

# **Community Assessment and Planning for Maternal and Child Health Programs: A Participatory Approach in Ethiopia**

Karabi Bhattacharyya  
John Murray  
Wondimu Amdie  
Mengistu Asnake  
Mulugeta Betre  
Paul Freund  
Tekleab Kedamo  
Workenesh Kereta  
Peter Winch

**BASICS**

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**Peter Winch**

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## **BASICS**

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## **Abstract**

A team of Ministry of Health staff of the Southern Nations and Nationalities People's Region of Ethiopia were trained in community assessment and planning through fieldwork in five communities of the region The activity used participatory and quantitative methods to enable health staff and the communities to jointly identify and prioritize health problems and develop a plan to solve them The planning process was conducted in four phases (1) identifying partners and building partnerships (2) selecting emphasis behaviors, (3) exploring reasons for the behaviors, and (4) developing intervention strategies Concrete community action plans resulted, calling for improved quality and availability of health services, training of health workers, community organization and participation, and health education At the end of the activity, most Ministry of Health teams felt they could conduct the procedures learned with little further training or assistance

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## **BASICS**

Basic Support for Institutionalizing Child Survival  
1600 Wilson Blvd , Suite 300  
Arlington, VA 22209 USA  
Phone 703-312-6800  
Fax 703-312-6900  
E-mail [infoctr@basics.org](mailto:infoctr@basics.org)  
Internet [www.basics.org](http://www.basics.org)

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# Acronyms and Glossary

AIDS	acquired immunodeficiency syndrome
ANC	antenatal care
ARI	acute (lower) respiratory tract infection
CDD	control of diarrheal diseases
CHA	community health agent
CI	confidence interval
EPI	expanded program on immunization
ESHE	Essential Services for Health in Ethiopia
KAT	Kambata, Alaba, and Tembarro Zone
MOH	Ministry of Health
NGO	nongovernmental organization
ORS	oral rehydration solution
ORT	oral rehydration therapy
PRA	participatory rural appraisal
SNNPR	Southern Nations and Nationalities People's Region
STD/HIV	sexually transmitted diseases/human immunodeficiency virus
TBA	traditional birth attendant
TT	tetanus toxoid
USAID	U S Agency for International Development
WHO	World Health Organization
ZCH	Zambia Child Health Project

## Glossary

aje	ear discharge
ereta	local weaning food made of several grains, legumes, and butter mashed together
jenjena	rash
katana	“village” or traditional social grouping of people
kebele	peasant association
keke	whooping cough
kosha	scabies
sambamich	pneumonia
sorkopha	swelling of mouth
woreda	district

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# Executive Summary

## Purpose

This report summarizes the use of a participatory approach to community assessment in five communities in Ethiopia. The purpose of the assessment was for government health staff and community members to jointly identify and prioritize maternal and child health problems and develop a plan to solve them. The assessment process (1) identifies important health problems and uses this information to monitor progress and (2) promotes and facilitates community involvement in planning community and health facility activities. A training workshop and field-testing of this approach was conducted in Zambia and is described in Annex A.

## Design and Methods

The process began with a list of emphasis or key behaviors that have been shown scientifically to decrease child morbidity and mortality. The emphasis behaviors were used as a “menu” from which community members and health staff jointly identified priority behaviors. These behaviors were then used to develop a joint action plan. The methodology combined participatory and qualitative methods with a structured household survey.

Activities were conducted in five communities in the Southern Nations and Nationalities People’s Region (SNNPR). Ministry of Health staff were trained in the methodology for one week. The 17 participants represented the regional level, four zones, and five districts. After training, the group broke into five teams and went to the selected communities for eight to ten days, during which the four phases of the assessment were completed. The size of the communities ranged from 726 to 1,187 households. At the end of the fieldwork, the team came back together to develop detailed implementation plans and identify next steps.

## Results and Products

In Ethiopia, the process resulted in (1) community action plans for communities in five districts, (2) baseline data on key behaviors for monitoring and evaluation, and (3) trained staff at regional, zonal, and district levels (five districts). The information collected was used at several different levels. The health staff and community teams used the data immediately to develop community action plans. The action plans included a wide range of activities at both the facility and community levels, such as training of health workers, integration of health facility services, health education, and work with community organizations. The data from the household survey were aggregated at a regional level to provide baseline indicators for monitoring and evaluation. The qualitative data were to be used in the development of communication and health education materials.

## Lessons Learned

An understanding of the advantages and disadvantages to the community assessment and planning approach is very important when considering this method. The process is not intended to change existing

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power relationships within a community, create sustained changes in the attitudes and behavior of health staff towards communities, produce in-depth information on cultural belief systems on any of the behaviors, produce quantitative data that are generalizable beyond the communities where they are collected, or constitute a blueprint for better health planning

The process does, however, teach health staff to learn from and listen to community members, give communities and health staff boundaries and a focus for the discussions, use the emphasis behaviors as a way to open up discussion of constraints, use data and community priorities to decide health activities, and foster a better relationship between health staff and communities. In essence, this approach is the *beginning* of a process to change the way health planning is done at the local level

**Figure 1**

*Building Rapport—A district health official (left) pounds maize with a villager [Zambia]*



# Design Overview

The design of the community assessment and planning process responds to a number of trends in public health planning. Throughout the world and especially in Africa, there is a trend for primary health care program planning to be moving away from the national level to the district level. This approach requires that health planners collect local information to develop strategies and allocate resources. Along with decentralization is a trend towards “integration” of maternal and child health programs. Integrated approaches are designed to manage all of the most important maternal and child health problems at the same time. More and more countries are choosing to implement programs that train workers at health facilities to provide all essential services every day (such as sick child care, immunization, and antenatal care [ANC]). This assessment is an integrated approach to planning community-level programs. It collects and uses information on maternal and child health behaviors and is designed for district and subdistrict program planners and health staff.

There is still little attention given to developing tools for use by local-level health staff, who often work with limited technical and financial resources. Health staff need assistance in a number of areas, including the formation of working groups with community representation, strategies for dialoguing with their communities, and the planning of interventions that target the people most in need. With the decentralization of planning and decisionmaking in a number of countries, it is even more urgent that health facility staff begin to engage the communities they serve in an ongoing dialogue. The goal of the community assessment described in this report is for the health staff and the communities they serve to jointly identify and prioritize health problems and develop a plan to solve them.

The community assessment and planning process does the following:

- Uses a limited number of maternal and child health behaviors that are critical to the prevention and management of the most important causes of childhood morbidity and mortality as a “menu” to guide planning
- Uses an integrated household survey that measures indicators of those maternal and child health behaviors
- Is conducted in eight to ten days by a team of community volunteers with the Ministry of Health (MOH) staff responsible for implementing health programs
- Encourages community members and health staff to use and analyze information immediately to produce joint action plans
- Collects data that can be used at the community level to develop an action plan and at the district, zonal, regional, and project levels to monitor and evaluate projects

## Maternal and Child Health Emphasis Behaviors

In order to have a measurable impact on childhood morbidity and mortality in developing countries, public health programs need to focus on health-related behaviors, in particular the prevention and treatment of illness in the home and community. Many public health programs are facility-based because facilities provide an organized structure, a recognizable system, and trained health workers. Health facilities often, however, see only a small proportion of all sick children in a community and are

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therefore unable to have an impact on overall childhood morbidity and mortality. In order to have a greater impact on child health, programs must improve the management of children in the home by their caretakers and families.

Reliable data from many developing countries now suggest that at least 70 percent of all childhood mortality is the result of five major conditions: diarrheal diseases, acute lower respiratory tract infections (ARI), malnutrition, malaria, and measles. The evidence suggests that children often have multiple conditions at the same time, managing just one of these conditions may not prevent death from another underlying condition. In addition, there is a great deal of evidence that malnutrition, even mild malnutrition, can increase the likelihood of mortality from a number of different disease entities. In order to improve the health of children in developing countries, programs need to focus simultaneously on all five of the most common causes of morbidity and mortality, including malnutrition.

The *emphasis behavior*<sup>1</sup> concept was developed for public health programs that want to improve child health in communities by changing caretaker<sup>2</sup> behavior, but that do not have the resources to undertake extensive background research or to implement large and complex programs. A multidisciplinary team of child survival and behavioral specialists selected a short list of emphasis behaviors by developing five criteria. These criteria were based on epidemiological and programmatic considerations. Emphasis behaviors should—

- 1 be important to public health by having an impact on multiple disease areas,
- 2 be documented to reduce childhood morbidity and mortality,
- 3 have an impact on the most important health problems in developing countries,
- 4 be measurable, and
- 5 be changeable by public health interventions already demonstrated as feasible and cost-effective.

The final list organizes 16 emphasis behaviors into five categories (see figure 2): (1) reproductive health practices, (2) infant and child feeding practices, (3) immunization practices, (4) home health practices, and (5) care-seeking practices. Each category is believed to be important in maximizing program effectiveness. Home feeding and immunization practices are separated from other categories of household behavior in order to highlight their importance. The emphasis behaviors have been used as a framework for planning and conducting all community-level planning activities. In Ethiopia, local MOH staff selected a subset of emphasis behaviors to focus on as they began the community planning process.

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<sup>1</sup> For a fuller discussion of the emphasis behaviors and the technical justification for the selection of each behavior, see Murray et al. (1997).

<sup>2</sup> In this report “caretaker” means anyone who sometimes cares for the child. We do not mean to imply that all these behaviors can or should be applied only by the child’s mother or primary caretaker.

**Figure 2**  
*Maternal and Child Health Emphasis Behaviors*

**Reproductive Health Practices Women of reproductive age need to practice family planning and seek antenatal care when they are pregnant**

- 1 For all women of reproductive age delay the first pregnancy practice birth spacing and limit family size
- 2 For all pregnant women seek antenatal care at least two times during the pregnancy
- 3 For all pregnant women, take iron tablets

**Infant and Child Feeding Practices Mothers need to give age appropriate foods and fluids**

- 4 Breastfeed exclusively for about six months
- 5 From about 6 months of age provide appropriate complementary feeding and continue breastfeeding until 24 months of age

**Immunization Practices Infants need to receive a full course of vaccinations, women of childbearing age need to receive an appropriate course of tetanus vaccinations**

- 6 Take infant for measles immunization as soon as possible after the age of 9 months
- 7 Take infant for immunization even when he or she is sick Allow sick infant to be immunized during visit for curative care
- 8 For pregnant women and women of childbearing age, seek tetanus toxoid vaccine at every opportunity

**Home Health Practices Caretakers need to implement appropriate behaviors to prevent childhood illnesses and to treat them when they do occur**

*Prevention*

- 9 Use and maintain insecticide treated bednets
- 10 Wash hands with soap at appropriate times
- 11 For all infants and children over 6 months consume enough vitamin A to prevent vitamin A deficiency
- 12 For all families, use iodized salt

*Treatment*

- 13 Continue feeding and increase fluids during illness, increase feeding after illness
- 14 Mix and administer oral rehydration solution or appropriate home available fluid correctly
- 15 Administer treatment and medications according to instruction (amount and duration)

**Care-Seeking Practices Caretakers need to recognize a sick infant or child and need to know when to take the infant or child to a health worker or health facility**

- 16 Seek appropriate care when the infant or child is recognized as being sick (i.e. looks unwell is not playing is not eating or drinking acts lethargic or has a change in consciousness vomits frequently has high fever or has fast or difficult breathing)

## **Objectives**

The community assessment and planning process has four main objectives

- 1 To develop a community implementation plan with full participation and consensus of communities
- 2 To develop a community implementation plan based on primary health care behaviors that are documented to impact on maternal and child health
- 3 To collect key indicators for monitoring and evaluating community and household activities
- 4 To expand the capacity of local staff and communities to develop and evaluate community programs

Although all four objectives were equally important, the need to expand local capacity heavily influenced the design and methodology of the community assessment approach. Every attempt was made to ensure the process was time and resource efficient. The only materials required for the fieldwork were copies of the household survey (six copies per community), a small notebook, and a pencil. The household survey results were all hand tabulated.

# Methodology

The community assessment and planning activity was conducted in five communities in the Southern Nations and Nationalities People's Region (SNNPR) of Ethiopia. MOH staff were trained in the methodology for one week in January 1997 in Awassa, the regional capital. The 17 participants represented the regional level, four zones, and five districts. After training, the group broke into five teams and went to the selected communities for eight to ten days. At the end of the fieldwork, the team returned to Awassa, where detailed implementation plans and next steps were developed and discussed.

The methodology in the community included both participatory and qualitative methods with a structured household survey. For the qualitative and participatory procedures (public meeting, social mapping, free listing, matrix ranking and scoring, and semistructured interviews), a suggested checklist of topics or issues was provided, which was modified both during the training and in the field. (A brief description of these procedures is included in Annex B.) The household survey was developed, pretested, and translated into Amharic in advance. The qualitative and participatory methods were conducted in six to eight days and the household survey was conducted in two days, so the entire process required eight to ten days in each community. The planning process was conducted in four phases as described below.

*Phase 1 Identifying Partners and Building Partnerships* This phase emphasized the establishment of working relationships between the health staff and community team members. During preliminary visits, community teams were identified and asked to work with the MOH teams. The health staff were introduced to the community at a public meeting. It was emphasized that health staff were there to listen to the community members. Community members were then asked to draw a map of their own community and list their health priorities.

*Phase 2 Selecting the Emphasis Behaviors* This phase involved the use of a simple household survey, which collected information on the key maternal and child health behaviors in a sample of households. The teams tabulated the data by hand. The behaviors shown to be at unacceptable levels by the survey were ranked by groups of men and women according to the importance of the behaviors and the feasibility of changing the behaviors. Based on the community ranking, three to five priority behaviors were selected.

*Phase 3 Exploring Reasons for the Behaviors* This phase involved the use of a variety of participatory research techniques, including semistructured interviews, seasonal calendars, and matrix ranking and scoring, to explore the reasons behind the practices of the three to five selected behaviors. For each behavior, a list of suggested topics and methods for understanding the behavior more fully was provided to each team.

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## Box 1

### Zambia Experience in Community Assessment and Planning for Maternal and Child Health Programs: A Participatory Approach

Annex A describes the use of the community assessment approach in Zambia. Although the overall goals and approach were the same, the methodology differed from that used in Ethiopia in several ways. The process was done as a two-week training workshop with six days in a nearby community. The fieldwork was conducted in one small community where all households with children under 2 years of age were interviewed. The information gathered was used to develop a risk map with indicators for each household so the community could monitor its own progress.

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## Community Assessment and Planning for Maternal and Child Health Programs

**Table 1 Community Assessment at a Glance**

Phase	Number of Days	Activities/Procedures	Location
Phase 1 Identifying partners and building partnerships	Completed in advance	Logistics Finalization of forms and schedules Selection of focus community Visits to focus community Formation of community team	
	5 days	Training in conducting household survey and participatory learning and action methods	Regional capital
	1 day	Public meeting Social mapping Free listing and ranking of child illnesses Team meeting	Focus communities
Phase 2 Selecting the emphasis behaviors	2 days	Household survey Hand tabulation Prioritization of behaviors (3–5) on the basis of indicators and health impact Matrix ranking and scoring Seasonal calendars Team meeting	Focus communities
Phase 3 Exploring reasons for the behaviors	3 days	Semistructured interviews Preparation for public meeting	Focus communities
Phase 4 Developing intervention strategies and next steps	1 day	Public meeting Team meeting	Focus communities
	2 days	Further analysis of data and experience Next steps in all districts including follow-up visits by regional staff and district teams	Regional capital

*Phase 4 Developing Intervention Strategies and Next Steps* This phase involved the development of interventions based on the reasons why people were doing or not doing the selected behaviors. The intervention strategies were suggested by community members and the health staff. During a public meeting, a plan for implementing the strategies was developed. The action plan included the identification of resource needs and allocation of responsibilities.

Table 1 summarizes the schedule for the planning process.

## Phase 1 Identifying Partners and Building Partnerships

### Site Selection

The Essential Services for Health in Ethiopia (ESHE) project is a bilateral agreement between the U.S. Agency for International Development (USAID)/Ethiopia and the government of Ethiopia. The purpose of ESHE is to improve the health status of the population through increased utilization of essential primary and preventive health services such as family planning, perinatal care, management of the sick child, immunizations, and sexually transmitted diseases/human immunodeficiency virus (STD/HIV).

prevention and control. The BASICS project was contracted by USAID/Ethiopia to provide technical assistance to the MOH to implement the maternal and child health component of the ESHE project in the SNNPR.

Four focus zones had been chosen by the SNNPR in Ethiopia for all BASICS project activities (Hadiya, Kambata, Alaba, and Tembarro [KAT], North Omo, and Sidama). Within each of these zones, five focus *woredas*, or districts, were selected for implementation of all low-level project activities. The focus *woredas* were selected by zonal committees using a number of criteria, including public health need (high incidence and prevalence rates of childhood diseases), larger population size and density (to maximize public health impact), functional health facilities available (to allow facility-based activities to be implemented), and limited nongovernmental organization (NGO) activity. Although intensive project implementation would initially occur in each of these focus *woredas*, it was hoped that these *woredas* would form the basis from which successful primary health care activities could be disseminated throughout the zones. In the longer term, it was hoped that trained staff from these focus areas could themselves become trainers of other staff.

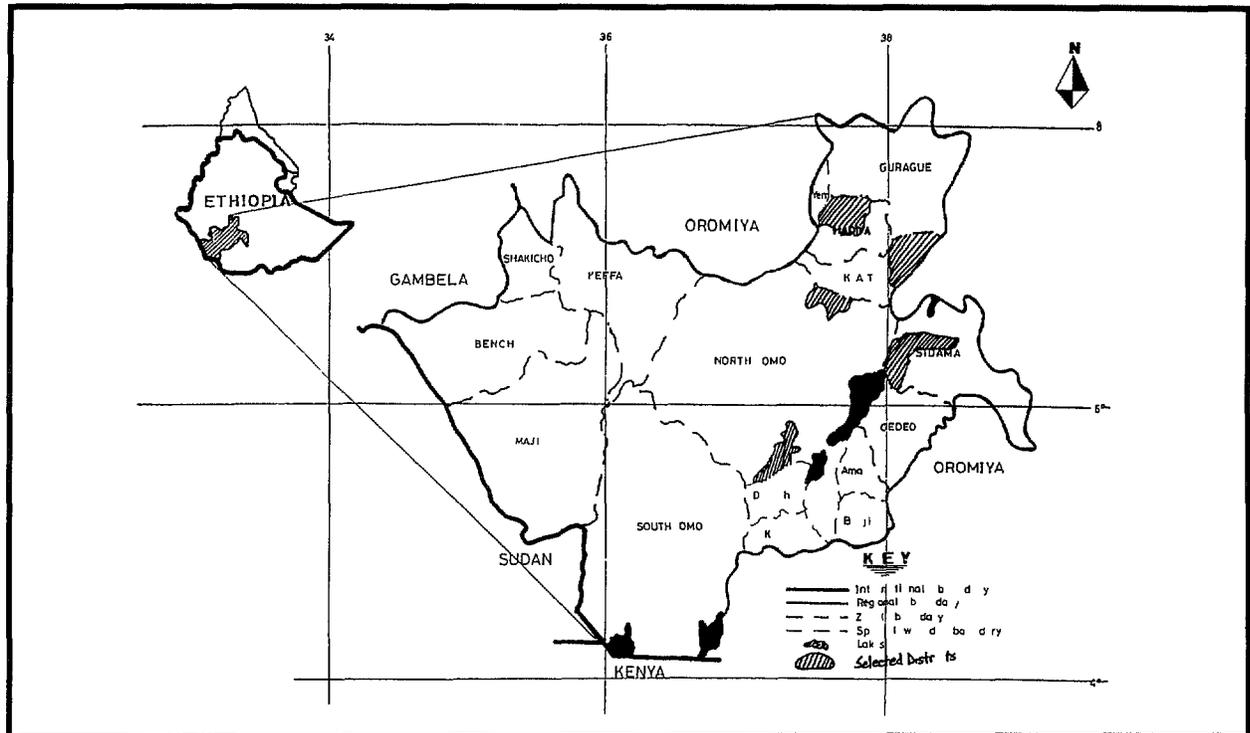
Within each focus *woreda*, one community or *kebele*<sup>3</sup> was chosen for the initial implementation of community-level activities. These communities were selected by *woreda* committees on the basis of such criteria as public health need, absence of extensive NGO projects, and accessibility. The focus zones, *woredas*, and *kebeles* are summarized in table 2. The population of zones and *woredas* is estimated from 1990 census figures and the number of households in each *kebele* from taxation and land-ownership records. A map of the SNNPR and focus *woredas* is shown in figure 3.

**Table 2 Focus Zones, *Woredas*, *Kebeles*, and Estimated Populations in the SNNPR**

Focus Zone	Woreda	Kebele
Hadiya Population 1 089 518	Konteb Population 320 274	Shurmo Adel Households 1 080
KAT Population 835 813	Alaba Population 198,274	Ashoka Households 750
North Omo Population 3 150 518	Boloso Sore Population 334 853	Dola Households 935
	Bonke Population 136 902	Demle-Leda Households 726
Sidama Population 3 537 500	Dale Population 320 567	Wicho Households 1,187

<sup>3</sup> *Kebele* translates into English as 'peasant association' which is the lowest administrative unit in Ethiopia. Some *kebeles* consist of one or more *katanas* which represent traditional social groupings of people or 'villages'.

**Figure 3**  
Map of SNNPR, Ethiopia



### Forming MOH and Community Teams

One of the important principles of this assessment was that the people who would be affected by the programs were to collect and analyze the data and then use them to make program decisions. MOH staff from each zone, district, and, where possible, local health facilities were involved in all community planning activities. Local health staff therefore represented implementation teams in their own areas. In each selected community, a community action committee was identified to participate in all planning activities. In many cases, this committee already existed either formally or informally and was usually composed of the *kebele* chairman and secretary (elected to be administrative heads of each *kebele*), teachers, agricultural extension workers, community health agents (CHAs), traditional birth attendants (TBAs), and village elders. Preliminary visits to each community allowed community committees to be identified and notified about the planning activity and the need for full community involvement.

### Training

The training was conducted in Awassa for five days in English and Amharic. The participants included the MOH staff from the region, zones, and the focus *woredas*. For logistical reasons,<sup>4</sup> it was not possible to include the health facility staff and the community teams, though this may be ideal for future training.

<sup>4</sup> The SNNPR is an extremely diverse part of Ethiopia with more than 15 ethnic groups and languages. A different language is spoken in each of the four target zones, and focus *woredas* are spread quite far apart, as shown in figure 3.

The first part of the training included experiential learning exercises designed to stress the importance of local knowledge and local participation in making programmatic decisions. In the second part of the training, participants were introduced to the methods. Each method was discussed with the group and then practiced using small group exercises and role-playing. Participants improved their skills in building rapport, listening, and asking open-ended questions. During the training, the structured household questionnaire was reviewed, consensus was reached on the interpretation of each question, standard definitions were agreed on, and minor changes were made. All procedures were practiced in a nearby community during the training week. At the end of the training, the group broke into five teams and traveled to the five focus communities.

### **Public Meeting, Social Mapping, and Free Listing**

The first day in the focus communities was spent building rapport through informal conversations, and through meetings with community leaders, the community team, and traditional healers. In addition, health facility staff and the community team were oriented to the assessment and their roles. A meeting was held with as many people from the community as possible (see figure 4) and was facilitated using the following checklist:

#### ***Suggested Public Meeting Checklist***

- Introductions by everyone
- Explanation of purpose: health facility trying to improve services, understand community problems, and improve relations with the community, focusing on child health
- Explanation of the need for ideas from *all* community members
- Explanation of what the community can expect from the health staff, including confidentiality
- Introduction of community interviewers and the district team and discussion of their roles
- Overview of the schedule for the time in the village
- Appointment of a time and place to meet at the end of the stay to present the information collected and develop an action plan

**Figure 4**  
*A Public Meeting to Discuss the Community Assessment [Zambia]*



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After the public meeting, groups of six to eight men and six to eight women (two separate groups) were formed to draw a social map of their *kebele*. This allowed the outsiders to get an overview of the community and showed the community members that the outsiders were interested in learning from them. After the map was drawn on the ground, it was transferred to paper by either community members or the MOH team. Much information about the resources, community groups, and infrastructure available to the community was obtained through the social mapping process.

### ***Suggested Checklist for Social Mapping***

- Overall layout of the village
- Water sources
- Roads in and out of the village, markets
- Main sources of health care and medicine
- Main ethnic groups and their location within the village
- Main socioeconomic groups, especially the very poor, and their location within the village
- “Public goods,” such as schools, churches, and mosques
- Parts or sections of the village, e.g. *katana*

An example of a social map is shown in figure 5.

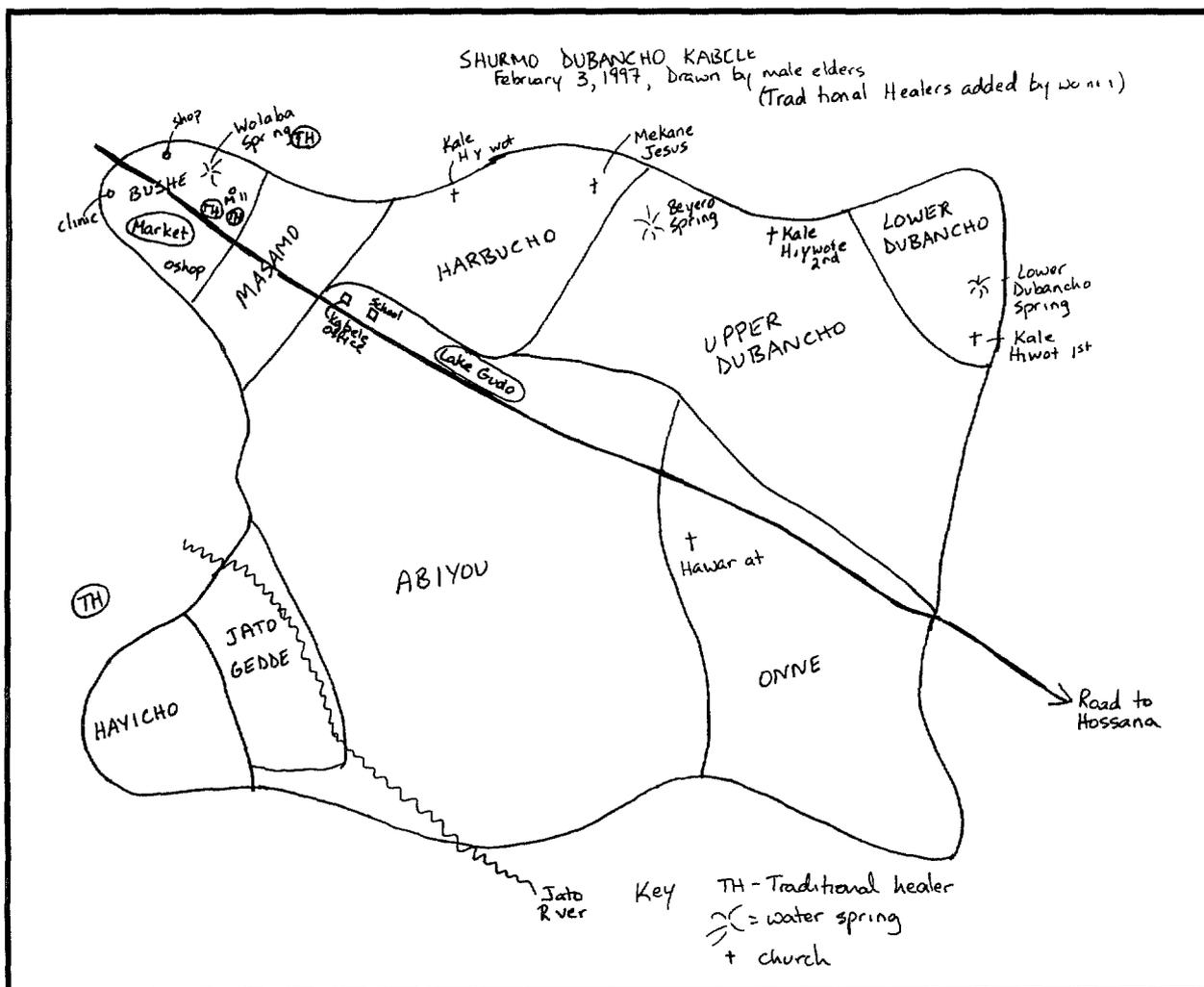
### ***Free Listing***

After the social maps were completed, the same groups of men and women were asked to do a free listing and ranking of children’s health problems. Participants were asked the following questions:

- Can you tell me all health problems that young children have in this community? List all you can think of. [Probing questions: What are the main reasons that children die in this community? What symptoms cause you to worry?]
- Use the matrix of health problems to score the symptoms and illnesses. Place one to five beans in each box to show how common or severe the illness or symptom is. (The more beans, the more severe or common the symptom or illness.)
- Out of all these problems, which one is the most common? Which one is the most severe? If you could be free of any one illness or symptom, which one would it be? Mark these problems in a special way (e.g., with a leaf).

An example of the final outcome of a free-listing and ranking exercise in the Konteb District is summarized in table 3. Each focus community produced a summary of this type using the same process.

**Figure 5**  
Example of a Social Map



## Phase 2 Selecting the Emphasis Behaviors

### Household Survey

A structured questionnaire designed to investigate the emphasis maternal and child health behaviors was developed and pretested. The questionnaire used proven survey questions from existing instruments, including the World Health Organization (WHO) control of diarrheal diseases (CDD)/ARI/breastfeeding household survey and the United Nations Children's Fund Multi-Indicator Cluster Survey. The forms were designed so that information for seven children could be completed on one form. This saved paper and made hand tabulation much simpler.

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**Table 3 Children's Health Problems Listed and Ranked by Men in Konteb, Ethiopia, Community Assessment and Planning, January 1997**

Name of Illness or Symptom	How Common Is This? <sup>1</sup>	How Severe Is This? <sup>1</sup>
Diarrhea (watery or bloody)	5	3
<i>Sorkopha</i> (swelling of mouth)	5	4
<i>Keke</i> (whooping cough)	4	2
<i>Jenjena</i> (rash on legs that won't heal)	2	0
Scabies ( <i>kosha</i> )	4	0
Amoeba	3	0
Swelling of glands in neck	2	0
Pneumonia ( <i>sambamich</i> ) <sup>2</sup>	5	5
Malaria	2	0
Ear discharge ( <i>aje</i> )	4	0

<sup>1</sup> Scale is 1–5 with 5 indicating the most common or most severe symptom or illness

<sup>2</sup> Participants said they want to be free of pneumonia because it kills the most

### **Sampling Approach**

In each community, 42 households were selected from taxation and land-ownership records using random number tables. Community members were confident that household lists were complete. A lot quality assurance sampling method was used to make decisions about indicators in each community, so a relatively small number of households could be sampled. The number 42 was selected because it was small enough to be feasible and large enough to allow an estimate of the acceptability by most indicators with a reasonable degree of accuracy (10%) and level of confidence (95%).

Although the household survey was the least “participatory” of the methods (in that community members were not involved in the choice of questions or the overall design), the community teams understood and were interested in the conduct of the survey. The *kebele* chairmen sometimes picked the random number starting point and read out the household names, while the community team explained to others how this was a “lottery” method and had nothing to do with any special services or benefits (see figure 6).

### **Conduct of the Survey**

Surveyors conducted the household survey in teams of two. A household was defined as a group of individuals sharing the same cooking pot. Each randomly selected household was visited, and only households with children 0–23 months of age were included in the sample. If there were no children 0–23 months of age, then surveyors moved to the adjacent house and repeated this process until a house with a child in this age range was identified. At every household, the questionnaire was administered to the primary caretaker of the child. If the primary caretaker was not present at the time of the household visit, then surveyors arranged a time to return to conduct the interview.

### **Hand Tabulation and Analysis**

All survey questions were coded at the end of each day by the team supervisors and survey teams. When all 42 households had been visited, coded data were hand tallied to summarize the performance for each indicator. The data were used at the community level by classifying each of the indicators as “acceptable” or “not acceptable” on the basis of whether the indicator reached a predetermined standard. If an indicator was classified as “acceptable,” the community did not need to concentrate program activities on this indicator. If an indicator was classified as “not acceptable,” additional programmatic resources would be required to improve this indicator. This method allowed community-level decisions to be made, but did not allow each community to calculate proportions for the selected indicators. The results from all selected communities could be combined, however, to calculate aggregate proportions for each indicator across all communities.

For this survey, an *upper threshold* of 80 percent was set for every indicator. This was the desired target for each indicator in each community. For example, if 80 percent or more infants between birth and 6 months of age in a community were exclusively breastfed, then performance for this indicator would be “acceptable.” A *lower threshold* of 50 percent was set for every indicator. This was the lowest desirable level for each indicator in each community. For example, if 50 percent or less of the children who had been sick in the previous two weeks were not given oral medications correctly, then performance for this indicator would be “not acceptable.”

For each indicator, the number of unacceptable responses required in order to decide that the performance for that indicator was not acceptable was calculated (the decision value) to produce results with a 90–95 percent level of confidence. For example, if a total of 10 children was selected, the decision value would be 3. This means that if more than three children with unacceptable performance were seen in the sample, then the indicator would be classified as “not acceptable.” If three or fewer children with unacceptable performance were seen, then the indicator would be classified as “acceptable.”<sup>5</sup>

**Figure 6**

The zonal health officer (left) works with the community chairman to draw the sample from household listings [Ethiopia]



<sup>5</sup> For further information on the quality assurance method, see Lanata and Black 1991, Lanata et al. 1990, Valadez 1991, and WHO/EPI 1996.

### Matrix Scoring

Behaviors that were not acceptable according to the household survey were presented to groups of men and women (six to eight men or women in each group) and prioritized using matrix scoring. Matrix scoring is a participatory learning and action procedure to compare and contrast alternatives with specific criteria. In order to select the emphasis behaviors, the groups of men and women ranked the behaviors according to their importance and the feasibility of changing them. This was done on the ground, using locally available materials as symbols for each behavior and maize, sticks, or berries to rank the behaviors. Decisions about the feasibility of changing certain behaviors were based on local perceptions about the complexity of the behaviors and the resources required to make a change. Three to five of the emphasis behaviors were prioritized according to the matrix scoring. An example of the matrix scoring process is pictured in figure 7. The results of matrix scoring in one community are shown in table 4.

### Phase 3 Exploring Reasons for the Behaviors

Once three to five behaviors were prioritized, the MOH-community teams tried to understand some of the major constraints on performing the behaviors. A suggested checklist for semistructured interviews and other participatory methods was developed and further modified in the field. Figure 8 shows an example of a checklist used for exclusive breastfeeding. One-page summary checklists of this type were developed for each behavior.

Different qualitative and participatory procedures were used to further explore constraints on practicing the priority behaviors. These procedures included semistructured interviews, free listing, matrix ranking and scoring, and seasonal calendars. For example, one of the behaviors selected in Konteb District was "From 6–24 months, provide appropriate complementary feeding." To understand more about this behavior, a group of six to eight women with young children was brought together and asked to list all the foods that children under 2 years eat (free listing). After a complete list was compiled, the women were asked what was good about some of the foods so criteria for comparing the different foods could be developed. All the weaning foods were matrix scored using these criteria. The results are shown in table 5.

**Figure 7**

*Selecting the Behaviors—A group of women discuss and rank the most important health behaviors [Zambia]*



**Table 4 Matrix Scoring to Prioritize Maternal and Child Health Behaviors in Konteb Men's and Women's Groups, Ethiopia Community Assessment and Planning, January 1997**

Behavior	Importance <sup>1</sup>				Feasibility <sup>1</sup>				Total
	M1	M2	W1	W2	M1	M2	W1	W2	
Complementary feeding <sup>2</sup>	4	4	4	5	5	5	4	3	34
Measles vaccination at 9 months <sup>2</sup>	5	2	5	5	6 <sup>3</sup>	5	5	5	38
Antenatal care and tetanus toxoid vaccination <sup>2</sup>	3	2	4	5	5	5	5	5	34
Appropriate care seeking	4	3	3	5	3	5	5	1	29
Use of a modern method of contraception	5	5	1	5	3	1	3	1	24
Washing of hands with soap at appropriate times	4	3	3	4	4	5	4	5	32
Storage and transport of water in narrow necked covered containers <sup>2</sup>	5	5	5	1	5	1	5	5	32

Notes M1=First men's group M2=Second men's group W1=First women's group W2=Second women's group

<sup>1</sup> Scale is 1–5, with 5 indicating the most important or feasible

<sup>2</sup> Selected behaviors

<sup>3</sup> Men felt this was very feasible and gave it a score of 6

**Table 5 Matrix Scoring of Weaning Foods by Women in Konteb, Ethiopia, Community Assessment and Planning, January 1997**

Characteristic	Fresh Milk	Egg	Ereta <sup>1</sup>	Bread	Potato	Enset Liquid	Tea	Telba Seed	Teff Gruel
Fatty	10	8	9	4	7	3	7	8	4
Replaces milk	—	9	10	4	8	2	7	4	5
Gives energy	10	8	9	5	8	4	7	4	5
Nutritious	10	8	10	8	7	4	4	9	7
Easy to digest	10	7	4	3	6	4	7	9	5
Easy to prepare	10	7	4	3	6	5	9	8	5

Note Scale is 1–10 with 10 indicating the most of each characteristic

<sup>1</sup> Ereta is a local weaning food made of several grains, legumes, and butter mashed together

**Figure 8**  
*Checklist for Exclusive Breastfeeding*

<p><b>Guidelines to Understanding More about Breastfeeding Exclusively for about Six Months</b></p> <p>What are people doing now?</p> <ul style="list-style-type: none"><li>■ Are mothers initiating breastfeeding within a couple of hours after birth?</li><li>■ Are children under 3 months given any supplemental teas, milks, or other liquids?</li><li>■ Are children under 4–6 months given any supplemental teas, milks, liquids or solids?</li><li>■ Are children fed on demand including during the night?</li></ul> <p>What are the reasons for doing the behaviors?</p> <p>What are the reasons for not doing the behaviors?</p> <ul style="list-style-type: none"><li>■ What do mothers do if they perceive their milk is not enough for the baby?</li><li>■ What do mothers do if they have to be separated from the infant for more than half a day?</li></ul> <p><b>Suggested Methods</b></p> <ul style="list-style-type: none"><li>■ Use beans with key informants (grandmothers TBAs mothers of children under 6 months) the total pile of beans being all children under 6 months old<ul style="list-style-type: none"><li>■ How many beans are exclusively breastfed?</li><li>■ Of the beans not exclusively breastfed what are the main reasons for not exclusively breastfeeding?</li></ul></li><li>■ Interviews with women <i>exclusively</i> breastfeeding and <i>not exclusively</i> breastfeeding a child under 6 months (can be identified from the survey)</li><li>■ Interviews with health care providers and traditional healers</li></ul> <p><b>Common Reasons Why People Do Not Do These Behaviors</b></p> <p><i>Concerns of the mother</i></p> <ul style="list-style-type: none"><li>■ Child is always hungry —The mother believes she does not have enough milk for the child</li><li>■ Women believe that the first milk is harmful</li><li>■ I don't know what to do —There is no family member or friend who can help the mother when she has a problem with breastfeeding</li><li>■ The weather is very hot —The mother is concerned that the child needs additional fluids on hot days and she believes that breast milk is not sufficient</li><li>■ Family members and friends want to help the mother and look after the child much of the day, the mother does not get a chance to breastfeed</li><li>■ If the mother is sick she should stop breastfeeding, or sickness will be transmitted to her child</li></ul> <p><i>Concerns of the father</i></p> <ul style="list-style-type: none"><li>■ Sexual relations are not allowed if the mother is breastfeeding so the father does not encourage the mother to breastfeed</li><li>■ The mother spends too much time breastfeeding and neglects others duties such as agricultural work and care of other children</li></ul> <p><i>Health care providers and traditional healers</i></p> <ul style="list-style-type: none"><li>■ Health care providers advise the mother not to breastfeed if her child has diarrhea</li><li>■ Health care providers do not know what to tell a mother if she has trouble breastfeeding</li></ul> <p><i>Environmental/Economic</i></p> <ul style="list-style-type: none"><li>■ Women do not take their infant to the field market or workplace and hence cannot breastfeed</li><li>■ A mother may not sleep with her infant making night feeding difficult</li></ul>
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When the matrix scoring was complete, the women were then asked about the seasonal variations in the foods that they had listed. During this discussion, the women mentioned that not all women know how to prepare the local food *ereta* and that women would like to learn this from other women. Thus a link between understanding more about constraints on the behavior and developing strategies was made. Figure 9 shows women in Zambia drawing a seasonal calendar of weaning foods.

The results of the semistructured interviews and other methods were analyzed by listing the reasons why people were doing and not doing the selected behavior. An example for measles vaccination from one community is shown in figure 10.

#### Phase 4. Developing Intervention Strategies and Next Steps

Intervention strategies were developed with the community teams using information collected during semistructured interviews and group discussions. Strategies were usually suggested by community members, but a few came from the MOH team. An example of the strategies proposed for improving measles vaccination coverage is shown in figure 11. Note that these strategies relate very closely to the reasons for getting or not getting the measles vaccine, summarized in figure 10. Intervention strategies were developed in every community for each of the prioritized behaviors.

#### Public Meeting

On the final day of the community assessment, another public meeting was called to present the selected behaviors and the strategies proposed for improving them. Every attempt was made to encourage people, especially women, from all parts of the community to attend the public meeting. In some communities, the public meeting included more than 100 people, whereas other communities had a smaller turnout. In several communities, the community team chaired the meetings and presented the information. Community members were encouraged to ask questions and to contribute ideas or suggestions for improving intervention strategies. An action plan for all follow-up activities was then developed and discussed with community members. During this process,

**Figure 9**  
*Seasonal Calendar—Women diagram the seasonal variations in the weaning foods available for children [Zambia]*



**Figure 10**  
*Reasons for Getting and Not Getting Measles Vaccination in Konteb Ethiopia Community Assessment and Planning, January 1997*

#### Reasons for doing the behavior

- Knowledge of benefits
- Reminders to and education of mothers by schoolchildren

#### Reasons for not doing the behavior

- Lack of awareness
- Belief that vaccinations prevent scabies, AIDS, and other diseases, so when a child gets scabies the family thinks it's a vaccine failure
- Fear of side effects
- No motivation from husbands for mothers to take their children
- Offering of vaccinations on Tuesdays only

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it was made clear that responsibilities for all implementation activities would need to be split among the community, the MOH staff, and the BASICS project. In some communities, the action plan was presented to the community as a “contract” and signed by all persons in attendance. An example of an action plan from one community is shown in figure 12.

### **Planning Next Steps**

After completing planning work in communities, the teams returned to Awassa, where each community action plan was presented and discussed. Aggregate household indicators were calculated and follow-up responsibilities for MOH and BASICS staff were planned. Each district or community implementation team was linked with a local BASICS staff member responsible for providing long-term follow-up and support. At the end of the planning process, each district or community implementation team had a clear action plan for the focus community with a set of prioritized next steps. In addition, arrangements had been made with the BASICS support staff for follow-up visits.

**Figure 11**

*Strategies for Improving Measles Immunization Coverage in Konteb, Ethiopia. Community Assessment and Planning, January 1997.*

<p><b>Health clinic</b></p> <ul style="list-style-type: none"><li>■ Offer vaccination services every day</li><li>■ Provide health education on which diseases can be prevented by vaccine</li><li>■ Have health workers explain and counsel on the side effects of immunization</li><li>■ Check vaccination status during sick child visits</li><li>■ Orient health workers on contraindications and reduce fear of wastage and use of the steam sterilizer</li></ul> <p><b>Community</b></p> <ul style="list-style-type: none"><li>■ Appoint one person in each village to disseminate the message and check vaccination status</li><li>■ Motivate school children to bring brothers and sisters for vaccination</li><li>■ Raise awareness of the community on their right to get children immunized any time during working hours</li></ul>
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**Figure 12**

*Summary of Actions to Be Taken in Alaba, Ethiopia, Community Assessment and Planning January 1997.*

<p><b>Community</b></p> <ul style="list-style-type: none"><li>■ Collect 3 Birr from each household within one week to establish a revolving drug fund</li><li>■ Form a health committee to administer the revolving drug fund</li><li>■ Mohammed Ribato will start working again as a CHA once the health post has been repaired</li><li>■ Men will help women after birth (e.g. fetching water and going to the market) so women can exclusively breastfeed for six months</li><li>■ Mothers will prepare complementary foods demonstrated at the public meeting for their young children</li><li>■ Mothers will continue feeding during illness with breast milk, food based homemade oral rehydration therapy and small amounts of the regular food given frequently</li></ul> <p><b>Health department</b></p> <ul style="list-style-type: none"><li>■ Procure drugs from Pharmid in Awassa using money collected from the community (zone)</li><li>■ Provide free of charge certain drugs, such as vitamin A and ORS which are in zonal stores. Assess other potential sources of free drugs, such as the Catholic Missions (zone)</li><li>■ Supervise revolving the drug fund (<i>woreda</i>)</li><li>■ Participate in community based training. Schedule and content will be prepared in the <i>woreda</i> office</li><li>■ Provide outreach (vaccination, antenatal and postnatal care, and family planning) at the <i>kebele</i> health post (<i>woreda</i>)</li></ul>
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# Results and Discussion

## Indicators

This section presents a summary of the status of the indicators for each community

### Feeding Practices

Table 6 shows infant and child feeding practices per community

A relatively low proportion of infants was exclusively breastfed in these communities. A number of reasons for the lack of exclusive breastfeeding were identified during semistructured interviews and focus groups, including a lack of awareness of the importance of exclusive breastfeeding, the belief that breast milk is not enough for a growing child, and the lack of time available for mothers to breastfeed when they are also attending to household chores and agricultural work. Strategies to increase exclusive breastfeeding focused on improving awareness and removing constraints.

Half of the caretakers in these communities report giving an adequate number of complementary feeds in addition to breastfeeding. There is considerable seasonal variation in the quality and quantity of foods given. Constraints on effective complementary feeding included the lack of adequate foods and the lack of awareness of the importance of giving certain foods to children. (For example, *ereta*, which is composed of several grains, legumes, and butter, was not used regularly as a weaning food, although it was likely to be a good, energy-dense food.) In addition, active feeding to promote food intake was not practiced; in many communities, children were fed passively and left to “feed for themselves” at mealtimes. Approaches to improving complementary feeding included improving community awareness of the importance of weaning foods and developing strategies for improving feeding in the home. In some communities, women’s groups expressed a need for “nutrition support groups” to help train women with young children to feed their children correctly.

**Table 6 Infant and Child Feeding Practices**

Indicator	Kebele					Overall Proportion <sup>1</sup> and 95% CI
	Ashoka	Wicho	Dola	Demble	Shurmo	
Infants and children 0–6 months exclusively breastfed	4/14 NA	4/13 NA	5/14 NA	2/21 NA	6/9 NA	35% ± 11% (N=71)
Children 7–23 months receiving 3–5 complementary feeds in addition to breastfeeding	1/29 NA	24/29 A	18/28 NA	15/21 A	10/33 NA	52% ± 7% (N=140)
Children 0–23 months with a growth-monitoring card	3/42 NA	14/42 NA	4/42 NA	26/42 NA	10/42 NA	25% ± 6% (N=210)
Children 0–23 months with a growth card weighed in the last four months	0/3 NA	0/14 NA	1/4 NA	0/26 NA	4/10 NA	9% ± 12% (N=57)

Notes: CI=Confidence interval; NA=Not acceptable; A=Acceptable; N=Sample size

<sup>1</sup> Weighted for population size

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A relatively low proportion of children had a growth monitoring card and had been weighed in the previous four months. In all communities there was a lack of awareness of the importance of nutrition and body weight as markers of nutritional performance. The most frequent constraint on improving growth monitoring was the performance of health workers, health workers often did not distribute child health cards and, even when a child had a health card, health workers did not weigh the child and plot his or her growth. Health facility staff also lacked awareness about the importance of nutrition. This finding fits in with the results of the health facility assessment conducted in September 1996 in the same *woredas* only 4 percent of sick children attending facilities during this survey had their nutritional status examined and only 9 percent were weighed (Murray and Manoncourt 1996)

**Immunization Practices**

Table 7 shows immunization practices per community

Only about one-third of all children 0–23 months old had received a vaccination card and, of those who were 12–23 months old, only a fourth had been vaccinated against measles. These findings suggest that health facilities were not routinely vaccinating infants, even if they had received a vaccination card. It is unlikely that children without vaccination cards in these communities had been vaccinated, none of the communities had received mass campaigns, and outreach was often irregular or nonexistent. A similar pattern was observed for tetanus toxoid (TT) vaccination for women.

Semistructured interviews and focus groups suggested a number of reasons for the poor card and vaccine coverage. At the household level, caretakers often had a low level of awareness of the diseases prevented by vaccination and did not seek vaccination services, were afraid of side effects such as fever or postvaccination abscesses, and thought that exposing a young child to other children at health facilities was dangerous (exposing children to the “evil eye”). Caretakers frequently complained that vaccination services were offered on only one day of the week.

**Table 7 Immunization Practices**

Indicator	Kebele					Overall Proportion <sup>1</sup> and 95% CI
	Ashoka	Wicho	Dola	Demble	Shurmo	
Children 12–23 months who have received measles vaccine (card only)	0/3 NA	9/20 NA	1/13 NA	3/10 NA	5/23 NA	24% ± 8% (N=69)
Children 0–23 months with an immunization card	3/42 NA	20/42 NA	4/42 NA	26/42 NA	10/42 NA	30% ± 6% (N=210)
Women currently pregnant or with a child 0–11 months who have received TT2+ (card only)	3/28 NA	10/19 NA	2/28 NA	9/19 NA	8/21 NA	35% ± 8% (N=115)
Mothers with a maternal health card	5/42 NA	18/42 NA	5/42 NA	27/42 NA	4/42 NA	27% ± 5% (N=210)

Notes: CI=Confidence interval NA=Not acceptable N=Sample size  
<sup>1</sup> Weighted for population size

Health workers reported that they did not want to waste vaccine by vaccinating one or two infants every day. Health workers did not recognize the importance of screening and vaccinating mothers and children at every opportunity and sometimes believed false reasons for not vaccinating. These findings support those of the health facility assessment in September 1996, which found that only 15 percent of sick children visiting health facilities had their vaccination status checked at the time of the visit, and none of the mothers of these children had their vaccination status checked. Overall, only 10 percent of children had their vaccination card at the time of the sick child visit. Strategies suggested for improving vaccination coverage included improving the awareness of caretakers through a variety of channels, such as educating schoolchildren to educate their parents. In addition, a number of facility-based strategies were suggested, including training health workers to avoid missed opportunities to vaccinate and to provide vaccination services more frequently.

## Home Health Practices

### Prevention

Table 8 shows preventive home health practices per community.

A low proportion of women reported having two or more antenatal visits for their last pregnancy. Reasons for the lack of antenatal care (ANC) included a lack of awareness of the importance of preventive screening visits during pregnancy, the belief that nothing could be done if signs or symptoms were noticed, the belief that other family members, neighbors, or TBAs were able to provide support if required, and distances from health facilities that were “too far” for pregnant women to walk. In one community, when health staff attempted to give TT shots to girls in school, they ran away, believing that the shots were contraceptives. Strategies for improving antenatal care seeking included increasing community awareness of its importance through TBAs and community organizations and improving the availability of antenatal services by linking with the vaccination outreach or by training community health workers to provide antenatal services.

**Table 8 Preventive Home Health Practices**

Indicator	Kebele					Overall Proportion <sup>1</sup> and 95% CI
	Ashoka	Wicho	Dola	Demble	Shurmo	
Women who made at least two antenatal visits for the last pregnancy	5/42 NA	12/42 NA	3/42 NA	11/42 NA	17/42 NA	23% ± 6% (N=210)
Women using a modern method of birth control	0/42 NA	5/42 NA	0/38 NA	0/42 NA	1/42 NA	4% ± 4% (N=206)
Households with soap available	21/42 NA	28/42 A	7/42 NA	22/42 NA	21/42 NA	47% ± 6% (N=210)
Households using covered narrow-necked containers for storing and transporting water	6/42 NA	8/42 NA	0/42 NA	1/42 NA	6/42 NA	10% ± 4% (N=210)

Notes: CI=Confidence interval; NA=Not acceptable; A=Acceptable; N=Sample size

<sup>1</sup> Weighted for population size

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A very low proportion of women of childbearing age was using a modern method of contraception. Attitudes towards contraception varied greatly among the communities. In some communities, women stated that they did not want to limit family size in any way, whereas, in others, they recognized that it was important (often because land availability was limited) and expressed a desire to learn more. Principal constraints on more widespread use of contraception included a lack of demand for these services and, where a demand might have existed, a lack of information and services. In several of the communities, there appeared to be a lack of communication between men and women, with women reporting that men do not want to limit family size and men reporting that it is important. In those communities believing that it was important to limit family size, there was a need for better education on the options and approaches towards contraception and a need for programs to facilitate communication within families.

Almost half of the households had soap available in the house. Although this survey did not allow a detailed analysis of handwashing behavior, the majority of communities reported that handwashing with soap was not practiced regularly. The primary constraints to handwashing included a lack of awareness of its importance, problems keeping hands clean when there were young children in the house, a lack of water for washing hands, and the cost of soap. It was acknowledged in some communities that handwashing could be improved with available resources by increasing awareness of its importance.

A low proportion of households stored and transported water in covered, narrow-necked water containers. Water quality was identified as an important issue in all communities, although there was very little awareness of the importance of storage and transport for improving water quality. In general, water was collected in open-necked containers and removed by dipping into these containers, young children often placed their hands into water containers used for storage. Constraints on improving this practice included the lack of suitable containers, their expense (an open-necked clay water container costs approximately 6 Birr whereas a plastic jerry can with a narrow-mouth costs approximately 60 Birr), and a belief that it is important to regularly clean the inside of containers manually (impossible to do with a narrow-necked container). Strategies suggested for improving this practice were better education of families and the production of narrow-necked clay pots by local potters.

### ***Treatment at Home***

The caretakers of any child 0–23 months who had been sick in the two weeks before the survey were asked questions about the management of their child during the illness (see table 9). In order to be included in the sample, children had to have had at least one of the following symptoms or diagnoses: fever or malaria, watery or bloody diarrhea, cough, fast or difficult breathing or pneumonia, or measles. Caretakers were asked about the medication given for the illness, feeding of the child during the illness, and care given at home for the child. A low proportion of caretakers was giving or had given medication according to the national treatment guidelines. While the dose per day was often adequate, medicines were usually dispensed for an insufficient number of days. Constraints on giving a full course of medications included poor instructions from health workers, inability to afford a full course, and the saving of medicine for the next illness.

In general, caretakers did not give fluids (including breast milk) or food appropriately during the illness. In order to be considered appropriate, fluids or breast milk had to be increased during the illness and food had to remain the same or be increased. Constraints on giving fluids or food included a perception that fluids and food should be reduced during the illness, lack of demand from infants and children, and a lack of awareness of the importance of this issue. Overall, only 41 percent of caretakers reported doing

**Table 9 Home Treatment of Infant and Child Illnesses**

Indicator	Kebele					Overall Proportion <sup>1</sup> and 95% CI
	Ashoka	Wicho	Dola	Demble	Shurmo	
Children 0–23 months, sick in the last two weeks given oral medications correctly	2/11 NA	1/8 NA	1/15 NA	4/11 NA	1/6 NA	17% ± 11% (N=51)
Children 0–23 months, sick in the last two weeks given fluids appropriately during the illness	3/37 NA	2/26 NA	10/36 NA	3/33 NA	2/36 NA	11% ± 5% (N=168)
Children 0–23 months, sick in the last two weeks given food appropriately during the illness	2/37 NA	8/25 NA	0/25 NA	4/33 NA	11/19 NA	26% ± 7% (N=139)
Children 0–23 months sick in the last two weeks, who received any home treatment	11/37 NA	5/26 NA	17/36 NA	10/33 NA	12/36 NA	41% ± 7% (N=168)

Notes CI=Confidence interval NA=Not acceptable, N=Sample size

<sup>1</sup> Weighted for population size

anything at all in the home for their child when the child was recognized as being sick. There appears to have been a low awareness of the potential importance of home management of sick children. Strategies proposed to improve the management of sick children included improving awareness by training community health workers to educate caretakers and improving the prescription of drugs and counseling in how to take drugs at home by health workers. In some communities, pharmacists and drug sellers were important sources of medication, and it was suggested that these groups be better trained to prescribe medication according to national treatment guidelines and to counsel caretakers in how to take drugs properly.

### Care Seeking

Most caretakers were able to list at least two signs for seeking care (see table 10) from the following list: fever, lack of interest in playing, refusal to eat or drink, fast or rapid breathing, convulsions, drowsiness or change in consciousness, and unwell appearance. It is less clear how this knowledge translated to actual care-seeking behavior. Even when the signs and symptoms of illness were recognized, there were often other constraints on taking children to health facilities, including distance, lack of time to visit a

**Table 10 Caretaker Knowledge for Seeking Care**

Indicator	Kebele					Overall Proportion <sup>1</sup> and 95% CI
	Ashoka	Wicho	Dola	Demble	Shurmo	
Caretaker knowledge of at least two signs for seeking care for their children	39/42 A	22/42 NA	42/42 A	33/42 A	34/42 A	78% ± 5% (N=210)

Notes CI=Confidence interval NA=Not acceptable A=Acceptable N=Sample size

<sup>1</sup> Weighted for population size

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health facility, and inability to afford medications. Most communities proposed improving the availability of services to communities by providing more outreach and by reactivating community health workers.

### **Priorities and Strategies**

A summary of the health problems and health behaviors prioritized by the communities and an overview of strategies proposed for addressing these problems in each community is outlined below. Communities identified similar priority child health problems. The most important health problems of children identified by communities are summarized in table 11. In general, community members and health staff agreed on the most important causes of mortality and morbidity.

Ten emphasis behaviors were prioritized by the five focus communities. These are summarized in table 12.

Communities and health staff were encouraged to develop action plans that were feasible with existing resources and structures. In general, approaches developed in communities focused on the household (the knowledge and behavior of caretakers), the broader community (supports required to sustain or enable household behaviors, such as the availability of soap or community health workers), and the health facility (health worker knowledge and practice and the availability of medications). The emphasis behaviors provided a focus for program planning, although there was considerable overlap between strategies and actions plans. For example, limited availability of services was a constraint for obtaining measles and TT vaccinations, ANC, and medications, and sometimes hindered appropriate care-seeking behavior. Availability was limited both because facilities were not geographically accessible and because some health facilities did not provide quality services.

Strategies developed by different communities had a number of similarities. At the health facility level, a need was recognized for greater integration of services to reduce missed opportunities for immunization and ANC screening. Counseling and health education by health workers on several primary health care

**Table 11 Results of Free Listing and Ranking,  
Ethiopia Community Assessment and Planning, January 1997**

<b>Health Problem</b>	<b>Number of Communities Ranking as Important</b>
Diarrhea	5
Malaria	4
Malnutrition	4
Pneumonia, cough	3
Measles	2
<i>Sorkopha</i> tonsillitis	2
Scabies skin problems	1
Eye problems	1

**Table 12 Selected Behaviors by Communities,  
Ethiopia Community Assessment and Planning, January 1997**

Behavior	Number of Communities Selecting
Breastfeed exclusively	4
Seek antenatal care	4
Seek measles vaccination at 9 months	3
Store and transport water in narrow necked covered containers	3
Administer treatment medicines according to instructions	3
Provide appropriate complementary feeding	2
Continue feeding and increase fluids during and after illness	2
Use a modern method of contraception	1
Seek tetanus toxoid vaccination	1
Wash hands with soap at appropriate times	1

topics were often cited as important. In communities, a need was recognized to involve community-based health workers and community groups in conducting health education and motivating community members to seek services. Both facility- and community-based health workers needed more training, especially in the areas of counseling and health education. Improved community organization and participation were recognized as important for supporting household behavior change. Most communities wanted to involve such existing community groups as churches, mosques, and schools in health work. Some expressed a need for support groups such as health and nutrition groups.

The need to develop incentives for community health workers was addressed in all communities and considered essential to sustaining health worker performance. Community groups discussed the development of revolving drug funds or central community funds for supporting community health workers. They also discussed nonmonetary incentives such as regular training and farming assistance for community health workers and their families. Other frequently raised issues included the need for community health posts for community health workers and the need for improved sources of safe water. Most community action plans included provisions to address these problems in a limited fashion, all construction activities were negotiated with communities so that labor and resource inputs were shared as much as possible.

An overall summary of community strategies is presented below.

### ***Improved Quality and Availability of Health Services***

- Conduct ANC screening during vaccination sessions
- Check immunization status of mothers and children during sick child visits
- Improve patient-provider interactions

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- Improve prescribing practices
- Identify TBAs and CHAs
- Build a community health post

### ***Training***

- Train first-level health workers in primary health care tasks
- Train CHAs and TBAs in essential community-level tasks that focus on the emphasis behaviors

### ***Community Organization and Participation***

- Form health committees and nutrition groups
- Involve schools, churches, and extension workers in health education
- Establish a health fund to be administered by the peasant association
- Encourage men to assist women with chores
- Contribute labor and material for health post
- Persuade potters to produce narrow-necked water pots

### ***Health Education***

- Teach how to take medication correctly
- Teach about vaccine-preventable diseases and vaccine side effects
- Teach and demonstrate the use of local weaning foods
- Teach the importance of exclusive breastfeeding
- Teach the importance of ANC and TT vaccination
- Teach about the danger signs for appropriate care seeking

## Next Steps

Intensive follow-up is the key to the success of any community intervention. It is hoped that the community assessment and planning approach will help encourage follow-up by involving communities, local health staff, and project staff in the planning process. A strength of this approach is that it encourages the allocation of responsibilities among all three groups according to what each can realistically contribute. Nevertheless, the critical elements to continuing this process in the short term are project resources and technical support. For example, local health staff and communities will need assistance in retraining community health workers and developing and implementing health education strategies before they will be convinced that they can implement and manage programs on their own. In the longer term, it will be important that health staff and communities can have the skills to identify health problems and develop plans to solve them.

Both the community and the MOH teams felt a sense of ownership of the process and felt that the information collected was accurate. The fact that the process resulted in concrete action plans rather than a research report was critical to the success of this approach. These action plans enabled everyone, but especially the MOH and community teams, to respond to the question “What will you do with all this information you are collecting?”

During the fieldwork, much of the process was intuitive and easily internalized by both health staff and community members. At the end of the process, the MOH teams completed an evaluation of the activity. When asked if they could repeat the method on their own, at least half the participants felt they could do all of the procedures except one (manual tabulation of indicators) without additional training and most of the others felt they could do them with a little more help. The majority of respondents reported that they expected to use the procedures in their work in the coming months. Similarly, with the exception of matrix ranking and scoring and manual tabulation of indicators, more than half the respondents felt they could teach the methods to others without any assistance. These results suggest that these methods are simple and streamlined enough to be used routinely. Since this is the first time that this process has been field-tested, BASICS will review the experience in detail to make modifications.

## Lessons Learned

An understanding of the advantages and disadvantages to the community assessment and planning approach is important when considering this method. Table 13 highlights some of the features and limitations of the method.

Four key features of community assessment should be considered when planning its use. First, this assessment is not designed to produce community participation or empowerment in a broad sense. During the process, an attempt was made to be aware of the existing power relationships in communities and to identify and involve the most vulnerable groups, but it is unlikely that this process alone will change those relationships. Second, this approach is unlikely to produce sustained changes in how health staff interact with community members. Ongoing training and supervision will be necessary for this to occur. Third, because limited data are collected, it is not possible to investigate the complex sociocultural aspects of each behavior. The purpose of the data is to allow sound program decisions. Fourth, this process is not a blueprint or recipe for health planning. The menu of behaviors, the specific methods

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used, and the sequence and timing of these methods (whether conducted for 10 days as in this survey or for a longer period) must be modified and adapted to local situations. For example, there is no guarantee that drawing a social map and holding a public meeting will create rapport and generate a sense of partnership. The goals of each of the four phases (building partnerships, selecting behaviors, exploring reasons for the behaviors, and developing an action plan) are overall guidelines of key steps to follow.

This approach does represent a change in the way that health planning is done at the local level. Currently, most program decisions are made without using local data and without any community involvement. The community assessment process teaches health staff some concrete skills for collecting and using data with community members. The menu of emphasis behaviors worked well as a framework for focusing discussions in communities because maternal and child health issues were an important priority in these communities, although not always the top priority (for example, the availability of water was often perceived as more important). Simple quantitative and participatory methods that can be implemented quickly with a minimum of resources make this method feasible for local health staff.

Although the emphasis behaviors provided a focal point for planning, the suggestions for changing these behaviors were not just limited to individual behavior change issues (such as health education for mothers), they also highlighted the need to change organization and support in the community itself and to improve the quality of care available at health facilities. As a consequence, health staff were made aware of the impact of their own policies and practices on members of the community. In this way, this assessment and planning process could begin to change the relationship between health staff and community members (see figure 13).

**Table 13 Features and Limitations of Community Assessment and Planning**

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### **The Community Assessment and Planning Process—**

<b>Does—</b>	<b>Does Not—</b>
Teach health staff to <b>learn from and listen to</b> community members	Change existing power relationships within a community
Give communities and health staff <b>boundaries</b> and a focus for the discussions (emphasis behaviors)	Create sustained changes in the attitudes and behavior of health staff towards communities
Use the emphasis behaviors as a way to <b>open up discussion</b> of constraints (cultural, social, environmental)	Produce in depth information on cultural belief systems on any of the behaviors
<b>Use data</b> and <b>community priorities</b> to decide health activities	Produce quantitative data that is generalizable beyond the communities where it is collected
<b>Foster a better relationship</b> between health staff and communities	Constitute a blueprint for better health planning

**Figure 13**

*The health center's clinical officer listens while women discuss their health priorities [Ethiopia]*



# Annex A. Zambia Experience in Community Assessment and Planning for Maternal and Child Health Programs: A Participatory Approach

This annex describes the use of the community assessment process in Zambia <sup>6</sup> In Zambia, the process resulted in (1) a community action plan for two villages, (2) a risk map showing indicators for each child under 2 years of age, and (3) trained staff at national, district, and health center levels (three districts) At the end of the workshop, each district identified additional health centers for training in this approach Four health centers were selected in Chama, four in Lundazi, and five in Chipata for training and implementation of this approach

One of the “pillars” of the Zambian health reform is the promotion of partnership between health facilities and communities Ideally, health facilities should engage communities in developing health facility work plans, which are then incorporated into the district work plans In practice, communities are rarely involved in the planning process because they lack skills and resources BASICS is providing technical support to the Ministry of Health (MOH) in community partnership through the Zambia Child Health Project (ZCH), the bilateral agreement between USAID and the government of Zambia This workshop was conducted to support the MOH’s effort to increase capacity in the area of community partnership

There were five key differences between the approach in Zambia and that used in Ethiopia

- 1 The assessment process was a two-week training workshop with six days of fieldwork in a nearby community (about 60 households) The workshop was held in Chipata in the Eastern Province of Zambia The district had selected Jerusalem Health Center to participate in this initial training activity The community activities were carried out in two adjacent villages, which are about seven kilometers from Jerusalem Health Center
- 2 Workshop participants included MOH staff from the national level who will be responsible for supporting and advocating such approaches The workshop also included the staff from three districts and from the health center where the community was located
- 3 Because the community was very small, all households with a child under 2 years old were selected for the household survey This method was therefore a census of all households with young children and did not use a sampling method to select a subset of households This approach can only be used when the number of households in the community is small enough to allow them all to be visited
- 4 A risk map was developed and presented to the community during the final public meeting This map indicated every household of the community with a child under 2 Four indicators were selected on the basis two criteria (1) practices directly related to actions that will be implemented by the project, and (2) behaviors most useful for targeting high-risk households for specific activities (e g , campaigns and participation in nutrition groups) On the map, next to each house, the indicators were color coded as shown in table A-1 so the community could

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<sup>6</sup> In Zambia, this process was called the Joint Health Facility Community Problem Solving Process

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**Table A-1 Color Coding of Risk Indicators**

<p><b>Feeding a sick child</b>            Red=Child not fed appropriately            Green=Child fed appropriately</p>	<p><b>Measles vaccination</b>            Red=Child 9–23 months not immunized            Green=Child 9–23 months fully immunized            Yellow=Child 0–8 months old</p>
<p><b>Using a narrow-necked container for water</b>            Red=Not using a narrow necked container            Green=Using a narrow-necked container</p>	<p><b>Antenatal visits</b>            Red=Fewer than two visits in last pregnancy            Green=At least two visits in last pregnancy</p>

visually monitor its progress on those indicators. In this way, everyone in the community could see which households were at risk.

5. In addition to participatory methods of assessment, Venn diagrams were drawn to show community organizations and movement of goods and services in and out of the community. The suggested checklist for Venn diagrams is as follows:

- Community-based organizations by type and membership (initiation groups, funeral groups, development committees)
- Local political structures (elders, chiefs, peasant associations, elected officials)
- Outsiders who visit the community on a regular basis
- Religious groups
- Traditional healers and TBAs

A number of lessons emerged from the Zambia experience. Through this process, the health facility staff, with support from their district supervisors, decided to make a number of changes in the way their facility operates. For example, the staff decided to subsidize exercise books for recording patient information when they discovered that children without exercise books were not being brought for care for fear of being scolded. The facility staff also decided to negotiate the clinic hours of operation with the community to better suit the seasonal variations in agricultural work. For these types of decisions, it was critical to have the involvement and support of the district and national level MOH staff. When communities are small enough for every household to be shown on a map, the risk map provides a visual way for the community to monitor its own progress as the colors of the indicators change from red to green.

# Annex B. Description of Participatory Procedures

(Note All of the methods described in Annex B are examples of participatory learning and action procedures that have been used around the world on many topics For more details on the theory, philosophy, and actual techniques of the procedures, see Chambers [1994a, 1994b, and 1994c] and Pretty et al [1995] )

## Social Mapping

Social mapping (as opposed to mapping of natural resources) is used to show spacial relationships between where people live and work and the resources available in the community Maps are drawn on the ground by groups of men and women (separately or together) using locally available materials First, participants are asked to draw a map of their community that includes anything they feel is important Then the facilitator asks for additional features according to the checklist (e g , sources of water, churches, and schools)

## Free Listing and Ranking of Children's Health Problems

Separate groups of men and women are asked to list all the health problems of children They are then asked to rank the six most important health problems by the most common and by the most severe They do this by placing different numbers of berries or corn on symbols representing the health problems according to their perceived frequency or severity

## Semistructured Interviews

A semistructured interview is a one-on-one interview using an interview checklist to guide the discussion of particular topics This approach allows the order and wording of questions to change as needed during the interview Probing questions are also added This method differs from in-depth interviews because topics are not explored as thoroughly and usually a person is interviewed only once rather than three to five times

## Matrix Ranking and Scoring

The purpose of matrix ranking and scoring is to understand how people (either individually or in a group) compare different alternatives Usually the alternatives are presented to (e g , emphasis behaviors) or generated by (e g , weaning foods) the group and symbols are placed on the ground to represent each alternative The criteria for comparing these alternatives are then decided, and these may be given to (e g , importance and feasibility of the emphasis behaviors) or generated by (e g , different characteristics of weaning foods) the group Matrix ranking uses beans or corn to rank the importance of each alternative according to the predetermined criteria In matrix scoring, each item is scored against the criteria on a scale of 1–10 or 1–5 (This can also be done with free scoring in which no scale is given )

## **Seasonal Calendar**

The purpose of a seasonal calendar is to clarify the seasonal variations in work and resources. Using available materials such as sticks, corn, or leaves, groups of men and women make simple diagrams to show the seasonal variations of work in the fields, work at home, availability of food, times of income, times of expenditure, times of debt, times of illness, and access to health facilities. The specific categories to be explored depend on the behavior selected and the checklist developed.

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