Chapter 6: Trials of Improved Practices (TIPs)

TIPs: A Method for Testing Program Recommendations

Developing strategies to change behavior requires knowledge of nutrition problems affecting children and information about improved practices that are acceptable and feasible for families. All practices should be tested, ideally in people's homes, before they are recommended. This is done through trials of improved practices (TIPs), the core method of this research.

The advantage of TIPs, particularly for refining feeding recommendations, is that mothers or primary caregivers are given a *choice* of recommendations to act on, questioned about their reasons for that choice, and then followed up to see what actually happened. Did they try the new practice, and if so, how did they feel about it? Did they modify it? Or if they didn't try it, why not? In this way the proposed recommendations are tested in a real environment, and information is gathered on their acceptability. This information helps program planners to set priorities among the many seemingly important feeding practices and messages. Through TIPs, researchers and/or nutrition counselors discover:

- The relative ease or difficulty of communicating various recommended practices;
- Modifications that make the recommendations more acceptable;
- Unanticipated resistance points that limit behavior change;
- Ways in which recommendations are undermined by practices such as dilution, replacement, or children's resistance to new foods; and
- The approximate proportion of families who are and are not able to modify feeding practices and improve nutrition without additional resources.

TIPs test the feasibility of asking people to carry out the advocated **behaviors.** (This is different from pretesting educational **materials** and **messages**, which occurs much later.)

Objectives

1. To test mothers' responses to recommendations for improving infant and child feeding and determine which are most feasible and acceptable.
2. To investigate the constraints on mothers' willingness to change feeding patterns and their motivations for trying and sustaining new practices.

TIPs involve the following steps, which are described in the Task Box.

1. Training field personnel
2. Recruiting participants
3. An initial visit to gather background information, conduct dietary assessment
4. Debriefing to analyze dietary information, prepare for counseling
5. Counseling visit to present options, get reactions, negotiate trial practices
6. Debriefing to discuss reactions to recommendations and options selected
7. Follow-up visits to learn about the reactions to the new practices
8. Analysis, summary, and application of results.

In some settings, the initial visit and the counseling visit can be combined.

TASK BOX FOR TRIALS OF IMPROVED PRACTICES (TIPs)	
Preparation Tasks	
Draft a counseling guide on behavior change recommendations.	■ list common feeding problems, by age ■ for each problem (and age) list several realistic recommendations for improving dietary intake ■ develop the counseling guide by completing Worksheet 6.1
Design the research protocol.	■ determine number and procedures for each household visit
Develop question guides and recording forms.	■ specify topics that require additional questioning ■ draft dietary assessment forms ■ draft recording forms ■ experienced nutritionist drafts dietary analysis forms
Revise the research plan.	■ Worksheet 4.3 ■ recruit participants
Draft a field plan.	■ schedule fieldwork ■ assign responsibilities
Train the field team and pretest the guides and forms.	■ objectives of TIPs ■ TIPs methods and forms ■ role plays and pretesting ■ initial analysis in the field
Implementation Tasks	
Recruit households.	■ identify households for TIPs ■ obtain consent
Conduct the *initial visits.*	■ conduct interviews, observations, and assessment in selected households ■ schedule counseling visit
The steps in the shaded boxes can be skipped if the field team has just completed the in-depth interviews and observations with families who will participate in TIPs.	

Analyze initial data and plan specific recommendations.	■ review results of initial visit ■ identify feeding problems and plan recommendations to suggest in each household ■ revise counseling guide as needed
Conduct the *counseling visits.*	■ discuss specific recommendations and negotiate with the mother to try a new practice ■ schedule follow-up visit
Summarize the response to counseling.	■ preliminary analysis: what recommendations are mothers willing/not willing to try and why? ■ document motivations and constraints
Conduct the *follow-up visits.*	■ repeat dietary assessment ■ find out how mothers followed the suggested practices, why/why not, how they modified the advice and why, and their positive and negative reactions. ■ review and summarize information
Analysis Tasks	
Tabulate results of the trials.	■ each recommendation: number agreed to, number tried, number will continue/were successful ■ note key constraints and motivations
Revise child feeding recommendations.	■ revise guide to include most appropriate/successful recommendations, amended according to mothers' suggestions ■ focus on most common problems
Write a report on the findings.	■ summary ■ recommendations for programming ■ remaining questions/recommendations for further research and the decision on need for checking research.

Preparing for the Counseling and Trials of Improved Practices (TIPs)

Draft an Assessment and Counseling Guide on Feeding Practices

At this stage, all the information collected to date is used to draft an Assessment and Counseling Guide on Feeding Practices. This guide is used by interviewers during TIPs. Development of this guide is a critical step because it translates information gathered during the research into a list of likely practice improvements. It is important to allow adequate time for development and discussion of all possible recommendations.

Begin by gathering the following information:

- the review of existing information, including the experiences of previous nutrition programs in promoting certain feeding practices or foods;

- completed Worksheets 3.1 and 3.2;
- the draft reports and worksheets from all the exploratory research conducted (in-depth interviews, observations, and/or recipe trials); and
- additional information about local food preparation methods, food availability, and nutrient values.

Sort the information by appropriate age groups. Use Worksheet 6.1 to list briefly the **ideal feeding practices** for the first age group. Refer to local norms for infant and young child feeding (such as those promoted by the ministry of health), *Facts for Life* (UNICEF, 1993), and other reference materials for additional information on ideal practices, if desired.

Use the data collected to list all of the **feeding problems** identified for that age group. If many problems are identified, choose the most important ones to focus on. Focus on practices that are:

- common in the population;
- likely to have a significant negative effect on nutrition; and
- could be improved using existing resources.

Some feeding problems require changes that are outside the scope of the program. Others result from practices that are deeply rooted in culture and unlikely to change. Consider all behaviors that appear amenable to improvement by changes in the use of available family resources.

For each problem selected, suggest **realistic recommendations** that help mothers take small, practical steps that move them toward the ideal behavior. These recommendations should be as specific as possible. Try to identify:

- positive feeding behaviors that are practiced in some households and could be recommended in others;
- acceptable modifications of current feeding practices (such as feeding one extra snack each day or modifying the consistency or contents of solid food recipes); and
- locally available foods that can be fed to children to improve their diets.

Leave space on the guide for additional recommendations identified during TIPs implementation.

All practical options that lead to the desired nutritional benefit are explored during TIPs. In many cases, there is more than one option for improving feeding practices. For example, to increase energy consumption, children can eat more frequently, consume larger portions, or eat foods that are enriched by adding ingredients or reducing water content. During planning, a list of possible recommendations to achieve each practice improvement is drafted. The list is shortened and refined during the testing process.

Repeat the process outlined above for each age group. Recommendations for special categories of children, such as children who are not breastfed, or who are experiencing illness and poor appetite are also developed.

After the list of recommendations is complete, review it with the team's nutrition experts to be sure that, if followed, the recommendations will have a positive impact on children's diets and the problems being addressed. Eliminate all recommendations that are unlikely to have the desired nutritional impact.

Number the remaining recommendations for each age group to help with record keeping, as shown in the Assessments and Counseling Guide for TIPs (Worksheet 6.1). A completed assessment and counseling guide for Nigeria is found in Attachment 6.1 at the end of this chapter.

WORKSHEET 6.1: Completed Assessment and Counseling Guide for TIPs

Age Group 1: 0 to less than 6 months (specify)

Ideal Feeding Practices: exclusive breastfeeding, frequently and on demand, day and night

Problem #1: Child is not exclusively breastfed

Recommendations:*	Potential Motivations:
1. Stop giving feeds of water. 2. Stop giving feeds of milk, porridge or other foods. 3. Increase frequency of breastfeeding. a. Feed more at night. b. Feed more day and night. 4. Reduce frequency of other fluids. 5. Reduce frequency of other feeds.	- Breast milk contains lots of water and won't be contaminated like unboiled water. - Breast milk alone contains all needed nutrients for babies this age and avoids the cost, time, trouble, and possible introduction of germs that supplements entail. - The more you breastfed, the more milk you will produce, so you'll always have enough to satisfy the baby; the more you breastfeed, the better the baby will grow; the more you breastfeed, the less likely you will become pregnant too soon. The more you do this, the more you avoid the cost, time, trouble, and possible introduction of germs that other foods bring.

*** These are options**. The mother is asked to try one, two, or three, not all of them. For example, the mother may agree to stop giving milk, but only to reduce water and to feed more at night. (#2, 3a, and 4)

Problem #2: ______________

Recommendations:	Potential Motivations:

Problem #3: ______________

Recommendations:	Potential Motivations:

Age Group 2: 6–8 months (specify)

Ideal Feeding Practices: Introduction of soft, nutritious food; continued breastfeeding

Problem # 1: Non-nutritious porridge is given; not energy-dense because over diluted

Recommendations:	Potential Motivations:
1. Make some porridge with less water. 2. Make a "special porridge"—recipe with less water and a teaspoon of oil and add fired, mashed groundnuts. 3. Feed the special porridge at least twice a day.	1. Child less hungry - more content, less crying - will let mother work 2. Child is able to swallow porridge 3. Child will like the taste

Problem #2:

Recommendations:	Potential Motivations:

Problem #3:

Recommendations:	Potential Motivations:

Develop the Research Protocol

Prepare a research protocol to guide the field team during implementation. Specify each step, from recruitment to analysis, and attach the research plan, questions, guides, and forms, as discussed below.

There are two alternative TIPs protocols: one requires three household visits (initial, counseling, and follow-up), the other requires two (counseling and follow-up only; see Box 6.1). The number of visits depends on the scope of the research, the availability of information needed to develop a detailed Assessment and Counseling Guide, and the level of training and experience of the interviewers.

The two-visit protocol combines the initial and counseling visits into one. If there is already considerable information on child feeding practices, and interviewers are able to do a dietary assessment and analysis of feeding problems on the spot, then the TIPs can be done in two visits. Otherwise, a three-visit protocol is recommended.

Box 6.1: Content by Day for a Three-Visit Trial

Initial Visit (Day 1)	**Counseling Visit** (Day 2)	**Follow-up Visit** (Day 6–10)
■ Background information ■ Feeding practices ■ 24-hour recall ■ Food frequency (of other regularly consumed foods)	■ Feedback on practices ■ Recommendations and initial response ■ Negotiation and motivation ■ Discussion with interviewers, if needed ■ Agreement on specific practices to try	■ Changes since last visit ■ 24-hour recall ■ Outcome and response to trial ■ Modifications ■ Adoption of practice

Advantages of the three-visit protocol include:

- The interviewers have time to assess dietary and qualitative information thoroughly for each child, confer with a field supervisor and other team members to discuss appropriate recommendations, and return to the household well-prepared for the counseling session.

- When less information on child feeding is available at the start, the Assessment and Counseling Guide may not be complete for all situations. With the three-visit design, the guide is refined during the process of conducting TIPs, adding problems and solutions as they come up.

This chapter describes the three-visit design. If the two-visit protocol is selected, the instructions and forms for Day 1 and Day 2 are combined into a single visit, and there is less emphasis on interviewing about current feeding practices (because this information is already available).

Other variations are also possible.

> *In Senegal the initial visit of TIPs included a detailed in-depth interview and full-day observation, similar to what was described in Chapter 5.*
>
> *In The Gambia an extra follow-up visit was conducted, so that mothers who had not successfully adopted a new behavior had a chance to choose another recommendation.*

If two *follow-up visits* are desired, revise the forms for Day 2 and Day 3 accordingly.

Develop Question Guides and Recording Forms

TIPs involve several activities: interviewing, observation, dietary assessment, counseling, motivation, and assessing response to the trial. A detailed guide is essential, because the interviewer needs to ask different types of questions and needs to have a different style of interacting with the mother at different times. Sometimes the neutral style of a researcher is required, while at other times the motivating style of a nutrition counselor is preferred.

Question guides outline the steps and key issues in conducting the initial, counseling, and follow-up visits. They may be integrated with, or separate from, the data forms used to record the mothers' responses. The guides and recording forms include the issues listed below.

The Initial Visit:

- Open-ended questions and probes on child feeding practices and mother's beliefs. (Refer to topics listed in Chapter 2 and the gaps identified in the review. Also see Chapter 5 for details on preparing open-ended question guides.)
- Dietary assessment methods and recording forms. (Details on the 24-hour recall and food frequency assessment are provided later in this chapter.)
- Identification of specific feeding problems (interpretation of the dietary assessment).

The Counseling Visit:

- Feedback on practices and suggested recommendations (from the Assessment and Counseling Guide).
- Appeals and motivations that are believed to be most effective in stimulating compliance.
- Information to help overcome attitudinal barriers to behavior change.
- Information to help overcome practical barriers.

- Guidelines for reaching an agreement with the mother to try the new practice for a certain period of time (usually about one week) and to be re-interviewed about her experience. The mother should be asked if and how often she is already carrying out the practice.

- Space to record the recommendations discussed with the mother and her positive and negative reactions to each. Ask the mother about her overall reaction to the suggested practice, her desire to follow the advice and why, and her perceived ability to follow the advice and why. Ask her if she expects to make any changes in the advice, and why. Find out if anyone else needs to be consulted for the behavior change to be tried.

- Space to record the recommendations that the mother agrees to implement.

- Guidelines for a cooking demonstration if a new food is involved.

The Follow-up Visit:

- Change since the last visit.

- Questions and a format to record the mother's comments after she has tried the recommendation.

- Space to record any modifications of the original recommendation.

- Questions and space to record the reactions of other family members who may have commented on the new practice.

- Assessment of whether the mother plans to continue the new practice.

Samples forms for TIPs that can be adapted are included in Appendix B.7. Although these forms were used for a study in Nigeria, they are similar to ones used for TIPs in various countries. Keep the following points in mind while adapting the forms:

- Be sure to include space for recording background information on the families, and a unique identification number for each household.

- Ask sensitive questions later in the interview, after rapport is established. In Nigeria, researchers decided not to ask about mother's education at the beginning the interview, in case it made mothers uncomfortable.

- Include questions only on those beliefs and practices that are relevant to your program and are not well understood. Also, provide guidelines on whether the interviewer should ask these questions in all participating households or only in those with a child in a certain age group.

- Do not cover the same issue repeatedly. Information on many practices and beliefs will be gathered during the dietary assessment or the response to the trials, so additional questions on those issues are not needed.

- Make the guide flexible. Interviewers should not read each question word by word. The objective is to remind the interviewer of the key issues, while allowing for a natural conversation with each mother.

- It is important to provide guidelines for analyzing the diet and planning the counseling for each household. These are included with the forms for the initial visit (see sections 14 and 15 in the example in Appendix B.7).

- Allow plenty of room to record detailed responses. Field teams in several countries pasted sections of the forms into lined exercise books, leaving extra pages where needed. Using a book is a helpful way to keep together the forms from all visits to a particular household.

Revise the Sample and Plan Recruitment

As discussed in Chapter 4, trials are conducted in the minimum number of sites needed to represent the diversity of child feeding practices in the region. Children are selected purposively from the age groups and other categories considered most relevant to the program, within the chosen population segments. At least two children of each age group are selected in each location, and possibly more children from the age groups for which feeding problems and transitions are common. The table below shows a suggested sampling scheme for the minimal sample from three sites.

Example of a Sample for TIPs

Age Group	Site 1	Site 2	Site 3	Total
0–5 Months	2	2	2	6
6–11 Months	4	4	4	12
12–17 Months	2	2	2	6
18–23 Months	2	2	2	6
Total	10	10	10	30

A few additional children may be included to replace the drop-outs that are likely to occur. In a qualitative study, the sample needs only to be large enough to include the range of usual responses. If in the process of collecting the data, feeding practices for an age group or a site are found to vary more than expected, it may be necessary to include a larger sample for that group.

Usually it is important to select low-income households where feeding problems are most likely to occur. However, the very poorest homes or those in areas suffering from severe food shortages are not appropriate because these families will be **unable** to make any improvements in child feeding without external assistance or provision of food. TIPs are useful for identifying which families **can** do more to help themselves. When selecting the sites, think about the expected program participants. Decide how children will be selected for TIPs.

- Include only one child from any one family compound because it is important to get a range of different feeding practices and responses to TIPs.
- Community leaders or health workers can help identify households with appropriate-age children.
- If there is a list of households with children in the selected age range, households can be selected randomly.
- The interviewers can select the sample, or a separate team of recruiters can select households in advance. Advance recruitment saves time, especially if undernourished or sick children are specified for TIPs.

Draft a Field Plan

Develop a field plan that specifies responsibilities, and when and where information is to be collected. The plan includes an implementation schedule. As with other methods, when planning the implementation schedule, remember to allow for more recruitment time if children with special characteristics (e.g., malnourished, anorexic, or in very narrow age ranges) are desired.

The length of time needed for household trials depends on the number of sites and workers, length of the question guides, availability of transport, and distances that must be covered. It is important to plan the schedule in advance because community leaders need to be informed, especially if they are assisting in the identification of households. To estimate the amount of time required, assume that interviewers can conduct two or three initial visits each day (if houses are not dispersed too widely).

Because this is qualitative research, data collection is scheduled to allow days in between for review and discussion, at least at the beginning of the work. Expecting to discuss findings at the end of a tiring day of fieldwork is not realistic. However, the time between visits is shortened as researchers' questioning and note-taking skills develop and their familiarity with the problems and possible solutions increases. The steps in conducting visits and summarizing the information are discussed in the implementation section.

The other difficult aspect of scheduling is the need for follow-up visits about five to six days after the counseling visit. Plans are made in advance so that field workers can tell mothers when they will return. If the sites are widely dispersed, it is better to use the time in between counseling and follow-up visits for analysis or for TIPs in additional households in the same site, rather than proceeding to another site and expecting to return later for follow-up.

Because follow-up visits take less time than initial visits, and there is no need to look for children of certain ages, field workers are able to complete about twice as many households per day. However, it is important to consider that not all mothers will be at home for the scheduled follow-up, so an extra day should be allocated for initial analysis and repeat attempts at follow-up, as needed. A sample TIPs schedule and field plan from Nigeria is included in Attachment 6.2 at the end of this chapter.

Train the Field Team for TIPs and Pretest the Guides and Forms

TIPs training requires about three days in the classroom (learning the techniques and practicing role plays), one day of field-testing, and a final day to discuss the field experience and make necessary modifications to the protocol. This is in addition to the general training on child feeding and qualitative research discussed in Chapter 4. Training is the ideal time for pretesting and adapting the forms and discussion guides for the interviews. Allow about one-half day for pretesting each guide. Trainees also assist with translation of the forms and discussion guides, if needed.

Topics covered during training include:

- Purpose of the training and the research.
- A review and discussion of the findings from the review of existing information (Chapter 3) and the exploratory research (Chapter 5), with an emphasis on common feeding problems and solutions.
- TIPs methodology:
  - data forms and discussion guides;
  - open-ended questions and probing;
  - observation;
  - 24-hour recall methods and food frequency methods (role play);
  - diet analysis and selection of appropriate recommendations (use of counseling guide);
  - follow-up visits; and
  - debriefing and analysis.
- Ideal versus actual practices for each age group and the need to identify feasible improvements that **move toward the ideal** (rather than to suggest that everyone adopt ideal but unfeasible feeding practices).
- Why and how to obtain mothers' input to ensure that recommendations are practical.
- How to with mothers to choose a recommendation.
- Techniques for and practice in motivating respondents to try recommendations.
- Criteria for sampling: age group, ethnicity, income, gender, health, or nutrition status.
- Scheduling: days of the week, times of the day, scheduling follow-up visits.

If exploratory research was conducted, it is helpful to have the same interviewers conduct TIPs. Refresher training for field team members is held before the implementation of the trials, but it is not as extensive as the one described above.

Recruit Households

A preliminary visit is made to each site to make sure it is appropriate, explain the study, and gain permission to work in the community. After arriving to conduct the research, field team members work with local representatives to identify eligible children and select households. Consent is obtained and mothers are informed about what to expect before the initial interviews begin. Recruitment follows an approach similar to that described for in-depth interviews in Chapter 5. A sample recruitment form is included in Appendix B.3.

Conduct the Initial Visits

During the initial visit, field workers collect background information and conduct dietary assessments based on the prepared 24-hour recall and food frequency forms (see Box 6.2). The sample guide in Appendix B.7 provides additional instructions for conducting 24-hour recall and food frequency assessments.

The dietary information is compared with recommendations on the Assessment and Counseling Guide to identify child feeding practices that need improvement. Because a child's illness often influences feeding decisions, information on health status and appetite is also probed and recorded at this time.

In addition to conducting the 24-hour food recall, interviewers ask whether there were foods consumed by the child during the last two to three days that were *not* consumed on the day of the recall, and if there are other foods available in the home that are consumed by older family members. This information is used to identify foods that are not consumed every day but that are considered appropriate for children, and foods that might be added to the child's diet.

Field workers usually also ask open-ended questions about child appetite, feeding styles, and preparation practices (described later), and observe and make notes on any child feeding or food preparation activities that occur during the visit.

Box 6.2: The 24-Hour Dietary Recall and Food Frequency Methods

> Ask the caregiver for a complete recall of all the foods and liquids consumed by the child during the previous 24 hours. Record this information on a simple form with columns for time of day, food preparation (e.g. soup, puree, etc.), ingredients, approximate quantity of food or ingredient consumed. Be sure to ask how much was actually eaten, not just how much was served. Inquire if this was a usual day with a diet typical for the child. If it was a special occasion, how was the child's diet affected?
>
> - Ask the caregiver what the child ate the previous day, starting from when the child awoke. Continue by having the caregiver recall various activities that occurred during the previous day and probe whether the child had food at those times. Include beverages and tastes of other people's food.
> - As each food is mentioned, find out the ingredients, methocs of preparation (such as boiled or fried), and the approximate amount eaten by the child. If the mother (or caregiver) can show the child's cup or plate, it may be easier to estimate accurately the amount consumed. Alternatively, show the mother some standard measures (that are carried to the home) and ask her to estimate quantity.
> - Prompt the caregiver about any snacks the child ate.
> - Ask about frequency of breastfeeding if the child is still nursing. Also ask what cues resulted in nursing (e.g., crying, fussiness, or nursing on a fixed schedule).
>
> After the recall, ask the mother:
>
> - In the past two or three days have you given any foods to your child several times which you did not give yesterday?
> - Was there any food prepared for or eaten by adults in the home yesterday that was not given to the child?

It is important to note that the purpose of the dietary assessment in TIPs is to provide a basis for discussion with the mother about feeding practices and problems, and to introduce and negotiate feasible improvements. The 24-hour recall method is *not* intended to be used to precisely quantify a child's usual dietary intake.

During the initial visit, these questions about feeding practices and perceptions are also important:

- Does the child eat all that is served? If yes, is more food offered? If no, does the mother offer encouragement or allow the child to decide when he is finished?
- Is the child served separately or does he eat with other siblings? Is feeding supervised or is the child left to feed himself?
- Does the child focus on eating or does he easily get distracted and go to play?

- Does the child regularly resist eating or does he eat vigorously?
- What dietary and practice changes, if any, does the mother make when the child is ill?
- Does the child seem hungry soon after the meal? What cues does he give?
- Has the amount of food consumed gradually increased as the child has gotten older, or has it remained the same or diminished?
- Does the mother think that the child is eating similar amounts as other children of the same age?
- Does the mother think that the child is growing well?

Analyze the Dietary Data and Plan Suggested Behavior Changes

Between the first and second visits, the field supervisor and interviewers review the results of each interview. This information is used in three ways: 1) to assess each child's feeding practices and select appropriate, tailored recommendations for testing on the follow-up visit; 2) to refine the original list of problems and recommendations, including appropriate, available foods for young children and positive practices already being implemented that can be tested with other mothers; and 3) to tabulate how often recommended behaviors are already being practiced. Observations on positive practices should be reported on so that the need for dietary improvement is placed in the context of all diets, and not only those with problems.

For each child, a form identifying individual feeding problems is completed by the interviewer with assistance from the field supervisor, using guidelines prepared by the research team's nutrition expert. The appropriate recommendations for the child, based on their specific problems, are selected from the Assessment and Counseling Guide, and written on the form used during the counseling visit.

As noted earlier, when analyzing the dietary information, it is important to recognize that it is *not* necessary to quantify each child's intake exactly. The analysis is intended to make judgements such as:

- Are breastfeeding practices adequate?
- Is feeding frequency adequate?
- Are the serving sizes large enough?
- Do the foods contain enough energy or are they too dilute or bulky?
- Is there enough variety in the diet to provide adequate amounts of protein, vitamin A, iron, and other essential nutrients for growth and development?

- What is the appropriate balance between feeding frequency, nutrient density, usual serving size, and diet variety (quality) to emphasize in this population, given the local diet for young children of different ages?

Clear guidelines, training in dietary assessment, and close supervision help to ensure that inadequacies in each child's diet *and* the best ways to improve nutrient intake are identified.

Complete details on how to analyze dietary data are beyond the scope of this manual. All programs require an experienced nutritionist to develop simple guidelines for this analysis. These guidelines are prepared using data on local foods, preparation practices, and nutrient composition tables. Suggestions and examples are included in Appendix C. Hopefully, in the near future, field tools will be developed to simplify the dietary assessment and analysis process for TIPs.

Conduct the Counseling Visits

During the counseling visit, the interviewer discusses the child's positive feeding practices and feeding problems. For each problem, corresponding recommended practices are mentioned and mothers are asked to select among them. Through a process of **negotiation**, the field worker and mother agree on the specific practices that the mother will carry out for next several days, until the scheduled follow-up visit. Throughout this discussion, the field worker carefully records the mother's reaction to the recommendations and the stated reasons for accepting or not accepting each one.

Although it may seem difficult to ask mothers to change practices, at least in the households where rapport is established, families usually are delighted to see the field worker return and often view this counseling as a reward for their earlier participation. Families generally are eager to try new practices that seem feasible when they understand how they can benefit the child.

During the negotiations, field workers often face resistance to new practices and they must encourage mothers to adopt one or more of the recommended changes. The Assessment and Counseling Guide includes strategies for motivating adoption and continuation of each recommendation. The success of different motivational strategies is also recorded during the visit. This information is used later to select motivational components of nutrition messages.

Whenever possible, it is best to teach through demonstration. If a new or modified food is agreed on, prepare it with the mother during the visit. If the child is going to eat more food at each meal, stay with the mother while she tries to do this. If possible, help her to complete the recommendation successfully. At least check the mother's understanding by asking her to repeat in her own words what new practice she is going to try and how she will do it. In areas where mothers (or at least one family member) are literate, leave a written reminder of what the mother has agreed to do.

At the end of the negotiations, agreement is reached on one, two, or, at most, three specific changes the mother is willing to try during the following days. The exact agreement is recorded (and later transcribed to the appropriate follow-up forms). It is important that each mother feels she has made her own decision about what to try. Review the sections on effective nutrition

communication in Chapter 2 for more information on this issue. Finally, a date is arranged for a follow-up visit five or six days later.

In Ecuador the counseling visit produced surprises:

- *Most mothers, even in the poorest areas, were willing and able to make at least small changes in their feeding practices. Many welcomed the recommendations, especially the weaning recipes, because they were interested in finding new ways to vary their children's diets.*
- *Mothers were surprised at how much their children actually could consume at any one sitting and throughout the day. During the in-depth interviews mothers had very little awareness about food quantity, in terms of how much a child required and how much was eaten in a single day. Investigators stayed with the mother and actually helped her feed her child. Each time, after a child consumed as much as he or she "wanted," the investigator encouraged the mother to feed more. Usually, to the mother's great surprise, the children happily continued eating, drawing attention to the idea of food quantity and to children's willingness to eat more when encouraged.*

In Nigeria recommendations were given as "feeding prescriptions"—the interviewer wrote the agreed-upon behavior changes on a small form that was given to the mother. For example, "Prepare soy flour and add two heaping tablespoons to the child's pap everyday."

Summarize the Response to Counseling

After the counseling visit, interviewers summarize each mother's response to all of the recommendations suggested (see Appendix B.8). One purpose of TIPs is to get participants' reactions to proposed behavior changes, before and after they try to implement them. ***Negative reactions and unsuccessful adoption are as important as positive reactions and successful adoption.*** The reasons a practice is not followed and under what conditions it might be, as well as any modifications that people make in the recommended practice during the trial, are valuable research findings.

It is useful to hold regular debriefing meetings so that the field team can review, summarize, and begin to analyze the results together. Debriefing meetings ought to begin early in the process of data collection, to correct problems. Possible corrections include modifying the recording forms, changing the sample, and revising the feeding recommendations.

During the debriefing meetings, supervisors review the lists of recommendations being offered to mothers to assess whether any recommendations are not being mentioned. Recommendations that are not suggested cannot be tested, and gaps will remain in the understanding of the acceptability of these practices. The most common reasons some recommendations get left out of counseling are:

- the relevant feeding problem rarely occurs in the sample, so the recommendation is not needed often;
- the feeding behavior is already widely practiced by most of the sample to whom it applies;

- a particular recommendation is at the end of a long list, so others are mentioned first; or
- the interviewers feel uncertain about making the suggestion, because they don't feel it is an appropriate practice or they are unsure how to explain and promote it.

Changes are made in the recommendations or the approach to counseling if major omissions are identified.

Conduct the Follow-up Visits

The field worker returns to the home on the pre-arranged day to assess the outcome of the trial. During this visit, she finds out if there are any significant changes in the home or in the child's health since the previous visit. A second 24-hour food recall is conducted, and the mother is interviewed about her reaction to the agreed-on practices. These discussions include the mother's experience with the new practice(s), the child's response, the mother's willingness to continue the practice in the future, and any modifications of the recommendations.

The following specific topics are discussed with the mother:

- the degree to which she followed the advice and why;
- how she felt about her experience (was trying the new practice hard or easy? were there any problems?);
- what other people thought and why;
- whether she or her child derived any benefits from or were harmed by the practice (specify);
- if she modified the recommendation and why;
- whether she intends to continue following the practice and why/why not; and
- how she might persuade a friend or relative to try the new practice.

If necessary, the mother is provided with additional counseling on child nutrition during this final visit.

If an important recommendation is consistently unsuccessful, and if time and logistics permit, it is useful to offer one or two alternative recommendations and conduct a second follow-up visit.

Analyzing the Results of the TIPs

Do Initial Analysis in the Field

Much of the initial analysis occurs between home visits, as described above. The interviewers summarize information, such as the child's age; feeding problems; and the recommendations discussed, demonstrated, and agreed on. After the follow-up visit, the mother's experience of carrying out the recommendation is added to the summary. As always, supervisors review all summaries to ensure that the information is complete.

After the follow-up visit, household summaries are tabulated for each age group. The tabulation includes information on:

- recommendations and motivations suggested;
- practices agreed on (noting changes that result from negotiations);
- outcome of *each* agreement (was it kept, modified, or not followed, and why); and
- reactions from the child and mother (like/dislike and why, problems, benefits they derived, intention to continue and why).

These summaries are used to **compare** reactions among the recommendations, so that the best (most accepted) can be chosen. They are also used to assess which recommendations are offered and agreed on most frequently; whether and why some recommendations are not offered; and to reaffirm that each recommendation is tested adequately.

During this analysis, the two dietary assessments (conducted on the initial and follow-up visits) are compared and summarized. The summary includes information such as breastfeeding frequency, consumption of non-breastmilk liquids, frequency of feeding solid foods, types of foods and amounts given, and rough calculations of nutrient intake.

At this time it is important to assess roughly whether the counseling affected feeding practices. Note during the 24-hour follow-up recall whether the agreed-on practices were followed. Also be alert to the possibility that adoption of the recommendations can be offset by detrimental changes in other feeding practices. For example, feeding more frequently may mean that less food is given per meal or that infants are nursed less frequently. During analysis, record whether adoption of the recommended practices appear to result in other—beneficial or detrimental—feeding changes.

Sort and Summarize after the TIPs Are Completed

Full analysis of TIPs involves several steps.

1. Analyze the responses to qualitative questions asked during the initial visit on feeding practices and beliefs by summarizing the major themes, such as:

- initiation and exclusivity of breastfeeding;
- planned duration of breastfeeding and reasons for stopping;
- breastfeeding problems and solutions;
- ages and cues for introduction of complementary foods;
- feeding and appetite during childhood illness; and/or
- sources of information and advice on infant feeding.

Highlight significant contrasts (by rural or urban residence, first-time versus experienced mothers, etc.), and include specific points or quotes mentioned by respondents that illustrate the conclusions. Focus on information that is useful for program planning by identifying problems, possible solutions, or ways to reach the program population. Refer to the sections in Chapter 5 on analysis of interviews and observations for additional information.

2. Summarize the results of dietary assessments. Describe the common feeding patterns of the population by age group, highlighting positive and negative practices. Describe feeding frequency, including meals and snacks as well as times of day children are and are not fed; common food preparation and nutrient densities.

3. Summarize the results of testing the proposed feeding recommendations. Tally the number of times each recommendation is suggested, agreed to, tried, and adopted and display the totals in a table. Describe adaptations made by mothers. Group the data by age or simply tally by recommendation across all age groups. Describe how changes in nutrient intake may be achieved and the expected magnitude of these changes.

4. These numbers are interpreted, based on the **reasons** for acceptance or rejection (i.e., the motivations and constraints). For guidance, excerpts from the presentation of results in Swaziland and The Gambia are included in Attachment 6.3 at the end of this chapter.

Compare and contrast the findings from different communities, age groups, and types of households by sorting the summaries into piles by various criteria. Depending on the research questions, it may be important to note differences based on criteria such as whether children are sick or malnourished. Interpretation is different if those who do not comply with the changes are primarily mothers of sick children or if other factors such as food security affect compliance.

Revise the Child Feeding Recommendations and Write a Brief Summary on the TIPs

Revise the list of child feeding recommendations to include only those that mothers were willing to try and that mothers and children liked. The objective is to refine the list of recommendations and to make them as specific, nutritionally sound, and acceptable as possible. The most important motivating factors and resistance points related to each recommendation are also noted. This list forms the basis of the nutrition program plan, specifically the nutrition education and communication activities.

The summary report includes:

- a brief description of the methods;

- a description of the sample (number and type of communities and participants);
- a summary table noting which feeding practices were recommended most frequently and most likely to be tried, liked, and adopted;
- a description of the response to the recommendations by age group, including the most important motivations and constraints for improving practices;
- a description of regional differences or any other factors such as food availability that directly affect the adoption of the recommendations;
- adaptations that mothers made to recommended practices;
- the expected impact from specific practice changes alone and in combinations;
- conclusions regarding implications of the results for program planning, such as whether different messages are needed for certain population segments; and
- consideration of whether checking research is needed, a list of the critical issues that need further investigation, and the type of people to participate.

Highlights of Insights from TIPs:

- ***Swaziland***—*Recommendations to enrich soft porridge by adding ingredients such as milk powder were popular in the trials, but the use of sour porridge was not accepted because of strong beliefs that it would cause heartburn.*
- ***The Gambia***—*Although many mothers agreed to add groundnut paste to children's porridge, actual trial and adoption were much lower due to the poor availability and high cost of groundnuts at the time of the TIPs.*
- ***Tanzania***—*Mothers gave water to breastfed children under six months to prevent constipation, but they were willing to try exclusive breastfeeding and were pleased with this new practice.*
- ***Nigeria***—*Mothers thought that the preparation of soya flour was a long and tedious process. They were excited to learn a simple method because they felt that soya beans were easily available and good for their children.*
- ***Indonesia***—*Mothers were not willing to add drops of oil from a bottle to their children's rice porridge. They modified the preparation so that in one place the rice porridge was cooked with the oil and in another a fried food (tahu) was mashed into the rice porridge.*