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# REPORT

of

## **The Fourth Meeting of the WHO-UNICEF Technical Expert Advisory group on nutrition Monitoring (TEAM)**

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## ACRONYMS

ANC	Antenatal care
BF	Breastfeeding
CDC	Centers for Disease Control and Prevention
CHW	Community health worker
DHS	Demographic and Health Surveys
EBF	Exclusive breastfeeding
FAO	Food and Agriculture Organization of the United Nations
FLW	Frontline worker
GDD	Global dietary database
GIFT	Global individual food consumption data tool
GNMF	Global Nutrition Monitoring Framework
GNPR2	2 <sup>nd</sup> Global Nutrition Policy Review
HIC	High-income country
HMIS	Health management information system
IFA	Iron and folic acid
INDDEX	International Dietary Data Expansion
IYCF	Infant and young child feeding
JME	Joint child malnutrition estimates
LIC	Low-income country
LMIC	Lower-middle income country
LSHTM	London School of Hygiene and Tropical Medicine
MAD	Minimum acceptable diet
MDD	Minimum diet diversity
MERG	Monitoring & Evaluation Reference Group
MI	Micronutrient Initiative
MICS	Multiple Indicator Cluster Surveys
MMF	Minimum meal frequency
NCD	Noncommunicable diseases
NLiS	Nutrition Landscape Information System
SDG	Sustainable Development Goals
SMART	Standardized Monitoring & Assessment of Relief & Transitions
SPRING	Strengthening Partnerships, Results and Innovations in Nutrition Globally
SUN	Scaling Up Nutrition
TEAM	Technical Expert Advisory group on nutrition Monitoring
ToR	Terms of reference
UNICEF	United Nations Children's Fund
UMIC	Upper-middle income country
WHA	World Health Assembly
WHO	World Health Organization
WPHNA	World Public Health Nutrition Association

# 1. INTRODUCTION

In 2015, WHO and UNICEF established an independent Technical Expert Advisory group on nutrition Monitoring (TEAM) to advise on enhancing nutrition monitoring at all levels. The TEAM is also expected to help identify emerging research questions and needs related to nutrition monitoring and to recommend action to develop or refine indicators and methods for the Global Nutrition Monitoring Framework (GNMF). A specific immediate focus of TEAM is completing development of 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 is a gender- and regionally balanced group of ten technical experts with support provided by a joint WHO-UNICEF Secretariat. TEAM members use their networks to reach out to other experts and agencies for collaboration. Thematic sub-working groups are convened as needed. The roles and responsibilities, scope and purpose, and operational modalities of TEAM are described in its Terms of Reference.<sup>1</sup>

The **first TEAM meeting** was held in July 2015 in Geneva, Switzerland, and a workplan for the first two years drafted with six main work areas: (i) WHA nutrition target operational guidelines; (ii) prevalence ranges for malnutrition (stunting, wasting and overweight); (iii) Rules for assessing progress towards achieving the six WHA nutrition targets; (iv) anthropometry data quality; (v) a research agenda for global nutrition monitoring; and (vi) engagement with other partners.

The **second TEAM meeting**, held in New York in February 2016, consisted of an open half-day session with invited partners and a closed session of one and a half days for TEAM members. In the first session, the WHO-UNICEF Secretariat briefed partners on the structure and functions of TEAM and modalities of partner engagement. Partners provided input on priorities as well as modalities for their engagement. In the closed TEAM meeting session, work progress on items pertaining to the drafted two-year work plan was presented and discussed, and the work plan was finalized taking into consideration partners' inputs. The reports on the partner session<sup>2</sup> and the 2<sup>nd</sup> TEAM meeting<sup>3</sup> were shared with all concerned.

The **third TEAM** meeting was held in September 2016 in Geneva, Switzerland. Updates on all ongoing activities in the TEAM workplan were provided by the groups working on those. The concept notes and/or terms of reference on iron and folic acid (IFA), minimum acceptable diet (MAD), trained nutrition professionals and breastfeeding counselling indicators were discussed. It was agreed that the calls for consultants for IFA, MAD and trained nutritional professionals would be finalised and advertised. It was decided that the TEAM working group working on breastfeeding counselling indicator would revise the concept note including a recommendation for an interim indicator. Other activities discussed were rules for tracking WHA global nutrition targets, prevalence level ranges for stunting, and wasting and overweight. The timelines for the activities were updated

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<sup>1</sup> Terms of Reference for the WHO-UNICEF Technical Expert Advisory Group on Nutrition Monitoring (TEAM), Draft 24 February 2015.

<sup>2</sup> Report on The Joint session of WHO-UNICEF Technical Expert Advisory Group on Nutrition Monitoring (TEAM) with Partners, 4 February 2016, UNICEF House, 3 UN Plaza, NY, USA.

<sup>3</sup> Report on the Second Meeting of the WHO-UNICEF Technical Expert Advisory Group on Nutrition Monitoring (TEAM), 4-5 February 2016, NY, USA. March 2016.

based on the current progress. A report<sup>4</sup> on the 3<sup>rd</sup> TEAM meeting is available on the TEAM SharePoint.

The **fourth TEAM** meeting was held in Geneva, Switzerland, March 21-22, 2017. This report includes the summary of discussion from the TEAM meeting sessions (see agenda in Annex 1 and list of participants in Annex 2).

## 2. MEETING SUMMARY

The meeting covered the six main areas of work as outlined in the TEAM workplan. The issues discussed on each topic and next steps are summarised below.

### 2.1 Global Nutrition Monitoring Framework (GNMF): 4 deferred indicators

Ongoing work related to the four deferred indicators was discussed. The four indicators are: (i) iron and folic acid (IFA) supplementation during pregnancy; (ii) number of trained nutrition professionals; (iii) minimum acceptable diet (MAD); and (iv) breastfeeding counselling. For each indicator, results were presented from ongoing indicator development work.

#### 2.1.1 Iron and folic acid supplementation indicator

TEAM with the Secretariat outlined a ToR to develop a comprehensive indicator definition and operationalization of the indicator relating to iron and folic acid (IFA) supplementation during pregnancy. In the September 2016 meeting, TEAM reviewed the proposed ToR in light of the decisions made during the February 2016 TEAM meeting (See 3rd TEAM meeting report<sup>4</sup> for more background information and scope of work).

A feasibility study was undertaken to assess the feasibility of reporting on components of suggested indicator. A set of Member States including a mix of low-, middle-, and high-income countries were selected based on the following criteria: the World Bank economic development category, region, anaemia prevalence and burden, IFA policy, existence of DHS surveys, and ANC coverage. Sixteen key informant interviews were conducted with representatives from 8 selected countries: Senegal, Nepal, India, Philippines, Nigeria, China, Mexico and United States.

Country findings on data sources for IFA supplementation suggest that DHS surveys consistently collect data in 5 (Senegal, Nepal, India, Philippines and Nigeria) out of 8 countries every 5 years. IFA is not consistently included in MICS; data were available in 2 countries. Both surveys report on completed pregnancies, however, DHS includes those completed in the last 5 years compared to 2 years in MICS. HMIS collects IFA distribution but of highly variable quality (% of women receiving first dose of IFA). National Health and Nutrition Surveys in UMIC and HIC are of variable frequency and mostly report on current pregnancies only. There were some additional surveys that covered health facility assessments (readiness) and context-specific program coverage of IFA. The findings also showed that about 45% of the Member States (88 out of 194) do not have DHS or MICS. These countries include 54 HIC, 23 UMIC, 10 LMIC, and 1 LIC. These findings underscore that relying on DHS and MICS alone for IFA data collection will not be a feasible way of reporting on this indicator.

Feasibility of collecting new data using existing data collection platforms was explored. It was found that DHS is not a feasible data collection platform for data on IFA distribution and purchase specifically with mixed distribution setting (public and private, clinic and pharmacy). It is feasible to

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<sup>4</sup> Report on the Third Meeting of the WHO-UNICEF Technical Expert Advisory Group on Nutrition Monitoring (TEAM), 15-16 September 2016, Geneva, Switzerland, October 2017.

collect data on number of IFA tablets received during the last pregnancy and number of IFA tablets consumed using DHS and MICS but highly dependent on validation results (See Annex Table 1 for detailed information). Recall period for reasonable reliable data on number of IFA received/purchased and number of IFA consumed is not known.

Stratification by age, parity, education level of women, source of supplements (health system/care organization or self-purchased), relevant sociodemographic factors (urban/rural, wealth quintile) is possible from DHS, MICS, and most NHNS except for 'distance to nearest health facility'.

The pros and cons of IFA indicator components were discussed in relation to IFA received/purchased (versus consumed/ taken), recommended number of tablets, iron/folic acid tablets, during last pregnancy, and in the last 2 years. It appeared that coverage vs compliance (intake adherence) can vary greatly, however, consumed ANY tablet may be an option. The number of tablets and recall period will need validation.

## **Decisions made**

- TEAM agreed on an interim indicator defined as “the percentage of women who consumed any iron and folic acid-containing supplements during current or completed pregnancy within the last 2 years”.
- Operational guidance for the proposed interim indicator will be included in the report of the feasibility study, which will eventually be included in the operational guidance for GNMF indicators.

## **Next steps: Indicator validation**

- Potential items for validation are: (i) Recall period and recall quantities; (ii) Quantities – accuracy of cut-offs versus actual number of tablets; versus estimating frequency (daily, weekly, monthly); versus any tablets; (iii) Sample size – minimum sample size needed to estimate IFA coverage (within ICC range). BMGF/JHU Improving Coverage Measurement Project (2-3 indicators) and MI surveys (India against MCP card) or Senegal (against continuous DHS) have been identified as potential validation platforms:
- Micronutrient Initiative (MI): conducted survey in Nigeria with surveys pending in India and Senegal. MI has adapted the methods proposed by DHS with questions regarding access and consumption by trimester or month of pregnancy with sample of women 0-11 months postpartum with a live birth.
- Performance Monitoring and Accountability 2020 (PMA2020) has added questions around compliance with IFA in the last 24-hours (as well as longer recall periods for current and completed pregnancies in the last 2 years in Kenya and Burkina Faso).

### **2.1.2 Trained nutrition professionals indicator**

A feasibility study for an indicator on trained nutrition professionals was conducted and results were presented for discussion. The study was done in two steps:

#### **Step 1: Defining individual and institutional indicators**

The following four indicator definitions were considered – two at individual level and two at institutional level:

- a. Density of trained nutrition professionals per 100,000 population

- b. Density of frontline health workers trained in key nutrition service delivery per 100,000 population
- c. Density of post-secondary training institutions that offer a degree in nutrition and/or another degree program with a nutrition-specific track/minor per 100,000 population
- d. Density of graduates during the last academic year from post-secondary training schools with a degree in nutrition and/or another degree with a nutrition-specific track/minor per 100,000 population

Potential existing data sources for each proposed indicator were discussed: (i) WHO National Workforce Account provide data on all four indicators from most WHO Member States; (ii) 2<sup>nd</sup> Global Nutrition Policy Review (GNPR2) provides data for the first three indicators from 104 WHO Member States (as of December 2016)<sup>5</sup>; (iii) Nutrition Landscape Information System (NLIS) provides data for the first two indicators from 36 high burden countries; and (iv) SPRING Workforce Mapping Tool analysis provides data for the first two indicators but the number of countries is not known.

## **Step 2: Scoping exercise to determine feasibility to produce data for reporting on this indicator**

Data from the 2nd Global Nutrition Policy Review (GNPR2) was used to evaluate the feasibility of collecting suitable data to enumerate the indicators. About 52.5% (102 out of 194) of the WHO Member States completed the 2016 GNPR2 questionnaire at the time of analysis. United Nations total country population data were used to calculate and express the indicators as population densities. Data were examined by WHO region and World Bank country income classifications.

Assessment of feasibility was based on: (i) the proportion of countries that provided responses for relevant questions; (ii) country response patterns in relation to WHO region, income and development; and (iii) comments from respondents about availability of data to answer the questions.

Validation of proposed indicators as predictors for selected MIYCN nutrition outcomes was assessed based on correlation of the indicator with nutrition outcome indicators, i.e., prevalence of stunting in children <5 years of age, prevalence of wasting in children <5 years of age, prevalence of overweight in children <5 years of age, exclusive breastfeeding rate, prevalence of maternal anaemia, and prevalence of low birth weight.

## **Key points discussed**

GNPR2 questions were designed for the purpose and appear feasible for collecting data for some indicators, especially from LMIC. However, larger sample sizes and checking of some data is needed to draw final conclusions on validity of indicators using GNPR2 questions. Once the indicator is defined, it will be easier to advocate as the report goes out every 5 years. The GNPR2 report is taking into consideration as the baseline to monitor the progress of implementation of the global targets.

It is important to check the number of children who are not malnourished against the number of trained nutrition professionals – there seemed to be higher number of nutritionists in areas with less malnourished children. Current analysis is only looking at a point in time and not changes over time, but changes over time should be more appealing.

Definition of frontline health workers should be clear as the definition is highly biased to low income countries. As the indicators were on IYCF and SAM treatment, it is unclear whether all countries were interpreting this the same way. Additional checks to the data need to be done.

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<sup>5</sup> GNPR2 has data from 150 countries, as of March 2017

TEAM can review the questionnaire for the next round of data collection and also how often would this data collection happen? This will be then included in the operational guidance.

### Next steps

- Repeat analysis with larger data set as it becomes available.
- Compare ranking of countries between indicators to see if they are the same, if so, choose the indicator based on the practicality of data collection.
- Take a sample of 10 purposively selected countries representing both high- and low-income countries and verify the data to find out how questions were interpreted and assess consistency of responses between countries. For example, high-income countries may interpret SAM differently from low-income countries that have SAM programmes.
- Consider the flexibility of the proposed indicator in the context of multi-sector action for better nutrition.

Selection of final indicator will be based on review of findings from the assessment and validation. An operational guidance will be prepared for reporting on the indicator by all Member States.

### 2.1.3 Minimum acceptable diet (MAD)

The IYCF indicator minimum acceptable diet (MAD) was selected as a process indicator in the Global Nutrition Monitoring Framework for tracking progress towards WHA 2025 targets. In previous TEAM meetings it was agreed that it can be proposed to substitute the minimum dietary diversity (MDD) for MAD. The main rationales for MDD are that it is a much simpler indicator than MAD and MDD is the “constraining” component in MAD as the other component of MAD indicator, i.e., minimum meal frequency (MMF) is much more frequently met. In addition, MDD has more global relevance, since MMF proxies for energy adequacy, which is less constrained (or in excess) in MIC and HIC.

Substitution of MDD for MAD raises issue that needs resolution. Non-BF infants are “favoured” in MDD and WHO 2008 IYCF indicator guidelines suggests not to compare MDD between populations with differing prevalence of BF. UNICEF analysis using existing database illustrated impact of some proposed changes using different definitions for meeting MDD including: (i) allowing breastmilk to count; (ii) not allowing formula to count; and (iii) not allowing formula and other milk to count. The results suggest increases in MDD in LIC when breast milk included and on average (across countries) no impact of exclusion of formula in either LIC or UMIC. In addition, operationalising either MDD or MAD from quantitative 24-hour recalls is new and requires new guidance.

A set of analyses was performed to assess feasibility and to inform development of guidance for generating MDD and MAD from nationally representative quantitative 24-hour (Q24 hr) recall data from three countries (US, UK and Mexico). Effect on estimates of prevalence for MDD was examined: (i) modifying MDD so that formula-fed infants are not advantaged; (ii) counting or not counting “secondary” ingredients in composite foods; (iii) including/excluding specific sweet or nutrient-poor food items from “counting” in groups; and (iv) applying minimum quantity criteria for food groups to count in MDD. In US and UK, there was little impact of inclusion of breastmilk but a 4-6 percentage point decrease in MDD when formula was excluded. In Mexico there were small non/significant differences in MDD for either change (positive for breastmilk and negative for exclusion of formula). In the analysed data sets, inclusion/exclusion of secondary ingredients and of sweet or nutrient-poor foods made little difference to estimates of MDD or MAD. In contrast, when generating from Q24 hr recalls, the choice of minimum quantity for food groups to “count” has a major impact on estimates of prevalence of MDD and MAD.

## Key points discussed

The TEAM was informed that in the case of MAD/MDD, no decisions were needed at the TEAM meeting, because a consultation is planned. However TEAM input is welcome and will be brought to the table at the broader consultation.

Regarding modifications to MDD to make the indicator comparable for breastfed and non-breastfed infants, several TEAM members responded positively to the inclusion of breast milk as a dairy food.

The comparability of MDD generated from DHS/MICS vs. Q24 hr recalls was discussed, as these are entirely different methodologies. In previous meetings TEAM had discussed and decided that MDD should be reported by all countries, despite being generated by non-comparable methodologies. Comments at the March 2017 meeting indicated this should perhaps be reopened for discussion at the consultation. One option would be to have a minimum indicator that everyone responds to (e.g. current MDD definition), and a more detailed indicator reported in addition (e.g. with quantitative information) for countries that are able to. However, more discussion is needed for making decision on this.

It was noted the WHO is also in the process of updating guidance on complementary feeding to consider issues such as prevention of overweight and obesity among children. After this process is complete, new indicators may be developed, but this will not occur in the immediate future.

There was a question raised if the consultative meeting June 2017 review the 2008 IYCF indicator document only for MDD and MAD or if possible should cover other indicators in the document that need improvement. Issues around the exclusive breastfeeding indicator were mentioned as an example.

## Next steps

Convening a consultation meeting inviting people who were involved in the 2008 IYCF indicators development process and key people who are currently working in this area, June 2017.

Making decision on the indicator to be used and developing operational guidance on the final indicator, August 2017.

Main points to be discussed in the consultation:

- **Minimum Dietary Diversity (MDD)**
  - Discuss how to remove the current “advantage” to non-breastfed IYC, either via allowing breast milk to count or disallowing breast milk substitutes; if the latter, define
  - Revisit the fruits and vegetables groups
  - Revisit certain categorization decisions from WHO 2010, including for sweetened beverages and desserts with dairy content and savory snack foods, also fortified blended flours and mixed dishes with dairy content
  - Define how to operationalize MDD with 24-hour recall data, including addressing the issue of minimum quantities and using data sets with different levels of disaggregation for foods
- **Minimum Meal Frequency (MMF)**
  - Revisit allowing non-breastfed (non-BF) infants and young children (IYC) to meet MMF if they only consume milk feeds

- Define how to operationalize MMF and the milk-feed count in MAD using 24-hour recall data with varying data types (respondent-defined meals/snacks and/or time for each food item)
- **Minimum Acceptable Diet (MAD)**
  - Review changes to estimates of prevalence when an error in calculation of MAD for non-breastfed IYC is corrected; reach consensus on correction
- **Reflect on experiences** using the WHO IYCF indicators: strengths, weaknesses, and the risks and benefits of revisions and extensions
- **Process for and optimal outputs from the consultation** and/or from revision to WHO 2010 (content, format, other communication tools)

#### 2.1.4 Breastfeeding counselling indicator

The working group gave an update on this indicator and discussed the next steps for the breastfeeding counselling indicator. The originally proposed indicator is defined as the “proportion of mothers of children 0-23 months who have received counselling, support or messages on optimal breastfeeding at least once in the last year”. This definition raised various issues, such as age ranges, fit to purpose, availability of data, etc. This indicator does not capture the prenatal intervention component or counselling support delivered by mass media. To date we are not aware of any country collecting a similar indicator at scale. Roll out of such an indicator will require a more expensive development and validation process (see below).

Since the September 2016 TEAM meeting, the working group reviewed global initiatives for reporting on breastfeeding support policies and programmes and discussed with Alive & Thrive staff. They also reviewed survey questions currently being used in large-scale household surveys to measure breastfeeding counselling exposure.

Based on this work, the working group proposed an interim indicator for WHA reporting in 2018 “Availability of national-level provision for counselling services in public health systems and/or nutrition programmes”. The purpose of this interim indicator is to assess whether there are designated health service providers in the context of national health systems (including public health programmes) who are responsible for providing breastfeeding counselling and support during antenatal and postpartum care, and in the first two years of life. Another purpose is to assess existence of strategies for reaching mothers with appropriate support to enable exclusive breastfeeding. The working group also proposed operational guidance for the interim indicator (see background concept note for more information).

#### Key points discussed

The interim indicator intends to capture national-level provision for breastfeeding counselling services to pregnant women and/or mothers of children 0-23 months of age through health systems or other community-based platforms.

Strategy for taking the interim indicator forward was discussed. Main issues for TEAM to discuss were indicator definition, age range, ability to capture the scale of national-level provision, mode of provision (only publicly financed provision for counselling services or both public-private), and adequacy of provision from a quality perspective.

The working group agreed to review and identify an existing indicator from one of two recent global survey/policy documentation efforts – GNPR 2016 and Nutridash.

**Development and testing of breastfeeding counselling coverage indicator:** The working group proposed Phase-2 work for development and testing of breastfeeding counselling coverage indicator defined as “Proportion of mothers of children 0-23 months who have received counselling, support or messages on optimal breastfeeding at least once in the last year”. Data mechanisms to collect this information remain large-scale surveys but DHS and MICS do not yet include questions for reporting on this indicator. Some potential options to review survey options and testing questions were discussed:

*University of Washington, Seattle:* Reviewing questions currently being used in major national surveys on access to BF counselling and other nutrition interventions; with funding from Bill & Melinda Gates Foundation.

*JHU/PMA 2020:* Testing of newly developed questions on nutrition coverage, with funding from Bill & Melinda Gates Foundation.

*IFPRI:* Examining survey questions being used to track changes in intervention coverage over time in India and integration of coverage measurement questions to capture counselling exposure in impact evaluation studies.

Financing needs for Phase-2 work was discussed. Funding will be required for a meeting to share insights from questionnaire reviews and field testing of ongoing work, agree on common core of questions to capture counselling coverage/exposure and on areas for adaptation. Additional funding will be required for indicator validation work to collaborate closely on this with Bill & Melinda Gates Foundation staff working on nutrition coverage.

## Next steps

- Continue ongoing review and testing processes to examine performance of currently used questions in the context of different intervention modalities. The working group will be reviewing three sets of policy/program questions – GNPR2, NutriDash and WBTi – to make the final recommendation.
- Follow on with further testing in survey programmes in the context of existing and functional national programmes that deliver counselling interventions, where initial testing can be done (e.g. IFPRI surveys, PMA 2020, India’s NFHS-5 and possibly Bangladesh’s next DHS survey).

## 2.2 Ranges of prevalence levels for wasting, overweight and stunting

The presentation covered the key motivation for revisiting prevalence levels for wasting, overweight and stunting: (i) global reduction of stunting approaching the level currently designated as “low” – 23% (JME 2015) with 43% of countries having stunting levels below 20%; (ii) release of the WHO Child Growth Standards in 2006; and (iii) the need for prevalence level ranges for overweight, which is one of the six WHA global nutrition targets.

The current prevalence level ranges for stunting were determined in the early 1990s based on an analysis of 79 national surveys from low- and middle-income countries by grouping them into four categories corresponding approximately to the observed quartiles: (i) “low” (<20%); (ii) “medium” (20-29%); (iii) “high” (30-39%); and (iv) “very high” ( $\geq 40\%$ ). For wasting, the prevalence level ranges were derived differently, in association with mortality risk: (i) “acceptable” (<5%); (ii) “poor” (5-9%); (iii) “serious” (10-14%); and (iv) “critical” ( $\geq 15\%$ ).

The points discussed and decisions made at the 3<sup>rd</sup> TEAM meeting in September 2016 were mentioned. The original terminology for stunting used was “classification of prevalence levels” and was not meant to imply that specific levels had any “public health significance”. For wasting, the original terminology referring to a “severity index for malnutrition in emergency situations” was

more in line with the fact that these population cut-offs were derived based on associations with mortality. Therefore, it is important to consider how these levels/ranges/thresholds/cut-offs should be named and described. The terminology “public health significance” does not seem justified to describe stunting and overweight levels as they carry no meaning as to risk levels of morbidity/mortality. Similarly, the labels used for the different levels need to be harmonized across the three indicators.

In the 3<sup>rd</sup> TEAM meeting in September 2016, results from analyses using three approaches were presented: (i) **Descriptive approach**: prevalence levels based on the quartiles using the latest available data; (ii) **Functional approach**: prevalence levels based on association with increased risk of functional outcomes; and (iii) **Novel approach**: prevalence levels based on degrees of deviation from “normality” based on the WHO Child Growth Standards. Descriptive approach is similar to the method used in the 1990s for stunting. Functional approach appears as the ideal approach but not feasible for stunting and overweight due to scarcity of required data sets/studies. Novel approach is the approach TEAM decided to proceed with.

At the 4<sup>th</sup> TEAM meeting in March 2017, results from analyses using the “Novel approach” applied to all three indicators – stunting, wasting and overweight, were presented and discussed in the context of other information related to the “Functional approach” as well as the “Descriptive approach” (i.e., number of countries falling in each level using the latest dataset of national surveys). The results are summarised in Table 1 below.

## Key points discussed

In the spirit of minimizing changes and keeping coherence across indicators, the following decisions were made: (i) use the terminology “prevalence thresholds” (e.g., “prevalence thresholds for wasting, overweight and stunting”); (ii) harmonise labels for the different levels within each indicator – very low, low, medium, high, and very high; (iii) for easy communication, round the “very low” level to <2.5% instead of <2.3%; and (iv) use multipliers of the “very low” level to derive the other levels as follows:

- a. **Wasting**: Very low, Low ( $\approx 2X$  normal), Medium ( $\approx 2-4X$  normal), High ( $\approx 4-6X$  normal) and Very high ( $\approx 6X$  normal)
- b. **Overweight**: Very low, Low ( $\approx 2X$  normal), Medium ( $\approx 2-4X$  normal), High ( $\approx 4-6X$  normal) and Very high ( $\approx 6X$  normal)
- c. **Stunting**: Very low, Low ( $\approx 4X$  normal), Medium ( $\approx 4-8X$  normal), High ( $\approx 8-12X$  normal) and Very high ( $\approx 12X$  normal)

Table 1: Prevalence thresholds, corresponding labels and number of countries in different prevalence threshold categories for wasting, overweight and stunting using “novel approach”

Wasting			Overweight			Stunting		
Prevalence thresholds (%)	Labels	# of countries	Prevalence thresholds (%)	Labels	# of countries	Prevalence thresholds (%)	Labels	# of countries
< 2.5	Very low	28	< 2.5	Very low	16	< 2.5	Very low	4
2.5 - < 5	Low	41	2.5 - < 5	Low	35	2.5 - 9	Low	26
5 - 9	Medium	39	5 - 9	Medium	50	10 - 19	Medium	30
10 - 14	High	14	10 - 14	High	18	20 - 29	High	30
$\geq 15$	Very high	10	$\geq 15$	Very high	9	$\geq 30\%$	Very high	44

## Next steps

- Prepare a manuscript to describe background, terminology and technical issues, discuss the pros and cons of the different approaches, and present the revised thresholds with the rationale for each indicator – July 2017.
- Initiate work on actions to be recommended at each level (i.e., very low, low, medium, high, very high) for each of the three indicators – include this in the TEAM work plan 2017-2019. Ideally two Working Groups should be formed – one for wasting and stunting, and another for stunting and overweight, which should include TEAM and Secretariat members, and outside experts as required.

## 2.3 Modelling exclusive breastfeeding rates using retrospective data

The prevalence of exclusive breastfeeding (EBF) in children from birth to six months of age is one of the six global nutrition targets for monitoring progress towards the achievement by 2025. It is also relevant to the global health priorities as outlined in the 2015 United Nations Resolution adopted by the General Assembly on the Sustainable Development Goals (Transforming our world: the 2030 Agenda for Sustainable Development) in the context of Decade of Action on Nutrition.

The Global Nutrition Report 2015 shows that 115 countries do not have enough data to report on progress toward achieving the EBF target<sup>6</sup>. It also noted that “there are no high-income countries with sufficient data to assess progress”. While the 2016 Global Nutrition Report shows a somewhat higher number of countries that are able to report on this indicator, the number of countries with missing data is still very high (110 countries)<sup>7</sup>. Both reports highlighted a lack of data on this indicator in many countries, particularly in high-income countries.

Methods for measuring EBF are not consistent across countries. The standard approach, as per the WHO indicator manual, to measuring EBF rates employs a 24-h recall of feeding. This standard approach has been adopted in the majority of low- and middle-income countries through DHS, MICS and other household surveys. However, EBF data using 24-h recall are not available in most high-income countries and only a few of them report the standard breastfeeding indicators. In most high-income countries, the data used for estimating exclusive breastfeeding rates are based on retrospective data which use a longer retrospective recall of infant feeding practice or on data from different administrative sources.

Comparisons of estimates are difficult for countries that do not have nationally representative surveys that collect breastfeeding data using international standardized methodologies. Lack of comparable breastfeeding data, affects the reporting of international breastfeeding indicators for these countries. In the absence of standardized data collection, it is important to explore whether the existing data can be used to meaningfully represent exclusive breastfeeding rates in these countries.

With this context, a study<sup>8</sup> was conducted to develop a model to estimate EBF rates among infants 0-5 months by using both data from the standard 24-h recall and retrospectively reported data on EBF. The model will potentially be used to estimate EBF rates using retrospectively reported data in countries that do not have EBF data from standard 24-h recall method.

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<sup>6</sup> International Food Policy Research Institute. Global Nutrition Report 2015: actions and accountability to advance nutrition. Available from: <http://globalnutritionreport.org/the-report/the-report-2015/>

<sup>7</sup> International Food Policy Research Institute. Global Nutrition Report 2016: ending malnutrition by 2030. Available from: <http://www.globalnutritionreport.org/the-data/>

<sup>8</sup> This study was implemented by WHO and carried out by Ipsos Switzerland.

The results from the study were presented and discussed. The study was conducted in two phases<sup>9</sup>:

- i. **Exploratory phase:** included identification and description of available data and definition of minimum inclusion criteria. Literature search was carried out to identify relevant studies (nationally representative surveys or studies containing both retrospective and recent-recall methods). Data sets collected during the exploration phase were heterogeneous in nature. Data sets for modelling were selected after several steps using inclusion criteria.
- ii. **Modelling phase:** several regression models were developed describing the relationship between estimates of EBF rates using data from standardized questions and estimates using retrospectively reported data. For each model, the dependent variable was the percentage of children <6 months who were exclusively breastfed in the last 24 hours and the explanatory variable was the longer retrospective recall data for children aged 6 months or older. Three main models were developed based on the explanatory variables. The best regression model was chosen for estimating the percentage of children 0-5 months of age that were exclusively breastfed in the last 24 hours as a function of the proportion of children over 6 months of age exclusively breastfed for at least 6 months, using longer retrospective recall data.

### Key points discussed

There was a lengthy discussion mainly around methodological and feasibility issues. Some of the highlights from discussion are presented below.

Concerns were raised that measurements using 24-h recall also have a number of problems. On the other hand, the EBF indicator has already been included in GNMF and all Member States were asked to report on this indicator. However, most HIC do not collect data using 24-h recall and they have their own system of collecting breastfeeding data. The modelling is being pursued to assess whether an opportunity to estimate EBF rates in countries that are lacking standard data collection of breastfeeding could lead to comparable global estimates across countries.

There was a question on whether the purpose of this exercise was to close the data gaps in countries that are lacking breastfeeding data using 24-h recall. It is important to look at how many more countries will be able to report on EBF using model based approach.

There is a potential of overestimating EBF using 24-h recall data as this does not take into consideration if the child was fed something else prior to the last 24 hours and it does not mean that the child will be breastfed until 6 months of age. In addition, there are challenges regarding the way feeding questions are asked in surveys and the way mothers perceive those questions. In some countries, giving water is still considered as EBF but the standard WHO definition defines this behaviour as non-EBF. These issues should be considered while estimating and reporting EBF rates.

We need to complete the analysis and determine if it is feasible to use the model to estimate EBF. There should be a guiding principles for data quality and how the data should be used for extrapolation. Additional analysis will be required to explore this issue and to make decision.

### Next steps

- Test the models using split samples to examine if the model-based estimates are reasonable and reliable.

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<sup>9</sup> For detail methodology, see the report on “Measuring exclusive breastfeeding using retrospective data: Challenges and opportunities. (Final draft, April 2017)

- Examine data quality issues for observations included in the analyses, excluding poor quality data, but not necessarily excluding outliers.
- Examine simpler models without covariates.
- Include results from additional analyses in the report.

## 2.4 Anthropometric data quality

An update on the work progress was provided by the TEAM Secretariat. A working group has been formed including TEAM and Secretariat members and external experts on this topic – Abigail Perry, Bradley Woodruff, Cynthia Ogden, Omar Dary, Reynaldo Martorell, Teresa Shamah Levi, Victoria Sauveplane. TEAM and Secretariat members included in the working group are Trevor Croft, Rafael Flores-Ayala, Julia Krasevec, and Monika Blössner.

A meeting of the working group was held in Washington, DC in January 2017. In addition to technical discussion, it was decided to develop an ebook entitled *“Minimum criteria and methods for collecting, analysing and reporting child growth survey data”*. The purpose of the ebook is to summarise good practices and provide links to available tools and guidance material for anthropometry data. The ebook will provide templates, checklists and typical questions for standardized data collection, analysis and reporting with the focus on how to obtain good quality anthropometric data.

An update on the ebook development process was presented. There will be twelve chapters and about fifteen pages for each chapter. For each chapter, title and person responsible were identified, and progress of work and expected date of completion was provided. Expected date of completion of full ebook is September 2017.

Reviewers for different chapters are Elisabeth Sommerfelt, Monica Woldt, Louise Mwirigi, Jonathan Gorstein, Monica Kothari, Lynnette Neufeld, Claudine Prudhon and Faith Thuita.

### Next steps

Revisions of first six chapters should be completed by March 2017. Development of the next five chapters will be done by April 2017. The full ebook will be developed by finalizing all twelve chapters after incorporating comments from various users. An editor should be hired to support in finalizing the ebook as a manual. The manual will be printed after the feedback process is completed by December 2017. As this workplan item is delayed, it will be included in the TEAM workplan for 2017-2019.

## 2.5 Operational guidance for the GNMF indicators

An update was provided by the TEAM Secretariat on the progress on the operational guidance for the GNMF indicators. The draft operational guidance was shared with TEAM and Secretariat members in December 2016 for feedback. The comments received were well incorporated in the revised document that has been shared as a background material for this TEAM meeting.

One specific issue related to the diarrhoea indicator was discussed in the meeting. In the second TEAM meeting in February 2016 in New York, TEAM recommended “coverage of children seeking treatment for diarrhoea in health facilities” as an indicator for childhood diarrhoea. However, the Secretariat felt that this indicator should be further modified to align with the one that is included in the 100 Core Health Indicators. TEAM unanimously agreed with the indicator included in the 100 Core Health Indicators, which is “children with diarrhoea receiving oral rehydration solution (ORS)” to be included in the GNMF indicators.

## Next steps

The Operational Guidance document will be field tested and Secretariat will facilitate this process through WHO and UNICEF Regional Nutrition Advisors and country focal points. Operational guidance for four postponed indicators will be incorporated in the document as they are developed. Further guidance for LBW data collection and reporting should also be added as they are available. The operational guidance should be ready by August 2017.

## 2.6 Methods and estimates for LBW, stunting and overweight

A brief overview was provided on the issues with existing methods used to adjust low birthweight estimates based on household survey data. A majority of low and lower-middle income countries are reliant on household survey based data as a low proportion of infants are weighed at birth making the household survey data the only option that would allow for adjustment of missing birthweights. The problem of heaping on 2500 g as well as other multiples of 500 g and/or 100 g in the survey data (due to scale or recording issues at birth or recall of the mother if a health card with the recorded birthweight is not available at time of survey interview) is another issue with the data that requires adjustment.

The existing procedure applied to the UNICEF global database is a crude manner of adjusting (all surveys have 25% of the births heaped on 2500 g moved over to be considered as LBW) and crude manner of adjusting for missing birthweights. An advisor from a working group comprised of The London School of Tropical Hygiene and Medicine, UNICEF, WHO, and Johns Hopkins University was developed to work on the issues and develop a new method and time series. At present the group is working towards developing the country level estimates using normal curve fitting to adjust for heaping and multiple imputations using variables including size at birth, sex, mothers height and mother's BMI to adjust for births that did not have a birthweight from household surveys. In October 2016, the group agreed on the list of countries from which LBW estimates would be based on administrative data and agreed on the country data points to accept based on a database which had previously been compiled. An even briefer overview was given on work being funded by the World Bank and implemented by consultants and overseen through the Joint Malnutrition Estimates group to develop country level models for stunting and overweight.

## Next steps

The working group on LBW will finalize the analysis for the household surveys and release the country level estimates and additional analysis will also be pursued by partners in relation to a country level model for annualized estimates before country consultation. The method for the country level model for overweight and stunting is to be completed (timeline unclear) and then later be considered for use in the JME estimates.

## 2.7 Mapping of ongoing nutrition monitoring activities and research priorities

This was presented by the TEAM working group for the first time. The presentation covered the purpose of mapping nutrition monitoring activities, how TEAM should be doing that, who the partners are and how to inform partners of the TEAM activities. The presentation also posed some basic questions related to research priorities for TEAM in the coming years that should be included in the TEAM workplan 2017-2019. There was a length of discussion on mapping and research priorities, which is summarised below –

The purpose of mapping is to look at who is doing what in the area of global nutrition monitoring and surveillance. This mapping should help identify partners working in nutrition monitoring and make decisions to collaborate with partners in a systematic way. TEAM should be proactive in

collaborating partners that are doing similar activities as TEAM is doing. This approach will be useful to avoid potential overlap between partners who are doing similar type of activities and produce results in a more efficient way.

It will be useful to inform partners of what TEAM is doing and learn from partners about their work in the same areas that TEAM is working. There will be opportunities to hear from different partners about global, regional and national initiatives for nutrition monitoring. This will help identify the gaps to fill up as well as the overlaps to be avoided. The global meeting on nutrition monitoring and surveillance in next two days will provide this opportunity to showcase TEAM activities and invite partners for collaboration in its efforts in global nutrition monitoring and surveillance.

### Research priorities

From its inception TEAM has been engaged mostly in activities related to the GNMFI indicators development as a priority for WHA reporting on indicators by 2018. While all TEAM members feel that TEAM should be involved in other priority research in nutrition monitoring, it has not been discussed in previous TEAM meetings. It was agreed that TEAM will develop a list of priority research topics to be discussed and finalised in the next TEAM meeting in 2017. The priority research topics will be included in the next TEAM workplan for 2017-2019.

## 3. TEAM WORKPLAN

This session was jointly moderated by TEAM Co-chairs. Responsible individuals and groups for specific activities were asked to update the status and future plans for those activities. The activities with less (i.e., anthropometry data quality) or no progress (i.e., mapping of ongoing nutrition monitoring activities and research priorities) will be included in the 2017-2019 workplan as needed. The existing TEAM workplan will be revised, mainly for timeline, based on the discussion and decisions made in this session and shared with TEAM members.

### TEAM workplan 2017-2019

The TEAM Secretariat in consultation with TEAM Co-chairs prepared a list of potential topics for the next TEAM workplan for 2017-2019. The list was shared with all TEAM members prior meeting to be discussed in the meeting. The list of topics were reviewed by TEAM but decision was pending until further discussion in a session after Surveillance meeting on 24 March.

In the follow-up session on 24 March, TEAM and Secretariat discussed the nutrition monitoring issues that came up in the Surveillance meeting, 23-24 March. The provisional list of potential topics for TEAM workplan for 2017-2019 was revisited and discussed. TEAM Co-chairs will share a revised/consolidated list with Secretariat for consideration that will be finalised during the 5<sup>th</sup> TEAM meeting later in 2017.

### TEAM website

Some TEAM members suggested a TEAM website that can be built up on the one that is already there on the WHO website. This website will facilitate sharing of documents within and outside TEAM. The TEAM Secretariat agreed with the idea to further develop the existing website for better and wider access to TEAM related information and wider dissemination of TEAM activities. It was also recognised that the TEAM SharePoint is underused and perhaps does not serve the purpose of disseminating TEAM information and products.

## 4. CLOSING SESSION

The TEAM Secretariat acknowledged TEAM's active engagement and excellent work for monitoring of the WHA global nutrition targets and other GNMF indicators. It sincerely recognised TEAM's contribution to other activities that the Secretariat is taking forward with inputs from TEAM. TEAM is going to complete its first term of two years in July this year and the TEAM Secretariat extended its sincere congratulations to all TEAM members. It was reiterated that a letter was sent to each TEAM advisor for an extension of their TEAM membership for another two years (2017-2019). TEAM members were requested to respond to that letter for the TEAM Secretariat to complete required administrative procedures.

The TEAM Secretariat emphasized the importance of partners' engagement in global nutrition monitoring activities to accelerate achievements. The meeting next two days entitled "Strengthening and Implementing the Nutrition Monitoring and Surveillance: Lessons from the Field" will provide an opportunity to showcase TEAM's efforts in the World Health Assembly global nutrition targets. TEAM will be actively participating in this meeting and TEAM Co-chairs will be facilitating the sessions on "Current data gaps and potential solutions" and "Potential collaboration in nutrition monitoring and surveillance".

The TEAM Chair summarised the outcomes of the meeting. On behalf of TEAM, he thanked the WHO-UNICEF Secretariat for the support provided to TEAM. He also thanked all TEAM members for their engagement in respective areas and the contribution they have been making on those. It was mentioned that TEAM is producing deliverables in a timely fashion although some areas need additional attention and support. He thanked all TEAM members for presenting and moderating the session on different activities.

Next TEAM meeting will be in September this year in New York and UNICEF will be hosting. As many of the TEAM (and Secretariat) members will be attending the 21st International Congress of Nutrition (ICN) in Buenos Aires, Argentina, 15-20 October 2017, it was suggested to explore the possibility of having next TEAM meeting at the time (before or after) of ICN in Buenos Aires. A Doodle poll will be sent out soon to identify the possibility of having next TEAM meeting in Buenos Aires around ICN and potential dates for the meeting.

## ANNEX 1: Agenda



### 4<sup>th</sup> Meeting of the WHO-UNICEF Technical Expert Advisory Group on Nutrition Monitoring (TEAM)

Centre International de Conférences Genève (CICG)

17 rue de Varembe, CH - 1211 Genève 20

T +41 22 791 91 11

21-22 March 2017

#### AGENDA

##### Tuesday, 21 March

9:00 am-9:30 am	Welcome and introductions <ul style="list-style-type: none"><li>- Opening remarks</li><li>- Objectives and expected outcomes of the meeting</li><li>- Introduction of participants</li><li>- Administrative issues</li></ul>	Mercedes de Onis Chika Hayashi
9:30 am-10:00 am	<b>Session 1</b> Iron and folic acid (IFA) supplementation indicator – current status and next steps	Presenter: Christina N. Dhillon Facilitator: Luz Maria de Regil
10:00 am-10:30 am	<b>Tea/Coffee</b>	
10:30 am-11:00 pm	<i>Continuation of Session 1</i>	
11:00 am-12:00 pm	<b>Session 2</b> Trained nutrition professionals – current status of indicator development and next steps	Presenter: Margaret Miller Facilitator: Rebecca Heidkamp
12:00 pm-1:00 pm	<b>Lunch</b>	
1:00 pm-2:00 pm	<b>Session 3</b> Operational guidance for minimum diet diversity (MDD) indicator – current status and next steps	Presenter: Mary Arimond Facilitator: Chika Hayashi
2:00 pm-3:00 pm	<b>Session 4</b> Breastfeeding counseling indicator – current status of indicator development and next steps	Presenter: Purnima Menon Facilitator: Faith Thuita
3:00 pm-3:30 pm	<b>Tea/Coffee</b>	
3:30 pm-5:00 pm	<b>Session 5</b> Prevalence level ranges for stunting, wasting and overweight – status update and next steps	Presenter: Mercedes de Onis Facilitator: Mary Arimond
7:30 pm	<b>Group dinner</b>	<b>Specifics to be provided</b>

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**Wednesday, 22 March**

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9:00 am-10:00 am	<b>Session 6</b> Modeling exclusive breastfeeding: updates and data quality for alternatives	Presenters: Hana Baronijan/ Aleksandar Zoric, Ipsos PA Facilitator: Larry Grummer-Strawn
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**10:00 am-10:30 am Tea/Coffee**

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10:30 am-11:30 am	<b>Session 7</b> Improving anthropometric data quality – status update and next steps	Presenter: Monika Blössner Facilitator: Trevor Croft
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11:30 am-12:30 pm	<b>Session 8</b> Updates on <ul style="list-style-type: none"><li>- Operational guidance of the GNMFI indicators</li><li>- Methods and estimates for LBW, stunting and overweight</li></ul>	Presenter: Kuntal K. Saha Presenter: Julia Krasevec Facilitator: Elaine Borghi
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**12:30 pm-1:30 pm Lunch**

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1:30 pm-2:30 pm	<b>Session 9</b> Mapping of ongoing nutrition monitoring activities and other research priorities – status update and next steps	Presenter: Luz Maria de Regil Facilitator: Patrick Webb
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2:30 pm-3:00 pm	<b>Session 10</b> <ul style="list-style-type: none"><li>- TEAM workplan – update current workplan</li></ul>	Rafael Flores-Ayala/ Mary Arimond
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**3:00 pm-3:30 pm Tea/Coffee**

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3:30 pm-4:50 pm	<i>Continuation of Session 10</i> <ul style="list-style-type: none"><li>- WHO-UNICEF's needs/expectation</li><li>- TEAM's expectation</li><li>- Topics for TEAM workplan 2017-2019</li></ul>	Francesco Branca/Chika Hayashi  Rafael Flores-Ayala/ Mary Arimond
4:50 pm-5:30 pm	Closing remarks Wrap up	Francesco Branca Rafael Flores-Ayala

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**Friday, 24 March**

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4:00 pm-5:00 pm	<b>Session 11</b> Prepare workplan for 2017-2019	All TEAM and Secretariat members
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## **ANNEX 2: List of Participants**

**4<sup>th</sup> meeting of the WHO-UNICEF Technical Expert Advisory group on nutrition Monitoring  
(TEAM)**

**21-22 March 2017, Geneva, Switzerland**

### **LIST OF PARTICIPANTS**

#### **TEAM Members**

- Rafael Flores-Ayala – Chair
- Mary Arimond – Co-Chair
- Trevor Croft – Member
- Luz Maria De-Regil – Member
- Rebecca Heidkamp – Member
- Eline Korenromp – Member
- Patrick Webb – Member
- Purnima Menon – Member
- Faith Thuita – Member

#### **TEAM members could not participate**

- Abul Kalam Azad – Member

#### **TEAM Secretariat (WHO)**

- Francesco Branca
- Mercedes de Onis
- Kuntal Saha
- Elaine Borghi
- Monika Blössner
- Larry Grummer-Strawn

#### **TEAM Secretariat (UNICEF)**

- Chika Hayashi
- Louise Mwirigi
- Julia Krasevec (via WebEx)

#### **Observer**

- Rahul Rawat - BMGF

#### **Meeting minutes written by**

- Monica Flores-Urrutia – WHO consultant
- Diana Estevez – WHO consultant
- Louise Mwirigi – UNICEF

### ANNEX 3: Group photo

Group photo of the Technical Expert Advisory group on nutrition Monitoring (TEAM) members with WHO-UNICEF Secretariat members, 21 March 2017, Geneva, Switzerland



**From left to right:** Elaine Borghi, Diana Estevez, Monica Flores-Urrutia, Patrick Webb, Mary Arimond, Kuntal Kumar Saha, Purnima Menon, Rebecca Heidkamp, Rahul Rawat, Mercedes de Onis, Trevor Croft, Faith Thuita, Monika Blössner, Louise Mwirigi, Chika Hayashi, Eline Korenromp, Rafael Flores-Ayala.

