The Eighth Meeting of the WHO-UNICEF Technical Expert Advisory Group on Nutrition Monitoring (TEAM)

Meeting report

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Acronyms

ANC	Antenatal care
Data-DENT	Data for decisions to expand nutrition transformation
DHS	Demographic and Health Surveys
GINA	Global Database on the Implementation of Nutrition Action
GPW	WHO General Programme of Work
GNPR	Global Nutrition Policy Review
GNR	Global Nutrition Report
GNMF	Global Nutrition Monitoring Framework
HMIS	Health management information system
IFA	Iron and folic acid
IFPRI	International Food Policy Research Institute
IHME	Health Metrics and Evaluation
IYCF	Infant and young child feeding
JME	Joint child malnutrition estimates
LMIC	Lower-middle income country
MAD	Minimum acceptable diet
MDD	Minimum diet diversity
MICS	Multiple Indicator Cluster Surveys
MIYC	Maternal, infant and young child
MMF	Minimum meal frequency
M&E	Monitoring and evaluation
NCD	Noncommunicable diseases
NIPN	National information platforms on nutrition
NIS	Nutrition information systems
NI	Nutrition International
NIMS	Nutrition Interventions Monitoring Survey
NNS	National Nutrition Survey
PMA	Performance monitoring and accountability
SAM	Severe acute malnutrition
SDGs	Sustainable Development Goals
SMART	Standardized Monitoring & Assessment of Relief & Transitions
SPA	Service provision assessments
SPRING	Strengthening Partnerships, Results and Innovations in Nutrition Globally
SUN	Scaling Up Nutrition
SUN-MEAL	Monitoring, evaluation, accountability and learning
TEAM	Technical Expert Advisory Group on Nutrition Monitoring
UHC	Universal health coverage
UNICEF	United Nations Children's Fund
WBTI	World Breastfeeding Trends Initiative
WHA	World Health Assembly
WHO	World Health Organization
WLZ	Weight-for-length

Background

In 2015, WHO and UNICEF established an independent Technical Expert Advisory Group on Nutrition Monitoring (TEAM) to advise on enhancing global nutrition monitoring at all levels. A specific focus of the TEAM during the first two years was developing an extended set of indicators to monitor the Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition, consistent with the global nutrition targets decided by the World Health Assembly (WHA). TEAM also identifies emerging research questions and needs related to nutrition monitoring and addresses them. More information on TEAM and its activities is available at https://www.who.int/nutrition/team/en/.

This report provides a summary of discussions, recommendations and decisions stemming from the TEAM meeting, held in Geneva from 1–4 October 2019. Days one and two reviewed progress on TEAM work plan items, while days three and four were dedicated to a nutrition indicator framework workshop and discussion of the guidance on nutrition information systems. The agenda and list of participants are included in Annexes II and III.

Summary of presentations and discussions

Session 1: WHO's nutrition work

Francesco Branca, Director of the Nutrition for Health and Development of WHO, outlined the objectives of the WHO transformation agenda, which supports WHO's strategic priorities to achieve the triple billion targets – universal health coverage (UHC) for 1 billion more people, address health emergencies for 1 billion more people, and promote healthier populations for 1 billion more people. WHO will differentiate its approach to supporting countries based on national capacities and vulnerability of the health system, providing a range of support from policy dialogue to service delivery.

WHO's nutrition support to Member States includes elements of leadership, monitoring, and guidance development. Nutrition and food safety are now merged as one WHO department to address the burden of disease from unhealthy diets, food contamination, antimicrobial resistance in the food chain, maternal and child malnutrition, overweight and obesity. The department's aim is to ensure universal access to effective nutrition actions, safe food and healthy diets by fostering sustainable food production and consumption, improving food environments and empowering consumers in all situations, including fragile and conflict-affected countries. Access to quality nutrition services is fundamental to achieving UHC; and nutrition interventions must be better integrated across the continuum of care. WHO's new edition of Essential Nutrition Actions supports such integration into national health policies and strategies to tackle malnutrition in all its forms across the life-course.

In its work on food systems policies, WHO is addressing the promotion of foods for infants and young children; restrictions on marketing; pricing; nutrition labelling and public food procurement. In its engagement on the reformulation of manufactured food, WHO is dialoguing with manufacturers to commit to salt and trans fat reduction, while creating an accountability consortium with two universities to independently evaluate those commitments. A number of guidelines and guidance documents are planned for 2020–2021, including those on healthy diets and the food environment. The UN Decade of Nutrition is nearing its midterm mark and an evaluation will be undertaken in July 2020.

Points of discussion:

There was some discussion about how 'healthy diets' were defined in the forthcoming WHO guidance. WHO is taking a nutrient-based approach in defining healthy diets, which will include new

guidelines on total fat, unsaturated fats and trans fats, sodium, and free sugars. Public consultations took place last year and the guidelines are now in their final stage of development. New work has been completed on carbohydrates and sweeteners as well, which will be published next year. There is also a group examining dietary patterns, including the level of processing and portion size, which would also be components of the definition. The concept of sustainability will also be included. WHO developed a joint communication on the guidelines with the Food and Agricultural Organization (FAO).[1]

There was some discussion about the integration of food safety within WHO's nutrition department. The integration will promote a comprehensive approach to food insecurity and malnutrition, improve linkages with food producers, and enable WHO to better address the role of contaminated food and water in undernutrition. There are currently no indicators on food safety to track the global burden of foodborne illness and the issue therefore lacks visibility in WHO's general programme of work. This absence may present a potential area of work for TEAM.

Session 2: Antenatal iron supplementation indicator – Update on validation

Sara Wuehler provided an update on progress towards developing and validating an iron and folic acid (IFA) supplementation indicator. This work complements the findings of the 2018 feasibility study and previous work by DataDENT. The current study aimed to examine: (1) the collection and use of iron supplementation data using key informant interviews and an online survey; (2) the quality of data; and (3) related factors, including issues around recall, number of antenatal care (ANC) visits, etc.

Key informant interviews were conducted in eight countries with informants mainly from government. Informants in all countries noted that a nationally representative survey had been conducted in the last five years, and all but one survey included IFA coverage assessments. In most countries, the indicator was similar to the one used by Demographic and Health Surveys (DHS).[2] Many informants did not have as much information on iron status indicators as might be expected. In some countries, data were used for programme implementation and monitoring, managing supply chain and improving nutrition policies, while others were not yet using the data. According to informants, six out of eight countries had national guidelines on antenatal iron provision and six countries provided IFA free of charge.

The same questions were posed in an online survey, which was disseminated through the WHO Nutrition Listserv and yielded 143 respondents. Fifty-five per cent of respondents were not satisfied with the current IFA survey questions and 75% of respondents suggested possible revisions. Responses to the online survey were similar to those provided during key informant interviews. Indicators of IFA data quality were analyzed for factors considered to have an impact on consumption or recall of consumption, such as recall period, number of ANC visits, maternal education, counselling, etc. Analyses were done for DHS data from four countries, and Nutrition Interventions Monitoring Survey (NIMS) data from four countries, using linear regression. The analysis found that data quality was acceptable. The number of ANC visits was highly correlated with iron consumption, but the data did not provide concrete answers on optimal recall period and further probes may be needed. Antenatal nutrition counselling was associated with improved data quality in NIMS and was also recommended by informants.

Some cognitive interviews were also conducted to see how women interpreted the questions. Most understood the questions to be related to ANC visits rather than number of days taking IFA. There was potential bias related to expectations to seek ANC. Recall was best among those less than four months postpartum and with higher education.

Points of discussion:
There was some discussion about whether the analysis was truly measuring quality or rather data precision. Some concern was expressed that countries were using survey data for supply chain and programme improvement when the data were not intended for this purpose. More variation might have been expected between number of ANC visits and tablets taken, and a multivariate analysis could be useful, as well as a visualization of the data.

On the issue of cognitive interviewing, there was a suggestion that questions reflect the context of ANC visits within the country to improve recall. Some women find it easier to recall the number of months during with IFA was taken, and then a follow-up question could be asked about whether tablets were taken every day or once a week.

There was some discussion about the importance of understanding the dose needed for biological impact. Some participants mentioned the use of histograms to assess the biological impact of IFA, given that women may not be able to differentiate between and recall the different forms of supplementation provided during pregnancy. Others also questioned whether iron stores would be a more accurate outcome to measure than anaemia, including total amount of iron provided during pregnancy.

Session 3: Revision of IYCF indicators documents – Update and next steps

Mary Arimond reviewed the background to the process of revising the existing guidance on IYCF indicators (see the reports of the 6th and 7th TEAM meetings for further details).

Based on input from the technical consultation held in July 2018, the definitions component of the indicator guidance (Part I) was revised and is near final. Two new breastfeeding indicators were added and almost all complementary feeding indicators are either new or revised. For the first time, some indicators on negative practices (e.g., sweet beverage consumption, unhealthy food consumption and zero vegetable or fruit consumption) were included, which may be challenging to communicate. Part II of the guidance, on measurement methods, is nearly final. New questions have not yet undergone cognitive testing or field testing.

TEAM was asked to provide feedback on the decision to include 100% fruit juice within the sweet beverage definition and on how to present the concept of sentinel unhealthy foods. The rationale for including 100% fruit juice includes evidence of an association with higher infant weight-for-length (WLZ) and body mass index z-score, recommendations from some pediatric societies, and the fact that it would be impossible to operationalize questions attempting to differentiate sugar sweetened juice drinks from 100% juice.

On the unhealthy food indicator, sentinel types are those that are commonly consumed by infants and young children; high in salt, sugar, refined grains or unhealthy fats; and can displace healthier foods in the diet. Unhealthy foods are defined as (1) sentinel sweet foods, including sugar confections, frozen treats, and baker's confections; and (2) sentinel fried and/or salty foods, including chips, fries etc. TEAM was asked for feedback on these groups and how to best present the concept.

Points of discussion:
On the sweet beverage definition, there was agreement on the inclusion of 100% fruit juice. The indicator was intended to measure one of the key sources of added sugar for young children and give insight into health-related outcomes. It would be ideal to measure the frequency and period of sweet beverage consumption, but the current indicator can quantify at population level what percentage of infants and young children are receiving such foods.

There was some discussion about the importance of methods. It was confirmed that juice would not count as fruit consumption for meeting the minimum dietary diversity (MDD) and fruit juice would be considered within other sweet beverages. Any foods eaten with a spoon would not be considered within the definition.

Regarding the definition of unhealthy foods, there was some discussion about the importance of aligning with the definitions used in the Gallup women's diet list and the DHS. Others also suggested using the term 'baked confection' rather than 'baker's confection' and that it would be important to align with the terminology used by FAO.

In the definition of sentinel salty foods, there was a suggestion made to use the word salt rather than sodium. Several participants felt strongly that instant noodles should be included in the definition given their ubiquity in young children's diets, particularly in Asia. Noodles could potentially be added to the chip description given that many children eat them uncooked as a snack. Suggestions were also made to include powdered soups, bouillon and savory crackers such as saltines in the fried or salty food definition, and to add a sweetened dairy category to the sweet foods definition.

It was emphasized that all questions should be tailored to the national context. While various foods can be problematic in different settings, it is important that the categories and definitions are clear and can be easily communicated. The sentinel foods are not selected based on an assessment of nutrient quality (as this would be difficult to operationalize), but rather for ease of categorization and communication.

It was agreed that the working group would meet to discuss TEAM's feedback and confirm how the feedback would be integrated into the guidance.

Session 4: Breastfeeding counselling indicator – Where we are and where to go

Purnima Menon provided an update on work to advance coverage indicators for breastfeeding counselling interventions with Alive & Thrive in collaboration with DataDENT and IMPROVE.[3] In the area of agenda-setting, a global paper on coverage measurement was published with Countdown to 2030 and nationally-focused data analyses are creating demand from countries. On the issue of operationalizing the indicator, a consultation was held in September 2019 on background research and coverage measurement and a global survey consultation took place resulting in recommendations on a core set of indicators on measuring counselling for the DHS revision. Testing of questions was also undertaken in several surveys, and cognitive testing has begun in India and will include a validation component.

TEAM was asked to consider other potential work on survey data, such as measurement guidance. If the recommendations made to DHS are successful, it will strengthen the data available from subsequent surveys and enable further analyses, including cognitive testing. There is a need to better assess the availability and quality of breastfeeding counselling data from administrative data sources. One such initiative is already underway in India. These efforts should be linked with the guidance on nutrition information systems that TEAM is undertaking.

Points of discussion:

WHO will publish implementation guidance on the breastfeeding counselling guideline, including a monitoring and evaluation component with options for countries around data collection. TEAM is welcome to review the document; the process will be completed by March/April 2020.

A suggestion was made to eventually include operational guidance for counselling measurement in the GNMF indicator guidance. The counselling indicator included in the GNMF indicator guidance is an interim one, based on TEAM's recommendation, that is simple and easy for countries to report. There was some discussion about the challenges of cognitive testing, including finding multilingual researchers. This is a challenge common to all cognitive testing, and highlights the need for financial and technical support, and good coordination across all indicators and in various contexts and settings.

Session 5: TEAM research priorities – Updates and future plan

Edward Frongillo noted TEAM's contributions to identifying emerging research questions and needs related to nutrition monitoring. Drawing from the priorities identified during previous TEAM meetings, a consultant was hired to develop a background paper exploring three[4] themes: the use of nutrition data for country decision-making and the type of data that trigger action; nutrition monitoring needs across the life course; and the importance of cross-sectoral data in countries and data on how nutrition contributes to other sectoral outcomes, such as agriculture and social protection.

On the use of data for decision making, the paper explores the path from knowledge to policy action under five themes: (1) defining the issue; (2) enhancing understanding; (3) influencing multi-sectoral actors; (4) informing policy and implementation; and (5) monitoring and evaluation. The paper was informed by a literature review on the topic of using nutrition knowledge and evidence to bring policy changes in countries; and programme documents from POSHAN (Partnerships and opportunities to strengthen and harmonize actions for nutrition in India), the Scaling Up Nutrition Movement (SUN) and Stories of Change. See background paper for further details.[5]

Points of discussion:

There was some discussion about the need to link to the national policy development process, including government mandates for data to be used in decision making and how TEAM and others could influence this process. Providing a better understanding of the process of institutionalizing data uptake was noted as a key contribution that could be made by TEAM. There was a suggestion that the background paper should go further in exploring how the data directly impacted policy.

A suggestion was made for TEAM to develop a paper on key issues to consider in encouraging better data use in countries. The importance of linking with the nutrition information systems guide was also highlighted. Positive examples of countries institutionalizing data use could help others; and understanding where countries are facing challenges in using data would be equally important. A suggestion was made to poll countries on their research needs, including what support they need to better use data for decision-making.

There was a discussion about whether TEAM should propose a research agenda for nutrition monitoring. The research priorities identified in previous meetings were the result of a brainstorming session rather than a consensus among members. In the end, it was decided that TEAM would continue focusing on the question of data use first, before considering whether to engage in a longer process of developing a research agenda. At the same time, TEAM would remain attentive to and consider emerging research needs as they arise and would better communicate its mandate.

Action: TEAM's feedback will inform the final version of the background paper. The working group will be closed once the background paper is finalized.

Session 6: Diet quality indicators – Update and next steps

Jennifer Coates and Mary Arimond presented an update on the progress of the diet quality working group. The working group has conducted a desk review of diet quality initiatives (presented during the last TEAM meeting), and drafted a concept note, framework for inquiry, draft interview guide and list of key informants to provide further information on concepts, metrics and initiatives. A consultant was hired to conduct a landscape assessment on diet quality indicators, the first draft of which was submitted in mid-September 2019; the report was then circulated to TEAM.

The presentation to TEAM reviewed the results of the landscape assessment. Landscape assessment interviews with key informants highlighted that there was no internationally recognized definition of diet quality. Elements commonly listed as contributing to diet quality included: adequacy, moderation, proportionality, environmental sustainability and safety. Informants felt that normative global agencies should take the lead in defining diet quality; and that metrics for diet quality would be more readily accepted by WHO Member States if they reflected an accepted global definition.

There was consensus among informants on the need for monitoring diet quality globally. Informants noted that diet quality data could be used to inform policy making, reach new stakeholders, support advocacy, design programmes, inform public health guidelines, inform sectors outside of nutrition, help governments diagnose their food system and track progress towards national dietary guidelines.

Informants mentioned several requirements for global monitoring on diet quality: simple, uniform indicators; able to help countries identify and prioritize dietary gaps, including sub-nationally; capture different dimensions with a suite of indicators; capture over- and undernutrition; consider frequency and quantity (mentioned by some); disaggregate to assess disparities; make use of data from household surveys; and collect information on the food environment.

The lack of data from nationally representative surveys was noted as a challenge. Even in high income countries, data are not gathered frequently enough for routine monitoring. Lack of funding and capacity, time commitment and the absence of diet quality in the Sustainable Development Goals (SDGs) were also noted as challenges.

Some new diet quality initiatives have begun since the initial desk review, including work by FAO and the European Union to map women's dietary diversity; a food systems dashboard; a Harvard and PRIME diet quality score; and a global review of food-based dietary guidelines.
Most informants felt that TEAM should play a convening role among partners working in this area, including in supporting normative agencies to develop definitions and guidelines. Other suggestions for TEAM included setting guidelines on indicators and advocating for diet quality monitoring.

Points of discussion:
There was agreement that TEAM could take a convening role in pursuing a shared vision on diet quality among partners. While diet quality indicators are not monitored in the SDGs, they make a critical contribution to these targets and should be monitored. Setting normative guidance should begin with a definition of quality or healthy diet. Indicators will then be needed to operationalize the guidelines; or conversely, one could begin by identifying indicators and move from there to a definition. There was some discussion about the challenge of making global or regional food-based dietary guidelines applicable to varying contexts.

There was some discussion about data from the Institute for Health Metrics and Evaluation (IHME), and whether it could be used to measure the relationship between food security and diet quality. Some participants emphasized the need for caution in using these data. Others noted that the IHME

work is an evaluation of risk factors for specific elements of diets rather than a definition of healthy diet.

A suggestion was made to include FAO in the landscape assessment, in addition to UNICEF and WHO. Other suggestions were made to consider nutrient adequacy, proportionality and moderation and to discuss nutrient density rather than nutrient intake. It was noted that language around supply, sustainability, accessibility and price were also important to a diet quality. USAID may be able to contribute funds for further research on diet quality.

Session 7: Joint malnutrition estimates – Country-level models

Edward Frongillo provided an update on work to develop country-level models for the joint malnutrition estimates (JME) to address limitations of the current linear mixed-effect models. Country-level models would help track indicators to monitor progress in meeting certain thresholds, such as the SDG targets, and improve global monitoring by offering a means of including countries that are not collecting data at the recommended frequency of 3–5 years, as well as allow aggregation of country estimates to generate regional and global estimates. The current JME model generates estimates at the regional rather than the country level. Limitations of this approach include the assumption of homogeneity within sub-regions and in the precision of data points.

Two consultants were hired to help develop country-level models for stunting and overweight. Models were initially developed and tested for Africa and have been expanded for all regions.[6] The models are robust yet simple, flexible enough to allow for non-linear trends, and account for the strength of the data. The models have enough structure to run effectively, even with moderate sample sizes and can be reproduced with standard statistical software. Covariates have been used to improve prediction in stunting models but no covariates were identified to improve prediction for overweight models.

Three main modelling challenges were discussed: (1) differences in the type of survey (a relative bias adjustment was used for SMART and surveillance surveys); (2) fitting a flexible curve to stunting data (the model was altered to encourage linear predictions in later years); and (3) smoothness of overweight data (the model now allows that both the trend and the smoothness of trend differ by region and the smoothness is chosen to optimize fit for each region). A technical consultation will be held from 2–3 December 2019 to achieve consensus on the new models and consider their use in SDG 2 monitoring.

Some stunting estimates were shown for sub-Saharan Africa and South Asia, showing the sparse data available and highlighting the need for modelling; the fit of these models worked well. Modelling for overweight has not been as straightforward (e.g., there is a blip/rise occurring in Africa around 2005) and TEAM was asked to provide feedback on how to address this challenge.

Points of discussion:

Most advisors saw the blips for sub-Saharan Africa and South Asia as problematic and suggested that the working group looks into the issue and amend the overweight model. It was emphasized that the model should be believable, and this was not the case for overweight in these two regions. Some advisors noted that it would be useful to re-examine the country data in cases where the model appeared odd.

A number of suggestions were made to address the overweight modelling challenges:

1. Examine which countries are driving the blip and determine: whether the data point is from a very large and/or precise survey; whether the blip in that country could be explained or

could be related to data quality; and whether some analysis could be done to better understand the influence of different data points on the curve.

2. Remove some of the resolution of the model, as it is unlikely that all African countries would have experienced the same rise and the model may have weighted too heavily on region rather than country. Alternatively, the model could be stretched out more over time or downweight on factors other than the standard error. The working group clarified that these suggestions had already been implemented and the blips remained. In response, a suggestion was made to force less curvature; however, this would result in even wider confidence intervals, which are wide in many countries already.
3. Change the degrees of freedom; however, if the trend becomes a too linear it may obscure the real trend and give the false impression that overweight is being systematically reduced.
4. Examine the input data from countries in the region that are known to have high quality data and determine whether the model is comparable to their actual data.

Despite their limitations, it was noted that the model estimates for overweight were important for the promotion of healthy diets and that advocacy for improved data quality would need to continue. It was emphasized that country-level models will only be used to produce global estimates, while survey data will continue to be used for individual country estimates. These and other issues of communication about the modelled estimates will be discussed during the December consultation and UNICEF will continue its due diligence in checking survey data quality.

Session 8a: Updates on anthropometry data quality

Elisa Dominguez noted that the anthropometry data quality guide was now published and disseminated. WHO has begun receiving feedback from countries and many have requested briefings. The document will be translated into all UN languages. There remain some unanswered questions, and it will be important to consider what kind of group should be assembled to improve the next version.

Session 8b: Global community of practice for nutrition data

Rebecca Heidkamp described the process of launching a community of practice for nutrition data – an initiative motivated by the need for a common exchange and dissemination platform.

The community is led and financially supported by DataDENT but is meant to be member owned. The online platform is called 'Mobilize'; it includes discussion boards and users can engage by email. Sub-groups may be launched or left to emerge naturally. Quarterly webinars will be hosted and topics have been identified if needed for the first year. The experience with other communities of practice, such as the Agriculture-Nutrition community of practice (Ag2NutCoP), suggests that engagement is fostered through collaboration on concrete outputs.

The goal is to launch the community of practice before the SUN global gathering on 1 November 2019. A webinar launch will also take place in December.

Session 8c: Recommendations on the DHS 8 questionnaire

Trevor Croft provided a summary of the process to revise the DHS standard questionnaires and optional modules.[7] There are about 700 questions across the three core questionnaires. Interviews are approximately 45-50 minutes in length, with women interviewed for household surveys about 40 per cent of the time. An average of three optional modules per country are used; the one of domestic violence is the most frequently used, while the male circumcision module was not used at all.

The questionnaire review process aimed to meet emerging critical needs and improve the quality of data being collected. More than 954 questions were requested, and more than ten new modules were considered. Inputs were received from 110 countries. Overall, there were 96 questions deleted from the survey and around 148 new questions were added. The review process took place over four phases between January and September 2019, and DHS is currently waiting for USAID's final approval. Once approved, new modules and heavily revised sections will be piloted.

There were 90 nutrition-related questions requested; of these, 40 questions were accepted[8] – much more than for other groups. This success is due in part to the well-coordinated process led by DataDENT (see the report of the 7th TEAM meeting). Few, if any, nutrition questions were deleted.

Points of discussion:
There was some discussion about the partial inclusion of the indicator on breastfeeding counselling at early critical time points. It was clarified that questions about ANC and counselling in the two days after birth were included, but not the questions on the first month as it would be challenging to record. It was not clear what questions were included on IYCF counselling in the 6–23-month period.

The household food insecurity module only contained eight questions; however, the analysis and tabulation would be challenging. TEAM was encouraged to share any experiences or suggestions with the DHS team. Rebecca Heidkamp agreed to share the contact of a researcher at the American University of Beirut who may be able to provide guidance on food insecurity groupings.

Session 9: Nutrition administrative data and district health information system (DHIS2)

Chika Hayashi described the work of UNICEF and partners to define a standard set of data elements and indicators for routine monitoring and develop visualization tools and templates that facilitate data use for programme review and improvement. This guidance will be discussed during a November consultation with stakeholders and country practitioners at all levels and finalized by the second quarter of 2020. Nutrition will be one of several modules summarizing the data that should be collected at community level. Background documents will be prepared for the consultation and feedback from TEAM is welcomed.

Vrinda Mehra presented the DHIS2 proposal for infant and young child feeding (IYCF) indicators. The proposal focused on age appropriate IYCF counselling indicators to assess timed and targeted counselling, with separate indicators to report on counselling during antenatal and postnatal period and beyond, aligned with the WHO counselling guidelines. There were proposals for health facility and/or community-level indicators based on the delivery platform adopted by the country.

Some sample visualizations were presented, such as a graph showing the content of IYCF counselling, with a traffic light feature to track progress. Stakeholders will be asked to consider whether IYCF counselling data should be collected through routine systems or whether there is potential at country level to conduct exit interviews; what counselling content should be measured; and what elements could capture age-appropriate counselling. TEAM was also asked to comment.
Julia Krasevec presented the DHIS2 proposal for vitamin A supplementation (VAS). Semester data would be kept separate and countries could consider individual-level tracking. Proposed indicators included: VAS coverage semester 1 and 2 (routine) and VAS coverage semester 1 and 2 (event). Visualization shows the semester-level estimates for each delivery mechanism and each age group separately. TEAM was asked to consider the benefit of defining new indicators linked to individual tracking using longitudinal data.

Julia Krasevec presented the DHIS2 proposal for IFA in pregnancy. A basic core programme performance indicator was proposed for all countries in addition to longitudinal indicators for more advanced countries. It would be important to consider how to capture the consumption of different supplements.

The percentage of prenatal visits during which pregnant women were covered with IFA was proposed as the core indicator, reported through monthly reporting at the facility. This would track whether a prescription or IFA was given, rather than whether it was taken. The advanced indicator would be the registered pregnant women who came to term during the reporting period who were covered with at least 90 IFA[9] throughout their pregnancy. Stakeholders will be asked to provide feedback on the concept of coverage in the basic indicator, consider an appropriate cut-off for the advanced longitudinal indicator, and consider whether postnatal IFA coverage should be core or optional.

Chika Hayashi presented the DHIS2 proposal on growth monitoring and promotion, weighing at birth and weight gain monitoring during pregnancy. Various indicators are currently being reported, without a clear idea of how to best interpret and use them, and it will be important to decide on a minimum core set that should be aggregated at various levels for decision-making. Questions remain about when data can be used at each level, how countries are using these data, and whether global estimates could be based on these data sources.

Louise Mwirigi presented the process being undertaken to develop standard indicators for severe acute malnutrition (SAM) and moderate acute malnutrition (MAM) in DHIS2. Key issues to be discussed during the November consultation include: (1) the definition of wasting – weight for length versus MUAC and related issues, including double counting and exclusion; (2) how to standardize age group disaggregation; (3) how to define and best use screening data. Other issues to be considered include developing an indicator on the proportion of admissions versus re-admissions; completeness and timeliness; and standardizing the definitions of admissions and discharge categories.

Louise Mwirigi described the process of developing an emergencies module for nutrition in DHIS2, in collaboration with the Global Nutrition Cluster (GNC) and partners. Key considerations included: what additional information should be collected during emergencies to supplement routine data; how to address protracted versus acute contexts; how to link the module with existing structures and guidance; how to make data more accessible; and how to leverage innovative solutions for collecting data in emergencies. The draft module is complete; UNICEF will seek feedback from TEAM on its content.

Points of discussion:
On the proposed IFA indicators, it was noted that the timing of the visit was critical. The inclusion of time points would depend on the structure decided for the reproductive, maternal, newborn and child health (RMNCH) module, as the draft version of that module covered timing of ANC visit; however, timing was not currently included.

It was also suggested by an advisor that tracking of receipt (and not consumption) was not an issue and that the indicator should not be discredited. However, it was clarified that some other sectors monitor more than receipt/prescription – such as vaccinations, deworming and other interventions where the commodity is consumed, injected, etc., at the time of service provision.

On the proposed counselling indicators, concern was expressed about overburdening frontline health workers in reporting on a long list of topic areas. There was also a risk of encouraging a

didactic checking of boxes rather than an interactive counselling experience. To address this, it could be useful to ask how much time was spent with the woman and what tools were used in the counselling session.

On the issue of growth monitoring, it was noted that evidence on the impact of this intervention was weak. One advisor expressed concern that including such indicators would be akin to endorsing their use and effectiveness.

There was a suggestion that routine monitoring should be focused on tracking service provision, rather than nutrition status indicators. Administrative data on status is not comparable to the data collected by surveys and there are concerns around quality and interpretation. It was clarified that if a status indicator were to be included, one should be low birthweight, as the only time a newborn's birthweight can be taken is at birth, and a standard module for this topic in health management information systems (HMIS) and DHIS2 is essential to improved birthweight data.

Some concerns were expressed about using administrative data to 'report up'. It was emphasized that administrative data should be used to improve programmes, and that this objective should be communicated to countries. UNICEF clarified that the intention was to aggregate administrative data to improve programme performance (rather than report up. 'Report up' is used as a general term to signal what data are aggregated.

Session 10: Revisiting the methodology for monitoring progress towards the global nutrition targets

Elaine Borghi provided an overview of the Global Nutrition Targets and noted that TEAM had endorsed the methodology used to track country progress. Prevalence thresholds have been classified for wasting, overweight and stunting by 2025. With the involvement of TEAM, WHO proposed an extension of the targets to 2030. TEAM was asked to consider whether the threshold for low stunting should be reduced from 5% to 3% when the targets are extended.

Points of discussion:

One advisor expressed concern about whether the stunting indicator was the best measurement of malnutrition and well-being, as it could also be viewed as a biological adaptation to the environment (e.g., for populations at high altitudes above sea level).[10] This was suggested as a future research question. Others noted that some of the adaptations of stunted populations affect other forms of malnutrition, including overweight later in life, which have a cascade of repercussions, including chronic disease; thus, stunting needed to be viewed as an issue in need of correction. Some advisors commented that the different cut-off points could potentially confuse countries, and good communication would be essential.

No countries were on track to meet the anaemia target and previous goals from 1990 were also not achieved. One advisor suggested that this was at least in part due to the lack of accurate measures of prevalence (e.g., tests that rely on finger pricking can overestimate prevalence if not done correctly) and a lack of clarity on etiology and appropriate approaches by country. It would be important for TEAM to provide better guidance on how to measure and achieve targets, and possibly set a different goal that is more realistic.

Session 11: New malnutrition prevalence thresholds: programmatic implications

Julia Krasevec presented the revised malnutrition prevalence thresholds and noted the impact of these revisions: higher prevalence of stunting; rich countries low labelled as having 'very low' wasting; and overweight prevalence now available. Many regional and country offices are seeking support to discuss these changes with governments. In response, two webinars were held (with the

GNC and countries in sub-Saharan Africa) and a Q&A has been requested to support policy dialogue with governments.

The new thresholds have important implications for emergency response, such as allowing for geographical targeting for stunting, and facilitating a more holistic view of prevention and treatment in humanitarian settings. SAM prevalence thresholds were not included given the concern around sampling error for these estimates, which are generally much lower than for wasting (e.g., equivalent value for 'very low' using the same methodology as for the other indicators would be 0.1% for severe wasting), and given that more research on mid-upper arm circumference (MUAC) would be needed on the interaction between sex-age adjusted z-scores and static cut-offs used in programmes.

A draft communication plan was prepared, with recommendations for governments to adopt the new thresholds and determine the scope of the problem and work towards achieving very low prevalence. Development partners were encouraged to adopt the new thresholds and support the prioritization of actions and resources. The communication plan and a Q&A will be finalized and disseminated, followed by webinars for countries and frameworks to support roll-out in all contexts.

Points of discussion:
Various organizations could play a role in disseminating these products. A forthcoming paper employs an ecological analysis showing levels of stunting as a greater predictor of mortality than wasting. In a 2018 Lancet paper, the odds ratio for stunting and mortality was half that for wasting; a narrative could be developed around this link. Nevertheless, stunting reduction should continue to be monitored, even though it may not be an accurate measure of programme success.

Action: UNICEF to share the communication plan with TEAM before finalization.

Session 12: Updates/planning on partner meeting

Purnima Menon confirmed that no partner meeting would be held during the 8th TEAM meeting; rather, TEAM would use the time to explore and develop a global nutrition indicator framework.

Points of discussion:
Several advisors felt that a partners meeting should be part of a clear strategy with measurable objectives. There was a suggestion to bring data partners together to consider the commitments that countries should be encouraged to make during next year's Nutrition for Growth Summit. If a meeting were to take place, partners should be selected strategically (for example, those in a position to decide investments). It was emphasized that communication – and various modes of engagement besides a partners meeting – should be discussed. For example, the nutrition community of practice could be used to facilitate a webinar for partners.

Purnima Menon also shared the results of an observational study conducted across four states in India to assess the growth monitoring process in the Integrated Child Development Services (ICDS) programme, including the integration of measurement technology such as a mobile phone app and dashboard. The study aimed to observe how people are using the data and how the technology supports them. The growth measurement process was observed in health centres and compared with anthropometry guidance. Photographic evidence was also powerful in illustrating some of the challenges in quality growth measurement.

Findings showed that the use of equipment and placement for measuring weight was mostly fine, except for a few problems with positioning. In measuring height, there were important challenges in using the right instrument and positioning the child in an age-appropriate manner (e.g., younger

babies are often positioned inappropriately). Some simulation work is being undertaken to show how inaccurate measurement can influence prevalence estimates, and how growth data are shared with caregivers. UNICEF would be well-placed to undertake further observation work in this area.

Points of discussion:
Several advisors requested that the protocol be shared with TEAM, as many had observed similar growth monitoring challenges in other countries, including inappropriate measuring techniques, rounding of weights, errors in digitalizing data and visualization.

The burden on health workers was also noted, and it was suggested that better consensus on the priorities for data collection at the health facility level could help eliminate unnecessary tasks. The need to look at innovations in data collection was emphasized – such as digital scales or digital check lists – to reduce the time spent by health workers, ensure better accuracy, and simplify processes. UNICEF is looking at DHIS data in 2–3 regions and conducting some observational research on growth monitoring tools and practices, which can be shared with TEAM.

Session 13: Nutrition household survey indicator and question module guidance

Rebecca Heidkamp discussed an initiative to develop a core set of questions for household surveys to measure nutrition intervention coverage. The initiative was motivated by the process of contributing to the DHS questionnaire review. A paper was published exploring what nutrition intervention indicators are recommended, which ones are being used in practice in countries, and which ones are appropriate for collection via household surveys.

A working intervention and indicator list were developed, organized by the continuum of care, and distinguishing between core and supplemental indicators. It was not clear where adolescents should fit within this framework. Guidance is needed on how countries can decide which indicators to measure; and how to find balance in measuring what is recommended and what is being done. The standard format for guidance would include name, definition, rationale, recommended questions and question use. Guidance for integration into the full survey would include design considerations and references for other indicator/question guidance that may influence design, etc.

Initial drafts have been completed for the current list of indicators. Full drafts will be disseminated for review towards the end of 2019; and the document will be released by March 2020 and revised in 2022. TEAM was asked to participate in reviewing the drafts and consider: how to address what is being done versus what is recommended; how much additional information about survey design versus links to other resources should be included; what approach to take in releasing a 'working draft' that will be revised in 2–3 years; and, where the guidance could be reviewed and used in countries.

Points of discussion:
There was consensus that referencing other guidance documents would keep the document succinct and accessible. Nutrition International (NI) and UNICEF have a micronutrients survey manual that could be referenced. NI will share its experience of a similar process working with countries to select survey indicators. Indicators for weekly IFA supplementation are also being tested, including for adolescents.

There was some discussion about how to organize the guidance to make clear that countries do not need to measure all indicators, but rather, should determine what is useful to their context and national priorities. A mapping of questions in the guide to clusters of interventions, in addition to life stages, would be helpful. The guidance should also align with the revised Essential Nutrition Actions as guiding principles for countries around measurement decisions.

UNICEF is also establishing a nutrition metrics advisory group on school-aged children and adolescents (aged 5–19). Part of the group's work will be to develop a knowledge paper summarizing what is known in this area and identifying data gaps, with the goal of eventually developing a monitoring framework.

Session 14: Effective coverage measurements – An update

Theresa Diaz outlined the concept of effective coverage, which accounts for the actual health benefit of an intervention. It may be measured by adjusting crude coverage levels according to service readiness, quality of care or health outcomes; or, it may be calculated as a composite measurement of coverage across a range of interventions.

WHO launched a Think Tank series on measuring effective coverage as part of a renewed commitment to primary health care and universal health care. The series aimed to develop a working definition of effective coverage, define methods, apply them to create a proxy list of indicators, and set an agenda for future research.

Care cascades track health system performance longitudinally for a population. For effective coverage, the proposed cascade would descend as follows: target population; service contact; input adjusted coverage;[11] crude coverage;[12] quality-adjusted coverage;[13] user adherence-adjusted coverage;[14] and outcome-adjusted coverage.[15] Outcome-adjusted coverage is the ideal measure of effective coverage when the population requires a service for which a direct health impact can be measured. For routine preventive services linked to multiple outcomes (e.g., counselling), quality-adjusted coverage may be more appropriate.

A statement and manuscript on effective coverage are in progress; measurement advisory groups are invited to review and provide recommendations. Pilot testing of care cascades is also envisioned.

Points of discussion:
TEAM had included work on quality-adjusted indicators as part of its work plan but had not made significant progress yet. There was some discussion about linking quality service delivery with Service Provision Assessments (SPA). WHO is working with digital colleagues on medical records to determine how much information should be included in the health management information system.

Session 15: TEAM work planning 2020–2021

TEAM co-chairs Jennifer Coates and Ed Frongillo led the group through a work planning session and discussion of existing TEAM working groups. It was decided that working groups would meet at the end of the week and confirm their next steps (*See Annex 1*). TEAM was asked to brainstorm how to define its success and what new priorities should be considered over the next two years.

Points of discussion:
Financial resources from the Secretariat and other partners were critical to TEAM's work and the availability of resources may be a useful metric for prioritization of work. TEAM's funding had originally come from WHO given its mandate to advise on the GNMF indicators. With that work coming to a close, a fundraising strategy could be developed to seek support from the global community on other pressing monitoring issues. External communication about TEAM's mandate was noted as an ongoing challenge that would need to be addressed to successfully raise funds.

TEAM's mandate is quite broad, providing the opportunity to address issues raised by WHO/UNICEF while at the same time making recommendations for additional areas of work. A suggestion was

made to revise the description of TEAM on the WHO website to focus on the leadership role of TEAM and mandate to respond to emerging nutrition monitoring demands.

Proposals on how TEAM should define success over the next two to four years:

- Its ability to play an integrative leadership role in providing technical authority on bigger picture initiatives on nutrition monitoring frameworks and information systems.
- Its ability to make progress on gaps and lingering issues in the nutrition monitoring sphere, such as the IFA indicator or the NIS guide.
- Its ability to meet the priorities defined by its mandate: (1) supporting UNICEF/WHO priorities and monitoring needs; (2) responding to the needs of global monitoring partners who fund and invest in nutrition; and (3) addressing additional priorities identified by TEAM.
- More entities demanding advice and leadership from TEAM on new and pressing issues.

Brainstorming: suggestions for new TEAM priorities in the next two to four years:

- Research the cost of interventions, including the implementation of policies and programmes and scaling up;
- Research the cost of investing in national data systems; and, the cost of doing it alone versus partnering with others.
- Gather knowledge on strengthening data use and the systems that support the use of data effectively (i.e., taking the background paper on data for decisions to the next level). This would also include better understanding how data are interpreted and used for priority setting.
- Develop metrics on (1) food safety, (2) the food environment, and (3) what drives dietary choices.
- Review and analyze the relevance of SDG tracking values.
- Explore if and how countries are using existing monitoring tools (e.g., the GAVA VAS monitoring guide for district managers) to help them manage their programmes, and then determine the need for additional tools and support.
- Consider how to support countries with national decision making, including what data to collect and how to develop a monitoring and evaluation framework linked to the national strategy.
- Advance the discussion on maternal nutrition indicators, including how to evaluate maternal nutrition status during pregnancy and lactation.
- Consider the future of funding for data and monitoring and how to convince countries to prioritize and invest in this area. This includes helping countries plan for their future data needs and processes as they continue to develop and DHS is eventually no longer funded.
- Explore work on the use of electronic medical records and other monitoring innovations.
- Position nutrition monitoring beyond the first 1,000 days to address chronic disease and the needs of countries in this area. Some of this work will begin with the discussion of indicator frameworks, which thus far, have been focused on the outcome of stunting reduction.
- Support monitoring needs around guideline development and other aspects of WHO's mandate – for example, the monitoring of nutrition-related noncommunicable diseases, guidelines on the management of childhood obesity and implementation guidance on breastfeeding counselling.
- Support Nutrition for Growth commitments, including financing for nutrition data systems.
- Supporting work on the new nutrition-related DHS questions, particularly MDD-W.

Some of these issues would be addressed through finalization of the NIS guide. A point was also made that data use and effectiveness were not exclusively nutrition-related concerns, and that TEAM should work to ensure that nutrition is represented in broader discussions about this issue. A number of advisors expressed interest in work on childhood overweight, NCDs, diet quality,

adolescents, the food environment and food safety. It was suggested that TEAM determine whether FAO had already established a working group on food safety in order to avoid duplication in work.

Prioritization: decisions on priorities to take forward
TEAM was encouraged to select the priorities for its workplan from this list based on the criteria of urgency, potential impact and feasibility. Issues that represented a niche for TEAM and direct requests from partners should also be considered. It was suggested that the priorities be re-grouped into (1) function and process issues; and (2) content issues.

Action: The Secretariat will circulate a poll by email asking TEAM advisors to rank their priorities. Once the new priorities are determined, TEAM may need to re-evaluate its composition and consider seeking additional advisors with expertise in these emerging areas.

Day 3: Nutrition indicator framework workshop[16]

Purnima Menon made a case for examining the various existing global nutrition indicator frameworks and reorganizing some of them around a theory of change that would achieve the WHA and SDG targets. This was necessary, as most existing frameworks[17] are not guided by a clear impact path across indicators and domains, limiting their usefulness to countries. The exercise would also help highlight gaps in the indicators needed to monitor progress. This exercise was a continuation of background research, led by Results for Development with support from Johns Hopkins University.[18]

Working groups were formed and linked to specific WHA and SDG outcomes: stunting and wasting; exclusive breastfeeding; anaemia among women of reproductive age; low birthweight; childhood overweight; and adult overweight, diabetes and hypertension. Each group was asked to develop a causal indicator framework for each outcome by identifying related indicators and gaps. Suggested domains for grouping indicators included: consequences; immediate causes; underlying causes; intervention and delivery platform coverage; policy and enabling environment; and other.

The exercise was meant to establish frameworks for six WHA/SDG outcomes; and use them to support countries in identifying monitoring priorities, charting paths to success and improving their NIS. The six outcome working groups reported the results of the exercise back to plenary:

Childhood overweight: The working group noted that some domains had multiple available indicators (e.g., IYCF); however, some were not fit for purpose in their current form. The group felt that there was not enough evidence on some indicators to determine their impact in overweight. Important indicator gaps were identified, including on the food system and food environments (e.g., availability and affordability); food insecurity; physical activity; and child diet for ages 3–5 years. Some diet indicators are being developed that may be useful to add. Some policy indicators were available, though indicators on labelling and other 'nudging' interventions were absent.

Adult obesity, hypertension and diabetes: The working group tried to focus on adult-specific indicators that were not addressed above. Some useful indicators for these conditions may exist within health but were not available from the existing nutrition frameworks. Gaps in underlying cause indicators included: smoking, sleep deprivation, shift work, gender norms around mobility, lack of time for exercise, cultural issues around body image, affordable and accessible exercise, safety and infrastructure, workplace and community interventions, and building design. There may also be gaps in screening and management indicators for overweight and obesity.

Anaemia in women of reproductive age: The working group used the lens of nutrient adequacy to guide the causal path, while also considering biological factors. Most indicators were available, including those covering gender and women's empowerment and the health system (e.g., supplementation, helminth and malaria control, and family planning). However, fewer gender-related indicators were available on the delivery of programmes, aside from using school enrollment. There were gaps noted in agricultural policies (e.g., biofortification and crop incentives), as well as indicator gaps around adolescents, overweight, and the food environment. Indicators on child outcomes were available.

Low birthweight: The working group noted that many food and health system indicators were the same as listed above, though some new ones were noted (e.g., altitude). Most immediate causes, such as diet and nutritional adequacy, maternal health and other factors (e.g., age) and environment were available, with some gaps (e.g., weight gain during pregnancy, pre-eclampsia, and micronutrient deficiency).

Stunting and wasting: The working group needed to prioritize indicators, given that so many were related to childhood undernutrition within all domains. Gaps included the lack of a care indicator and indicators on the role of enteropathy or inflammation.

Exclusive breastfeeding: The working group noted a similar need to prioritize indicators, given that so many were related to breastfeeding and the frameworks were intended to address undernutrition. They tried to select indicators that were broadly applicable, rather than context specific. The lack of a basic level indicator on agriculture and on agricultural policies was noted as gap, in addition to the gaps listed above for stunting and wasting. Tensions were discussed between taking a multi-sectoral approach and narrowing to nutrition indicators, while encouraging their integration into other information systems.

Points of discussion:
Many advisors appreciated the exercise and discussion of causal paths and outcomes, which would be valuable for countries. The national planning process, including linking the national strategy and monitoring framework, would be critical.

Some indicators were vague, and it was suggested that TEAM play a role in advising on determining whether an indicator provided enough value to be collected at the national level. However, others felt such an approach would be too generic; and the usefulness of different indicators would depend on the programme and country needs. Core indicator frameworks based on causal paths had been developed for food fortification and universal salt iodization, at a higher, strategic level.

It was suggested that the six frameworks presented by the working groups could be developed into a reflection paper or brief. Others noted that the work could contribute to the NIS guide, including in providing guidance for countries on prioritizing indicators through a similar process. It could also feed into the DHIS2 process. A suggestion was made for TEAM to define three sentinel indicators that all countries should track in order to achieve each WHA and SDG outcome.

On the outcome of wasting, most indicators were relevant to stable contexts and it would therefore be important to add additional indicators on preparedness and resilience. It was noted that prevention was key in the wasting path. On the outcome of childhood overweight, the exercise highlighted how the global community has largely missed the mark on developing a clear causal path to this target. Addressing this absence was noted as a potential piece of work for TEAM going forward, and it would be important to look at the work of the Ending Childhood Obesity (ECHO) commission as a first step. On the anaemia outcome, it was suggested that local diagnoses of the

cause of the condition were critical before developing a causal path and strategy; however, further work was needed to elevate the importance of this issue.

Day 4: Guidance on nutrition information systems

Jose Luis Alvarez provided an update on progress towards developing a guide on NIS, which is part of TEAM's workplan. The guide is organized in three modules: (1) rationale, background and approach; (2) components of a NIS; (3) and monitoring and evaluation and improving NIS. Module 1 had been drafted and shared with partners for feedback; module 2 has been shared and discussed with TEAM; and module 3 is not yet written.

Thus far, there has been little involvement from countries. The timeline has been adjusted to have a final draft by January 2020.

Points of discussion:

In response to a question about the tone of module 2, it was clarified that the module would aim to guide thinking by providing examples of a NIS, including what data are typically collected and why. The guide would avoid being too prescriptive but would be clear about the processes and methodologies involved. The guide should also be explicit about what *not* to do when developing a NIS.

Some advisors saw the guide as an information landscape, describing how different forms of information guide different decisions. For example, programme monitoring data and survey data provide information for different country needs and purposes. Examples from countries would be short, concrete examples. Several advisors felt that the NIS title could be confusing and may be understood as a guide about routine HMIS data, rather than the comprehensive data landscape (i.e., all surveys, sentinel sites, surveillance and the MIS). There was also concern that the term 'system' referred to data stored in a single location. 'Nutrition information architecture' was proposed as a possible alternative; however, others felt that NIS was used widely in countries and by UNICEF.

There was some discussion about integrating TEAM's work on developing indicator frameworks. It was suggested that an example outcome path be included in the guide, showing which indicators could be used to monitor progress towards a desired outcome.

The guide should demonstrate how the NIS can support national-level decisions, such as those around strategic planning, programme management and monitoring progress to a target. UNICEF noted that they may be able to seek feedback on the guide from countries during the upcoming DHIS consultation.

TEAM was asked to consider some outstanding questions on modules 1 and 2. On the question of whether a new module was needed on identifying information needs, there was agreement that this was important. This may include different data uses, such as tracking progress and reporting, strategy refinement, programme revision, impact assessment, etc. It was suggested that this chapter introduce the uses of data before showing the sources of data and indicators.

It was suggested that references to other materials be included as links at the end of each module. There was also support for having a glossary of terms. It was noted that the guide would be used mostly online – in all parts of the world – and that having extensive annexes would be cumbersome. On the issue of a set of core indicators, a suggestion was made for the guide to define the various types of indicators (e.g., status, intervention, etc.) and propose a core set of 20, outlined with their uses in a table. It was noted that the previously discussed causal indicator frameworks may not be

applicable here, as they were mainly for global monitoring and may not align with country programming needs.

There was agreement that global monitoring frameworks should be mentioned in the guide, making it clear that selecting comparable national indicators would also facilitate global monitoring. There was also consensus that the guide should not recommend particular software or explain how data are collected, collocated or managed. However, the guide could point to references on principles and tools for improving data quality, including the anthropometry data quality guide.

There was some discussion about how to reflect issues related to nutrition in emergencies in the guide. Most advisors felt that nutrition in emergencies should be highlighted in a box or separate section. While many processes would be the same, key additional issues to note included preparedness, the need for more frequent data and surveillance, reliance on the routine system, and coordination. The guide could also reference external guidance on how to deal with data on refugees, etc. On advisor felt that the issue was deserving of either a separate chapter or deletion from the guide.

Survey decisions tree

Louise Mwirigi presented the concept of a survey decisions tree to be included in the NIS guide, which would help countries make decisions about when and how to conduct a survey and reduce confusion in in different results. Key considerations in the decision tree include its objectives, the existing data, the methodology used, how the results will be used, the available resources and the access to populations. TEAM was asked to discuss what questions should be included in the decision tree (in module 3).

The possibility of developing a costing template for the NIS guide was also discussed. Costing should reflect what is needed rather than what currently exists. The CDC has some costing tools and will meet with WHO to discuss and help propose a generic template that could be adapted by countries.

Points of discussion:

Several advisors commented that a discussion was needed with global partners to better plan and coordinate the various surveys and requests to countries. There was some discussion about developing the survey tree as a freestanding externally available product. Others suggested that it could be a useful add-on module, particularly for middle- and high-income countries doing surveys other than DHS that do not use standard indicators. Some advisors felt that the decisions tree would require more work and could be published in a later version.

It was noted that the process of costing a NIS or survey has itself a significant cost. The components of costing should include the human resources needed. A costing tool could include a range of potential costs to consider when preparing a budget, which would be agreed according to context.

Next steps:

- Continue work on the survey decisions tree [Louise Mwirigi and Jose Luis Alvarez Moran]
- Continue work on the costing template [Chika Hayashi and Jose Luis Alvarez Moran]
- Support the development of a new module on information needs [Sub-group 1: Rebecca Heidkamp, Purnima Menon and Jose Luis Alvarez Moran]
- Develop a conceptual framework for selecting indicators; a decision will be taken later as to whether a country example would be used [Sub-group 2: Sara Wuehler and Jose Luis Alvarez Moran].
- Draft considerations for a checklist to assess NIS. A checklist will be prepared in annex to assess the current system [Sub-group 3: Chika Hayashi and Jose Luis Alvarez Moran].

- Look at tools specific to emergencies [Sub-group 4: Louise Mwirigi and Zita Weise Prinzo].
- Sub-groups will have six weeks to complete their work; a call will be scheduled in eight weeks (approximately 10 December).

Closing session

The secretariat thanked TEAM for its contributions to the WHO-UNICEF's global nutrition monitoring activities. This was the last TEAM meeting for Trevor Croft, who had been a member for last four years and will be replaced by DHS colleague Sorrel Namaste. The secretariat expressed appreciation for his contributions to TEAM. All TEAM members welcomed Sorrel's nomination as Trevor's replacement and looked forward to working together.

The next meeting will be scheduled for spring of 2020. Advisors appreciated having time set aside for working groups to meet. It was suggested that working groups meet earlier to allow time for reporting back and consolidation of inputs to the larger group.

Annex I: Working group actions and outputs

Working group	Decisions/Actions/Outputs
Antenatal iron supplementation	- Revise the report on "Improving antenatal iron-containing supplementation indicators" based on feedback from the meeting; - Develop a manuscript for journal publication; - NI's cognitive testing of questions to be shared with TEAM at next meeting; - Continue planned activities and propose next steps in next meeting.
Breastfeeding counselling indicator	- Finalize and submit the manuscript on measuring coverage of infant and young child feeding counseling interventions; - Cognitive testing of questions; - Develop operational guidance for counselling measurement in the GNMF indicator guidance.
Anthropometry data quality	- Guide has been published; - Working group will be formed to carry forward the work to address outstanding issues and revise the guide.
Research priorities	- Working group to continue focusing on the first research question (data use) and the consultant will revise the draft; - Working group can retire after the report is finalized.
IYCF indicators guide	- Share the draft document with a select group of reviewers (identified by the WG) for expert comments; - Resolve pending issues and finalize the document by end on December; - Publish new edition of the document by early 2020.
Diet quality working group	- Finalize paper (from consultant) and publish as a TEAM report - Group discussed and affirmed potential role of TEAM in this work area and affirmed continuation of the WG - Following from the landscape assessment, WG agreed to discuss a possible meeting in 2020 to convene key actors around definitions and indicators of diet quality, with TEAM to play a convening or co-convening role.
Quality Adjusted Coverage	- WHO-lead effort under Theresa Diaz asked for "coverage cascades" for nutrition interventions in health systems to complement those already developed for MNCH; - DataDENT/JHU will add this to their work plan and at the summer 2020 meeting share findings from 1) development of coverage cascades, 2) findings from "expert survey" to define nutrition quality, 3) development of quality index using items from standard facility surveys (SPA, SARA), and 4) linking analysis to estimate "quality adjusted coverage" for set of interventions using quality index from facility surveys (SPA, SURVEY) & HH (DHS/MICS) surveys. - Will circulate with working group members for comment in advance.
Guidance on Nutrition Information Systems	- See action steps on page 22 of report
JME	- Country-level modelling proposed to go forward; - Workshop on country-level modelling will be held in December. - Model to be updated based on consultation
IYCF database	- Proposal made by the IYCF TAG will be implemented and discussed at a TAG call in 2020

Working group	Decisions/Actions/Outputs
School-aged children and adolescents	- UNICEF to convene expert group meeting in first half of 2020;
Indicator mapping	- Develop a reflection paper or brief based on the six frameworks reported by the working groups; - Identify a core set of indicators; TBD in the next meeting
Partners meeting	- No decision has been made; - TBD in the next meeting.

Annex II: Agenda

8th Meeting of the WHO-UNICEF Technical Expert Advisory Group on Nutrition Monitoring (TEAM)
WHO Headquarters, Geneva, Switzerland
1-4 October 2019
MEETING AGENDA

Day 1: Tuesday, 1 October

9:00 – 9:30	Welcome and introductions - Opening remarks by TEAM Co-chairs - Objectives and expected outcomes of the meeting - Introduction of participants - Administrative issues	Francesco Branca Jennifer Coates/Edward Frongillo Chika Hayashi Kuntal Saha Claire Ory Schärer
9:30 – 10:00	**Session 1:** WHO's nutrition work	Francesco Branca
10:00 – 10:30	**Tea/Coffee**	
10:30 – 11:15	**Session 2:** Antenatal iron supplementation indicator – update on validation and next steps	Presenter: Sara Wuehler Facilitator: Kuntal Saha
11:15 – 12:00	**Session 3:** Revision of IYCF indicators documents – update and next steps	Presenter: Mary Arimond Facilitator: Trevor Croft
12:00 – 12:45	**Session 4:** Breastfeeding counseling indicator – where we are and where to go	Presenter: Purnima Menon Facilitator: Larry Grummer-Strawn
12:45 -13:45	**Lunch**	
13:45 – 14:30	**Session 5:** TEAM research priorities – updates and future plan	Presenter: Edward Frongillo Facilitator: Rafael Flores-Ayala
14:30 – 15:15	**Session 6:** Diet quality indicators – update and next steps	Presenter: Jennifer Coates/Mary Arimond Facilitator: Omar Dary
15:15 – 15:45	**Tea/Coffee**	
15:45 – 16:15	**Session 7:** Joint malnutrition estimates (JME): Country-level models	Presenter: Edward Frongillo Facilitator: Elaine Borghi/Richard Kumapley
16:15 – 17:00	**Session 8:** Updates on – - Recommendations for anthropometry data quality - Global Community of Practice for Nutrition Data - Recommendations to DHS on the DHS 8 questionnaire	 - Elisa Dominguez/Julia Krasevec - Rebecca Heidkamp - Trevor Croft
	End of Day 1	

Day 2: Wednesday, 2 October

9:00 – 9:45	**Session 9:** District Health Information System 2 (DHIS2)	Presenter: Louise Mwirigi/Vrinda Mehra Facilitator: Chika Hayashi
9:45 – 10:15	**Session 10:** Revisiting monitoring progress towards the global nutrition targets for 2025	Presenter: Elaine Borghi Facilitator: Chika Hayashi
10:15 – 10:45	**Tea/Coffee**	
10:45 – 11:15	**Session 11:** New malnutrition prevalence thresholds: programmatic implications; and thresholds for SAM?	Presenter: Julia Krasevec Facilitator: Chika Hayashi
11:15 – 11:45	**Session 12:** Updates/planning on partner meeting	Presenter: Purnima Menon Facilitators: Rafael Flores-Ayala
11:45 – 12:30	**Session 13:** Nutrition HH survey indicator and question module guidance	Presenter: Rebecca Heidkamp Facilitator: Wenhua Zhao
12:30 – 13:30	**Lunch**	
13:30 – 14:00	**Session 14:** Effective coverage measurements – an update	Presenter: Theresa Diaz Coordinator, EME/MNCAH
14:00 – 15:15	**Session 15:** Review of TEAM workplan 2018-2019	Facilitators: Jennifer Coates/Edward Frongillo
15:15 – 15:45	**Tea/Coffee**	
15:45 – 17:00	**Session 16:** Discuss and prepare TEAM workplan for 2020-2021	Facilitators: Jennifer Coates/Edward Frongillo
19:00	**Group dinner**	**Specifics to be provided**

Day 3: Thursday, 3 October

9:00 – 10:30	Reviewing domains in multiple global nutrition frameworks	Purnima Menon
	Presentation of findings from DataDENT data visualization tool landscape review	Rebecca Heidkamp
	Discussion	
10:30 – 11:00	**Tea/Coffee**	
11.00 – 12.30	Breaking things apart: Clustering indicators from multiple global frameworks into domains	Interactive and small group work
12:30 – 13:30	**Lunch**	
13:30 – 15:00	Putting it back together: Assembling the domains into a harmonized indicator framework	Interactive and small group work
15:00 – 15:30	**Tea/Coffee**	

Day 3: Thursday, 3 October

15:30 – 17:00	Reviewing and consolidating group work	Purnima Menon
	Discussing next steps	All TEAM
	End of Day 3	

Day 4: Friday, 4 October

9:00 – 9:30	Guidance for nutrition information system (NIS) – Where do we stand? Outline and progress	Jose Luis Alvarez Moran
9:30 – 10:30	Module 1 & 2 outstanding comments and feedback.	Jose Luis Alvarez Moran
	Final decisions on these modules	All TEAM and Secretariat
10:30 – 11:00	**Tea/Coffee**	
11:00 – 11:30	Surveys decision tree	Louise Mwirigi
11:30 – 12:30	NIS session (*Contd…*)	All TEAM and Secretariat
12:30 – 13:30	**Lunch**	
13:30 - 15:15	TEAM Sub-group meetings to discuss specific workplan items	All TEAM and Secretariat
15:15 – 15:30	Closing session	TEAM Co-Chairs/Secretariat
15:30 - 16:00	**Tea/Coffee**	
	End of meeting	

Annex III: List of participants

TEAM Members

1. Jennifer Coates – Co-chair
2. Edward Frongillo – Co-chair
3. Mary Arimond – Member
4. Trevor Croft – Member
5. Omar Dary – Member
6. Rafael Flores-Ayala – Member
7. Rebecca Heidkamp – Member
8. Purnima Menon – Member
9. Lynnette Neufeld – Member
10. Sara Wuehler – Member
11. Wenhua Zhao – Member

Observer

1. Debora Di Dio – Scaling Up Nutrition Secretariat
2. Jose Luis Alvarez Moran – Independent consultant

TEAM Secretariat (UNICEF)

1. Chika Hayashi
2. Julia Krasevec
3. Richard Kumapley
4. Vrinda Mehra
5. Louise Mwirigi

TEAM Secretariat (WHO)

1. Elaine Borghi
2. Francesco Branca
3. Elisa Dominguez
4. Lawrence Grummer-Strawn
5. Kuntal Kumar Saha

Rapporteur

1. Julia D'Aloisio – Independent consultant

Annex IV: Group photo

From left to right, *Standing:* Julia D'Aloisio (Rapporteur), Laurence Grummer-Strawn, Louise Mwirigi, Auye Claire Ory Scharer (Admin Assistant, WHO), Sara Wuehler, Elisa Dominguez, Elaine Borghi, Trevor Croft, Purnima Menon, Lynnette Neufeld, Vrinda Mehra, Rebecca Heidkamp, Omar Dary, Julia Krasevec, Jose Luis Álvarez Morán. ***Sitting:*** Rafael Flores-Ayala, Mary Arimond, Chika Hayashi, Jennifer Coates, Edward Frongillo, and Kuntal Kumar Saha.

Endnotes

[1] See http://www.fao.org/3/ca6640en/ca6640en.pdf
[2] The DHS indicator is: Took any or ≥ 90 IFA in most recent pregnancy in the previous 5 years.
[3] Breastfeeding counselling was included in the first set of GNMF indicators; however, lack of available data on reach and coverage of counselling was a key gap. After deliberation by TEAM, final guidance suggested the use of country-reported existed breastfeeding counselling.
[4] Examples of other research themes noted previously included: variations in diet or weight (related to seasonality, within-country differences, meals eaten outside of the home, prevention of chronic disease and adjusting estimates/aging-out); child nutrition indicators (responses to prevalence thresholds for wasting, overweight and stunting; prevalence thresholds for severe acute malnutrition (SAM); relapse in SAM treatment); and nutrition initiatives (effectiveness of mother-to-mother support groups, paid performance-based initiatives, etc.)
[5] Khan, A., Frongillo, A., Coates, J., Dary, O., Menon, P., Flores-Ayala, R., Zhao, W., Hayashi, C., and Saha, K. Use of nutrition data in decision-making: A review paper (forthcoming).
[6] McLain, A. et al. Prediction intervals for penalized longitudinal models with multisource summary measures: An application to childhood malnutrition. Statistics in medicine, 38: 6, November 2018.
[7] Standard questionnaires include the household questionnaire, the woman's questionnaire, the man's questionnaire, the biomarker questionnaire and the fieldworker questionnaire. Optional modules include: accident and injury, adult and maternal mortality, disability, domestic violence, female genital cutting, fistula, male child circumcision, newborn care, non-communicable diseases, out-of-pocket health expenditures, and a supplemental module on maternal health care.
[8] Accepted recommendations included: assessment of child growth; updated indicators for infant and young child feeding; minimum dietary diversity for women and unhealthy diets; measuring household food insecurity (module); and iron containing supplements for pregnant women and young children. Partially accepted recommendations included: coverage of nutritional interventions during antenatal care; counselling about breastfeeding at early critical time points; and infant and young child feeding counselling from 6–23 months.
[9] A final decision has not yet been taken on this cut-off
[10] See for example, https://www.ncbi.nlm.nih.gov/pubmed/17342161
[11] Input-adjusted coverage: Population in need of health service who comes into contract with a health service that is 'ready'. This requires that all inputs necessary to provide the service are available and functional at time of visit.
[12] Crude coverage: Populations in need that come in contact with a service that is 'ready' and receives the service.
[13] Quality-adjusted coverage: Population in need who comes into contact with a service that is 'ready' and receives the service according to quality of care standards (i.e., what is expected to be delivered to maximize health gain).
[14] User adherence-adjusted coverage: Population in need who receives the service according to quality of care standards and adheres to provider instructions.
[15] Outcome-adjusted coverage: Population in need who receives the service according to quality of care standards, adheres to provider instructions, and experiences the expected health gain.
[16] This session was added and does not follow the published agenda.
[17] Global nutrition monitoring framework; SUN Monitoring , Evaluation, Accountability and Learning (MEAL); Global Nutrition Report Country Profiles; Hunger and Nutrition Commitment Index; Countdown to 2030 country dashboards; WHO Nutrition Landscape Information System country profiles; Global Breastfeeding Scorecard; and SPRING National Anaemia Profiles.
[18] Background research for this exercise, led by Results for Development with support from Johns Hopkins, was completed to compare and categorize indicators from eight global frameworks (see endnote 15). The aim was to identify where similar indicators could suggest different conclusions. The research found 58 overlapping indicators and 42 with variability in definitions, suggesting the need for greater coherency.