

MODULE II

Annexes

Annex II-1. Recipe Creation Exercise	184
Guidelines for completing the registration form for the Recipe Creation Exercise (Form II-1.1)	194
Form II-1.1. Registration form for the Recipe Creation Exercise	198
Form II-1.2. Matrix for the nutritional analysis of recipes	203
Form II-1.3 Matrix for the acceptability and feasibility analysis of the recipes	204
Annex II-2. Test of Recommendations	205
Guidelines for completing the registration form for the initial visit (Form II-2.1)	218
Form II-2.1. Registration form for the initial visit	221
Guidelines for completing the registration form for the follow-up and final visits (Form II- 2.2)	223
Form II-2.2. Registration form for the follow-up and final visits	226
Example of a reminder of a recommendation	228
Form II-2.3. Matrix of motivations	229
Form II-2.4. Matrix of solutions	230
Form II-2.5. Matrix for the analysis of the Test of Recommendations	231
Form II-2.6. Matrix for the compliance and feasibility analysis of the recommendations tested	232
Annex II-3. Focus Groups	233
Form II-3.1. Registration form for the Focus Groups	239
Form II-3.2. Matrix for the analysis of the Focus Groups	242
Form II-4. Matrix of final list of recommendations to be promoted in an intervention	243

Annex II-1

Recipe Creation Exercise

OBJECTIVES

- ◆ Develop new recipes for small children through the active participation of mothers
- ◆ Improve existing preparations for small children through the active participation of mothers (for example, increase the iron or vitamin A content by adding other foods, or modifying quantities or proportions of ingredients).
- ◆ Identify different food combinations and recipes that can be prepared with the same number of ingredients

STEPS

1. Previous work

Selection of potential foods

Based on the results of Module I, specific foods and food combinations will be selected for the recipe creation sessions (Creed-Kanashiro et al., 1991). These foods should be selected from the *Key Foods List* and from the information derived from the information collected in the *24-hour Recall*, *Food Attributes Exercise*, and/or *Market Survey* (Module I).

Some criteria for the selection of these foods are listed below:

- ◆ Availability: Refers to foods usually available in the home or sold in the community.
- ◆ Nutritional value: Refers to the selection of foods that are high in the nutrients found to be lacking in the diet.
- ◆ Cost per nutritional benefit: Refers to foods that are accessible to the target population and that have good nutritional value in relation to their cost.
- ◆ Actual use: Refers to foods commonly used by families and their method of cooking and preparation.
- ◆ Acceptability: Refers to the cultural acceptability of feeding these foods to small children.

Identification of the potential food combinations

Once the potential foods have been selected, the most nutritionally appropriate food combinations should be identified keeping in mind the dietary inadequacies found during the nutritional assessment carried out in Module I. These potential food combinations should be presented to mothers who would then be asked to create new recipes or modify existing ones. For example, in Peru mothers were given potatoes, squash, chicken liver, and oil as one combination and toasted wheat-flour, toasted pea-flour, carrots, oil, and sugar as another combination (Creed-Kanashiro et al., 1991). In Guatemala, mothers were given cooked black beans, corn meal, and a dark green leafy vegetable (Rivera et al., 1998).

Two sessions should be carried out for each combination of foods in order to obtain multiple recipes or preparations. If time is an issue, two or three different combinations of foods may be tried in the same session.

2. Selection of participants

The participants in the *Recipe Creation Exercise* should be the potential users of the recipes, i.e., mothers of infants and young children.

For each session, 8-10 mothers with similar characteristics (for example, from the same community or with similar economic conditions) should be identified. If it is likely that not all the mothers invited will be able to participate, it is recommended to invite approximately twice the total number required for each session (for example, 20 mothers invited for a session with 10 mothers). In addition, since these sessions require the participation of each mother, the team should try to form a group that is likely to work well together and avoid including participants that might intimidate others because of social status in the community or personality traits.

To further increase participation, the sessions should be held at a convenient time for mothers. In Mexico, it was observed that the main reason why many mothers did not participate was because the sessions were held in the mornings and many mothers needed to be at home at this time to prepare the main mid-day meal. Another way to motivate mothers to participate is to invite them to bring containers to take home the foods they will prepare during the sessions. This way, they will perceive added benefit from the sessions. Mothers might also be asked to bring their own cooking utensils to the sessions to make them more comfortable with the exercise and to give them an added sense of their contribution. However, in certain cultures this suggestion might seem offensive and counterproductive.

Mothers should be invited to a place with cooking facilities, such as a cafeteria, health center, or the home of one of the participants. Mothers should take their children to the sessions so the children can taste the final recipes and field workers can collect information on the mothers' opinions about their children's acceptability of the recipes. To ensure that mothers are able to participate fully in the session, it is recommended to have two or three people watching the children during the session.

3. Materials

- ◆ Copies of the registration form for the *Recipe Creation Exercise* (Form II-1.1)
- ◆ Pencils/pens
- ◆ Food scale with a capacity to 5 kg
- ◆ All ingredients expected to be used by mothers
- ◆ Potable water for cooking
- ◆ Clean water, soap and disinfectant for hand and food washing
- ◆ Cooking utensils (such as spoons, cups, pots, pans, knives, and cutting boards)
- ◆ Several tables to work on
- ◆ Aprons and kitchen rags to clean counter tops
- ◆ Blender or other kitchen appliance to grind foods if necessary
- ◆ Range, stove top or any other equipment where foods can be cooked or heated
- ◆ Eating and drinking utensils (such as dishes, spoons, cups, and napkins)

4. Personnel, site, and time

One session can be carried out per day. A single recipe creation session may last one and a half hours or more. If foods with extended cooking times are included and are not pre-cooked, the session will last longer. If several food combinations will be tested, the time required for the whole exercise, including the analysis of results, is one to two weeks.

The sessions should be carried out in a relatively controlled atmosphere, where mothers are provided with the ingredients, cooking utensils, and fuel, among other resources, for the recipe creation or modification. The place where the sessions are held should be a “neutral” area in which all the participants feel at ease cooking, tasting and feeding the preparations to their children, and discussing their impressions. This will increase the probability that they will participate actively and creatively.

The leader of the sessions should be the nutritionist supervising the field work, who should have the skills to easily guide the participants through all of the steps of a recipe creation session. In addition to the supervising nutritionist, two or three assistants should also be present at each session. Both the nutritionist and assistants should have excellent interpersonal communication and observation skills.

If the field workers that participated in Module I also participate in the recipe creation sessions, the training will take only two to three days as they should already be familiar with the communities, and the background and objectives of the project.

The supervising nutritionist and assistants should be responsible for the following tasks:

Supervising nutritionist

- 1) Select the ingredients that will be used and identify the food combinations that will be presented
- 2) Arrange for a place to cook, and the necessary cooking utensils, equipment and ingredients
- 3) Moderate the session: introduce the session, ask the mothers about the ingredients provided, give instructions, observe the food preparations, and guide the final discussion
- 4) Gather and complete notes taken on Form II-1.1 during the exercise
- 5) Coordinate the analysis of the food preparations

Assistants

- 1) Help to identify and prepare the place for the session
- 2) Identify the participants
- 3) Visit and invite the selected mothers
- 4) Take notes during the food preparations and discussion
- 5) Assist in the analysis of the food preparations

5. Description and procedures

Before the session

The team should clean and organize the place where the session will be held, making sure that the necessary food items, and cooking utensils and equipment are available and ready to be used. In addition, scales and forms to record the recipes and results of the session should be made available. In Mexico, it was useful to have “comales” or charcoal ovens available since in one of the session the electricity went out making the electric grills unusable.

During the session

At the beginning of each session, the objectives of the exercise should be clearly stated. Mothers should be asked to participate in the process of “making recipes that are even more nutritious to feed small children like yours.” It is possible that some mothers will attend the sessions thinking that they will be taught how to prepare special foods or porridges. Therefore, in addition to telling them in advance the objectives of the session and what their expected role in it is, it will be necessary to remind them that they, not the members of the team, will be preparing the food combinations.

If the supervising nutritionist notices that some mothers are not feeling comfortable with the idea of preparing recipes with other mothers, she might use an “ice-breaker” activity, or encourage them with positive words.

To help the mothers prepare useful recipes, simple guidelines or criteria should be established depending on the objectives to be achieved. For example, if the objective is to create thick preparations that are acceptable to children, this should be clearly explained to the mothers first. If the objective is to use iron-rich foods, examples of these should be shown to mothers.

Mothers should be given clear directions, such as the ones listed below (Creed-Kanashiro et al., 1991; Dickin et al., 1997). Directions should be tailored to the specific objectives of the session.

- ◆ The recipes should be appropriate for children 6 months or older, who are just learning how to eat.
- ◆ The recipes should be appropriate for children 12 to 23 months old, who are already eating table foods.
- ◆ The recipes should use few ingredients, preferably three to five, and be easy to prepare.
- ◆ Specific combinations or proportions should be used (for example, two cereals servings for every bean or legume serving).
- ◆ The final preparation should have a specific consistency (for example, thick like mashed potatoes)
- ◆ The final preparation should always contain a particular ingredient (for example, a piece of meat, fish, egg, and/or poultry).
- ◆ The recipe should be easy to prepare at home (for example, it should not take too long to prepare, the ingredients and cooking utensils needed should be readily available, and it should be prepared based on foods cooked for the entire family).
- ◆ The recipes should include ingredients to improve the taste and/or make the recipe more attractive to children (for example, they should include spices or aromatic herbs).
- ◆ The mothers should give a name to each recipe.

In previous projects, giving examples of specific recipes obtained during the assessment in Module I helped the mothers to better understand these objectives.

Once the session objectives are clarified, the different foods with which the mothers will be working should be shown to them. Then, they should be asked: a) if they have access to them, and b) which preparations they would create with those foods. In trying to determine “access”, both product availability in the community and the economic resources of mothers should be considered.

As an alternative to providing raw food, the assistants could provide some pre-cooked foods (for example, beans, lentils, chick peas, chicken or beef liver) to mothers. This would reduce the preparation time significantly. If pre-cooked foods are used, it is important to ensure that they are prepared and stored hygienically, and reheated in a safe manner.

Mothers should be asked to create “any recipe” with the foods or ingredients provided. Depending on the available resources and time, groups of three mothers could be formed to simultaneously prepare different recipes. It is recommended that the mothers be divided into groups according to the ages of their children. For example, groups of mothers of children aged 6-11 and 12-23 months could be formed.

If a mother would like to prepare or share more than one recipe and there is not time left in the session, she might describe it in detail to the assistant who can recreate the recipe at another time.

While the mothers are cooking, the supervising nutritionist and assistants should observe and record in Form II-1.1 “Registration form for the *Recipe Creation Exercise*” (included in this Annex), the information listed below. In Mexico it was very useful to tape and take extensive notes on the mothers’ comments, explanations, and reactions during the session.

- ◆ The food amounts (in household measurements and in grams) and combinations used
- ◆ The steps followed in the preparation
- ◆ The preparation and cooking methods used
- ◆ The time it took to prepare and cook the recipe
- ◆ The final amount (weight in grams)
- ◆ Participants’ comments regarding ingredients, cooking methods, and acceptability by the children.

Discussion about the recipes

Once the recipe preparation step is finished, the characteristics of the recipes should be discussed with the mothers. All the mothers and children should be invited to taste the recipes and give their opinions. During the discussion, the following should be recorded in Form II-1.1 (included in this Annex):

- ◆ Children’s reactions (for example, if they eat it, if they like it, how much they eat)
- ◆ Whether it is possible for the mothers to prepare the recipes at home and under everyday circumstances
- ◆ Reasons why mothers chose particular ingredients and decided against other ingredients
- ◆ Mothers’ opinion about the taste, smell, appearance and consistency of each preparation
- ◆ Mothers’ suggestions to improve or modify the recipes prepared

Although ideally, mothers should be gathered together again after the cooking and tasting is completed to discuss their reactions, many times this is difficult to achieve. As an alternative, the assistants can instead listen to the mothers’ comments while they are preparing the recipes, tasting them, and feeding their children. In Bolivia, mothers took approximately 15 minutes to feed the food preparations to their children and the assistants used this time to ask each mother questions about the food preparations, her opinions about them and how she thought her child responded to their taste and consistency. It is also important to observe the children when mothers are feeding them. The assistants should then take notes on the children’s behaviors, such as, for example, if a child refused to eat, if a child ate but only while being motivated by the mother, and amount each child ate

On occasion, it might be necessary to use incentives to encourage mothers to attend the sessions, such as to give them animal-shaped dishes and spoons for their children.

6. Analysis

Three analyses should be carried out for each of the recipes prepared: nutritional analysis, cost analysis, and preparation acceptability and feasibility analysis.

Nutritional analysis

The information collected for the nutritional analysis of the recipe should be organized in two matrices. One matrix requires no nutritional calculations (see Form II-1.2, option 1) and one which does (see Form II-1.2, option 2). The matrix which requires no nutritional calculations is shown in Table II-1.

Table II-1. Example of a completed matrix for the nutritional and cost analysis of recipes (Option 1)

Food Preparation	Ingredients	Consistency (0=liquid 1=semi-liquid, 2=thick 3= solid)	Animal source foods present (number=0, 1, 2)	Vegetables present (number=0, 1, 2)	Additional energy source (0=No, 1=Yes)	Cost per 100 g
Mashed potatoes with squash and liver	Potatoes Squash Liver	2	1	1	0	1.25

Consistency: If, when a spoon is inserted into and removed from it, the preparation runs quickly off the utensil, it is liquid. If the preparation slowly drops off the spoon, it is semi-liquid. If when the spoon is removed the preparation does not run, it is thick. If the preparation can be cut with a knife, it is solid.

In Table II-1, for each recipe, the values in the middle 4 columns of the matrix can be summed (consistency, animal-source foods, vegetables, energy source), where a higher score suggests a more nutritionally dense recipe.

Alternatively, the energy and nutrient density of each recipe can be calculated (see Table II-2). Then, based on the nutritional objectives of the recipe, the recipes can be ranked. For example, in Mexico, recipes selected were those providing 1 kcal/g or more or those that met the WHO recommendations (see Table 2 in the Introduction chapter) regarding the iron and zinc density for complementary foods for children 6 to 8 months of age with an average breast milk intake

Cost analysis

Because the cost of a recipe will affect families' ability to prepare the recipe on a regular basis, the cost should be determined. To be able to compare prices among several recipes, calculate the price per 100 g of each recipe, as described in the formula below.

$$\frac{100 \text{ grams} \times \text{total price of the preparation}}{\text{Total weight of the preparation (grams)}}$$

Table II. 2. Example of a completed matrix for the nutritional and cost analysis of recipes (Option 2)

Food preparation	Ingredients	Energy density (kcal/g)	Iron density ¹ (mg/100 kcal)	Zinc density ¹ (mg/100 kcal)	Cost per 100 g (US \$) ²
Vegetable and liver soup	Tomato, potato, squash, carrot, "chayote", chicken liver.	1	3.69	0.90	0.112
Onion smothered liver with orange	Potato, onion, orange juice, beef liver.	1.29	2.88	1.41	0.169
Meat balls	Tomato, carrot, egg, ground beef meat.	1.27	1.03	1.21	0.188

Energy density: The number of kilocalories per gram of preparation (see Glossary). It is calculated using the following formula:

$$\frac{\text{Total kilocalories of preparation}}{\text{Total weight of preparation (grams)}}$$

Nutrient density: The amount of a nutrient per 100 kilocalories of preparation (see Glossary). It is calculated using the following formula:

$$\frac{100 \text{ kcal} \times \text{total amount of nutrient in the preparation}}{\text{Total kilocalories in final preparation}}$$

The calculation of the energy and nutrient density of each recipe can be completed using the **ProPAN** software. For detailed instructions, see the annexes of the **ProPAN** software manual.

1 This table represents an example of recipes nutritional analysis for a community in which the assessment of the Module I allowed to identify iron and zinc as the nutrients deficient in the children's diet.

2 Prices can be entered in units of local currency for the software to make the analysis in these units.

Preparation acceptability and feasibility analysis

In addition to the nutritional and cost analyses, criteria regarding the acceptability and feasibility of adopting recipes should also be considered when selecting the potential recipes. Some of these criteria include:

- ◆ Acceptability by participating mothers and children
- ◆ Number of ingredients used in the preparation
- ◆ Time required for the preparation
- ◆ Equipment necessary for the preparation
- ◆ Availability of the foods used in the preparation (if they are seasonal or available during the entire year)

To analyze acceptability and feasibility, a matrix like the one presented in Table II-3 may be used (Form II-1.3).

Table II-3. Example of a completed matrix for the acceptability and feasibility analysis of the recipes

Food preparation	Number of ingredients	Ingredients	Amount	Preparation time (in minutes)	Mother's acceptability	Child's acceptability (including amount consumed)	Positive/negative comments/motivations	Suggested name
Mashed potatoes with squash and chicken liver	5	Potato, squash, chicken liver, oil, broth	1 lb. 1 lb. 1 lb. 3 tsp	5	Liked it	Liked it. Ate _ cup	Tasty Easy Smooth Nourishes Takes time to feed	Liver vitamin

Finally, a list should be developed with the information gathered during the *Recipe Creation Exercise* summarizing the barriers and facilitators that may occur when mothers are asked to follow the recommendations or new or modified recipes. This summary can also be used when developing the motivations (Form II-2.3) and solutions (Form II-2.4) guides for the *Test of Recommendations*. For example, in Mexico:

- ◆ Mothers felt their children preferred more liquid preparations, since they ate them faster and better. In addition, they felt that vegetables and meats “leak their essence” into the broth when cooking, and for this reason the broth is also considered nutritious.
- ◆ According to the mother’s comments, some foods are classified as either cold (such as meat, squash, rice, beef broth) or hot (such as mango).
- ◆ Mothers used words such as “vitamins, energy, and nutritious”. They felt that there is a relationship between proper feeding and the growth and development of their children.
- ◆ During the recipe exercises, mothers would breastfeed their children.

- ◆ Some mothers stopped feeding their children when the child said they did not want anymore, but other mothers insisted a little more until the plate was finished.
- ◆ For children to have something to drink with the preparations, some mothers made orange juice and provided it along with the recipes that they prepared.
- ◆ When the food was too hot, mothers waited for it to cool while giving rolled-up tortilla “tacos” soaked in broth.

PRODUCTS

When finished with the *Recipe Creation Exercise*, the following products will be available:

- ◆ New recipes with higher nutritional value and which are appropriate for small children.
- ◆ Improved recipes that include a greater variety of foods and that are more nutritious than the ones from which they were created.
- ◆ Different combinations of foods and recipes that can be prepared with the same number of ingredients.

To determine their degree of acceptance and adoption by children between 6 and 23 months of age and their mothers, the recipes selected should be included in the *Test of Recommendations* (see Annex II-2).

REFERENCES

- Creed-Kanashiro H, Fukumoto M, Jacoby E, Verzosa C, Bentley M, Brown KH (1991) Use of Recipe Trials and Anthropological Techniques for the Development of a Home Prepared Weaning Food in the Central Highlands of Peru. *Journal of Nutrition Education* 23(1):30-35.
- Dickin K, Griffiths M, Piwoz E (1997) *Designing by Dialogue: A Program Planners' Guide to Consultative Research for Improving Young Child Feeding*. Washington, DC: Academy for Educational Development/The Manoff Group.
- Rivera Dommarco J, Santizo MC, Hurtado E (1998) *Diseño y Evaluación de un Programa Educativo para Mejorar Las Prácticas de Alimentación en Niños de 6 a 24 Meses de Edad en Comunidades Rurales de Guatemala*. Washington, DC: Pan American Health Organization.

GUIDELINES FOR COMPLETING THE REGISTRATION FORM FOR THE RECIPE CREATION EXERCISE (FORM II-1.1)

Form The code (II.1) is indicated in the upper-right corner of the form, corresponding to the recipe creation.

-
- 1. Meeting date** Write the date of the meeting, starting with the day, month and year. This information can be completed before the meeting. The first nine days of the month should be preceded by a zero. For example, day 2=02. The months should be indicated by two digits, starting with 01 for January and ending with 12 for December.
-
- 2. Meeting place** Write the name of the community where the meeting takes place.
-
- 3. Nutritionist's or assistant's name and code** Write down your name and the first letter of your last name. Record your code in the space provided at the right (this code will be assigned to you by the Supervisor).
-
- 4. Age group** Write the corresponding code according to the following options:
01= Mothers with children aged 6 to 8.9 months
02= Mothers with children aged 9 to 11.9 months
03= Mothers with children aged 12 to 23.9 months
-
- 5. Recipe's code** Later, the supervisor should assign a unique code to the recipe the mothers have prepared.
-
- 6. Mothers' names** Clearly write the names of the mothers in the following order: paternal last name, maternal last name, and first name.
-
- 7. Starting time** Write the time the preparation began, that is, from the time mothers begin washing/cutting/preparing the foods.
-
- 8. Weight of container** Record the weight of the container where the mothers will prepare the food, that is, the pan, pot or other where the final recipe will be cooked.
-
- 9. Name of preparation** Once the mothers have decided on what they will prepare, ask them the name of the recipe and record it.
-
- 10. Recipe content:**
- 10.1 Ingredients** Write the ingredients used during the preparation.
-
- 10.2 Amount used (household measure)** Record the household measure used by mothers for each ingredient. For example, 1 cup, 1 piece, 1/2 tablespoon, etc.
-

10.3 Amount used (grams)	Using a food scale, weigh the amounts used of each ingredient (and noted in 10.2) and write the total weigh in grams in 10.3. If the mother adds other ingredients (such as, for example, water to cool the food, spices or additional food) after cooking the food preparation, remember to weigh the ingredients and consider them as part of the preparation.
10.4 Edible portion	If the weight of the ingredient corresponds to the <u>net weight</u> of the food (for example, potato without skin, chicken without bone or skin, rice, or avocado without pit) write the answer “ Yes ”. If the mother adds an ingredient with an inedible portion, such as skin, pit, bone, etc., write the answer “ No ”. Remember to verify in the food composition table the percentage corresponding to the edible portion before performing any nutrient calculations.
10.5 Cooking	Specify if the food used by the mother was previously cooked or not. If the food was previously cooked, write “ Yes ”. If the food was raw, write “ No ”.
11. Preparation method	Carefully record the entire preparation procedure until the recipe is finished and ready to be fed to the children.
12. Observations during the preparation	Record all the comments made by the mothers during the preparation, their reactions, practices, and attitudes.
13. Finishing time	Always remember to write the time when the recipe preparation is finished (and the preparation is ready to be eaten).
14. Total preparation time	Calculate from the starting time (question 7), the time it took to prepare the recipe, from the moment the foods were washed/cut to the moment the recipe was ready to be eaten.
15. Final amounts of the recipe	
15.1 Total weight (grams)	When mothers have finished the preparation, weigh the final preparation inside the container in which it was prepared and record the total weigh in grams.
15.2 Weight of the container (grams)	Copy from question 8 the weight of the container used (pot or pan).
15.3 Net weight (grams)	Subtract the amount in column 15.2 (weight of container) from the amount in column 15.1 (total weight) and record the number. This is the net weight of the recipe.
15.4 Household measure	Record the final volume that the recipe occupies in the container. For example, 1 small pot or 3/4 of a large pot.

16. Amounts served and consumed

16.1 Weight of the dish (grams)	Before each mother serves the preparation to her child, weigh and record the total weight in grams of the dish where the mother will serve the food to her child.
16.2 Total weight served (grams)	Once served, weigh the dish with the food and record it in grams.
16.3 Net weight served (grams)	Subtract the amount obtained in column 16.1 (weight of the dish) from the amount obtained in column 16.2 (total weight served) and write the number. This is the net weight served.
16.4 Household measure	Record the household measure mothers use to serve the preparation to their children. For example, 4 tablespoons, 1/2 small dish, or 1 large soup bowl.
16.5 Left-over weight (grams)	Once the child has stopped consuming the food, weigh the dish with the left-over food and record it in grams.
16.6 Amount consumed (grams)	Subtract the amount obtained in column 16.5 (left-over weight) from the amount obtained in column 16.2 (total weight served) and write the number. This is the total amount consumed by the child.

17. Consistency of the final preparation according to the mothers

Once the mother serves her child, ask her about the consistency of the preparation, without suggesting an answer. If the mother’s opinion coincides with any of the classifications on the form (liquid, semi-liquid, thick, or solid), write the corresponding code. If the mother provides a different classification, write code 77 (other) and specify the word she used. For example: write 77 and specify goeey.

Questions 17 and 18 contain five different lines that should be completed. Each one corresponds to the answer of up to five mothers who are part of the group preparing a specific recipe.

18. Consistency of the final preparation according to the observer (field worker)

Write the consistency of the final preparation as estimated by you, the nutritionist or assistant, according to the following classification:

- 01 = liquid
- 02 = semi-liquid
- 03 = thick
- 04 = solid

For this, it will be necessary to introduce a fork or spoon into the preparation and observe:

- If when removing the utensil the preparation is runny, it is liquid = 01.
- If when removing the utensil the preparation slowly drops off the spoon, it is semi-liquid = 02.
- If when removing the utensil the preparation does not run, it is thick = 03.
- If the preparation can be cut with a knife, it is solid = 04.

19. Observations while the children taste the recipes While the mothers feed their children, observe and record the children's reactions, if they like it or not, if they finish it or not. Ask the mothers what they think about their children's acceptability of the new recipe or preparation.

20. Complementary information (discussion) When finished observing the acceptability, the mothers should be gathered and asked about their opinions about the recipes. Find out

- If it is possible that they will make the preparations in their homes under every-day situations.
- The reasons why the mothers chose or not those foods/combinations.
- Each mother's opinion about the taste, smell, appearance, and consistency of each food preparation.
- The mothers' suggestions for the improvement/modification of the recipes prepared.

21. Additional recipe (optional) There are some recipes that the mothers know and would have liked to prepare, but for lack of time were not able to do so. For this reason, it is important to ask each one personally, at the end of the meeting, if there is any other recipe (with the characteristics mentioned in the meeting) that they would like to have created with the same ingredients.



REGISTRATION FORM FOR THE RECIPE CREATION EXERCISE (FORM II-1.1)

1. Meeting date: __ __ / __ __ / __ __ __ __
day month year
.....
2. Meeting place:
.....
3. Nutritionist's or assistant's name and code:
..... 3. __ __
4. Age group:
01= 6-11.9 months
02= 12-23.9 months 4. __ __
.....
5. Recipe code: 5. __ __
..... (Supervisor should complete)
6. Names of mothers:
.....
.....
.....
.....
7. Starting time: _____:_____ _____
8. Weight of the container where recipe will be prepared (grams):
.....
9. Name of the preparation:
.....

20. Complementary information (discussion after the tasting):

- Mothers' opinions about the recipes. Is it possible to prepare it at home?
- Reasons why mothers chose specific foods/combinations
- Opinions about taste, smell, appearance, consistency
- Suggestions to improve/modify the preparation

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21. Additional recipes recommended by the mothers (optional):

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MATRIX FOR THE NUTRITIONAL ANALYSIS OF THE RECIPES (FORM II-1.2)**Option 1**

Food Preparation	Ingredients	Consistency (0=liquid 1=semi-liq. 2=thick 3= solid)	Animal source foods present (number=0, 1, 2)	Vegetables present (number=0, 1, 2)	Additional energy source (0=No, 1=Yes)	Cost per 100 g

Consistency: If, when a spoon is inserted into and removed from it, the preparation runs quickly off the utensil, it is liquid. If the preparation slowly drops off the spoon, it is semi-liquid. If when the spoon is removed the preparation does not run, it is thick. If the preparation can be cut with a knife, it is solid.

Option 2

Food Preparation	Ingredients	Energy density (kcal/g)	Specific nutrient density ¹ (mg/100 kcal)	Specific nutrient density (mg/100 kcal)	Cost per 100 g

Energy density: is the number of kilocalories per gram of preparation (see Glossary). It is calculated using the following formula:

$$\frac{\text{Total kilocalories of preparation}}{\text{Total weight of preparation (grams)}}$$

Nutrient density: The amount of a nutrient per 100 kilocalories of preparation (see Glossary). It is calculated using the following formula:

$$\frac{100 \text{ kcal} \times \text{total amount of nutrient in the preparation}}{\text{Total kilocalories in final preparation}}$$

¹ Refers to specific micronutrients identified as deficient, such as iron and zinc. If information on more micronutrients is desirable, more columns might be added.

MATRIX FOR THE ACCEPTABILITY AND FEASIBILITY ANALYSIS OF THE RECIPES (FORM II-1.3)

Food Preparation	Number of ingredients	Ingredients	Amount per ingredient	Cooking time (in minutes)	Mother's acceptability	Child's acceptability (including amount consumed)	Positive/negative comments/motivations	Suggested name

Annex II-2

Test of Recommendations¹

OBJECTIVES

- ◆ Determine the acceptability of recommendations.
- ◆ Identify which aspects of recommendations are adopted and which are not.
- ◆ Identify barriers to the adoption of recommendations, such as, for example, lack of skills or resources.
- ◆ Identify facilitating factors such as, for example, knowledge, family support and perceived benefits.
- ◆ Document changes and improvements that mothers make to the original recommendations.
- ◆ Obtain information needed to modify the recommendations to make their adoption more feasible.
- ◆ Identify methods that can be used to reinforce the adoption of the recommendations.
- ◆ Help identify strategies for the intervention.

STEPS

1. Previous work

Motivation scheme

During the *Test of Recommendations*, the team should work with the recommendations selected in Module I and the recipes selected in the *Recipe Creation Exercise* (Module II). For each recommendation or recipe to be tested, it will be necessary to develop a matrix of motivations with relevant information from the assessment (see model matrix in Form II-2.3). The form should be completed with the factors that motivate mothers to follow a recommendation or prepare a specific recipe, using arguments and terminology expressed by mothers during Module I.

¹ This methodology also known as Trial of Improved Practices (TIPs) is developed in detail in Dickin K, Griffiths M, Piwoz E (1997) *Designing by Dialogue: A Program Planners' Guide to Consultative Research for Improving Young Child Feeding*. Washington, DC: Academy for Educational Development/The Manoff Group.

An example of how the matrix of motivations was used in Peru is presented in Table II-4. This recommendation was one of the top five recommendations selected after analyzing the data collected in Module I, as it had the highest score for both feasibility and potential impact on the nutritional problems of the target population.

Table II-4. Example of a completed matrix of motivations¹

RECOMMENDATION	MOTIVATIONS
Feed your child mashed foods or thick preparations	<ul style="list-style-type: none"> • Thicker foods fill the child more and are more nutritious • One dish of mashed foods equals three dishes of soup • The child will be less hungry and will cry less, allowing the mother to carry on with her chores for longer periods of time • Since it is thick, it is good for them, it helps them strengthen their stomachs • It will help your baby to grow strong and healthy • Solid foods are more nutritious than broths • It is easy and inexpensive to make thicker mashed foods with foods cooked for the family, you do not have to cook special foods for the baby

PRESENTATION OF THE RECOMMENDATION

It is also important to develop specific messages for the presentation of the recommendation to the mothers during the first visit. The following example was used in Peru.

The recommendation that I would like to have you test now that your baby is 8 months old is to begin feeding him thick mashed foods.

Did you know that

- *broths only fill the baby’s stomach for a short time and that mashed foods instead, fill and satisfy him so he will not cry from being hungry, this way you can finish your chores with a little more time on your hands?*
- *it is easy and inexpensive to prepare mashed foods from the foods you prepare for the rest of the family; you do not have to prepare the food for your baby separately?*

For example, what are you preparing for... today? From this, you can take... (for example, potato, noodles, rice, carrots, spinach, lentils, beans, chicken liver or a small piece of ground meat) .. and mash it. This way you can prepare a thick mashed food to feed your baby.

Eating this way, the baby will grow stronger and be more alert.

I would like to suggest that this week you try to feed your child thick mashed foods during each meal. And remember, the mashed food can be prepared from the foods you have prepared for the rest of the family (for example, potatoes, noodles or rice).

Would you like to try it this week?

¹ To be used during the initial and follow-up visits of the *Test of Recommendations*.

REMINDER FOR EACH RECOMMENDATION

It is useful to develop a reminder or drawing for each recommendation or recipe, and leave it with the mother during the initial visit (see in Example of a reminder of a recommendation in Annex II-2).

SOLUTIONS GUIDE

During the follow-up visit it will also be useful to have suggestions to help the mother practice the recommendation in spite of problems that she may have encountered. For this, a matrix of solutions should be developed (Form II-2.4). An example of the matrix of solutions used in Mexico is provided below in Table II-5.

Table II-5. Example of a completed matrix of solutions¹

Recommendation: Increase meal frequency	
BARRIERS	SOLUTIONS
“There is not enough time for so many feedings”.	<ul style="list-style-type: none"> • Ask the mother to try to feed her child only one more time than usual. • Feed the child an extra fruit. • If the child is older than 1 year, he/she can eat a fruit or bean taco all by him/herself. • Feed the child lunch or dinner when everyone else is eating. • When his siblings are eating bread or fruit, ask them to share it with the baby.
“It is expensive”.	<ul style="list-style-type: none"> • Ask the mother to feed the baby the same foods she feeds the rest of the family.
“He cannot tolerate a large dinner; his stomach can get too full. He gets diarrhea if he has too much dinner”. “When they have too much dinner they wake up complaining of stomach aches or with diarrhea”. “We do not have dinner”.	<ul style="list-style-type: none"> • Give only a snack of bread and milk or yogurt. • Do not feed heavy foods for dinner.
“She falls asleep before dinner time”. “When she eats at night she cannot sleep, her stomach hurts”.	<ul style="list-style-type: none"> • Feed the child dinner an hour before bed time.

2. Selection of participants

Participants with similar characteristics as those to whom the recommendations will be directed (in this case, mothers of children less than two years of age) should be selected. They do not have to be chosen randomly and could include mothers who participated in Module I. Each recommendation should be tested in at least six households. Always select extra households in the event that a mother cannot be found for the follow-up and final visits. For example, in Peru, each of the five recommendations selected was tested in six homes. There were a total of 30 participating mothers in the initial visit, but only 24 were found and interviewed in the final visit.

¹ To be used in the follow-up visits during the *Test of Recommendations*.

3. Materials

For the initial visit:

- ◆ Copies of the registration form for the initial visit (Form II-2.1)
- ◆ Copies of the matrix of motivations (Form II-2.3)
- ◆ Pencils/pens
- ◆ Identification card
- ◆ Battery-operated cassette recorder, if planning to tape the interview
- ◆ Clipboard
- ◆ Support material to help the mother remember the recommendation (such as drawings and recipes)

If a demonstration will be done, it might be necessary to also include:

- ◆ Ingredients or food models and pictures
- ◆ Food scale to weigh foods with a capacity up to 5 kg
- ◆ Measuring cup
- ◆ Samples of spoons and other utensils/containers used for household measures (for example, tin cans, bags and bottles)

For the follow-up visit:

- ◆ Copies of the registration form for the follow-up and final visits (Form II-2.2)
- ◆ Copies of the matrix of motivations (Form II-2.3)
- ◆ Copies of the matrix of solutions (Form II-2.4)
- ◆ Pencils/pens
- ◆ Identification card
- ◆ Battery-operated cassette recorder, if planning to tape the interview
- ◆ Clipboard

For the final visit:

- ◆ Copies of the form for the follow-up and final visits (Form II-2.2)
- ◆ Pencils/pens

- ◆ Identification card
- ◆ Battery-operated cassette recorder, if planning to tape the interview
- ◆ Clipboard

Note: If the visits will be taped, it is recommended to use one cassette per mother to record all three interviews on the same cassette.

4. Personnel and time

Inasmuch as the *Test of Recommendations* is a participatory activity, it is necessary to establish an open and cordial relationship with the participating mothers. Thus, it is important that the field workers are familiar with the community and have excellent communication and interpersonal skills. These skills are also helpful in exploring the beliefs and opinions regarding the practices and recipes being recommended.

To the extent that differences in adoption or rejection of a recommendation may be a function of the quality of interpersonal communication used by different field workers rather than a function of the recommendation itself, it is critical that the field workers carrying out the tests should be well trained and standardized in this methodology. Preferably, the same field personnel that participated in Module I should be involved as they are already familiar with the project objectives. If this is the case, four days of training, including field practices, should be sufficient

During the home visits, a field worker with good communication skills would:

- ◆ Not make the mother feel evaluated, instead make her feel her comments about and experiences with the recommendation are important.
- ◆ When asking questions, do not suggest the answer to the mother, avoid the use of leading questions.
- ◆ Avoid being satisfied with superficial answers and avoid changing the subject too quickly.
- ◆ Not interrupt the mother when she is speaking.
- ◆ Be patient and allow time for her to think.
- ◆ Not make promises or create false expectations.
- ◆ If possible, during the interview, observe the relationship between the mother and other family members, the mother's reactions with her children, the general family life conditions, and the family interaction.
- ◆ Observe the position, gestures, and attitude of the person being interviewed.

The testing of each recommendation should last approximately eight days. If resources and time are available, the testing period can be extended to 15 days. This would allow a more realistic estimate of the actual adoption of the recommendations by the mothers. For example, in Mexico it was observed that during the first week numerous mothers followed the recommendation; however, the frequency of practicing the recommendations decreased during the second week.

The total time to conduct the *Test of Recommendations* will depend on the number of behaviors that will be tested and on the number of field workers. One field worker can carry out two to three visits daily. If six field workers are available, two weeks should be enough to carry out tests in approximately 24 homes. The total time including training the field workers, execution, and analysis of the tests is approximately three weeks.

5. Description and procedures

The *Test of Recommendations* includes three home visits: an initial visit, follow-up visit, and final visit to each of the mothers selected to participate.

Initial visit

INTRODUCTION

During the initial visit, the field worker should explain to the mother that the tests are activities that require her participation because she, as a mother, is most knowledgeable about child feeding and can offer the best understanding of the acceptability of a recommendation. In order to ensure her collaboration, the field worker should maintain a cordial relationship with the mother and explain, in clear and simple words, the purpose of the visit. If possible, it is very helpful to have other family members, neighbors and/or friends present in the meeting as they could later remember and/or reinforce the recommendation.

The following is an example of the way in which the field workers introduced themselves to the participating mothers in a *Test of Recommendations* in Peru.

Good morning. My name is Graciela Respicio and I work for the Nutrition Research Institute. We are working on a project to improve child feeding of children less than 2 years of age and we have developed a number of recommendations for mothers of children in this age group. Before giving the recommendations to all mothers, we would like to have some mothers like yourself, help us test the recommendations at home and give us your opinion about them to see if they can truly be followed.

We would like to ask you to help us to test a recommendation for one week. I will be back in seven days so you can tell me your experience with the recommendation and if you were able to follow it or not. I would like to know if this is alright with you and if you would like to help us by participating.

I would like you to help us test this recommendation and if something of what I tell you is not clear, please ask me to clarify it. Also, if you have difficulties following the recommendations, I would like you to give me as much information as possible so we can improve our recommendations. In addition, if you have any ideas on how to improve the recommendation, please tell me. We are very interested in your comments and opinions. Everything that you tell me about when you were able to follow the recommendation and when you were not able to do so is very valuable and will be very helpful.

COLLECTION OF BASELINE INFORMATION

In addition to presenting the specific recommendation to the mother, baseline information needs to be collected during the initial visit to know what and how the mothers are feeding their children, and avoid giving them a recommendation that they are already practicing. The baseline information will be used also to determine if the desired behavior change was achieved. A form to collect this information (Form II-2.1) and the guidelines for its application are provided in this Annex.

Depending on the recommendations suggested to the mothers, it may be necessary to add questions to Form II-2.1. For example, in Mexico, specific questions related to the recipes were asked, such as, for example: "Do you feed your child thin or thick soups?" To confirm these answers, a simplified food frequency questionnaire emphasizing the foods of interest was developed based on the *24-hour Dietary Recall*. This questionnaire was applied only to those mothers selected to test a new recipe or food preparation.

INITIAL VISIT AND PRESENTATION OF THE RECOMMENDATION

When a recommendation is being presented to the mother, the motivations (reasons and benefits) to adopt the recommendation should also be presented and discussed with her. A form for recording these motivations (Form II-2.3) is provided in this Annex.

Other messages may also be given to further motivate mothers. For example, in Peru, the message "feed your child with patience, love, and good humor" was presented to mothers along with the specific recommendation to be tested as a way of promoting interactive feeding at the same time that specific dietary recommendations were being tested for acceptability.

If the recommendation is a new recipe or makes reference to an appropriate consistency (for example, how thick the preparation for the child should be), a specific amount of food to give to the child in each meal, or the amount of an ingredient that should be included in a preparation (for example, half a chicken liver), it is very important to demonstrate the preparation of the food as part of the presentation of the recommendation. However, if the resources necessary for the preparation are not available, the use of pictures to explain consistency or amounts may be useful. It is important that the mother have a clear idea of what she is being asked to test.

The presentation of the recommendation should be done individually with each mother in her home. This way, the baseline data collection, the selection of the recommendation that will be tested, and the motivation to encourage the mother to adopt it will be individualized and most likely will lead to better results than if done in group. It is important to note that the *Test of Recommendations* is not a test of communication messages (which is better carried out in group). Instead, it is a trial to select recommendations that will be promoted during an intervention.

At the end of the visit, the field worker may leave a reminder or drawing of the recommendation with the mother (see in Example of a reminder of a recommendation, in this Annex). This will remind the mother to practice the recommendation and the different steps to follow if the recommendation includes a new or modified recipe.

Follow-up and final visits

In addition to the initial visit, two other visits are recommended: a follow-up visit during the middle of the test period and a final visit at the end of the test period.

FOLLOW-UP VISIT

This should be carried out by the field workers to determine the degree to which the mothers are following the recommendation or suggested recipe. It is important to note that it might be difficult for a mother to remember details of her experience with the test one week after the initial visit. Therefore, a visit during the middle of the testing period is suggested so that the team can assess whether the mother remembers the recommendation, if she was able to put it to practice or not, and what facilitated or impeded her to carry out the recommendation. Form II-2.2 should be filled during this visit.

It is important to evaluate the probability that the mother will continue the new practice, and if low, motivate her to continue the test. However, if the mother refuses to continue the test, the field worker should thank her for trying and take notes of her reasons for not complying with the recommendations.

If the mother is not able to remember the recommendation during the follow-up visit or has some reservations that have kept her from adopting it, the field worker will need to re-explain it to her so that she can follow the recommendation during the remainder of the testing period. The follow-up visit is also useful to demonstrate to the mother how to practice the recommendation, help her with the skills needed for its practice, and to identify other ways to support her. For this, the field worker should rely on the matrix of motivations (Form II-2.3) and matrix of solutions (Form II-2.4).

If a *24-hour Dietary Recall* or food frequency questionnaire is being used during the follow-up visit, it will be possible to determine quantitatively if the mother was able to follow the recommendation.

FINAL VISIT

At the end of the testing period, a final visit to all participating mothers should be carried out in order to obtain their impressions, experiences, and comments regarding the recommendation or recipe tested. For this, Form II-2.2 should be used. The *24-hour Dietary Recall*, food frequency questionnaire, or any other questionnaire (if developed) should be re-applied to assess if the mother followed the recommendation.

The purpose of the final visit is to determine what the mothers understood and remembered about the recommendation, if they put it to practice or not, how many times they practiced it, how it was carried out each time, what modifications were made, what problems were encountered, what motivated or enabled them to comply with it. In addition, they should be asked if they have suggestions about how to more effectively communicate this recommendation to other mothers in the community.

6. Analysis

Descriptive analysis

The first analysis of the *Test of Recommendations* is descriptive. To facilitate this analysis, the answers to the questions of Form II-2.2 (registration form for the follow-up and final visits) should be organized in a matrix, such as the one provided in this Annex (matrix for the analysis of the *Test of Recommendations*, Form II-2.5). The following is an example of such a matrix from Peru.

Table II.6. Example of a completed matrix for the analysis of the *Test of Recommendations*

Recommendation	Remembered	Execution	Modification	Facilitators	Obstacles	Intention to continue
Feed thick puree before soup	Yes, remembered the recommendation	Executed	None	It is easy It is more nutritious Soup is not nutritious	When money is an issue, it is difficult to add everything to the puree	Has intention to continue

Matrices should be developed and analyzed for each recommendation tested, consolidating the information from all of the households that participated in the test. These summary matrices will be used to rank recommendations and to select the final recommendations.

In general, it has been observed that the facilitating factors are related to the ease of putting the recommendation to practice, the perceived (positive consequences) or expected benefits (motivations), the skills, and the support of family members, among others. The obstacles deal with the lack of actual or perceived time, the elevated cost, particular child's characteristics (illness, lack of appetite, etc.), the child's acceptability (he/she liked it or not), or situations perceived as out of the mother's control (other people decide what to feed the child, etc.).

Summary of the results about compliance and feasibility

The selection of the recommendations that will be included in the intervention plan (Module III) should be done according to the mothers' *compliance* with the recommended practice, the *feasibility* of continuing the recommended practice, and the positive *impact* the recommended practice will likely have on the nutrition of young children.

To evaluate the recommendations, the first step is the development of a matrix (Form II-2.6) to be completed with quantitative and qualitative information about mothers' *compliance* with and the *feasibility* of each recipe or recommendation being tested.

Compliance is defined as the combination of:

- a. Percent of mothers who put each recommendation to practice
- b. Number of times per week they practiced them
- c. If it is a recipe, number of times per day they fed it to the child.
- d. Child's acceptability of the new recipe.

Feasibility refers to the following criteria:

- a. Positive and immediate consequences perceived by the mother
- b. Compatibility with existing beliefs and knowledge in the population
- c. Cost in economic resources for the mother
- d. Cost in time and effort to the mother
- e. Complexity of the recommended practice.

Table II-7 shows a matrix that was very useful for the selection of the final recommendations in Mexico.



Table II-7. Example of a completed matrix for the compliance and feasibility analysis of the recommendations tested

CRITERIA		Noodle soup with liver	Vegetable soup with liver	Give foods with smaller servings of broth	Increase the number of meals per day
COMPLIANCE	% who put recommendation into practice	100%	64%	82%	82%
	# of times/week they put it into practice	1 or 2 times a week	1 time every 2 weeks	Foods were not always given with broth	Few put it to practice every day
	# of times/ day they fed it to the child	2 times a day (lunch and dinner)	1 time a day	Does not apply	Does not apply
	Child's acceptability	Very good acceptability. Giving him liver too often may bore him.	Not all children liked it because of the vegetables. Giving liver too often may bore him.	Good acceptability	Good acceptability
FEASIBILITY	Perceived positive consequences	Nutritious and good for her growth.	Nutritious. Good if the child is sick.	Her health and digestion improved. Was no longer hungry.	She was happier and her health and weight improved.
	Compatibility with beliefs and knowledge	Noodle soup is good for children. Chicken liver is good for small children.	Vegetables have vitamins and are good for the child's digestion. Chicken liver is good for small children.	There is a set belief that the <i>substance</i> is in the broth and not in the <i>solid food</i> .	Too much food may be harmful to the child. It is the child who decides how much and when to eat.
	Cost in economic resources	Inexpensive and accessible.	Inexpensive.	Does not increase expense.	Increases expenses.
	Cost in time and effort	Little time.	Effort to find vegetables.	Takes time.	Too much time and effort.
	Complexity	Does not seem complex.	Does not seem complex.	It is easier to serve broths and liquids than solids.	Depends on the child's appetite and the mother's activities.

Data analysis

Once the results are organized in matrices like the one described in the table above, the data should be analyzed by applying the feasibility and impact criteria (see Form I-10.4 of Annex I) to the recommendations that were tested and to those that were not tested but will be included in an intervention. The results of the *Test of Recommendations* will provide a clearer idea of the potential feasibility of each recommendation. Based on this analysis, three to five recommendations deemed to have potential for adoption should be selected. These recommendations will form the basis of an intervention to be designed during the application of Module III.

7. Example of the application of the Test of Recommendations

In a project in Guatemala (Rivera et al., 1998), the following recommendations were tested after having been ranked using the data analysis described in Module I:

- ◆ Increase feeding frequency giving the child three main meals and two snacks, one at mid-morning and one at mid-afternoon. In addition, “good” snacks were suggested, such as sweet bread, banana or other fruit, and thick atole (cereal-based drink).
- ◆ Combine certain foods in each meal, giving the child at least two basic foods such as black beans, rice, noodles and egg. Always serve these foods with a corn tortilla.
- ◆ Increase the amount of food, giving the child one more spoonful than usual of beans, rice, or noodles. Give children less than one year of age half a corn tortilla and children older than one year of age at least one corn tortilla at each meal.
- ◆ Help the child eat by spoon-feeding the child less than one and helping and motivating older children to finish all the food served.

Each recommendation was evaluated using the *Test of Recommendations* with six mothers for a period of five days. Most of the mothers put the recommendation to practice during the five days. However, when comparing results, the recommendation most feasible to adopt was “increase the frequency consumption each day”, particularly for children older than eight months of age. The most difficult recommendation to adopt was “give food combinations” since it was difficult to remember and it seemed complex to the mothers. Also, the recommendation about “amount to feed” was difficult to adopt, especially because children were not able to eat the amount of tortilla suggested. Finally, the mothers were able to help their children eat; and those who tried to increase the frequency of consumption each day spontaneously stated that to achieve it they had to help their children eat.

The data were analyzed again using the feasibility of adoption and potential impact criteria. The following recommendations were tested:

- a) Increase the daily frequency of meal times

- b) Prepare certain food combinations at each meal
- c) Increase the amount of food served at each meal
- d) Help the child to eat
- e) Increase the daily frequency of meals during diarrheal illness and recovery
- f) Increase the amount of food served during diarrheal illness and recovery

It should be noted that the last two recommendations were not evaluated in the *Test of Recommendations* because of the implicit difficulty in finding children with diarrhea or in the recovery period after having had diarrhea.

In the data analysis, “increasing the daily frequency of meal times”, letter (a) above, received the highest score for feasibility of adoption followed by the maternal practice of “helping the child to eat” (d). Meanwhile, “increasing the amount of food served” (c), received the highest score for potential impact, but the lowest score for feasibility of adoption. Moreover, it was considered more feasible to “increase the daily frequency of foods during diarrhea and the recovery period” (e) than to “increase the amount of food” (f).

Therefore, the final selected recommendations were: “increase the daily frequency of meal times (three formal meals and two snacks) (a), and “help the child to eat” (d). The social communication intervention was designed around these two recommendations.

PRODUCT

Once the *Test of Recommendations* is finished, a final list of recommendations to improve infant and young child feeding which have the potential to be adopted by the community will be available and summarized on the Form II-4.

REFERENCE

Rivera Dommarco J, Santizo MC, Hurtado E (1998) Diseño y Evaluación de un Programa Educativo para Mejorar Las Prácticas de Alimentación en Niños de 6 a 24 Meses de Edad en Comunidades Rurales de Guatemala. Washington, DC: Pan American Health Organization.

GUIDELINES FOR COMPLETING THE REGISTRATION FORM FOR THE INITIAL VISIT OF THE TEST OF RECOMMENDATIONS (FORM II-2.1)

I. Introduction

Before starting the questions, the field worker should introduce herself to the mother and ask her consent to apply the questionnaire. In the same manner, the objectives of the study and the interest in the mother's participation should be explained in simple terms.

II. Completing the form

-
- | | |
|-----------------------------|--|
| 1. Date of interview | Write the date in which the initial visit is carried out, starting with the day, month and year. The months should be written using a progressive code that goes from 01 for January to 12 for December. For the first nine days of the month, a zero must be written before the number. For example day 2 = 02. |
|-----------------------------|--|
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- | | |
|--|---|
| 2. Field worker's name and code | Write your name and the first letter of your paternal last name, and your code after the diagonal (which should be assigned by the Supervisor). |
|--|---|
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|------------------------|--|
| 3. Child's code | Write the corresponding code, unique for each child . This code should be assigned by the Supervisor and added to a list of participating children. |
|------------------------|--|
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|------------------------|--|
| 4. Child's name | Clearly write the child's name in the following order: paternal last name, maternal last name, and first name. |
|------------------------|--|
-
- | | |
|-------------------------|---|
| 5. Mother's name | Clearly write the mother's name in the following order: paternal last name, maternal last name, and first name. |
|-------------------------|---|
-
- | | |
|---|--|
| 6. Name of the person who takes care of the child (if different from the mother) | It is possible that the person who usually takes care of the child is not the mother. In this case, clearly write the name of the person in the following order: paternal last name, maternal last name, and first name. |
|---|--|
-
- | | |
|-------------------------------------|--|
| 7. Relationship to the child | Write the relationship between the child and the person who usually takes care of him/her. |
|-------------------------------------|--|
-

-
- 8. Location of home** Write the name of the street where the home is located. Record also particular signals and/or reference points that will facilitate finding the home later.
-
- 9. Recommendation that will be tested** Write the recommendation that the mother will test.
-
- 10. Evaluation of whether or not recommendation is currently followed** According to the questions or forms developed by the team, determine if the mother already practices the recommendation that she will test. If she already practices the recommendation, ask her about another recommendation that will also be tested and record the change in number 9. If the mother is not already practicing it, proceed to question 11.
-
- 11. What do you think of the recommendation?** The purpose of this question is to determine the mother's initial reaction to the recommendation.
Ask the mother: What do you think of the recommendation? Record her reactions.
-
- 12. Would you like to change it in some way? How?** The purpose of this question is to determine if the mother would like to change the recommendation in some way to improve it or make it easier to put to practice. In addition, the question asks how the mother would like to change the recommendation.
-
- 13. Have you heard something similar before? Where?** The purpose of this question is to determine if the mother has heard the recommendation previously and where she had heard it.
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- 14. Have you done something similar before? What did you do?** The purpose of this question is to determine if the mother has practiced a similar recommendation and to record which practice it was and how it was similar to the recommendation.
-
- 15. Do you think you could put this recommendation to practice? Why? Why not?** The purpose of this question is to determine if the mother thinks she can comply with the recommendation and why she thinks that way.
-
- 16. Do you have any doubts?** The purpose of this question is to determine whether the mother has any doubts about the recommendation, how to put it to practice and the frequency with which she should practice it. In addition, this question will give the field worker the opportunity to increase the mother's confidence in practicing the recommendation, using the matrix of motivations (Form II-2.3).
-

- 17. Observations** Write any information needed to clarify or facilitate the interpretation of any answer given by the mother.
Record any problems encountered while conducting the interview, if applicable.
If more space is needed to record the answer to any of the previous questions, use this section.
-

- 18. Days and times available for possible visits** The purpose of this question is to determine which days and times are convenient for the mother for the follow-up and final visits.
-

III. At the end of the interview

Thank the mother for answering the questions and explain that you will be back to hear her opinions regarding the recommendation. Leave a reminder or drawing of the recommendation, if available.



- 11. What do you think of the recommendation?
.....
.....
- 12. Would you like to change it in some way? How?
.....
.....
- 13. Have you heard something similar before? Where?
.....
.....
- 14. Have you done something similar before? What did you do?
.....
.....
- 15. Do you think you could put this recommendation into practice? Why? Why not?
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.....
- 16. Do you have any doubts about this recommendation?
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.....
- 17. Observations:
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- 18. Days and times available for possible visits:
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GUIDELINES FOR COMPLETING THE REGISTRATION FORM FOR THE FOLLOW-UP AND FINAL VISITS OF THE *TEST OF RECOMMENDATIONS* (FORM II-2.2)

I. Introduction

As a general rule, avoid reading questions word by word. Try, instead, to establish a natural conversation with the mother. This conversation should include the mother's experience with the new recommendations and her comments, the child's response, the mothers' willingness to continue the practice, and the changes made to the recommendation.

The following topics should be covered with the mother:

- ◆ To what extent were you able to follow the recommendation? Why?
- ◆ How did you feel about this experience (was it difficult or easy to practice the new recommendation)?
- ◆ Did you modify the recommendation? Why?
- ◆ What did other people think of the recommendation? Why?
- ◆ Do you plan to continue putting the recommendation in practice? Why? Why not?

After introducing yourself to the mother, explain to her that you are interested in knowing if the practice worked or not, and proceed with the interview.

II. Asking questions

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|--|---|
| 1. Date of interview | Write the date in which the follow up or final visit is carried out, starting with the day, month and year. The months should be written using a progressive code that goes from 01 for January to 12 for December. For the first nine days of the month, a zero must be written before the number. For example day 2 = 02. |
| 2. Field worker's name and code | Write your name and the first letter of your paternal last name, and then in the diagonal write your code (this should have been previously assigned by the Supervisor). |
| 3. Child's code | Write the corresponding code, unique for each child . This code should be assigned by the Supervisor, it is necessary to verify that there are no repeated codes and that the number that will be written is added to a general list of children who enter into the study. |

- 4. Child's name** Clearly write the child's name in the following order: paternal last name, maternal last name, and first name.
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- 5. Mother's name** Clearly write the mother's name in the following order: paternal last name, maternal last name, and first name.
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- 6. Relationship to the child** Write the relationship between the child and the person listed in question 5, if not the mother.
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- 7. Recommendation tested** Write the recommendation that the mother agreed to test at the initial visit.
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- 8. Do you remember the recommendation? What did it say?** The purpose of this question is to evaluate if the mother remembers the recommendation given. It is NOT to evaluate if she put it practice or not, only if she remembers it.
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- 9. Evaluate if the mother has been practicing the recommendation, the frequency with which she has practiced it, and why or why not she has practiced it** The purpose of this question is to evaluate if the mother followed or not the recommendation, how many days or times she practiced it and why. Apply those questions or forms developed to evaluate compliance with the recommendation.
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- 10. How did you feel practicing the recommendation?** The purpose of this question is to determine the mother's reactions regarding her experience practicing the recommendation.
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- 11. ¿What did you like about the recommendation?** The purpose of this question is to determine what the mother liked about the recommendation or about practicing it.
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- 12. What did you dislike about the recommendation?** The purpose of this question is to determine what the mother DISLIKED about the recommendation or about practicing it.
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- 13. Do you think your child liked it or not? Why?** The purpose of this question is to evaluate the child's reaction to the recommendation and document his/her reaction.
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- 14. Did other people say something to you about the recommendation? Who? What did they say?** The purpose of this question is to determine if family members, neighbors or friends, or any other person, said something to the mother about the recommendation, who they were, and what they said.
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- 15. Did you ever change the recommendation? What did you change? Why did you change it?** The purpose of this question is to determine if the mother made any changes to the recommendation, which changes she made, and why she made those changes.
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- 16. Are you willing to continue practicing this recommendation? Why? Why not?** The purpose of this question is to determine if the mother intends to continue practicing the recommendation and why or why not.
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- 17. Observations** Write any information important for clarifying or facilitating the interpretation of any answer.
Record anything that might have obstructed or impeded the interview, if applicable.
If more space is needed to record the answer to any of the previous questions, use this section.
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- 18. Days and times available for the final visit** The purpose of this question is to determine which days and at which times it is more convenient for the mother to have the field worker return for the final visit.
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III. At the end of the interview

Thank the mother for her collaboration and come to an agreement with her about the best day and time for the final visit.

Form II-2.2

Child's code _____

10. How did you feel practicing the recommendation?

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11. What did you like about the recommendation?

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12. What did you dislike about the recommendation?

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13. Do you think your child liked it or not? Why?

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14. Did other people say something to you about the recommendation? Who? What did they say?

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15. Did you ever change the recommendation? What did you change? Why did you change it?

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Child's code _____

16. Are you willing to continue practicing this recommendation? Why? Why not?

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17. Observations:

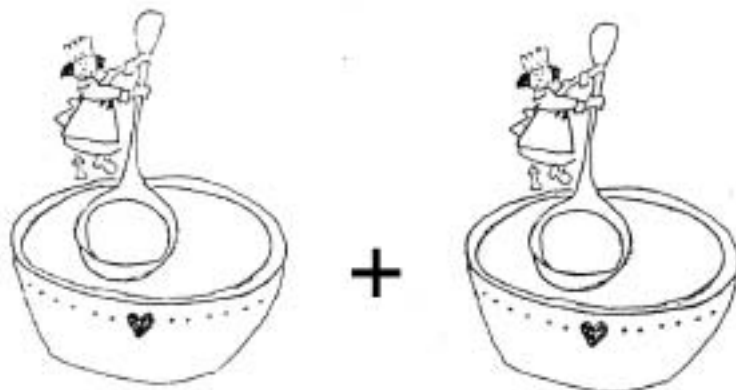
.....
.....

18. Days and times available for the final visit:

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Example of a reminder of a recommendation

Give to: _____



(Drawing by Marian Villanueva, Instituto Nacional de Salud Pública, Mexico)

MATRIX OF MOTIVATIONS (FORM II-2.3)

RECOMMENDATION	MOTIVATIONS

MATRIX OF SOLUTIONS (FORM II-2.4)

Recommendation:	

BARRIERS	SOLUTIONS

MATRIX FOR THE ANALYSIS OF THE TEST OF RECOMMENDATIONS (FORM II-2.5)

Recommendation	Remembered	Execution	Modification	Facilitators	Obstacles	Intention to continue

MATRIX FOR THE COMPLIANCE AND FEASIBILITY ANALYSIS OF THE RECOMMENDATIONS TESTED (FORM II-2.6)

CRITERIA	Recommendation 1	Recommendation 2	Recommendation 3	Recommendation 4	Recommendation 5	Recommendation 6	Recommendation 7
COMPLIANCE { % who put recommendation into practice # of times/week they put it into practice # of times/day they fed it to the child Child's acceptability }							
FEASIBILITY { Perceived positive consequences Compatibility with beliefs and knowledge Cost in economic resources Cost in time and effort Complexity }							

Annex II-3

Focus groups (optional)¹

OBJECTIVES

The objectives of the *Focus Groups* are to:

- ◆ Resolve doubts and/or inconsistencies regarding the information collected during the assessment (Module I) and *Test of Recommendations* (Module II)
- ◆ Confirm the feasibility of mothers following those recommendations that were modified after applying the *Recipe Creation Exercise or Test of Recommendations*

STEPS

1. Previous work

The following tasks must be completed in preparation for a *Focus Group*: identifying the participants, scheduling a time that is convenient to them, searching for a place to hold the sessions; and revisiting the persons invited to reconfirm their attendance. This process might take from two to four days per group.

In addition, a guide must be developed according to the purpose of the group with the topics to be covered and the main questions to be asked during the session.

2. Selection of participants

The selection of participants for the *Focus Groups* depends on its purpose, i.e., either to clarify contradicting results of the *Test of Recommendations* or to elucidate issues related to carrying out a specific recommendation. The selection of participants does not have to be random.

¹ More guidance on how to prepare, conduct, and analyze focus groups can be found in Dawson S, Manderson L (1993) *A Manual for the Use of Focus Group*, published by the International Nutrition Fund for Developing Countries. Also available online at www.inffoundation.org.

In general, for each *Focus Group* there should be between six and eight participants. To ensure this number, it may be necessary to invite approximately ten to fifteen persons. This will depend on the response of the study community to the project.

The invitation may be done verbally directly with the person who will participate or written in an invitation card, or a combination of both. The invitation card should include the name of the person invited, the place where the session will take place, and the time the group will meet.

The number of *Focus Groups* will depend on the information to be collected. It is recommended to have at least two *Focus Groups* carried out for each topic.

3. Material

- ◆ Copies of the Form for the *Focus Groups* (Form II-3.1)
- ◆ Notebook to take notes
- ◆ Pens/pencils
- ◆ Clipboard
- ◆ Identification card
- ◆ Battery-operated cassette player with batteries and two cassettes, if planning to tape the session
- ◆ Name labels and markers for the participants' names
- ◆ Snacks

4. Personnel, site and time

To effectively develop a focus group, a minimum of one moderator and two note-takers is needed. Their tasks are described below.

Moderator:

Moderating a Focus Group is not an easy task. A skilled moderator will have a good handle on group dynamics techniques and on the subjects to be discussed.

Note-taker:

The note-taker should be trained to listen and record the Focus Group discussion as exactly as possible. This person should be receptive to participants' attitudes and opinions during the session.

If the team does not have anyone with these characteristics, hiring outside experts may be necessary.

It is common for mothers to take their children to the session for lack of baby-sitter. Thus, it is recommended to plan to have someone in charge of the children at the *Focus Group* location while their mothers participate. If possible, participants should be asked to attend the session without their children.

Each *Focus Group* should be carried out in a neutral and private site, with minimal risk of interruptions. Ideally, the site should have good ventilation and illumination. The seats should be similar for everyone (participants and moderator) and arranged in a circle with nothing in the middle.

It is recommended that only one session be held per day. The discussion should last no longer than one and a half hours.

5. Description and procedures

The moderator should be in charge of asking the questions listed in the question guide, always inquiring about the reasons behind mothers' practices or opinions. The note-takers should record the most pertinent comments and, at the end of the session, use the tape recording (if available) and the moderator's notes to expand and complement their notes.

Welcome

It is important to greet and welcome the participants to help them feel comfortable and willing to participate with enthusiasm and trust. For this, it is recommended to:

- ◆ Greet the participants and thank them for attending the meeting
- ◆ Assure them that their presence is very important and thank them for the opinions and comments they will give during the meeting
- ◆ Explain to them, in general terms, the reasons for the meeting:

For example: *We have invited you because we would like to learn about infant and young child feeding in... (name of community). (If the participants are mothers) Who better than you, mothers, who are in charge of feeding your families, to talk about this...*

Introduction (ice-breaker activity)

The moderator and the note-takers should introduce themselves:

For example: *To get to know each other better, each one of us is going to introduce herself. My name is Rosario and I am from Concepción, a beautiful little town in the Mantaro valley, near Huancayo. I have two children: Ruben who is 9 and Ururi who is 6, and I hope to have two more.*

I am Hilaria, from a little town in ..., but not as beautiful as ... I have a baby, but my baby is 20 years old.

OK! Now it's your turn... Who would like to start?

Motivate the participants to introduce themselves one at a time until all have done so. These introductions may be used to record some information on the participants, as for example, number of children, age of the youngest, mother's age and education. The introductions may also be done as part of an ice-breaker activity or game.

Purpose and procedure

It is important to inform the participants about how the session will be carried out:

For example: We are here to learn about infant and young child feeding in this community ... It is you, the mothers, who will teach us. This is why it is very important that all of you participate. This will be a conversation. There is not set order, we cannot tell you to start here and end there. Anyone of you may start, anyone may follow, and we may contradict ourselves. It is important that all of you give us your opinions and listen to the opinions of the others present. All your opinions are good; there are not bad or incorrect opinions

If applicable, the use of a cassette-recorder should be explained:

For example: Since all that you will say is very important for us, we will record your opinions so nothing escapes us. Our friends (name the note-takers) will take notes, but if they cannot write everything down, we have the tape to listen to later.

General discussion

The moderator should have a copy of the question guide and know it well. It is recommended not to read each question. Moreover, the order of the questions does not have to follow that of the question guide; in some instances, it might be necessary to change the order to be able to follow the flow of the conversation. Examples of questions are shown in Table II-8 below.

Table II-8. Focus Group Questions to Assess Consumption, Availability, Cost and Beliefs of Specific Processed Foods

Objective	Question
Consumption	Are young children in this community given (specific food)? How old are they when they are first given (specific food)? At what age is (specific food) no longer given to children? How is (specific food) prepared? How is (specific food) served?
Availability	Is it easy or hard for families to find (specific food) in the community? What makes it easy/hard?
Cost	How much does (specific food) cost? Is that considered inexpensive, moderately priced, or expensive? If (specific food) cost less, do you think more parents would give it to their child? Why do you think that?
Beliefs	How would you describe the parents of children who do eat (specific food)? Is (specific food) a suitable food for children less than two years of age? Please explain.
Suggestions	If you wanted to convince parents in this community to feed (specific food) to their children, what would you say to them?

To increase the fluidity of the conversation, the moderator should use the same expressions as the participants.

For example: *Juana said that her son likes okra. At what time can children begin to eat okra? How do you feed it to children of that age? Will 6 month old children eat it?*

The moderator and note-takers should be attentive to mumbled words, gestures, body movements, head movements agreeing or disagreeing with something, and conversations between two participants, and they should further explore their contents. It is by paying attention to such details that the best information is obtained. The following are examples of exploring these cues:

I heard Rosa telling Vicenta that ... you can also make pudding with sweet potatoes? Can you tell us how, Rosa?

I thought I heard someone around here say that broccoli is good for children.

When Susana was explaining how to prepare green beans, Sonia moved her head saying no, no, no. How do you prepare them, Sonia?

Conclusion

When all the questions have been asked, the moderator should summarize what was said and ask if anyone wants to add something else to the discussion. This time may be used to clarify any doubts the participants might have about the recommendations.

Snacks

When finished, a snack may be served. This time may be used in many ways to:

- ◆ Quickly exchange impressions among the moderator and the note-takers to determine if anything was left unsolved or not clarified and, if yes, discuss these issues with the participants before they leave.
- ◆ Approach a participant and ask her to clarify something that does not require everyone's participation, as for example, information about her age or number of children.
- ◆ Ask any questions to the participant who spoke the least.
- ◆ Listen to what the participants talk among them regarding infant and young child feeding.

Departure

It is important to thank the participants for their time and, particularly, for their comments and opinions. When the participants begin to get up from their seats, the moderator should approach the door to personally say good-bye to each one.

It is important to remember that respect and cordiality, in the words and gestures of the moderator and note-takers, are crucial for the success of the *Focus Group*.

6. Analysis

The systematization and analysis of *Focus Groups* data is based on matrices, much like the analysis of the semi-structured interviews. How each matrix is organized depends on the topics covered in the *Focus Groups*. It is suggested to start by summarizing the information obtained (knowledge, reasons, and positive or negative attitudes) for each of the recommendations or questions included in the question guide. It is useful to record on the matrix the number of participants that gave each of the answers in order to be able to rank the answers in terms of its prevalence in the group.

PRODUCT

The product of the *Focus Groups* is:

- ◆ A better understanding of the acceptability of the recommendations that were modified during the *Recipe Creation Exercise* and/or *Test of Recommendations*

Form II-3.1

Focus Group Number _____

Meeting place _____

REGISTRATION FORM FOR THE FOCUS GROUP (FORM II-3.1)

1. Focus group number: __ __

2. Meeting place:

.....

3. Date of focus group: __ __ / __ __ / __ __ __ __
 day month year

4. Moderator's name and code:

..... / __ __

5. Note-taker's name and code:

..... / __ __

6. Participants' names and codes:

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MATRIX FOR THE FINAL LIST OF RECOMMENDATIONS THAT WILL BE PROMOTED IN AN INTERVENTION (FORM II-4)

FINAL RECOMMENDATIONS

