

MODULE I

ASSESSMENT

PURPOSE

The purpose of this module is to identify the main problems in the diets and feeding practices of children less than two years of age and the social, economic, and cultural factors that influence them. Although the sampling techniques describe target infants and young children 6 to 23 months of age, questions about breastfeeding are used to gather retrospective data on breastfeeding practices in the first 6 months of life.

The quality of the field work is critical as the success or failure of the intervention to be implemented depend to a great extent on the accuracy of the assessment made. The integration of quantitative and qualitative research methodologies permits a detailed and thorough assessment of the typical infant and young child feeding practices, the reasons behind them, and the factors that are facilitators of or barriers to compliance with the ideal practices defined in *ProPAN* (see Table 1 in the Introduction). The final analysis of the data will provide information on how the actual infant and young child feeding practices can be modified using available resources.

In addition to the ideal practices described in the Introduction, there may be other practices that the team would like to consider evaluating and promoting. These could include, for example, practices related to hygiene and food preparation, and to feeding a sick child. Questions about other practices can be easily added to the research instruments available in *ProPAN* and included in the analysis.

PRODUCTS

The application of Module I will enable the team to identify:

- ◆ suboptimal breastfeeding and complementary feeding practices;
- ◆ the social, economic, and cultural factors that influence these practices; and
- ◆ the opportunities for improving these practices

STEPS

This module includes four steps:

Step 1: Identification of the General Nutrition Situation

In this step, existing data about the characteristics of the country and target population(s) are analyzed. The information will be used to identify the main nutrition problems, institutions providing health and nutrition services, and if there are important cultural, demographic and socio-economic differences among the target population.

Step 2: Preparation for the field work

Application of *ProPAN* requires good organization and logistics in preparation for fieldwork. Among the logistics activities that need to be carried out are the following: hiring personnel, selecting study communities, establishing contacts in the study communities, preparing the computer software program, adapting the research instruments to the local context, obtaining ethical approval and preparing consent and presentation letters, and preparing a work schedule.

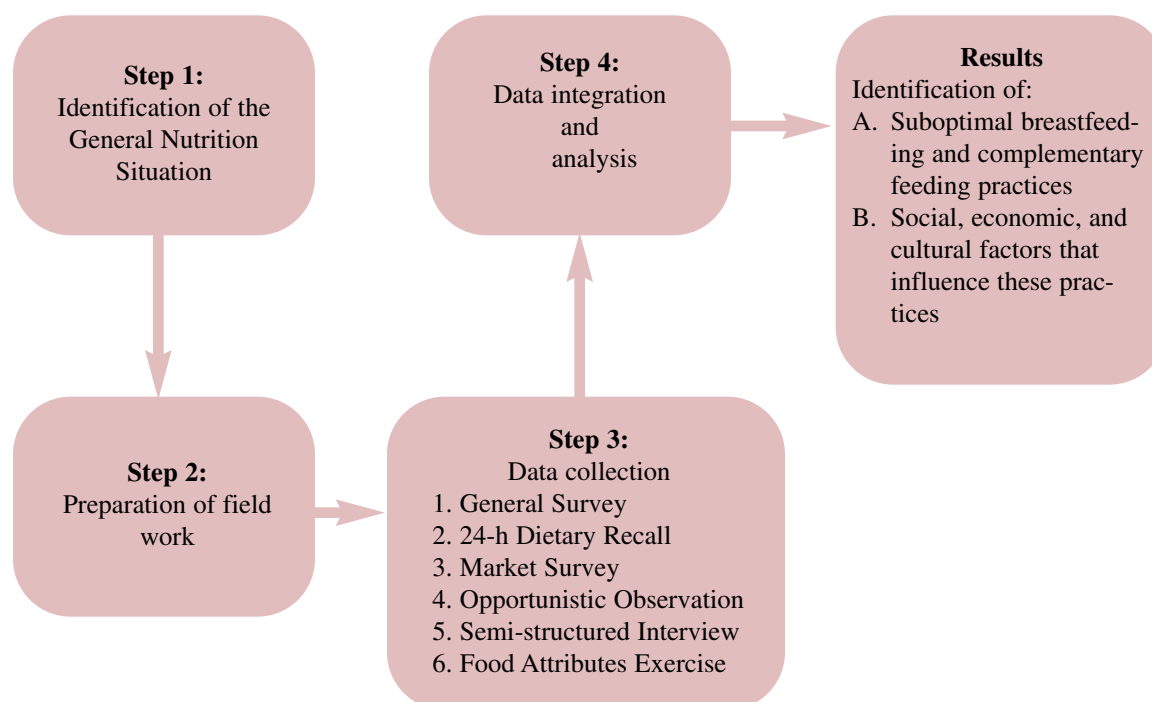
Step 3: Data collection

This step refers to the application of quantitative and qualitative data collection methodologies to obtain information on the nutritional intake and feeding practices of infants and young children, as well as on the cultural and socio-economic characteristics of the families and communities.

Step 4: Data integration and analysis

This step refers to the integration of both the quantitative and qualitative data so that the main nutrition problems can be identified and potential recommendations to be tested in Module II, developed. Analysis matrices have been developed to aid in the systematic organization of the data collected.

These steps are described in detail below and Figure I-1 shows how they are interrelated.

Figure I-1 Relationship among steps 1, 2, 3, and 4 of Module I.

DEVELOPMENT

Step 1: Identification of the general nutrition situation

The objectives of this step are to:

- ◆ Obtain an overall vision of the main infant and child nutrition and feeding problems in the country and target population.
- ◆ Identify the general problems related to availability of and accessibility to foods in the target population.
- ◆ Determine if the target population contains subgroups with cultural, demographic and socioeconomic differences that are significant enough to require separate representative samples.
- ◆ Identify the main ongoing health and nutrition programs, and the organizations involved in these programs.
- ◆ Identify the main Ministry of Health norms and policies regarding infant and child feeding and nutrition.

To obtain information on the nutrition programs and activities being carried out in the country or target population, meetings with two or three of the main organizations (governmental or not) involved in nutrition and health programs will be held.

Annex I-1 contains a list of topics that should be included in the analysis of the general nutrition situation and that, once collected, should be summarized in writing by the coordinator. After reviewing the summary, the team should review the **ProPAN** research instruments, decide which ones to apply, and make adaptations, if needed. For example, if the information reviewed about the target population(s) clearly identifies the existing nutritional deficiencies, then it may not be necessary to apply the *24-hour Dietary Recall*.

Once the review of the general nutrition situation is finished, the team will be able to:

- ◆ Define the number and type of target populations that need to be represented in the Assessment.
- ◆ Define the number of communities per target population.
- ◆ Avoid repeating the collection of data already available through other sources.
- ◆ Identify the existing information gaps that will need further research.
- ◆ Identify infant and young child feeding norms of the Ministry of Health.
- ◆ Select the methodologies and research instruments to be used in Module I and II. The final selection should be done according to time, personnel, and other resources.
- ◆ Identify the persons or institutions that could assist in the interpretation of data as well as potential users of the results of the application of **ProPAN**.

This step should not take more than one week to complete.

Step 2: Preparation for the field work

2.1. HIRING PERSONNEL

As described in the Logistics chapter, at the central level, a Coordinator, an Administrator, a Data Analyst, and a Data Entry person are needed. At the field level, two Supervisors and six Field Workers are recommended.

2.2. SELECTING STUDY COMMUNITIES

The information obtained in the identification of the general nutrition situation should provide the necessary information to select the target population(s). The next activity is the selection of the communities within each target population to be studied.

To ensure that sample size requirements for the various research instruments are met, two or more communities of similar characteristics will need to be selected to represent each target population. The communities selected should represent the general characteristics of the target population. The selection should be based on the knowledge and experience of the Coordinator and should be done in cooperation with institutional counterparts of the project.

The communities selected for each target population should have, combined, at least 200 mothers¹ of children 6 to 23 months of age to ensure that sample size requirements are met. This is because the required sample size for two of the instruments is 80 per instrument, and it is preferable to apply only one or at most two instruments to each mother to avoid fatigue or rejection.

2.3. ESTABLISHING CONTACTS IN THE TARGET COMMUNITIES

It is important to obtain the approval and support of well-respected community leaders, since they can facilitate entrance into the communities and provide assistance in motivating the population to participate in the study. Community leaders will most likely be local authorities, teachers, midwives, health personnel, health volunteers and religious leaders.

After choosing the study communities, a visit should be organized to identify the community leaders and request a meeting with them. During the meeting, they should be informed of the study objectives, the possible benefits to the community, and the support that will be needed from them. In addition, they should be asked about the best way to gain access to the community and ensure its participation and support, which might include a general assembly and distribution of flyers, for example.

2.4. PREPARING THE COMPUTER SOFTWARE PROGRAM

Information obtained with the *General Survey*, *24-hour Dietary Recall*, and *Market Survey* can be analyzed using the **ProPAN** computer software program. This program contains a food composition table based on the USDA Table Release 13, and foods and variables compiled by the National Institute of Public Health of Mexico for use in the 1999 National Nutrition Survey². Subsequently, additional foods were added by the Caribbean Food and Nutrition Institute (CFNI/PAHO) in Jamaica, the Institute for Nutrition for Central America and Panama (INCAP/PAHO), the Federal University of Pelotas in Brazil, and The Ministry of Health and PAHO country office in Panama. More details about software and the food composition table are available in the **ProPAN** software manual.

2.5. ADAPTING THE RESEARCH INSTRUMENTS TO THE LOCAL CONTEXT

It is important to adapt the instruments to the local language and context. Before starting the training of Field Workers, the research instruments should be carefully reviewed by the Coordinator and Supervisors

¹ The vast majority of young children are likely to be cared by their mothers. However, we used “mother” throughout **ProPAN** to denote mothers and other caregivers.

² Safdie K M, Barquera C S, Porcayo M M, Rodríguez R SC, Ramirez S CI, Rivera J (2004) Base de Datos del Valor Nutritivo de los Alimentos. Cuernavaca, Morelos, México: Compilación del Instituto Nacional de Salud Pública.

and, where necessary, modified. Questions that are not relevant should be deleted and others of interest added. The new version should then be pretested with a few mothers of young children and further modified, if necessary.

In addition, it may be necessary to make some additional changes during the training period. All the terms that the Field Workers and interviewees do not understand should be systematically written down. The team should then meet and decide if any terms need to be modified.

If the **ProPAN** software will be used to analyze the *24-hour Dietary Recall*, *General Survey* and *Market Survey*, care must be taken not to eliminate data that may be necessary for the software to function properly (for example, information on the weight of retail units sold for foods in the *Market Survey*).

2.6. OBTAINING ETHICAL APPROVAL AND PREPARING A CONSENT AND PRESENTATION LETTER

Before field work begins, ethical approval from the institutions involved in the application of **ProPAN** should be obtained. Each institution is likely to have its own guidelines for how to request such approval. An example of PAHO's guidelines for ethical approval can be found at www.paho.org.

Before the application of the first questionnaire, it is important to explain to the mothers why they are being interviewed and request their permission to interview them. The request can be verbal or written, through a letter of consent. It is important that the Field Workers carry identification and a letter of presentation explaining their presence in the community. An example of a consent and presentation letter can be found in Annex I-2.

2.7. PREPARING A WORK SCHEDULE

The time this study will take will depend on the number of target populations and the number of communities that will be studied per target population. It is estimated that the application of Module I will take approximately 8-12 weeks (based on a 5-day work week), including training, data collection, and data entry and analysis (see Table I-1).

The several activities of Step 2 (described above) are not included in the work schedule because the time they will take depends on factors such as, for example, the previous experience of the Coordinator and Supervisors, and the administrative procedures necessary for hiring personnel and purchasing equipment.

Table I-1. Work schedule and sequence of activities suggested for the completion of Module I with two supervisors and six field workers in one site

Activity/Method ³	Weeks							
	1	2	3	4	5	6	7	8
Step 1. Identification of the general nutrition situation								
Identification of the general nutrition situation	X							
Step 3: Data collection								
Training of Field Workers and Supervisors for the <i>General Survey, 24-hour Dietary Recall, Market Survey, Semi-structured Interview, and Opportunistic Observation</i>		X						
<i>General Survey and 24-hour Dietary Recall</i>			X					
<i>Market Survey</i>				X				
Rapid analysis of the <i>24-hour Dietary Recall</i> and <i>Market Survey</i> to define a <i>Key Foods List</i>				X				
Training for the <i>Mothers' Semi-structured Interview</i> and <i>Food Attributes Exercise</i>					X			
<i>Opportunistic Observation</i>	To be carried out at the oportune time							
<i>Semi-structured Interview</i>						X		
<i>Food Attributes Exercise including summary</i>						X		
Step 4. Data integration and analysis								
Training							X	
Completion of analysis matrices							X	
Definition and prioritization of recommended practices								X

Step 3: Data collection

The main objectives of the nutritional assessment are:

- ◆ To identify suboptimal feeding practices in children 6-23 months of age as well as the levels of dietary inadequacy of the nutrients of main interest as, for example, vitamin A and iron.
- ◆ To determine the main institutional, community, social, cultural, familiar, and individual factors influencing breastfeeding and complementary feeding practices.
- ◆ To identify the existing factors, opportunities, and resources that might facilitate the improvement of the practices and problems identified.

³ It does not include Step 2 (Preparation for the field work) because the time it takes to complete may vary greatly.

A combination of quantitative and qualitative data collection methodologies in six data collection instruments will be used for the nutritional assessment: *General Survey, 24-hour Dietary Recall, Market Survey, Opportunistic Observation, Semi-structured Interview, and Food Attributes Exercise.*

Table I-2 presents a summary of the six instruments, the number of mothers to whom each instrument should be applied, and the type of information that will be obtained with each one.

Data collection will be comprised of two activities:

1. Selecting participants from the study communities; and
2. Applying the data collection instruments

Table I-2. Information to be obtained and respondents needed for each research instrument

Research Instrument	Information to be obtained	Minimum number of respondents needed
General Survey	<ul style="list-style-type: none"> • Breastfeeding and complementary feeding practices • Information to be used in the design of intervention strategies 	40 mothers of children 6-11 months old and 40 mothers of children 12-23 months old
24-hour Dietary Recall	<ul style="list-style-type: none"> • Dietary intake and complementary feeding practices 	40 mothers of children 6-11 months old and 40 mothers of children 12-23 months old
Market Survey	<ul style="list-style-type: none"> • Reasons why families can or cannot comply with the ideal practices • Information to be used in the design of intervention strategies 	5 owners/staff of grocery stores/markets
Opportunistic Observation	<ul style="list-style-type: none"> • Actual complementary feeding practices • Reasons why families can or cannot comply with the ideal practices 	10 mothers of children aged 6 to 23 months
Semi-structured Interview	<ul style="list-style-type: none"> • Actual breastfeeding and complementary feeding practices • Reasons why families can or cannot comply with the ideal practices 	10 mothers of children aged 6 to 23 months
Food Attributes Exercise	<ul style="list-style-type: none"> • Reasons why families can or cannot comply with the ideal practices • Information to be used in the design of intervention strategies 	10 mothers of children aged 6 to 23 months

3.1. SELECTING THE PARTICIPANTS

The selection of participants for the quantitative instruments (*General Survey and 24-hour Dietary Recall*) should be random to ensure that they are statistically representative of the population. For the qualitative research instruments (*Opportunistic Observation, Semi-structured Interview, and Food Attributes Exercise*), participants will be selected based on convenience.

Other important criteria to be considered are:

- ◆ The child's age to ensure that 40 children are in the 6-11 months age group and 40 are in the 12-23 months age group.
- ◆ Gender representativeness (both boys and girls should be equally represented).
- ◆ Geographical representativeness (the different areas in the community should be well represented, i.e., children from furthest places in the community or from poor sectors should be equally included).

Generally, health personnel working in the area or community leaders have information on the approximate number of children between 6 and 23 months of age. If the number of children in the selected communities is not enough, neighboring communities with similar characteristics will need to be visited until reaching the recommended number. For most research instruments the mothers of children less than two years of age are the informants; however, some research instruments could be applied to either the mother or another family member, such as the grandmother.

3.2. APPLYING THE DATA COLLECTION INSTRUMENTS

The objectives and products of each of the data collection instruments are described below. Annexes I-3 through I-9 include a copy of each instrument and detailed guidelines for its use in the field and its analysis. All data collection instruments are also available electronically in Word and PDF format in the **ProPAN** software accompanying this manual.

3.2.1. General Survey (Annex I-3)

Objectives:

- ◆ To identify breastfeeding and complementary feeding practices.
- ◆ To compare the practices with the ideal practices defined in Table 1 in the Introduction and determine the adequacy of the practices.
- ◆ To collect information that will help understand the context in which the breastfeeding and complementary feeding practices occur.
- ◆ To collect data to be used in the design of the intervention plan, such as sources of information on child feeding, communication channels that reach mothers the most, and use of health services by mothers.

Products:

- ◆ The percentage of children who were breastfed within the first hour after birth.
- ◆ The percentage of children who were not fed pre-lacteal substances.
- ◆ The percentage of children who were fed colostrum.
- ◆ The percentage of children who are breastfed on demand, day and night.
- ◆ The percentage of children who were breastfed exclusively until the child's sixth month of life.
- ◆ The percentage of children who were weaned before 23 months of life.
- ◆ The percentage of children who began complementary feeding with semi-solid foods at 6 months of age.
- ◆ The percentage of children who received support and were motivated to eat during meal times.
- ◆ Results of questions regarding the context in which feeding occurs, such as socio-demographic characteristics of the families, housing conditions, reach of the main communication channels, consumption of micronutrient supplements, and use of health services.

3.2.2. 24-hour Dietary Recall (Annex I-4)

Objectives:

- ◆ To identify complementary feeding practices.
- ◆ To compare practices with the ideal practices defined in Table 1 in the Introduction, and determine the adequacy.
- ◆ To determine the adequacy of energy, protein, iron, zinc, vitamin A, vitamin C, and calcium intakes.
- ◆ To identify other complementary feeding practices that will help to interpret inadequate macro and/or micronutrient intake.
- ◆ To obtain information that will be used to develop the *Key Foods List*.

Products:

- ◆ The percentage of children consuming foods with the recommended nutrient and energy density.
- ◆ The percentage of children consuming at least the recommended daily number of main meals.
- ◆ The percentage of children meeting their energy requirements
- ◆ The percentage of children meeting their protein, iron, zinc, vitamin A, vitamin C, and calcium requirements.
- ◆ The percentage of children consuming at least one animal source food daily.
- ◆ The average energy and nutrient intakes.
- ◆ The percentage of foods consumed from animal sources.

- ◆ The percentage of energy consumed from animal source food.
- ◆ The percentage of energy consumed at each meal time.
- ◆ The nutrient and energy density of the foods consumed.
- ◆ The percentage of food served that was consumed.
- ◆ A list of foods consumed by children.
- ◆ The sample's socio-demographic and morbidity profile.
- ◆ Information to be used in the development of the *Key Foods List*.

3.2.3. Market Survey (Annex I-5)

Objectives:

- ◆ To identify the foods that provide the greatest amount of energy and nutrients for the least cost (nutrient/cost ratio).
- ◆ To determine the seasonality and availability of specific fruits and vegetables.
- ◆ To obtain information that will be used to develop the *Key Foods List*.

Products:

- ◆ Lists in decreasing order of those local foods that provide the greatest amount of energy, protein, iron, zinc, vitamin A, vitamin C, and calcium for the least cost.
- ◆ A calendar with the months of the year in which certain fruits and vegetables can be found locally.
- ◆ Information to be used in the development of the *Key Foods List*.

3.2.4. Definition of the Key Foods List (Annex I-6)

This is an intermediate activity before applying the *Food Attributes Exercise*. Once data collection with the *24-hour Dietary Recall* and the *Market Survey* is finished, it will be necessary to perform a rapid analysis of the results to define the *Key Foods List*.

Objectives:

- ◆ To define the foods most frequently consumed by children 6-23 months of age in the target population.
- ◆ To identify foods that will be potentially important to promote in an intervention.

Product:

- ◆ A list with the 25-30 key foods (including foods growing in the wild and those produced in the home or commercial sector, particularly those that are enriched or fortified). Thus should include energy-rich foods, animal sources foods, sources of protein and/or micronutrients (iron, zinc, vitamin A, vitamin C, and calcium) and others that can be considered potentially important. The resulting list will be used in the *Food Attributes Exercise*.

3.2.5. Opportunistic Observation (Annex I-7)

Objectives:

- ◆ To identify the context of feeding behaviors and to observe the interaction between the mother and the child during the child's meal time.
- ◆ To identify facilitators of and barriers to the ideal practice of supporting and motivating the child to eat to satiety during meal times.
- ◆ To look into other aspects of food preparation and feeding such as, for example, hygiene and the use of bottles, spoons and other utensils.

Product:

- ◆ A list of the facilitators of and barriers to the ideal practice of supporting and motivating the child to eat to satiety during meal times.

3.2.6. Semi-structured Interview (Annex I-8)

Objectives:

- ◆ To identify the breastfeeding and complementary feeding practices.
- ◆ To understand the reasons behind these practices.
- ◆ To identify the facilitators of and barriers to the ideal breastfeeding and complementary feeding practices.
- ◆ To identify practices that could potentially be improved so that mothers' behaviors more closely resemble the ideal practices.

Products:

- ◆ Summary of breastfeeding and complementary feeding practices.
- ◆ Summary of facilitators of and barriers to each ideal breastfeeding and complementary feeding practice.

3.2.7. Food Attributes Exercise (Annex I-9)

Objectives:

- ◆ To identify the positive and negative characteristics that mothers attribute to key foods.
- ◆ To determine which key foods are fed to children and why.
- ◆ To identify at what age key foods were offered to the child for the first time, how they were prepared, and how they are prepared now.
- ◆ To explore the conditions and changes necessary so that mothers can offer foods that are currently not offered to infant and young children.

Products:

- ◆ A summary of key foods that are offered to children and those that are not, and the reasons why.
- ◆ For each food, the positive and negative characteristics attributed by the mothers.
- ◆ For each food, information about the age at which it was offered for the first time, how it was prepared, and how it is prepared now.
- ◆ For each food that is not being offered to infant and young children, the conditions and changes necessary for it to be offered.

Step 4: Data integration and analysis

The objectives of this step are:

- ◆ To summarize the familiar and community context and the cultural concepts around breastfeeding and complementary feeding practices.
- ◆ To identify the main problems in achieving the ideal breastfeeding and complementary feeding practices.
- ◆ To identify the facilitators of and barriers to compliance with the ideal practices.
- ◆ To formulate recommendations to improve suboptimal breastfeeding and complementary feeding practices that would be feasible given the family, community, and cultural context.
- ◆ To prioritize the recommendations developed by evaluating the possible impact and feasibility of each.

4.1. DATA INTEGRATION

The data on breastfeeding and complementary feeding practices (collected primarily through the *General Survey* and the *24-hour Dietary Recall*) will be integrated with the data on the facilitators and barriers (identified mainly in the *Opportunistic Observation*, *Semi-structured Interview*, *Food Attributes Exercise* and *Market Survey*).

To summarize the information, a master matrix will be developed using the format provided in Annex I-10.1. In this matrix, information collected about each one of the ideal breastfeeding and complementary feeding practices investigated is summarized. One practice per form should be analyzed to ensure that all relevant information collected with the different instruments is included. Each page heading will include the ideal practice being summarized. For each ideal practice, the actual practices (whether similar to the ideal ones or not) should be written down in the second row, under the heading “actual practice.” Thus, this row should include both positive and negative findings.

The first two columns of the third row should include all the obstacles identified for the compliance with the ideal practice. For example, one common reason why mothers administer water or other liquids early to their infants is because they think their infants are thirsty even if they are breastfed. In this case, the fact that the mothers do not believe that breast milk quenches thirst is an internal barrier to exclusive breastfeeding that could possibly be addressed in a future intervention. All the important barriers should be identified.

The third and fourth columns of the third row are used to identify the facilitators, internal and external, of the ideal practice. One example of an internal facilitator would be the fact that mothers consider breast milk the best food for their infants. This would be a motivating factor to be used in the design of messages. An example of a completed master matrix is provided in Table I-3.

Module II will provide more information about the barriers and facilitators, but it is important to start identifying them at this stage.

In addition, a matrix of foods can also be completed using the form provided in Annex I-10.2. The advantage of completing this matrix separately is that the key foods and the way in which specific ones could be incorporated in the recommended practices are identified. An example of a completed matrix of foods is provided in Table I-4.

Table I-3. Example of a completed master matrix (Form I-10.1).

Ideal Practice # 11: That all children are fed meat, fish or poultry daily			
Actual practice: of the children interviewed, 26.5% were fed meat, fish or poultry daily			
Barriers		Facilitators	
Internal	External	Internal	External
Child does not like fish or liver.	Meat is expensive for the family.	Mothers believe that meat makes children strong.	Chicken liver is cheaper than beef

Table I-4. Example of a completed matrix of foods (Form I-10.2).

Food	Positive attributes	Negative attributes	Consumption frequency	Age when first given to child	Contribution to diet	Cost-benefit	Seasonality	Way of preparing or feeding
Chicken liver	It's good for the child, it's something special for the small child	Doesn't like it, tastes bitter, hurts child's stomach	Once a week	5 to 6 months of age	10% of children consumed it	\$0.50 for 10 mg of iron	All year round	<ul style="list-style-type: none"> • Fried • In pasta soup • With refried beans

4.2. DATA ANALYSIS

In the data analysis, the feeding practices of mothers and the reasons behind these practices are examined in detail with respect to facilitators and barriers. To perform this analysis, the process described below should be followed.

For each of the problem practices found (see Glossary), new behaviors or recommended practices should be proposed in the matrix of problem practices and recommended practices (using the form provided in Annex I-10.3). These recommended practices can refer to new practices or to modifications of existing practices. It is possible that the same recommended practice may improve two or more problem practices simultaneously. For example, the recommendation to “combine one or more food of animal origin with tortillas during each meal ” can address the following problem practices: “children are served small quantities” and “children are served foods of animal origin infrequently”.

The identification and wording of these recommendations are very important. They should clearly express what the mother should do in relation to infant and child feeding and not what she should know. (Confusing what a mother should know with what she should do is the most frequent error when formulating recommendations.) An example of a completed matrix of problem practices and recommended practices is provided in Table I-5.

Not all the recommended practices that appear promising in theory are useful in reality. Almost always, behaviors are far more complex than apparent at first glance. What can seem a simple practice (for example, “combine foods such as rice, beans, noodles, or eggs with tortillas at each meal”) can in reality represent a series of behaviors or steps, some of which require new skills, or additional time and economic resources.

The data analysis can also help to identify some possible positive consequences that would result from compliance with the recommended practices as well as some possible negative consequences. In addition, it can provide suggestions to minimize or avoid negative consequences.

To systematically evaluate potential recommended practices in terms of their impact on nutrition, feasibility and observability, a set of criteria has been developed and is explained below.

Table I-5. Example of a completed matrix of problem and recommended practices (Form I-10.3)

Problem practices (actual practices)	Recommended practices
<ul style="list-style-type: none"> • Small portions of food with low energy density are served to children 12-23 months old. 	<ul style="list-style-type: none"> • Feed 3 meals per day to breastfed toddlers between 12-23 months old. • Combine one or more basic foods (rice, beans, noodles or eggs) with tortillas in each meal. • Give sweet bread or banana as snacks • Blend in beans with the broth after straining.

Impact criterion

The first criterion to consider in the selection of recommended practices is that of nutritional impact. The team needs to analyze the *potential for impact on nutrition* of each recommended practice. Since the analysis should be based on existing clinical or epidemiological information, it may be necessary to consult with a specialist to score the nutritional impact of each recommended practice.

1. Potential for impact on nutrition

What impact would the adoption of the recommended practice have on the nutritional problem to be addressed?

0. Would not have an impact on the problem
1. Would have some impact on the problem
2. Would eliminate the problem

If the answer is “0”, the recommended practice can be eliminated from the list. If the answer is “1, but the score in any of the feasibility criteria is low, the team should analyze if there is an intermediate point between the ideal and actual practices that can be recommended and would still have an impact on the nutritional problem that is to be addressed. The recommended practices selected for the intervention should be the most *feasible* to adopt and with the greatest *potential for impact on nutrition*.

Feasibility criteria (potential for compliance or change)

A set of feasibility criteria can be used to evaluate the probability that each proposed recommended practice will result in improved practices.

To score the recommended practices, a meeting should be organized with an interdisciplinary team composed of a meeting Facilitator (someone who knows the project and the methodology but will only participate as a discussion moderator), the Coordinator, both field Supervisors, and Field Workers who participated in the data collection. All the recommended practices should be scored for each feasibility criteria by each member of the team, using the matrix provided in Annex I (Form I-10.4). Each participant should explain to the rest of the team what score was given and why. It is important to record the reasons and the discussion. Once all the scores from all the team members regarding one specific recommended practice and the reasons why have been expressed, an average for each recommended practice should be calculated. When finished, the scores for each recommended practice for all the feasibility criteria should be added. The recommended practices with the highest score will be, in theory, the most feasible for mothers to adopt.

2. Positive consequences

In your assessment, does the recommended practice have positive consequences (pleasant or favorable) that are immediate and perceivable by the mother who will adopt it?

0. None (or even some unpleasant consequence)
1. Very few or some
2. Has many or significant positive consequences

3. Compatibility with beliefs and knowledge

Do mothers have beliefs or knowledge that support or motivate them to comply with the recommended practice?

0. The mothers' beliefs are incompatible with the recommended practices
1. The mothers' beliefs are somewhat compatible with the recommended practices
2. The mothers' beliefs are compatible with the recommended practices

4. Cost in resources and/or money

What are the monetary or material resource costs required to comply with the recommended practice?

0. Requires significant additional resources
1. Requires few additional resources
2. Requires no additional resources or requires resources that are already available to the mother

5. Cost in time and/or effort

What is the cost in time and effort required from the mother to comply with the recommended practice?

0. Requires significant time or effort, it is not realistic
1. Requires some time or effort
2. Requires very little time or effort

6. Complexity

From the mothers' point of view, how complex is the recommended practice? Does it require a few or several steps?

0. Too complex, it requires too many steps (five or more)
1. Requires several steps (three to four)
2. Requires a few steps (one or two)

Observability criterion

Finally, the possibility of having a Field Worker observe compliance with a recommended practice can be evaluated during data analysis. This analysis is optional and it can be performed as part of Module IV (monitoring and evaluation design).

7. Observability

Could the compliance or non-compliance with the recommendation by mothers be observed by Field Workers in the environment in which it would occur?

- 0. Cannot be observed
- 1. Can be observed, although it would be somewhat difficult to observe
- 2. Can be easily observed

Table I-6 presents a matrix with an example of scores given by the members of an interdisciplinary team to two recommended practices, using the feasibility and impact criteria. The lower scores in some criteria indicate the main barriers for each recommended practice. For example, recommended practice # 2 is more costly in money and effort than recommended practice #1. Recommended practice # 1 has the highest total score suggesting it is more feasible to adopt than the other is. However, the potential impact of both recommended practices was similar. Therefore, if a choice had to be made between both recommended practices, the first one would be chosen.

Table I.6. Example of a completed matrix for the impact, feasibility and observability analysis (I-10.4).

Recommended practices	Impact (1)	Positive consequences (2)	Compatibility with beliefs and knowledge (3)	Cost in resources and money (4)	Cost in time and/or effort (5)	Complexity (6)	Feasibility (2-6)	Observability (7)	Total (1-7)
When preparing soup, give the child the solid ingredients and not only the broth.	4	3	3	5	5	5	21	3	28
Starting at 6 months of age, give the child a piece of smashed chicken liver at least 3 times a week.	3	2	2	1	1	4	10	3	16

4.3. SELECTING THE POTENTIAL RECOMMENDED PRACTICES

The final result of this exercise should be a list of the recommended practices that are considered to have potential for improving the nutritional situation of young children. This list of recommended practices should include those which will be tested in Module II as well as those identified as important but which cannot be tested in the homes, such as putting the child to the breast within the first hour after birth or exclusively breastfeeding for six months.

Annex I-10.5 contains a matrix to summarize this information and Table I-7 shows an example of a completed matrix. The matrix's first column shows the problem practices that should be addressed; the second column, the selected recommended practices that will be tested in Module II; and the last column the recommended practices that cannot be tested but that might help reduce the problem practice and that should probably be promoted in an intervention.

After completing this matrix, the process of testing the recommendations in the homes, as described in Module II, can be started.

Table I-7. Example of a matrix for the summary of possible recommended practices (Form I-10.5).

Problem practice	Recommended practices to be tested in Module II	Recommended practices that will not be tested but will be promoted
<ul style="list-style-type: none"> • Small amount of animal source foods in the diet of young children 	<ul style="list-style-type: none"> • Feed one source of fish, chicken or beef daily • Combine a meat source with one or more staples (rice, beans, potatoes or noodles) at lunch and dinner 	<ul style="list-style-type: none"> • Wash hands before preparing food and feeding child • Wash child's hands before feeding him

