FOOD AND NUTRITION TECHNICAL ASSISTANCE

Technical Consultation Reports: Nutrition in the Demographic and Health Surveys (DHS) November 14, 2003 and Young Child Feeding and the DHS April 16, 2004

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Background

Initiated by USAID in 1984, the DHS assists developing countries to collect, analyze, and use data to improve national programs to address family planning, maternal and child health, child survival, HIV/AIDS and other STIs, and reproductive health. The household questionnaire of the DHS collects information on the nutritional status (anthropometric indicators) of women and young children, anemia prevalence, and use of iodized salt. The women's questionnaire covers questions on infant and young child feeding including breastfeeding and complementary feeding practices, and micronutrient supplementation of women and children.

The Food and Nutrition Technical Assistance (FANTA) Project, in collaboration with ORC Macro/DHS hosted a meeting on November 14, 2003 to review the nutrition sections of the current questionnaire as well as the presentation of nutrition data in the DHS documents (see Annex 1: Meeting agenda). FANTA and its partners and colleagues in other cooperating agencies, academic institutions, and bi- and multilateral institutions draw on the DHS reports to inform their policy guidance and applied programming work in the areas of nutrition, health, and food security. As USAID prepares to begin a new five-year DHS program, it is an opportune time to discuss and recommend modifications to the current indicators, survey questions, and presentation of data related to nutrition.

Consultation objectives

The objectives of the meeting were to:

- Become more familiar with the nutrition information currently being collected by the DHS (including child and women's anthropometry, measures of children's and women's micronutrient status, micronutrient supplementation and fortification, and infant and young child feeding),
- Share experiences with use of DHS data, and
- Bring forward recommendations for modifications of the questions, presentation of data, and dissemination strategies to ORC Macro/DHS.

USAID

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1. Meeting format: Nutrition in the Demographic Health Surveys

Dr. Altrena Mukuria, Nutrition Specialist at the DHS program at ORC Macro presented an overview of the nutrition sections of the DHS including question and indicator development, data analysis, presentation, and dissemination strategies (see attached Powerpoint file, *Children's and Women's Nutrition: Current DHS Experience in Data Collection*). She discussed issues that ORC Macro has identified as requiring revisions and some of the constraints to this process. Dr. Mukuria also solicited feedback from the meeting participants on these topics.

Following this overview, the meeting broke into four discussion groups, each facilitated by an expert in the topic. Discussion group questions are found in Annex 2. Recommendations were presented in plenary at the end of the day. The four discussion areas included:

- Anthropometry and women's nutrition
- Infant feeding (breastfeeding)
- Young child feeding (complementary feeding)
- Micronutrients

1.1. Anthropometry and women's nutrition

1.1.1. Background

Currently, the DHS collects heights and weights for all women ages 15 to 49 years of age in a household. For children less than six years, heights and weights (including birth weight and estimation of birth size by mother) are collected.

For children < 5 years, the following indicators are presented: underweight (low weight for age); wasting (low weight for height); stunting (low height for age); and overweight (equivalent to two SD above the mean for weight for height). Results are presented by child's age, sex, birth order, birth interval, size at birth, mother's residence, region, education, age, wealth index and mother's interview status.

For women, these data are presented as Body Mass Index (mean, normal, thin indicating chronic energy malnutrition, and overweight) and height (mean and percentage < 145 cm). Prevalences are stratified by age, residence, region, and education of the mothers.

1.1.2. Recommendations for DHS questions/data collection related to anthropometry

- No changes were recommended to the existing questions or types of data collected, but there were suggestions regarding presentation of data and the addition of men's BMI (see below).

1.1.3. Expanded reporting of anthropometry

- Place graphs depicting child/women's anthropometry in the Executive Summary of the DHS country reports.
- In addition, use these same graphs to show trends in countries that have conducted previous Demographic and Health Surveys.

1.1.4. Child anthropometry

- For presentation of child anthropometry, include the standard deviation when discussing the mean. Few end-users of DHS data use both - 2 ***and*** -3 SDs apart from emergency contexts. The consultation suggested presenting both only in key cases and only for wasting and stunting; in general, remove - 3 SDs from data presentation.
- Include indicators of overweight in children, defined by Z-scores.

1.1.5. Body Mass Index

- Women's BMI should continue to be calculated, but do not expand to other anthropometric measurements or indicators (e.g., do not collect MUAC). There may be a need for corrections of women's BMI related to ethnicity and body proportions. Correction factors will need to be validated prior to adoption.
- Consider expanding the anthropometric section to include measurements and calculation of BMI for adult men (ages 15-49). The tools and data presentation would be similar to that for women.
- For children, BMI is more difficult. This is especially true for adolescents because of the problems with interpretation of data related to differing growth trajectories for individual youth. Therefore, it is probably not feasible to present BMI for children ages 5-15 although there is discussion in the broader international nutrition community about the advantage of having a single indicator to assess nutritional status that is consistent throughout the lifecycle.

1.1.6. Birth size

- The track record of this indicator varies across populations. Therefore, the group recommended evaluation of the indicator's performance in a variety of reports to determine specific suggestions for inclusion or not.

1.1.7. Women's nutrition

- Expand the section on women's nutrition to include questions (24-hour recall of food groups) about quality and quantity of women's diets and meal patterns pending consensus about the evidence of the value and utility of this information.
- Retain presentation of overweight and obesity in adult women but without highly specific categories (e.g., currently presented as $\geq$ 25; 25.0-29.9 and 30.0 or higher).
- Do not present mean height for women, but simply report percent of women with height <145 cm.

1.2. Infant feeding (breastfeeding)

1.2.1. Background

The DHS collects data on breastfeeding practices including: timing of initiation; prelacteal feeds; exclusive breastfeeding; frequency of breastfeeding; duration and continuation of breastfeeding; and bottle use.

1.2.2. Current use of DHS data on infant feeding

- Source of background information for program planning, research proposal development, etc.
- Used for comparison (e.g. comparison of DHS national trends against LINKAGES Project data).
- ORC Macro should review its database on stakeholders' use of DHS data to inform the next update.

1.2.3 Recommendations for DHS questions related to infant feeding

- All current questions listed below in table should remain in the DHS survey. Where validation of a question is recommended, use the current question in the DHS survey instrument until the next update (in 5 years) when additional research on the questions will be completed. The questions were ranked high, medium, and low in importance.

Question	Ranking	Comments
Q440: Did you ever breastfeed (Name)?	High	
Q441: How long after birth did you first put (Name) to the breast?	High	
Q442: In the first 3 days after delivery, before your milk began flowing regularly, was (name) given anything to drink, other than breastmilk?	High	▪ Assessing prelacteal feeding is of high importance, but wording changes were recommended. The consultation suggested removing "before your milk began flowing regularly." The new question would read: *In the first 3 days after delivery was (name) given anything to drink other than breastmilk?*" ▪ Ask the question only about the currently breastfed child.
Q443: What was (name) given to drink before your milk began flowing regularly?	High	▪ Adjust wording to parallel Q442.
Q445: Are you still breastfeeding (name)?	High	
Q446: For how many months did you breastfeed (name)?	Low	▪ Data generated from this question are often misinterpreted by non-technical professionals. The group made no final recommendation to keep or drop this question.
Q448: How many times did you breastfeed last night, between sunset and sunrise?	Med	▪ The medium ranking is given because of concerns about the question's wording. It is important to collect information about "on demand" breastfeeding practices during the night (as opposed to a specific number

Question	Ranking	Comments
		of feeding episodes). It is also important to ascertain whether or not the baby and mother have been separated at night. ▪ Validate the reworded question and have FP and LAM specialists review this question and Q449.
Q449: How many times did you breastfeed (name) yesterday, during the daylight hours?	Med	▪ Same recommendation as above, for daytime hours.
Q450: Did (name) drink anything from a bottle with a nipple yesterday or last night?	High	
New question: *Did someone talk to you about breastfeeding?*		▪ Recommended for purposes of determining whether the caregiver is getting breastfeeding advice/counseling, and if so, where and from whom.

1.2.4. Revised target population for infant feeding questions

- Currently, questions 440, 441, 442, 443,445, 446, 448, 449, 450 are asked for all children born in the last 5 years in the household. There is potential for recall bias and inaccuracy if there is more than one child eligible for these questions. Possible solutions were presented but there was no consensus reached.
- Target questions to 1) one child < 5 years randomly selected in household, 2) the youngest child under age 3 in household, or 3) all children in household (current practice). The mother may be more likely to remember specific breastfeeding behavior related to the youngest child, but this may overestimate exclusive breastfeeding (EBF) and other recommended practices.

1.2.5. Infant feeding data presentation

- Present EBF rates against different health outcomes (e.g. cross-tabulate EBF rates against diarrheal prevalence) in Nutrition Chart Books. The LINKAGES Project has done this with data presentation in Madagascar and Ethiopia.
- Make the fact that the EBF rate is calculated from the question of breastfeeding practice in the past 24 hours more explicit. (Some policy makers have misinterpreted how EBF is calculated and this has caused confusion.)

1.2.6. Need for new questions related to infant feeding in the context of HIV/AIDS

- Explore new questions about infant feeding including recommended practices for HIV+ mothers related to EBF, mixed feeding, replacement and prelacteal feeding in the context of HIV-AIDS.

- Consider how to meet the need to capture information about children without mothers, especially in areas of high HIV/AIDS prevalence (for example, the need to interview grandparents or other caregivers in the household).

1.3. Young child feeding (complementary feeding)

1.3.1. Background

The DHS collects data from 24-hour (expanded) dietary recall, 7-day food frequencies, and questions on the feeding frequency of solids or semi-solids and addition of sugar to foods or liquids fed to young children in the past 24 hours. Continued breastfeeding up to 24 months and appropriate complementary feeding practices from 6 months of age are also assessed.

1.3.2. Current use of DHS data on young child feeding

- Stakeholders stressed the importance of these data for advocacy purposes, drawing a parallel to the important role of indicators and data to increased attention to breastfeeding. This is needed now for child feeding.

1.3.3. Related research on young child feeding indicators and paradigms

- The Guiding Principles (GP) for Complementary Feeding of the Breastfed (and soon, non-breastfed) Child are an important framework for nutrition program development and should be reflected/considered in questionnaire, indicator, and presentation development.
- ORC Macro should stay involved with and informed of the different processes that are currently underway to develop indicators for the GP/WHO/PAHO work, the UNICEF work on GP3 (Responsive feeding) and the FANTA/IFPRI work on the Knowledge Practice and Coverage Survey (KPC) in conjunction with the PVOs implementing child survival and health programs. Some of these processes will yield results of importance in the short-term (in time for incorporation in the revised DHS questionnaire by March 2004); others are longer-term.

1.3.4. Recommendations for DHS questions related to young child feeding

Question	Comments

Q452: How many times did (name) eat solid, semisolid, or soft foods other than liquids yesterday during the day or at night?	▪ Move question closer to 24 hour recall of food group frequency (revised Q493) in order to help interviewers triangulate information, and help improve respondent recall.
	▪ Ask only of last-born child under three years of age.
	▪ Validation needs:
	  ▪ Relationship of question results to actual dietary intake (FANTA is funding an IFPRI/UC Davis proposal to address aspects of this question)
	  ▪ Does the simplified question collect valid information?

Q492: How many days during the last seven days did (name) drink each of the following?	▪ Reformat from 7-day to 24-hour recall with a yes/no response for each liquid item: *Did (name) drink these items (plain water, infant formula, etc.) during the day yesterday or last night?* ▪ If DHS collects information on the quality of the water used, this

Question	Comments
	data should be linked to Q492 to capture the relationship to the GP on food safety.
Q493: How many days during the last seven days did (name) eat each of the following foods either separately or combined with other food?	Reformulate this question according to the FANTA document *Generating Indicators of Appropriate Feeding of Children 6 through 23 months from the KPC 2000+*. ▪ Add a fortified complementary food group before group A, and change A to "Any other foods made from grains…" ▪ Consider moving 'optional' organ meat group to standard list given importance of organ meats, even infrequently eaten, to increased micronutrient consumption ▪ Include more extensive examples of the type of food in each food group for greater specificity in the questionnaire. ▪ Review the need to break out different flesh foods if the consumption of eggs is asked as a separate question. ▪ Use only 24-hour recall and not the 7-day question format.
New question on responsive feeding. "*Who is the primary feeder of (name) when you (the mother) are not present?*"	▪ This new question is recommended for the March 2004 revision of the DHS questionnaire. Additional or different revisions may be suggested following the results of the UNICEF-led consultative process related to Guiding Principles for Complementary Feeding of the Breastfed Child #3 (Responsive feeding).

1.3.5. Active involvement of CAs for strengthened food group questions

- CAs should be more actively involved in helping ORC Macro identify appropriate local foods to adapt the food group examples (e.g. MOST is a source for local vitamin-A rich foods in countries where the MOST Project operates). Using the country schedule for the upcoming DHS, CAs will be able to provide ORC with this support in a timely fashion.

1.3.6. Seven-day versus 24 hour recall

- The 7-day food frequency question can be dropped. The 24-hour recall is sufficient for analysis at a population level, with the following caveats:
    - If there is a specific food or food group identified where a 7-day question format would be critical to obtaining valid information, the module might include the 7-day food frequency question for the specific food group.
    - There may be a set of users of the data (those who use it for individual level analysis such as regressions) that might protest dropping the 7-day question format. ORC Macro must determine how often the DHS datasets have been used by researchers for this purpose in order to make a decision about dropping this question.

1.3.7. Presentation of young child feeding data

- A simplified presentation is recommended, organized around the GPs where possible.

- Present data by the age groupings that are more commonly used by the nutrition community (e.g., 6 through 8, 9 through 11, 12 through 17, and 18 through 23 months), rather than the 2-month groupings currently used in the DHS reports.
- For non-age specific breakdowns (e.g. urban/rural) include a disaggregation by age-groups within the larger groups. Not disaggregating by age-group confounds the interpretation of the results.

1.4. Micronutrients

1.4.1. Background

The DHS collects information on iron and vitamin A supplementation of women and children, consumption of vitamin A-rich foods by children < 3 years and the prevalence of household use of iodized salt. It assesses the prevalence of night blindness in pregnancy and conducts anemia testing (hemoglobin) on women and children.

1.4.2. Current use of DHS data on micronutrients

- Establish the gap between practice and behavior and program outcomes; document change (BASICS Project)
- Develop strategies to address micronutrient deficiency conditions in vulnerable populations (USAID)
- Advocate with missions in-country (USAID)
- Document the results for vitamin A programs (e.g., coverage with vitamin A) (MOST Project)
- Develop new technologies (e.g., Ultrarice) (PATH)

1.4.3. Recommendations for DHS questions on micronutrients

- Unless noted, all current micronutrient questions should remain in the DHS questionnaire.

Question	Comments
Q417: During this pregnancy, were you given or did you buy any iron tablets or iron syrup?	▪ The categories of iron preparations offered in this question may not adequately reflect the full range of those available to a population. ▪ The precision and utility of the current question were raised as concerns. ▪ There is a potential recall bias. ▪ It is important to link the receipt of iron with access/quality of antenatal care services.
Q418: During the whole pregnancy, for how many days did you take the tablets or syrup?	▪ Careful review of this question is required, given the high likelihood of recall bias.
Q419: During this pregnancy, did you have difficulty with your vision during the daylight?	▪ Validation studies of questions 419 and 420 are strongly recommended. ▪ Consider reversing the order of Q419 and

Question	Comments
	Q420. Knowledge of the local term for nightblindness may be a successful screen for women who are experiencing true VAD-related vision problems, alleviating the need for the two-step process of subtracting the results of Q420 from Q419.
Q420: During this pregnancy, did you suffer from night blindness?	▪ See above.
Q433: In the first two months after delivery, did you receive a vitamin A dose like this?	▪ No changes recommended.
Q451: Was sugar added to any of the foods or liquids (name) ate yesterday?	▪ Suggest removal of Q451 from the core questionnaire; reserve it for the optional module, and ask about this practice during 24-hour dietary recall.
Q457: Did (name) receive a vitamin A dose like this during the last 6 months?	▪ Although data on vitamin A supplementation of children are only presented for <5 years, there may be stakeholders interested in the total data set (through 72 months). ▪ Reporting of data on vitamin A supplementation of children currently does not reflect experience of children 0-5 months of age.
Q460: Vitamin A (most recent) dose on vaccination card	▪ How do Q457 and Q460 relate to each other? ▪ Consider adding a question about iron supplementation in children ≥6 months (or younger?) of age, given the emerging interest in research/programming for iron with this younger age group.
Q492/3: 7-day recall of foods and liquids fed to youngest child < 3 years	▪ The current versions of these questions are not well adapted to capture of micronutrient intake. ▪ Consider re-aggregating the micronutrient-rich foods (the current grouping is suitable for data collection on complementary feeding practices, dietary diversity, and other issues).
New questions on iron and zinc	▪ As programs incorporate new approaches to child malnutrition (e.g., zinc and iron supplementation of young children), add questions to reflect the activities.

2. Young Child Feeding and the DHS

On April 16, 2004, the Food and Nutrition Technical Assistance (FANTA) Project, in collaboration with ORC Macro DHS, hosted a meeting to review the current sections of the DHS specific to young child feeding and recommend modifications. It was a follow-up to the Technical Consultation: Nutrition in the Demographic Health Surveys (DHS) held November 14, 2003. The Young Child Feeding and the DHS consultation provided an opportunity for those not able to attend the November 2003 Technical Consultation to participate in and provide recommendations to the current review and update of the DHS, specific to young child feeding (6-23 months of age).

Consultation Summary: Young Child Feeding and the DHS

Dr. Altrena Mukuria, Nutrition Specialist at ORC Macro, presented an overview of the history of the DHS survey and new surveys that are being developed. Dr. Mukuria also covered recommendations from the November 2003 Technical Consultation on anthropometry and women's nutrition, micronutrients, infant feeding (breastfeeding) and young child feeding (complementary feeding), and outlined a number of outstanding issues that have been targeted for modification and discussion related to young child feeding.

Ms. Mary Arimond, Scientist from the International Food Policy Research Institute, shared results from a recent analyses of DHS data in her presentation, *Improving the Measurement and Presentation of Young Child Feeding Practices in the DHS*. Using the framework of the *Guiding Principles for Complementary Feeding of the Breastfed Child*[1], Ms. Arimond presented a summary of suggestions for revising the selected questions in the DHS and ways to present key young child feeding indicator data.

Following the opening presentations (http://www.fantaproject.org/publications/dhsmeeting.shtml), the consultation shifted into a discussion focused on young child feeding in the DHS. Comments, recommendations, and conclusions follow.

2.1. Anthropometry and Women's Nutrition

- See pages 2 and 3 in this report for anthropometry and women's nutrition recommendations made at the November 2003 Technical Consultation.
- Request that participants send suggestions to Altrena Mukuria at ORC Macro (altrena.g.mukuria@orcmacro.com) for food groups/questions to capture women's 24-hour dietary recall information.

[1] PAHO/WHO 2003. Guidelines for the non-breastfed child are forthcoming.

2.2. Infant Feeding (breastfeeding)

2.2.1. Background

The focus of the April 2004 consultation was young child feeding in the 6 through 23 month age group. Some participants came prepared with input to the infant feeding recommendations made at the November 2003 Technical Consultation.

2.2.2. Recommendations for current DHS questions/data collection related to breastfeeding

Question	Comments from Young Child Feeding and the DHS
Q448 How many times did you breastfeed last night between sunset and sunrise? Q449 How many times did you breastfeed yesterday during the daylight hours?	▪ In terms of nutritional outcomes, frequency (vs. "on demand") is the critical component of breastfeeding. According to representatives from UNICEF, the "on demand" concept is not found in all cultures and is therefore less useful to collect than the frequency of breastfeeding. ▪ Regarding LAM, UNICEF noted that breastfeeding intervals are important, yet frequency of breastfeeding is still the best proxy. ▪ To tabulate an "intensity of breastfeeding ratio"[2] the frequency (#) of both breast milk feeds and other liquids, specifically formula or non-human milk feeds, needs to be collected. Recommendations: ▪ Keep the breastfeeding frequency (Q448 and Q449) questions ▪ It is important to assess the separation of mothers from baby at night/during the day. Consider adding questions along the lines of - "Do you usually sleep with the child?" - "Is (name) with you throughout the day?" - "Does (name) accompany you to work?" or, - "What is the longest period in the last 24 hours you were away from your child" to the DHS questionnaire. ▪ Additional work will be needed for specific wording of the question(s).
Q450: Did (name) drink anything from a bottle with a nipple yesterday or last night?	▪ UNICEF questioned the usefulness of bottle use question. Bottle use is not quantified, nor associated with other outcomes. How is information from the bottle use question used? Are the data helpful? Moreover, it would be useful to collect what is in the bottle (e.g. breast milk, other milks, watery liquids).
New Question: Did someone talk to you about breastfeeding?	▪ Participants suggested that the question is more appropriate for the SPA (Service Provision Assessment) survey, not the DHS.

[2] BF intensity ratio

$$\frac{\text{\# of breastfeeds}}{(\text{\# of breastfeeds} + \text{\# of formula or non-human milk feeds})}$$

2.2.3. Infant feeding data presentation

- A recommendation was made at the November 2003 Technical Consultation to relate exclusive breastfeeding (EBF) to other health outcomes (e.g. reduced ARI, reduced diarrhea) in DHS data presentation. However, it is problematic to associate 24-hour recall data with longer term health outcomes. At the April 2004 consultation, participants suggested associating EBF with longer term health outcomes in the DHS report introductory text only.

2.3. Young Child Feeding (complementary feeding)

2.3.1. Related research and indicator definition needs

- The DHS are population level surveys and all recommendations below are based on young children with "average intake" of breast milk. There is still not an agreed upon indicator for "adequate" breast milk intake or definition of the term "breast milk feed" for children 6 through 23 months old.

2.3.2. Recommendations for DHS questions and data collection related to young child feeding

Question	Comments from Young Child Feeding and the DHS
Q452: How many times did (name) eat solid, semi-solid, or soft foods other than liquids yesterday during the day or at night?	▪ Concerns about data collection of meal frequency of semi-solid foods were voiced. The current recommendation (Guiding Principle #7 Meal Frequency and Energy Density) of 2-3 meals per-day for breastfed children applies to all foods, including porridges, which may not be "counted" in Q452 if they are considered "liquids." Thus, the meal adequacy may differ depending on consistency of foods (especially foods such as porridge). Suggestion: ▪ Modify question (452) slightly, to "How many times did (name) eat solid or semi-solid foods, other than liquids or porridge yesterday, during the day or at night?" ▪ Also include a sub-question on porridge consumption (not liquids, only porridge). See New Question 493. "How many times did (name) eat the porridge (yesterday)?" ▪ These questions need to be field tested.
Q492: Now I would like to ask you about the liquids (name) drank over the last 7 days, including yesterday.	▪ Some discussion on how well breastfeeding frequency in the past 24 hours predicts breast milk intake. Ultimately participants agreed the 24-hour recall is the best instrument we have. ▪ Some participants suggested to continue collecting the "number of times" yesterday for options b. commercially produced infant formula and c. any other milk such as tinned, powdered, or fresh animal milk in the survey.

	Recommendations: ▪ Drop the 7 day recall, but keep the 24-hour recall; therefore, delete column "last 7 days." ▪ Consider change from "number of times" yesterday to "yes/no" yesterday for the liquid groups. ▪ Suggest putting breast milk on list of liquids (the number of times would be collected in Q448 and Q449). ▪ Add a catch-all category "any other liquids" to the list (no prompts from enumerators) in place of current option e. any other liquids such as sugar water, tea, coffee, carbonated drinks, or soup broth.
Q493[3] Now I would like to ask you about the types of foods (name) ate over the last seven days, including yesterday. How many days during the last seven days did (name) eat each of the following foods either separately or combine with other food? In total, how many <u>times</u> yesterday during the day or night did (name) eat (item)?	▪ Participants debated the best way to collect information about specific foods consumed in the past 24 hours. Some suggested that enumerators should read out the list of foods and the respondent will say "yes/no" to each. Others suggested an alternate method, where the enumerators "check" the various categories of foods groups after respondents described what the child was given throughout the day, from morning through evening. Recommendations to: ▪ Drop the 7-day recall. ▪ Consider "yes/no" for each food group rather than the "number of times" eaten yesterday. ▪ Add a catch-all category "any other foods" yesterday during the day or at night to the list (no prompts from enumerators). ▪ Field test "alternate" method of 24-hr recall data collection (Take the mother through the morning, then mid-morning, etc., to see if she has a better memory of what the child ate the day before).

2.3.3. Suggestion to add a separate porridge group to the DHS

- In DHS reports, graphs and charts showing the proportion of children with adequate frequency of feeding of complementary foods may fail to capture the sometimes substantial amounts of "food" consumed as thinned gruels, or porridge, etc. The data can be misinterpreted, as it can appear that the children are not getting enough food. In turn, the program response would be to increase complementary food intake, thus displacing (even more) breast milk intake.
- The # of episodes of liquids (made up of breast milk, formula, and non-human milk feeds), # of porridges, and # of all other food groups could be captured in DHS data collection. But, the requirements that would be necessary may not be feasible for large national surveys such as the DHS.

[3] If porridge question is added to DHS survey the food group question would become new Q494.

Proposed New Question	Comments from Young Child Feeding and the DHS
The recommended order of questions is: ▪ 24-hour recall liquid group questions (Current Q492) ▪ 24-hour recall porridge questions (New Q493) ▪ 24-hour recall food group questions (Current Q493, New Q494)	▪ Suggestion to add new questions, -"Did (name) eat porridge or gruel (local term) yesterday during the day or at night?" - If yes, "What was the consistency (recommendation to use common foods to describe it and code later, e.g., very thin like tea, cream)?" -"How many times did (name) eat the porridge?" ▪ In the 24-hour recall (current Q493), pick up whether the porridge is fortified. ▪ The porridge may or may not only be a food specially prepared for infants. It could be a food that the whole population eats, e.g. rice water. ▪ In terms of ingredients that might make up the gruel or porridge, root and tuber flours are missing. ▪ Results from the consistency question will determine analysis. E.g., if the consistency of the porridge is categorized as very thin, the porridge could be excluded with the liquids when calculating meal frequency. If the porridge is not categorized as very thin, it should be included in the calculation of meal frequency. ▪ These questions need to be field tested.

2.3.4. Consensus on seven-day vs. 24-hour recall for the DHS

- Definite agreement that the 24-hour recall is adequate for the DHS.

2.3.5. Maintaining comparability of survey results

- Participants noted that researchers and programmers look at data trends for a variety of indicators and variables collected in DHS surveys. If the DHS questions, data collection methods, and indicators change too much, the ability to compare survey results over time will be undermined.

2.3.6. Presentation of young child feeding data

- Participants at the November 2003 Technical Consultation recommended that DHS present data by age groupings that are more commonly used by the nutrition community (e.g. 6 through 8, 9 through 11, 12 through 17, and 18 through 23 months), rather than the 2-month groupings currently used in the DHS reports. A counter-suggestion was made at the April 2004 consultation to continue using the "standard" indicator age-groupings for UNICEF, especially for breastfeeding, which ARE 2-month groups. It was pointed out that collapsed groups are for complementary feeding and not for breastfeeding. ORC Macro says data can be presented both ways.

- Recommendation to use a combination indicator for vitamin A-rich foods, based on food groups in the DHS questionnaire. The combination indicator would capture all sources of VA rich foods, not only the more narrow categories (e.g. VA rich-fruits or vegetables or animal source foods).

- Participants recommended continued use of the area graphs and stacked bar graphs to present breastfeeding practices by age data (0 through 23 months). Area graphs are part of ORC Macro/DHS+' standard tabulation plan, but the graphs are not always included in the DHS country reports.

- In data presentation, participants recommended using bar charts, for children 6 through 23 months to summarize "adequately breastfed" and those achieving "minimum number of frequency of feeding" by age in the same table. Currently, the tables that summarize only "percent of breastfed children 6-23 months fed at least recommended number of times yesterday" may be misinterpreted as a call for feeding the children more food, without highlighting breastfeeding needs. As a result, it is recommended to include both adequate breastfeeding and meeting minimum number of feeds at the population level in a table together.

Annex 1: Meeting Agenda

Meeting Agenda: **Nutrition in the Demographic and Health Surveys (DHS)**
November 14, 2003 8:30 AM – 4:30 PM
Academy for Educational Development, Greeley Hall

8:30 – 9:00 Continental breakfast

9:00 – 10:30 Welcome and introduction by Dr. Bruce Cogill, Director, FANTA Project
Presentation by Dr. Altrena Mukuria, Nutrition Specialist, ORC Macro: ***Nutrition in the DHS***

- An overview of the current version of the nutrition sections of the DHS
- Question and indicator development; nutrition data analysis and presentation formats
- Issues targeted for modifications
- Constraints to expansion of the questionnaire and the need to prioritize and streamline topics for data collection
- Dissemination strategies

10:30 - 11:00 Break

11:00 – 12:30 Break-out discussion session

- Infant feeding (breastfeeding)
- Anthropometry and women's nutrition

12:30 – 1:30 Lunch (provided in Greeley Hall)

1:30 – 3:00 Break-out discussion session

- Young child feeding (complementary feeding)
- Micronutrients

3:00 – 3:15 Break

3:15 – 4:15 Plenary

- Sharing of recommendations for modification of the current DHS nutrition sections

4:15 – 4:30 Wrap up

Meeting Agenda: **Young Child Feeding and the DHS**
Friday April 16, 2004
Academy for Educational Development
Greeley Hall 3rd Floor
1875 Connecticut Ave., NW
Washington, DC
10:00 am to 1:30pm

I. Objectives

The meeting will provide an opportunity for those who were not able to attend the November 2003 Technical Consultation: Nutrition in the DHS to participate in providing recommendations to the current update of the DHS. Topics covered will be specific to young child feeding. The meeting objectives are to:

- Become more familiar with young child feeding information currently collected by the DHS
- Review recommendations on the questions, indicators, and data presentation on young child feeding made at the November 2003 Technical Consultation
- Provide a status report on the DHS update
- Identify new recommendations on young child feeding for the DHS update

II. Agenda

10:00 Welcome and Introduction
Dr. Bruce Cogill, FANTA Project Director, Academy for Educational Development

10:15 Young Child Feeding and the DHS
Dr. Altrena Mukuria, Nutrition Specialist, ORC Macro

Overview of the:
- Current version of young child feeding survey questions, indicators, and common data presentation formats from the DHS
- Issues targeted for modifications
- Recommendations from the November 2003 Technical Consultation
- Current status of the DHS update

Q&A

11:00 Improving Measurement and Presentation of Young Child Feeding Practices in the DHS
Mary Arimond, Scientist, IFPRI
Q&A

11:30 Break

11:45 Discussion
Moderated by Altrena Mukuria, ORC Macro

1:00 Wrap up
Review of Recommendations and Conclusions

1:30 Close

Annex 2: Discussion Questions for Small Group Sessions

Anthropometry and women's nutrition

1. For what types of research, monitoring and evaluation, policy, advocacy, program and indicator development activities have you used DHS data on women's anthropometry? Child anthropometry? Estimation of birth size?

2. Delineate what works well and what specific problems you encountered (related to research, policy, program and indicator development and monitoring work) with DHS anthropometric data?

3. Are there recommendations to change/modify the specific data collected (i.e., height and weight of women ages 15-49 and children 5 years and younger, estimated birth size)? Indices constructed (i.e., women's BMI and low height; stunting, wasting, underweight and overweight in children)?

4. What recommendations do you have for changes to the presentation of data related to child anthropometry? Women's anthropometry?

5. If the nutrition section had to be reduced, which are the essential tables and data needed to adequately describe anthropometry and women's nutrition?

Infant feeding (breastfeeding)

1. For what types of research, monitoring and evaluation, policy, advocacy, and program development activities have you used DHS breastfeeding data?

2. Delineate the specific types of problems encountered in your use (e.g., in research and policy development work) of DHS data on breastfeeding?

3. Are there specific recommendations on wording changes for DHS questions related to breastfeeding/other early infant feeding practices? For example, timing of initiation of breastfeeding? Prelacteal feeds? Duration of exclusive breastfeeding? Day/nighttime breastfeeding patterns? Use of bottles?

4. What recommendations do you have for changes to the presentation of data related to infant feeding?

5. If the nutrition section had to be reduced, which are the essential tables and data needed to adequately describe breastfeeding practices?

Young child feeding (complementary feeding)

1. For what types of research, monitoring and evaluation, policy, advocacy, and program development activities have you used DHS data on young child feeding?
2. Delineate what works well and what specific problems you encountered (related to research, policy, program and indicator development and monitoring work) with DHS data on young child (complementary) feeding?

3. Are there specific recommendations on wording changes/types of data collected for DHS questions related to young child feeding practices? For example, are there suggestions related to questions/data

about enriching the diets of young children with sugar; 24-hour recall of solid foods being fed to young children ages 6-9 months? Children 10-23 months? Lack of information about the quality of complementary foods?

4. What recommendations do you have for changes to the presentation of data related to young child feeding?

5. If the nutrition section had to be reduced, which are the essential tables and data needed to adequately describe young child feeding practices?

Micronutrients

1. For what types of research, monitoring and evaluation, policy, advocacy, program development and indicator monitoring activities have you used DHS data on micronutrients?

2. Delineate what works well and what specific problems you encountered (related to research, policy, program and indicator development and monitoring work) with DHS data on micronutrients (e.g., vitamin A status and supplementation of children and mothers; household use of iodized salt; nightblindness in women in last pregnancy; iron supplementation of pregnant women and anemia prevalence)

3. Are there specific recommendations on wording changes/types of data collected for DHS questions related to micronutrients?

4. What recommendations do you have for changes to the presentation of data related to micronutrients?

5. If the nutrition section had to be reduced, which are the essential tables and data needed to adequately describe micronutrients?

Annex 3. List of Participants

Nutrition in the DHS consultation (November 2003): Participant list

Last	First	Organization	Email
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Young Child Feeding and the DHS (April 2004): Participant List

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