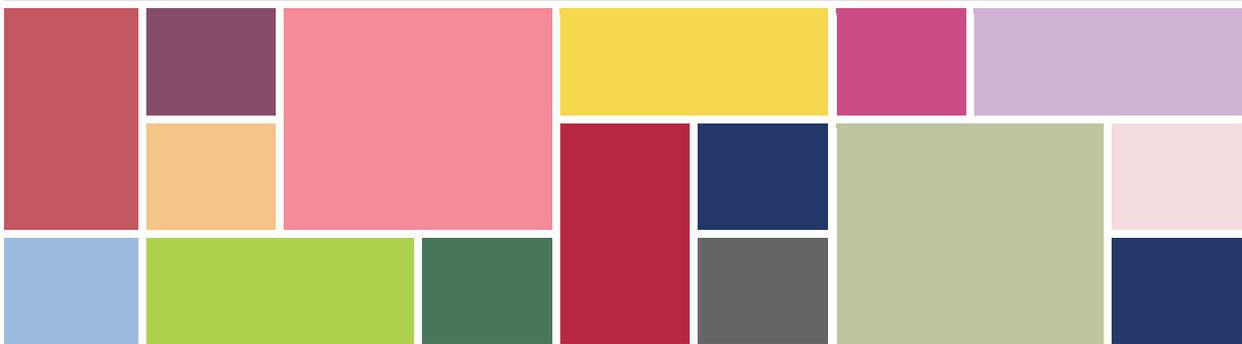# Rapid Knowledge, Practices and Coverage (KPC) Survey

Nutrition Module
(Infant and Young Child Feeding,
Child Anthropomety and
Maternal Nutrition)

www.mcsprogram.org

Contents

1. Overview

This module yields information on infant and young child feeding (IYCF), child anthropometry, and maternal nutrition. IYCF practices are critical because they impact the nutritional status and overall well-being of children under 2 years of age. Child anthropometric indicators provide outcome measures of nutritional status. Adequate nutrition is critical to child development, especially from the critical period from birth to two years of age, which is especially important for optimal growth, health, and development. Micronutrient malnutrition affects the health and survival of both women and their offspring.

One of the most important factors responsible for maternal micronutrient deficiency is poor diets lacking diversity. Women achieving the minimum dietary diversity have a greater likelihood of meeting their micronutrient needs. The KPC Nutrition Module includes indicator definitions, a summary of updates made to the module, notes for program managers, interviewer instructions, the tabulation plan, suggestions for other data sources, and the questionnaire [included as a separate Excel file].

2. Indicators

Poor nutrition contributes to a variety of poor health outcomes; therefore nutrition questions are included in other KPC modules, specifically in the Maternal and Newborn Care (MNC) and Sick Child (SC) Modules. This Nutrition Module includes only questions that help measure indicators that cannot be collected in the MNC and SC modules. For a complete understanding of the nutrition status among women and young children, please include relevant questions from the MNC and SC modules.

The following list of indicators is divided into three groups: (1) indicators that can be collected from the Nutrition Module; (2) nutrition-relevant indicators that can be collected from the MNC Module; and (3) nutrition-relevant indicators that can be collected from the SC Module.

Nutrition Module Indicators

IYCF

Indicator 1.1: Exclusive Breastfeeding under 6 Months

Indicator 1.2: Continued Breastfeeding at 1 Year

Indicator 1.3: Introduction of Semi-Solid Foods—Children

Indicator 1.4: Minimum Dietary Diversity—Children (MDD-C)

Indicator 1.5 Minimum Meal Frequency—Children

Indicator 1.6: Minimum Acceptable Diet (MAD)—Children

Indicator 1.7: Consumption of Iron-Rich or Iron-Fortified Foods—Children

Children's Anthropometry[1]

Indicator 2.1: Prevalence of Stunted Children under Age 2

Indicator 2.2: Prevalence of Wasted Children under Age 2

Indicator 2.3: Prevalence of Underweight Children under Age 2

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[1] Depending on the scope of program, children's anthropometry measurements can be taken for children under 5 years of age.

Maternal Nutrition

Indicator 3.1: Minimum Dietary diversity—Women (MDD-W)

MNC Module Nutrition-Relevant Indicators

Indicator 1.3: Iron Tablets (Possession)—Pregnant Women

Indicator 1.4: Iron Tablets (Consumption)—Pregnant Women

Indicator 1.9: Deworming Treatment—Pregnant Women

Indicator 1.13: Intermittent Prophylaxis Treatment (IPT) for Malaria during Last Pregnancy

Indicator 1.14: Long-Lasting Insecticidal Net (LLIN) Use by Women during Pregnancy

Indicator 8.3: Early Initiation of Breastfeeding

Indicator 8.10: Pre-Lacteal Feeds

SC Module Nutrition-Relevant Indicators

Indicator 5.1: Appropriate Sick Care (continued fluids) (composite indicator)

Indicator 5.2: Appropriate Sick Care (continued fluids) (fever)

Indicator 5.3: Appropriate Sick Care (continued fluids) (fast/difficult breathing)

Indicator 5.4: Appropriate Sick Care (continued fluids) (diarrhea)

Indicator 5.5: Appropriate Sick Care (continued feeding) (composite indicator)

Indicator 5.6: Appropriate Sick Care (continued feeding) (fever)

Indicator 5.7: Appropriate Sick Care (continued feeding) (fast/difficult breathing)

Indicator 5.8: Appropriate Sick Care (continued feeding) (diarrhea)

Table 1 below contains the indicator names and definitions, as well as a column that indicates the KPC module where the listed indicators are found.

Table 1. KPC Nutrition Module and Other Nutrition-Relevant Indicators

Indicator	Definition	Reference Module
Early initiation of breastfeeding	Proportion of live children born in the last 0–23 months who were put to the breast within 1 hour of birth	MNC
Pre-lacteal feeding	Percentage of children ages 0–23 months who received a pre-lacteal feeding within the first 3 days of life	MNC
Exclusive breastfeeding under 6 months	Proportion of infants ages 0–5 months who are fed exclusively with breast milk; "Exclusive breastfeeding means that the infant received breast milk and might have received oral rehydration solution (ORS), vitamins, minerals, and/or medicines, but did not receive any other food or liquid"	Nutrition
Continued breastfeeding at one year	Proportion of children ages 12–23 months who are currently breastfeeding	Nutrition

Indicator	Definition	Reference Module
Predominant breastfeeding under 6 months	Proportion of infants ages 0–5 months who are predominantly breastfed Predominant breastfeeding is defined as consuming breast milk and plain water only	Nutrition
Introduction of solid, semi-solid, or soft foods—children	Proportion of infants ages 6–8 months who received solid, semi-solid, or soft foods during the previous day[2]	Nutrition
Early initiation of breastfeeding	Proportion of live children born in the last 24 months who were put to the breast within 1 hour of birth	MNC
Minimum dietary diversity (MDD)—children	Proportion of children ages 6–23 months who received foods from four or more food groups Minimum dietary diversity for *breastfed children* ages 6–23 months is defined as four or more food groups out of the following seven food groups: 1. Infant formula, milk other than breast milk, cheese, or yogurt other than milk products 2. Foods made from grains, roots, and tubers, including porridge and fortified baby food from grains 3. Vitamin A-rich fruits and vegetables (and red palm oil) 4. Other fruits and vegetables 5. Eggs 6. Meat, poultry, fish, and shellfish (and organ meats) 7. Legumes and nuts Minimum dietary diversity for *non-breastfed children* ages 6–23 months is defined four or more food groups from six food groups (same as above with the exclusion of #3—dairy products)	Nutrition
Minimum meal frequency—children	Proportion of breastfed and non-breastfed children ages 6–23 months who receive solid, semi-solid, or soft foods (but also include milk feeds for non-breastfed children) the minimum number of times or more Minimum is defined as: • Two times for breastfed infants 6–8 months • Three times for breastfed children 9–23 months • Four times for non-breastfed children 6–23 months Meals include both meals and snacks and frequency is based on caregiver report General guidelines for minimum meal frequency are: • <u>6–8 months</u>: Feed at least two meals per day for the breastfed child; the non-breastfed child should receive 1–2 cups of milk and one to two extra meals per day • <u>9–23 months</u>: Feed at least three meals per day for the breastfed child; the non-breastfed child should receive 1–2 cups of milk and one to two extra meals per day	Nutrition

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[2] Due to the narrow age range of this indicator, it may not be possible to detect small changes with the sample sizes normally used in a KPC. However, this indicator can be easily calculated from questions already being asked and is useful for obtaining an idea of the situation.

Indicator	Definition	Reference Module
Minimum acceptable diet (MAD)—children	Proportion of breastfed and non-breastfed children ages 6–23 months who received a minimum acceptable diet, apart from breastmilk. The MAD indicator measures both the minimum meal frequency and the minimum dietary diversity, as appropriate for various age groups. If a child meets the minimum meal frequency and minimum dietary diversity for his or her age group and breastfeeding status, then the child is considered to be receiving a minimum acceptable diet.	Nutrition
Prevalence of stunted children under age 2	Stunting is a height-for-age measurement that is a reflection of chronic undernutrition. This indicator measures the percentage of children ages 0–59 months who are stunted, as defined by a height for age Z-score ≤2 SD. Although different levels of severity of stunting can be measured, this indicator measures the prevalence of all stunting, i.e., both moderate and severe stunting combined. While stunting is difficult to measure in children ages 0–6 months and most stunting occurs in the 9–23 month range (1,000 days), this indicator reports on all children under 59 months to capture the impact of interventions over time and to align with data from the Demographic and Health Survey (DHS).	Nutrition
Prevalence of wasted children under age 2	Wasting in children is a symptom of acute undernutrition, usually as a consequence of insufficient food intake or a high incidence of infectious diseases, especially diarrhea. Wasting is weight for height Z score ≤2.	Nutrition
Prevalence of underweight children under age 2	Underweight is a reflection of acute and/or chronic undernutrition and is measured using weight-for-age. This indicator measures the percentage of children ages 0–59 months who are underweight, as defined by weight-for-age Z-score (WAZ) ≤2 SD.	Nutrition
Consumption of iron-rich foods—children	Percentage of children ages 6–23 months who received iron-rich foods in the past 24 hours	Nutrition
Appropriate sick care (continued fluids) (composite indicator)	Percentage of children ages 0–59 months with *fever, fast/difficult breathing, or diarrhea* in the 2 weeks preceding the survey who were offered more than usual to drink (including breast milk)	SC
Appropriate sick care (continued fluids) (fever)	Percentage of children ages 0–59 months with *fever* in the 2 weeks preceding the survey who were offered more than usual to drink (including breast milk) during fever	SC
Appropriate sick care (continued fluids) (fast/difficult breathing)	Percentage of children ages 0–59 months with *fast/difficult breathing* in the 2 weeks preceding the survey who were offered more than usual to drink (including breast milk) during fast/difficult breathing	SC
Appropriate sick care (continued fluids) (diarrhea)	Percentage of children ages 0–59 months with *diarrhea* in the 2 weeks preceding the survey who were offered more than usual to drink (including breast milk) during diarrhea	SC
Appropriate sick care (continued feeding) (composite indicator)	Percentage of children ages 0–59 months with *fever, fast/difficult breathing, or diarrhea* in the 2 weeks preceding the survey who were offered more than usual to eat	SC

Indicator	Definition	Reference Module
Appropriate sick care (continued feeding) (fever)	Percentage of children ages 0–59 months with *fever* in the 2 weeks preceding the survey who were offered more than usual to eat during fever	SC
Appropriate sick care (continued feeding during fast/difficult breathing)	Percentage of children ages 0–59 months with *fast/difficult breathing* in the 2 weeks preceding the survey who were offered more than usual to eat during fast/difficult breathing	SC
Appropriate sick care (continued feeding during diarrhea)	Percentage of children ages 0–59 months with *diarrhea* in the 2 weeks preceding the survey who were offered more than usual to eat during diarrhea	SC
Minimum dietary diversity (MDD)—women	Percentage of women consuming foods from five or more or the MDD-W ten food groups	Nutrition
Iron tablets (possession) during last pregnancy	Percentage of mothers of children ages 0–23 months who received or purchased any iron tablets during the most recent pregnancy while pregnant with their youngest child	MNC
Iron tablets (consumption) during last pregnancy	Percentage of mothers of children ages 0–23 months who took iron tablets for 90 or more days while pregnant with their youngest child	MNC
Deworming treatment during last pregnancy	Percentage of mothers of children ages 0–23 months who took deworming treatment while pregnant with their youngest child	MNC
ITPp for malaria during last pregnancy	Percentage of mothers of children ages 0–23 months who received IPT for malaria, broken into the following categories:[3] • 1 dose • 2 doses • 3 doses • 4+ doses	MNC
LLIN use by women during pregnancy (optional)	Percentage of mothers of children ages 0–23 months who reported they slept under an insecticide-treated net (INT) all of the time or most of the time during their most recent pregnancy	MNC

3. Updates to the Module

This module replaces the Breastfeeding IYCF Module. It now includes IYCF, children's anthropometry, and maternal nutrition and reflects the recent developments in nutrition. It also includes a brief section on how to interpret the findings from the analyzed data in order to better understand the nutritional status in in the project target area and help inform follow-up actions.

Other changes include the following:

• A "Notes for Program Managers" section has been added, which includes items for consideration as the baseline KPC survey is being designed.

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[3] Current WHO recommendations are for women to receive at least three doses of IPT, but in order for programs to track progress this indicator should be broken down into categories by dose.

- The "Interviewer Instructions" section has been replaced with an "Interviewer Notes" section, which is meant to be more concise and only address issues that may arise rather than provide a question-by-question explanation of the questionnaire.
- The "Suggested Qualitative Research Questions" section has been replaced with the "Other Data Sources" section, which includes information about qualitative research topics.
- The survey questionnaire has been redesigned in Microsoft Excel, which is intended to make the questionnaire more easily adaptable and consistent with the DHS standard template.

4. Notes for Program Managers

This section outlines items that program managers and survey leaders need to prepare in advance before they implement the KPC and before they train a data collection team. In adapting the questionnaire, involve local nutritional experts to ensure that questions are appropriately adapted for the specific country and context. The adaption process must ensure that the meaning of each question remains the same as originally intended. In order to accomplish this, review the interview notes, conduct a group review with subject-matter experts, pre-test the questionnaire, and ensure that the questionnaire is carefully translated (group translation and back translation techniques should be considered).

Context Considerations

Scientific knowledge is constantly expanding; as such, there have been changes in what constitutes optimal IYCF practices. Although this module reflects consensus to date, program managers should monitor changes in the field to ensure that programs being implemented are following appropriate recommendations. This module draws on the World Health Organization (WHO) indicators for assessing infant and young child feeding practices manuals.[4,5] Additionally the DHS, Multiple Indicator Cluster Surveys, Feed the Future, and UN Refuge Agency all collect IYCF indicators; they serve as important references and provide important sources of information on infant and young child feeding practices, anthropometry, and maternal nutrition in many countries.

Age of Child: For the calculation of the nutrition indicators, it is very important to ensure that the age of the child is accurate. Many of the indicators presented in this module are dependent upon accurate calculation of the child's age. Although not listed as a requirement, program managers may require age verification through vaccination cards, birth or baptismal certificates, or other methods. The Food and Agricultural Organization provides some guidelines for estimating month and year of birth of infants and young children.[6] This guide can serve as a useful reference for program managers.

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[4] World Health Organization (WHO), 2008, Indicators for assessing young child feeding practices, part I Definitions, http://apps.who.int/iris/bitstream/10665/43895/1/9789241596664_eng.pdf.

[5] WHO, 2010, Indicators for assessing young child feeding practices, part II- Measurement and part III -Country Profiles, http://www.unicef.org/nutrition/files/IYCF_Indicators_part_II_measurement.pdf and http://www.unicef.org/nutrition/files/IYCF_Indicators_part_III_country_profiles.pdf.

[6] Food and Agriculture Organization (FAO), 2008, Guidelines for Estimating the Month and Year of Birth of Young Children, https://www.ifad.org/documents/10180/16154971-31a9-4722-837d-023604112713.

To appropriately adapt the Nutrition Module for your program, the program management team should determine the following:

- **The target population and level of your intervention**: Nutrition issues and associated health problems can differ by a range of factors, including sex and age. Programs are encouraged to augment these indicators with more specific indicators that reflect their own interventions, messages and behavior change objectives.

- **Existing cross-cutting environmental challenges:** When thinking through a nutrition survey, it is important to consider the context, trends, and sustainability challenges. Programs should be aware of situations such as food shortages, droughts, seasonality, or other food-related challenges in their implementation areas. These situations should be well documented. In addition, awareness of food assistance and distribution programs in the implementation areas is equally important.

- **Outcomes of interest**: The questions in the KPC tool will provide your program with a general snapshot of the nutrition situation in your target location. Depending on the health, economic, education, and policy outcomes of interest, there may be a need to expand the line of questions on certain topics within the module. Further, it is important to be cognizant of particular nutrient-rich foods that are being promoted in program implementation areas.

Training Interviewers

Training should be a mix of theory, practical exercise, and standardization. Annex 2 of the UNHCR Standardised Expanded Nutrition Survey (SENS) guidelines for refugee populations, infant, and young child feeding module step-by-step guide provides some training ideas[7].

Many of the questions in this module are based on mothers' recall. It is critical that interviewers ask the same questions from all eligible respondents. In cases when respondents do not understand the question or do not respond adequately to the question, interviewers may need to utilize probing techniques. Training should emphasize that probing questions (such as "Anything else?" or "Can you please clarify?") should be consistently worded and applied by all interviewers. Interviewers should be aware of the local terminology used in the areas of IYCF, anthropometry, and maternal nutrition.

Choosing Indicators

It is important the program managers recognize that they do not need to collect data to calculate every indicator that is included in the Nutrition Module and that they may decide to include additional nutrition-related questions, according to the scope and focus of the program and the local context.

Children's Anthropometry (Special Note): Before deciding to collect anthropometry indicators it is important to have a manual to reference, to have standard equipment, and to conduct the training on the equipment. For example the DHS uses the following for anthropometry:

- SECA 878 U digital scale for weighing children and adults. The scale has a maximum capacity of 200 kg and weighs in 0.01 kg increments. The scale is powered by six type AA 1.5 V batteries and has an on-off switch located at the side of the scale. (Note: The Seca 878 digital floor scale is manufactured by Seca Corporation, Munich, Germany. For measuring the height [length] of children and adults the Shorr height board is used. For more information, please reference the DHS Biomarker Field Manual.[8])

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[7] The UN Refugee Agency, UNHCR, 2013, UNHCR Standardised Expanded Nutrition Survey (SENS) Guidelines for Refugee Populations: A Practical Step-by-Step guide, http://sens.unhcr.org/wp-content/uploads/2015/03/UNHCR_SENS_Module_3_IYCF_v2.pdf.

[8] ICF International, 2012, MEASURE DHS Biomarker Field Manual, http://dhsprogram.com/pubs/pdf/DHSM7/DHS6_Biomarker_Manual_9Jan2012.pdf.

The Nutrition Module collects data on the nutritional status of children by measuring the height and weight of all children under 2 years of age. Data are collected with the aim of calculating three indices—namely, weight-for-age, height-for-age, and weight-for-height—all of which take age and sex into consideration. It is ideal that weight measurements are obtained using lightweight, bathroom-type scales with a digital screen designed and manufactured under the guidance of UNICEF. Children younger than 24 months are measured lying down (recumbent length) on the measuring board.

The children's nutritional status indicators are calculated using growth standards published by WHO in 2006.9 These growth standards were generated through data collected in the WHO Multicentre Growth Reference Study. That study, whose sample included 8,440 children in six countries, was designed to provide a description of how children should grow under optimal conditions. The WHO child growth standards can therefore be used to assess children all over the world, regardless of ethnicity, social and economic influences, and feeding practices. The three nutritional status indicators described below are expressed in standard deviation units from the median of the Multicentre Growth Reference Study sample.

Each of these indices provides different information about growth and body composition. The height-for-age index is an indicator of linear growth retardation and cumulative growth deficits. Children whose height-for-age Z-score is below minus two standard deviations (-2 SD) from the median of the WHO reference population are considered short for their age (**stunted**) and are chronically malnourished. Children who are below minus three standard deviations (-3 SD) from the reference median are considered severely stunted. Stunting reflects a failure to receive adequate nutrition over a long period of time and is affected by recurrent and chronic illness. Height-for-age, therefore, represents the long-term effects of malnutrition in a population and is not sensitive to recent, short-term changes in dietary intake.

The weight-for-height index measures body mass in relation to height or length and describes current nutritional status. Children whose Z-scores are below minus two standard deviations (-2 SD) from the reference median are considered thin (**wasted**) and are acutely malnourished. Wasting represents the failure to receive adequate nutrition in the period immediately preceding the survey and may be the result of inadequate food intake or a recent episode of illness causing loss of weight and the onset of malnutrition. Children whose weight-for-height is below minus three standard deviations (-3 SD) from the reference median are considered severely wasted.

Weight-for-age is a composite index of height-for-age and weight-for-height. It takes into account both acute and chronic malnutrition. Children whose weight-for-age is below minus two standard deviations (-2 SD) from the reference median are classified as **underweight**. Children whose weight-for-age is below minus three standard deviations (-3 SD) from the reference median are considered severely underweight.

Maternal Nutrition (Special Note): Minimum dietary diversity for women (MDD-W) captures the proportion of women of reproductive age 15–49 in the project implementation areas who are consuming a minimum dietary diversity. A woman of reproductive age is considered to consume a minimum dietary diversity if she consumes at least five of ten specific food groups in the previous 24 hours. MDD-W is a new version of the Women's Dietary Diversity Score (WDDS). There are three main differences between the MDD-W and the WDDS: (1) The MDD-W is a dichotomous indicator whereas the WDDS indicator is a quasi-continuous score; (2) the food groups used to calculate MDD-W are slightly different from those used to calculate WDDS; and (3) MDD-W uses ten food groups, while WDDS uses nine.

Women consuming foods from five or more or the MDD-W ten food groups have a greater likelihood of meeting their micronutrient needs than women consuming foods from fewer food groups.

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[9] World Health Organization (WHO) Multicenter Growth Reference Study Group, 2006, WHO Child Growth Standards: Length/height-for-age, weight-for-age, weight-for-length, weight-for-height and body mass index-for-age: Methods and development, http://www.who.int/childgrowth/standards/technical_report/en/.

MDD-W 10 food groups are shown below:[10]

1. Grains, roots, and tubers
2. Legumes and beans
3. Nuts and seeds
4. Dairy products
5. Eggs
6. Flesh foods including organ meat and misc. small animal protein
7. Vitamin A-rich dark green leafy vegetables
8. Other vitamin A-rich vegetables and fruits
9. Other fruits
10. Other vegetables

Questionnaire Overview

The nutrition questionnaire covers standard questions needed to understand basic nutrition situation of children and mothers. Any of the topics in this module could be expanded upon depending on the focus of your intervention. Additional nutrition questions are included in Maternal Newborn Care and Sick Child Modules. They are not repeated in the Nutrition Module but can easily be added;[11] details on the interviewer guidance and tabulation plans for these questions can be found in the respective modules. This module also has a section titled "Other Data Sources," which provides some additional question and themes to be explored.

5. Common Survey Question Considerations for Adaptation

Age groups are described in intervals of months completed. For example, a child age 6–23 months has completed 6 months but has not completed 2 years of age (or 24 months).

Except for the indicators Early Initiation of Breastfeeding, all indicators are based on current status data—that is, the current age of the child and other information for the day preceding the survey—rather than on retrospective data. Mothers will not be asked when they stopped or started particular feeding practices, which are questions that tend to produce a heaping of data at certain ages. The previous-day recall period was selected because it has been widely used and found appropriate in surveys of dietary intake when the objective is to describe infant feeding practices in populations. Because practices vary widely from day to day, indicators derived from the previous-day recall period should not be used to make assessments of dietary adequacy at the level of the individual.

Many of the indicators and corresponding questions in this module are based on international standards or current best practices, but some may need to be modified because of national policy, local context, or language.

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10 For additional guidance on the MDD_W, see
http://www.fao.org/fileadmin/templates/nutrition_assessment/Dietary_Diversity/Minimum_dietary_diversity_-_women__MDD-W__Sept_2014.pdf.

11 http://www.mchipngo.net/controllers/link.cfc?method=tools_mande.

The Nutrition Module should be adapted to reflect the liquids and foods (and the respective local names) consumed in the project area. Specifically, **Qs.IYCF103** and **MNUT101** on this module (liquids and foods consumed in the previous 24 hours by children and mothers, respectively) require additional adaptation. When adapting the questionnaire, survey personnel should consult local staff and nutritionists and make the food and liquid group descriptions as concrete and specific to the project area as possible. The KPC core module gives a number of examples under each food/liquid category. These are only examples, and the exact list for each category should reflect locally available foods.

Try not to leave categories abstract or vague (e.g., "other fruits and vegetables"). Instead, add examples: "other fruits and vegetables such as . . ." and then list commonly eaten fruits and vegetables in the area (but that are not included in the other categories). Similarly, please list specific, locally available dark green leafy vegetables under the category "dark green, leafy vegetables."

Clarity is important to distinguish among food group categories. Category IYCF103 (l), "any commercially fortified baby food," refers to complementary foods that have been fortified and should include local brand names.

In countries where children eat grubs, snails, insects, or other small protein foods, a separate category for these foods must be added to **Q.IYCF103**. Similarly, in countries where foods made with red palm oil, palm nut, or palm nut pulp sauce are fed to young children, a separate category must also be added.

If questions are adapted to fit the context or the program focus, ensure that the tabulation plan reflects the revised questions and terminology.

6. Interviewer Notes

For this module, questions target mothers or caretakers of children under 2 (U2) at the time of the data collection. In addition to the instructions presented here, the WHO indicators for assessing infant and young child feeding practices manual provides additional interviewer notes and instructions and serve as an important resource or reference.[12]

Asking Questions and Recording Answers

The majority of questions in this module are based on mother's recall. It is important that you ask each question exactly as it is written on the questionnaire. If the respondent does not understand the question, you may need to restate it or ask a probing question. Probing questions will be discussed in training. It is important that all interviewers use the same probing questions. In addition to the questions, there are statements that appear in all CAPITAL LETTERS, indicating that they are interviewer instructions and should not be read aloud to the respondent.

In some cases, the respondent may not know the answer to the question or may refuse to answer the question. Yet, responses for all questions asked must be recorded—do not leave any question blank because it may look as it the question was not asked. Circle don't know ('DK') in these instances.

Most questions in this module have pre-coded responses that should not be read aloud to the respondent. When you ask a question, you should listen to the response and then circle the respective code next to the category that best matches their answer or write the response above the assigned line, if appropriate. Numeric codes mean that you can only circle one response category. Sometimes it will be appropriate to circle multiple

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[12] WHO, 2010, Indicators for assessing young child feeding practices, part II-Measurement, http://www.unicef.org/nutrition/files/IYCF_Indicators_part_II_measurement.pdf.

answers; in this case the response codes will be letters. Read the instructions on the questionnaire carefully for each question.

When you see a question with "(NAME)", you should insert the name of the child about whom you are interviewing the mother—the child whose name is listed on the cover page of the module.

Skip Patterns

Skip instructions are given in the module to ensure that you do not ask irrelevant questions to a respondent. Skips are very important, since a failure to take a skip into account may result in (1) asking an inappropriate question to the respondent and/or (2) incorrectly skipping a whole section that should actually be administered.

Instructions for Completing the Cover Page

Before starting the interview, fill in the identification information on the cover page, including the cluster, household, and record numbers.

Before completing the information in the bottom of the cover page, after introducing yourself, you must ask the eligible respondent who will answer the questions in this module (the mother of the child U2) if they consent to participate in the survey. Read the informed consent statement exactly as it is written. The statement explains the purpose of the survey. It assures the respondent that her participation in the survey is voluntary and that he or she can refuse to answer any questions or stop the interview at any point.

After reading the statement and learning whether the respondent agrees to participate, *you* (not the respondent) must sign in the space provided to affirm that you have read the statement to the respondent and you have recorded correctly, whether the respondent agreed to be interviewed.

Important Notes about Asking IYCF Questions

Q.IYCF101: Name of child: You will already have asked the respondent about the name, age, date of birth and sex of the most recent child under age 2. Simply copy this information from the Cover Page.

Q.IYCF102: Ask the respondent if they are currently (at the time of the interview) breastfeeding the child.

Q.IYCF103: The main purpose of IYCF 103 is to learn if the child is being exclusively breastfed and to find out about the child's dietary diversity. Breastfeeding guarantees food and fluid security in infants and provides immune protection and remains a significant source of energy, nutrients and protection.

For all categories, you will ask the respondent if the child was given any of the different types of liquids/foods. Read each response option one at a time, then record if the response if yes ('1') or no ('2'); if the respondent does not know circle 'DK(8)'. Information on frequency is only collected for items h (milk such as tinned, powdered, or fresh animal milk), i (infant formula), and k (yogurt). For these categories, if the child was given the specified food, ask and record the number of times that the child consumed it in the day or night preceding the survey.

Start by reading the text in **Q.IYCF103:**

> Now I would like to ask you about (other) liquids or foods that (NAME OF CHILD FROM **Q.IYCF101**) ate yesterday during the day or at night. I am interested in whether your child had the item even if it was combined with other foods.

> For example, if (NAME OF CHILD FROM **Q.IYCF101**) ate a millet porridge made with a mixed vegetable sauce, you should reply yes to any food I ask about that was an ingredient in the

porridge or sauce. Please do not include any food used in a small amount for seasoning or condiments (like chilies, spices, herbs, or fish powder), I will ask you about those foods separately.

Then ask the following question for each food group:

Yesterday, during the day or night, did [CHILD'S NAME FROM *Q.IYCF101*] eat or drink any [NAME THE FOODS]?

Q.IYCF104 is a filter. For this filter, review responses for all food groups in **Q.IYCF103** (k through y). If there is at least one food group where '1' ('YES') is circled, skip to **Q.IYCF106**. If there is no '1' ('YES') circled for any of the specified categories, continue with **Q.IYCF105**. The **Q.IYCF104** filter is inserted here to make sure that you probe and check for any solid, semi-solid, or soft foods that the child may have consumed in the previous 24 hours that was not mentioned under the dietary recall in **Q.IYCF103**.

Q.IYCF105 asks if the child ate any solid, semi-solid, or soft food in the previous day or night. If the caregiver responds 'NO', proceed to **Q.IYCF107**. However, if the caregiver responds 'YES', probe for the type of foods consumed and go back and correct **Q.IYCF103**.

Q.IYCF106 is asked to determine the number of times the child ate solid, semi-solid, or soft foods in the previous 24 hours.

Solid, semi-solid, or soft foods include family foods and also many special dishes prepared for infants and young children. Thick soups and stews should be included. Thick paps and porridges are also included. Very thin, watery soups and gruels should not be included because infants and young children do not get enough energy (calories) from very thin soups and gruels. Liquids do not count for this question. Also, very small snacks, such as a bite or two of someone else's food, should not be counted.

Ask the caregiver the question as it appears. In some cases, the caregiver will be able to automatically indicate the number of times, and this information can be recoded. In other cases, you may need to use probes to help the respondent remember all the times that the child ate yesterday.

Q.IYCF107 is asked to determine if the child was given any iron pills, sprinkles with iron, or iron syrup in the last seven days. You will have samples of these products to show to the respondent.

Sub-Module 2: Children Anthropometry

Q.CA101. Copy the name, age, date of birth and sex of the most recent child from the cover page. Make sure that the information is copied exactly as it appears on the cover page.

Before proceeding with anthropometry measurements, read the consent in **Q.CA102** to the respondent and ask if they have any questions about measuring the height and weight of their child. Read the consent exactly as it is written.

Follow the specific procedure as detailed in the anthropometry manual to complete **Q.CA103** and **Q.CA104**. For reference, please see DHS Biomarker Manual,[13] Anthropometric Indicators Measurement Guide,[14]

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[13] ICF International, 2012, MEASURE DHS Biomarker Field Manual, http://dhsprogram.com/pubs/pdf/DHSM7/DHS6_Biomarker_Manual_9Jan2012.pdf.

[14] Bruce Cogill, 2003, *Anthropometric Indicators Measurement Guide* (Washington, DC: Food and Nutrition Technical Assistance (FANTA) Project, FHI 360; Revised March 2003).

Sub-Module 3: Maternal Nutrition

Q.MNUT101. Start by reading the text in this question as it is written.

> "Now I would like to ask you about liquids or foods that you ate yesterday during the day or at night. I am interested in whether you had the item even if it was combined with other foods. For example, if you ate a rice porridge made with a mixed vegetable sauce, you should reply yes to any food I ask about that was an ingredient in the porridge or sauce. Please do not include any food used in a small amount for seasoning or condiments (like chilies, spices, herbs, or fish powder); I will ask you about those foods separately."

> "Yesterday during the day or night did you drink/eat any [ASK FOR EACH ITEM SEPARATELY]?"

Q.MNUT101a–m. These are different food groups. Ask the following question for each food group:

> "Yesterday, during the day or night, did you eat or drink any [NAME THE FOODS]?" Then circle '1' ('YES'), '2' ('NO'), or '8' ('DON'T KNOW') for each food group.

7. Tabulation Plan

Nutrition Module

IYCF

Indicator 1.1: Exclusive Breastfeeding under 6 Months

Indicator 1.2: Continued Breastfeeding at 1 Year

Indicator 1.3: Introduction of Semi-Solid Foods—Children

Indicator 1.4: Minimum Dietary Diversity—Children (MDD-C)

Indicator 1.5 Minimum Meal Frequency—Children

Indicator 1.6: Minimum Acceptable Diet (MAD)—Children

Indicator 1.7: Consumption of Iron-Rich or Iron-Fortified Foods

Children's Anthropometry

We recommend that child stunting and underweight indicators be derived from the WHO child growth standards and associated software.[15] Anthropometric indicators for children under 5 years of age provide outcome measures of nutritional status. Height (length) and weight measurements are taken using standardized procedures and compared with the 2006 WHO child growth standards, which are based on an international sample of ethnically, culturally, and genetically diverse healthy children living under optimal conditions that are conducive to achieving a child's full genetic growth potential.[16] Use of the 2006 WHO child growth standards is based on the finding that well-nourished children of all population groups for which data exist follow similar growth patterns before puberty.

Weight-for-age takes into account both chronic and acute malnutrition and is often used to monitor nutritional status longitudinally. Children who are less than two standard deviations (SDs) below the median of the WHO child growth standards population for weight-for-age are considered underweight. The height-

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[15] WHO, 2011, WHO Anthro and macros, version 3.2.2, http://www.who.int/childgrowth/software/en/.

[16] WHO Multicentre Growth Reference Study Group, 2006, WHO Child Growth Standards: Length/height-for-age, weight-for-age, weight-for-length, weight-for-height and body mass index-for-age: Methods and development (Geneva: World Health Organization).

for-age index provides an indicator of linear growth retardation (stunting) among children. Children who are less than two SDs below the median of the WHO child growth standards population for height-for-age may be considered short for their age (stunted) or chronically malnourished. Severe linear growth retardation (stunting) reflects the outcome of a failure to receive adequate nutrition over a number of years and the effect of recurrent and chronic illness. Height-for-age, therefore, represents a measure of the long-term effects of malnutrition in a population and does not vary appreciably according to the season of data collection. The weight-for-height index measures body mass in relation to body height or length and describes current nutritional status. Children whose Z-scores are below minus two SDs are considered thin, or (wasted), and are acutely malnourished. Wasting represents the failure to receive adequate nutrition in the period immediately preceding the survey. It may result from inadequate food intake or a recent episode of illness causing loss of weight and the onset of malnutrition. Children whose weight-for-height is below minus three SDs are considered severely wasted.

Indicator 2.1: Prevalence of Stunted Children under 2

Indicator 2.2: Prevalence of Wasted Children under 2

Indicator 2.3: Prevalence of Underweight Children under 2

Maternal Nutrition

Indicator 3.1: Minimum Dietary Diversity—Women

Indicator	How to Calculate the Indicator
1.1 Exclusive breastfeeding under 6 months[17] Percentage of infants 0–5 months of age who are fed exclusively with breast milk	Infants 0–5 months of age who received only breast milk during the previous day $$\frac{\text{[IYCF102=1] and [IYCF103 (a–d, g–y = 2)]}}{\text{Infants 0–5 months of age}}$$
1.2 Continued breastfeeding at 1 year Percentage of children 12–23 months of age who are fed breast milk	Children 12–15 months of age who received breast milk during the previous day $$\frac{\text{[IYCF102 = 1]}}{\text{Children 12–15 months of age}}$$
1.3 Introduction of solid, semi-solid, or soft foods—children Percentage of infants 6–8 months of age who receive solid, semi-solid, or soft foods	Infants 6–8 months of age who receive solid, semi-solid, or soft foods during the previous day $$\frac{\text{[IYCF103 (k–y = 1)] or [IYCF105 = 1]}}{\text{Infants 6–8 months of age}}$$

[17] Exclusive breastfeeding means that the infant received breast milk (including milk expressed or from a wet nurse) and might have received oral rehydration solution (ORS), vitamins, minerals, and/or medicines, but did not receive any other food or liquid.

Indicator	How to Calculate the Indicator
1.4 Minimum dietary diversity—children Percentage of children 6–23 months of age who receive foods from four or more food groups	Children 6–23 months of age who received foods from ≥ four food groups during the previous day
	Children 6–23 months of age Minimum dietary diversity for *breastfed children* 6–23 months is defined as four or more foods from the following seven food groups: 1. Grains, roots, and tubers [IYCF103m, o] 2. Legumes and nuts [IYCF103w] 3. Dairy products (milk, yogurt, cheese) [IYCF103h, k, x] 4. Flesh foods (meat, fish, poultry, and liver/organ meats) [IYCF103s, t, v] 5. Eggs [IYCF103u] 6. Vitamin A-rich fruits and vegetables [IYCF103n, p, q] 7. Other fruits and vegetables [IYCF103r] Minimum dietary diversity for *non-breastfed children* 6–23 months is defined as four or more foods from the following six food groups: 1. Grains, roots, and tubers [IYCF103m, o] 2. Legumes and nuts [IYCFw] 3. Flesh foods (meat, fish, poultry, and liver/organ meats) [IYCF103s, t, v] 4. Eggs [IYCF103u] 5. Vitamin A-rich fruits and vegetables [IYCF103n, p, q] 6. Other fruits and vegetables [IYCF103r]
1.5 Minimum meal frequency—children Proportion of breastfed and non-breastfed children 6–23 months of age who received solid, semi-solid, or soft foods (but also including milk feeds for non-breastfed children) the minimum number of times or more	*Minimum meal frequency for breastfed children is defined as two or more feedings of solid, semi-solid, or soft food for children 6–8 months and three or more feedings of solid, semi-solid, or soft food for children 9–23 months* Breastfed children 6–23 months of age who received solid, semi-solid, or soft foods the minimum number of times or more during the previous day [IYCF 106 ≥ 2] if IYCF101 = 6–8 months and [IYCF106 ≥ 3] if IYCF101 = 9–23 months
	Breastfed children 6–23 months of age [IYCF102=1] *Minimum meal frequency for non-breastfed children is defined as four or more feedings of solid, semi-solid, soft food, or milk feeds for children 6–23 months, with at least two of these feedings being milk feeds.* Non-breastfed children 6–23 months of age who received solid, semi-solid, or soft foods the minimum number of times or more during the previous day [IYCF 106 ≥ 4] and [IYCF103h = 1 and IYCF103h ≥ 2]
	Non-breastfed children 6–23 months of age [IYCF102 = 2]

Indicator	How to Calculate the Indicator
1.6 Minimum acceptable diet—children Proportion of children 6–23 months of age who received a minimum acceptable diet (apart from breast milk)	Breastfed children 6–23 months of age who had at least the minimum dietary diversity (see indicator 1.4) and the minimum meal frequency during the previous day (see indicator 1.5)
	Breastfed children 6–23 months of age [IYCF102 = 1]
	Non-breastfed children 6–23 months of age who had at least two milk feedings and have at least the minimum dietary diversity not including milk feeds (see indicator 1.4) and the and the minimum meal frequency during the previous day (see Indicator 1.5)
	Non-breastfed children 6–23 months of age [IYCF102 = 2]
1.7 Consumption of iron-rich foods Percentage of children 6–23 months of age who received an iron-rich food in the last 24 hours	Children 6–23 months of age who received an iron-rich food during the last 24 hours [IYCF103 = s, t, u, or v]
	Children 6–23 months of age
2.1 Prevalence of stunted children under age 2 Percentage of children 0–23 months who are stunted, as defined by a height-for-age Z-score ≤2 SD	Children 0–23 months with a height-for-age Z-score < -2 SD
	Children 0–23 months
2.2 Prevalence of wasted children under age 2 Percentage of children aged 0–23 months who are wasted, as defined by height-for-weight Z-score ≤2 SD	Children 0–23 months with a height-for-weight Z-score < -2 SD
	Children 0–23 months
2.3 Prevalence of underweight children under age 2 Percentage of children aged 0–23 months who are underweight, as defined by weight-for-age Z-score (WAZ) ≤2 SD	Children 0–23 months with a weight-for-age Z-score < -2 SD
	Children 0–23 months

Indicator	How to Calculate the Indicator
3.1 Minimum dietary diversity—women Proportion of women of reproductive age in the project are who are consuming a minimum dietary diversity	Women of reproductive age (15–49) consuming at least five of the ten MDD-W food groups
	Women of reproductive age
	Minimum dietary diversity for women of reproductive age is defined as five or more foods from the following 10 food groups: 1. Grains, roots and tubers [MNUT101a, c] 2. Legumes and beans [MNUT101l] 3. Nuts and seeds [MNUT101l] 4. Dairy products [MNUT101n] 5. Eggs [MNUT101j] 6. Flesh foods including organ meat and miscellaneous small animal protein [MNUT101h, i, k] 7. Vitamin A-rich dark green leafy vegetables [MNUT101d] 8. Other vitamin A-rich vegetables and fruits [MNUT101b, f] 9. Other fruits [MNUT101g] 10. Other vegetables [MNUT101e]

8. Other Data Sources

Qualitative Data

Qualitative assessments provide an important complement to the indicators presented in this module. A situational assessment or formative research is an important starting point for any program and can help to identify needed focus areas. Qualitative data can also provide important context and depth to understand not only the indicators presented in this module but possible reasons for outcomes. In addition to qualitative analysis around the indicators presented in this module, other areas of qualitative exploration include the following:

- Ways to strengthen awareness, promotion, and protection of IYCF and maternal and child nutrition
- Areas of concern with regard to IYCF and maternal and child nutritional practices for special and vulnerable populations
- Environmental and contextual factors that impact IYCF and maternal and child nutrition outcomes
- Cultural and social practices, including food-related taboos or beliefs influencing IYCF and maternal and child nutrition

9. Survey Questionnaire

[See Excel file]

Rapid Knowledge, Practices and Coverage (KPC) Survey