanted to thank the webinar organizers for their hard work behind the scenes and to all the participants who joined from around the world who are willing and able to join us for this exciting presentation today. The event has now officially come to a close and thanks, everyone, so much.

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