ENVIRONMENTAL HEALTH PROJECT

# Strategic Report 8
# Assessing Hygiene Improvement
## *Guidelines for Household and Community Levels*

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The guidelines are capable of being used as a stand-alone, hardcopy document, but they also can be used in interactive electronic form for the following reasons:

- ☞ Elements of hygiene improvement relate directly to relevant indicators
- ☞ Appropriate model questions are linked to specific indicators
- ☞ One can quickly move to the parts of these guidelines of greatest interest

Readers who are interested in the interactive electronic form may want to pay particular attention to the section.

### FEEDBACK

Monitoring and evaluation is an essential function in any type of program. However, the availability of guidelines and reference materials will vary greatly among programs. For example, several guidelines and measurement instruments exist for child health programs that build on standard indicators and methods of data collection and are widely used by private and public institutions. The same level of guidance is not available for interventions focusing on water supply and sanitation and hygiene promotion. The guidelines for assessing hygiene improvement intend to strengthen the systematic assessment of these interventions by suggesting indicators and survey questions that are appropriate at the household and community levels. Some of the proposed indicators and survey questions have been validated through numerous monitoring and evaluation experiences, while many others have been used occasionally and found useful for informing programmatic decisions. As more hygiene improvement interventions are monitored and evaluated, new experiences will help to refine and improve indicators and survey questions. The authors would like to encourage users of these guidelines to share their experience and contribute to future revisions of these guidelines.

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## ABOUT THESE GUIDELINES

Hygiene Improvement is a comprehensive approach to prevent childhood diarrhea through a combination of improving access to water and sanitation hardware and household technologies, promoting proper hygiene, and strengthening the enabling environment to ensure the sustainability of hygiene improvement activities. Hygiene improvement interventions can be implemented within the context of health programs such as community child health or programs of other sectors (e.g., education, agriculture, water and sanitation, or environment).

The Assessing Hygiene Improvement Guidelines are part of a series of publications intended to strengthen the planning, implementation and evaluation of hygiene improvement interventions. They are intended for use both in programs with a broad child health agenda and in programs with a principal focus on water and sanitation.

Their purpose is to help program planners and managers design, implement and evaluate water supply, sanitation, and hygiene interventions. Primary users would include managers, program personnel, and consultants. Public institutions, local government organizations, nongovernmental organizations, and community organizations also will find these guidelines equally informative. The material may be useful to students of environmental health and social and behavioral sciences as well.

The Assessing Hygiene Improvement Guidelines provide easy access to up-to-date information about appropriate indicators and data collection instruments that are necessary to evaluate water supply, sanitation, and hygiene interventions. The guidelines describe 66 indicators and propose approximately 360 model survey questions for measuring hygiene improvement comprehensively at the household and community levels and at institutions such as schools and health facilities. The indicators and survey questions are based on the best available knowledge from numerous surveys, including the Demographic and Health Surveys and instruments focusing on water supply, sanitation, and hygiene used by the Environmental Health Project (EHP) and the London School of Hygiene and Tropical Medicine. The selection of indicators and assessment questions is just one step in a longer process (e.g., use of a household survey), which is explained later in this document (see Section A).

These guidelines will help users in planning and conducting the following evaluation tasks:

- Perform a situation analysis and needs assessment to inform an overall strategy and programming options
- Develop a performance monitoring plan with indicators and data collection instruments
- Establish a baseline for current hygiene practices and develop a behavior change and communications strategy
- Assess the current handling of water and plan interventions to improve the quality of drinking water in the home and at institutions
- Assess community capacity to sustain hygiene improvement interventions

- Develop tools for self-assessment and supervision of hygiene improvement interventions
- Assess the mid-term progress of hygiene improvement interventions
- Measure disparities in access and hygiene behaviors between population groups of different social, economic, or cultural characteristics (e.g., urban slums, ethnic origin, single parent or female-headed households)
- Evaluate the impact of hygiene improvement at the end of a program cycle

Users should be aware that these guidelines and instruments are not intended as blueprints, but rather as a menu to choose from and adapt according to the field context and user's needs. Indicators that best fit programmatic needs may already be defined here, and others can be added indicators that use additional survey questions shown in this document. See "Using These Guidelines for a Situation Analysis and Needs Assessment" for examples.

Not all components of the Hygiene Improvement Framework are equally covered in these guidelines. For example, the guidelines do not address public policies and regulations, nor do they include a full range of measurements associated with water supply, sanitation, and hygiene at the community level, especially related to the operation and maintenance of water and sanitation services and other technical issues. Certain model questions are more applicable in a rural context, while corresponding questions for an urban environment still need to be developed and tested. The model questions address only very basic information about water quality.

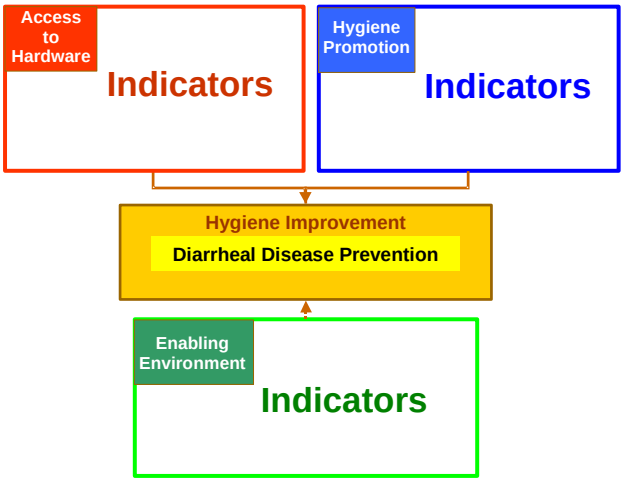
While these guidelines are for quantitative data collection, program managers can choose other methods to collect their data as well. Regardless of the mix of data collection methods used, the most important outcome will be that programs use the information to set priorities, design interventions, develop plans of action, and evaluate progress.

## ABBREVIATIONS

| | |
|---|---|
| C-IMCI | Community Integrated Management of Childhood Illnesses, or, increasingly known as "community child health" |
| CT | Caretaker |
| DHS | Demographic and Health Survey |
| EHP | Environmental Health Project |
| FANTA | Food and Nutrition Technical Assistance project |
| GMP | Growth Monitoring Programs |
| HH | Household |
| HF | Health Facility |
| HI | Hygiene Improvement |
| HIF | Hygiene Improvement Framework |
| JMP | Joint Monitoring Programme (of WHO and UNICEF, for monitoring of water supply and sanitation) |
| KPC | Knowledge, Practice and Coverage |
| Lcd | liters per capita per day |
| LQAS | Lot Quality Assurance Sampling |
| LSHTM | London School of Hygiene and Tropical Medicine |
| MDG | Millennium Development Goal |
| MICS | Multiple Indicators Cluster Survey |
| OCA | Organization Capacity Assessment |
| O&M | operations and maintenance |
| SC | Schoolchildren |
| SF | Safe food |
| SW | Safe water |
| UNICEF | United Nations Children's Fund |
| USAID | United States Agency for International Development |
| WASH | Water and Sanitation for Health initiative of the WSSCC |
| WSSCC | Water Supply and Sanitation Collaborative Council |

# PART A. UNDERSTANDING THE ASSESSING HYGIENE IMPROVEMENT GUIDELINES

## What is "hygiene improvement"?




Hygiene improvement is a comprehensive approach to prevent childhood diarrhea. It is a combination of improving access to water supply and sanitation hardware and household technologies, promoting hygiene, and strengthening the enabling environment to ensure the sustainability of hygiene improvement activities (Click on the framework to see a description of each component or to go to the corresponding indicators).

Implementing several of the hygiene improvement components simultaneously seems to yield the greatest health impact and reduces child morbidity by up to two thirds. Hygiene improvement interventions can be implemented within the context of health programs, such as community child health, or programs of other sectors, such as education, agriculture, water and sanitation, or the environment.

All hygiene improvement indicators are organized according to the components of the Hygiene Improvement Framework and presented in the **Diagram of Indicators**, which serves as the road map to guide the selection of indicators and survey questions.

The following color coding is used throughout the document to indicate the components of the Hygiene Improvement Framework to which indicators belong:

| | | |
|---|---|---|
| | Yellow | Health Impact and Essential Family Practices |
| | Red/Orange | Access to Hardware and Household Technologies |
| | Blue | Hygiene Promotion |
| | Green | Enabling Environment (sustainability) |
| | Pink | Institutional Sanitation and Hygiene |

## Why is it important to evaluate hygiene improvement interventions?

The evaluation of hygiene improvement programming has two primary purposes: (1) to obtain information for improving the program; and (2) to demonstrate whether the program made a difference. Evaluation objectives must be clearly defined in the project design phase, well before program implementation. Evaluation may include one of two broad types: process evaluation and summative or outcome evaluation.

- Process evaluation is more appropriately done through monitoring and refers to measuring quantity, quality and reach. Quantity refers to the volume of materials produced or activities conducted as well as the extent to which implementation conforms to the original plan of action. Quality refers to the appropriateness of the messages/activities and to the reaction of the intended audience to the communication interventions, be they mass media or interpersonal in nature. It answers the question "Did the activities address what they were intended to address?" Reach entails measuring in quantitative terms (1) the absolute numbers exposed to the intervention components, and/or (2) the percentage of the intended target audience who has seen or heard a message (i.e., can recite the story line of a spot or identify the logo) or has participated in an event such as a community rally clearly identifiable with the program.

- Summative/outcome evaluation answers one of three questions:

  - Did the desired change occur?
  - Is the change attributable to the program?
  - What is the cost per unit of change (cost effectiveness)?

- The objective of the program will determine the outcome variables to be included in summative evaluation, including changes in hygiene behavior and community actions for hygiene improvement and initial outcomes, such as changes in knowledge, self-efficacy, skills, access and other factors that often precede actual behavior change. By tracking such variables, it is often possible not only to determine whether the program achieved the desired change, but also to identify the pathways that led to the change. This type of evaluation shows "what works" and helps to guide future programming.

- These guidelines are intended for summative/outcome evaluations, which are generally more difficult to design and implement than process evaluations. However, programs need to ensure that an appropriate monitoring system and instruments are in place to evaluate the implementation process, and these guidelines can help in developing simple process indicators.

**Purpose of the Assessing Hygiene Improvement guidelines**

The **ASSESSING HYGIENE IMPROVEMENT** guidelines aim to help program planners and managers design, implement and evaluate water supply, sanitation, and hygiene interventions. They are intended for use both in programs with a broad child health agenda and in programs with a principal focus on water and sanitation.

These guidelines provide easy access to up-to-date information about appropriate indicators and data collection instruments that are necessary to evaluate water supply, sanitation, and hygiene interventions. Measurements of key indicators play an important role during the program management cycle, beginning with a situation analysis and baseline data collection, and ending with impact evaluations. During the implementation phase of programs, the monitoring of performance and progress toward established targets becomes an essential

activity. The collection of quality data about hygiene improvement is an important step toward a greater use of information, for example, to develop hygiene improvement program strategies and work plans, design community participation and mobilization approaches, and prepare monitoring and evaluation plans.

The ASSESSING HYGIENE IMPROVEMENT guidelines are part of a series of publications intended to strengthen the planning, implementation, and monitoring and evaluation of hygiene improvement interventions. Publications in addition to these guidelines include the Hygiene Improvement Framework Advocacy Document and the Programming Guide for Behavior Change.

## Users of these guidelines

- These guidelines are primarily intended for those responsible for designing, implementing, and monitoring and evaluating hygiene improvement interventions. Users would include managers, program personnel, and consultants.
- Public institutions, local government organizations, nongovernmental organizations (NGOs), and community organizations should find these guidelines equally informative.
- Extension workers and community members will require support and training in the use of these guidelines.
- Students of environmental health and social and behavioral sciences may also find the material useful.

User Scenario I: Small NGO Project

An NGO implements a maternal and child health program in 15 urban slums in India covering a population of approximately 50,000. It decides to add the promotion of handwashing with soap and household water treatment to reduce the frequent number of diarrhea episodes in children under 5. The program manager uses these guidelines to add 6 hygiene improvement indicators and 40 related questions to his baseline survey to be conducted in 210 households. He estimates that the costs for collecting and analyzing the additional data will be covered by the total costs of $10,000 for the survey.

## Structure of the guidelines

The guidelines describe 66 indicators and pose approximately 360 model survey questions for measuring hygiene improvement comprehensively at the household and community levels and at institutions such as schools and health facilities. The indicators and survey questions are based on the best available knowledge from numerous surveys, including the Demographic and Health Surveys and instruments focusing on water supply, sanitation, and hygiene used by the Environmental Health Project (EHP) and the London School of Hygiene and Tropical Medicine. These guidelines have four closely related parts:

**A.** For a quick overview of a wide range of household- and community-level indicators measuring hygiene improvement, go to the **DIAGRAM OF INDICATORS FOR ASSESSING HYGIENE IMPROVEMENT.** This one-page presentation of all 66 indicators has direct links to model survey questions and to the detailed description of each indicator.

**B.** For more background information about diarrheal disease and the Hygiene Improvement Framework, go directly to Part B, **MONITORING HYGIENE IMPROVEMENT.**

**C.** For a detailed description of all 66 indicators, go to the section on **HYGIENE IMPROVEMENT INDICATORS**. It contains direct links to the model survey questions necessary to collect data for each indicator.

**D.** To discover how some of these hygiene improvement indicators can be used for an initial situation analysis and needs assessment to inform programming options, go to **USING THESE GUIDELINES FOR SITUATION ANALYSIS AND NEEDS ASSESSMENT**.

**E.** To select survey questions from many possible options, go to Part C, **MODEL SURVEY QUESTIONS.** It contains a comprehensive list of questions for measuring hygiene improvement at the household level (about 220 questions), community levels (about 85 questions), and institutions such as schools and health facilities (about 66 questions):

- Household level **(HYGIENE IMPROVEMENT HOUSEHOLD SURVEY QUESTIONS).** The household questionnaire begins with information on the household (identification, census of people living in the household, socioeconomic data, household assets). This is followed by questions relating to three major components of hygiene improvement and diarrhea prevalence: access to safe water, access to improved toilet facilities, and hygiene practices.
- Community level **(HYGIENE IMPROVEMENT COMMUNITY SURVEY QUESTIONS).** The community questionnaire collects information about the enabling environment, the fourth component of hygiene improvement, including community assets, water supply and sanitation systems, community management and financing, and hygiene promotion activities.
- Institutional Sanitation and Hygiene (**RAPID HEALTH FACILITY ASSESSMENT: HYGIENE IMPROVEMENT MODULE**). Suggested model questions for schools can be included in a household questionnaire, although a separate assessment instrument for schools would be preferable. Such an instrument that assesses basic hygiene improvement conditions is included for health facilities.

  **Note**: The model questions used to assess community capacity are very different from those used in the household survey. The purpose of the latter is to collect quantitative data; community questions are designed to obtain qualitative and descriptive information on some important issues or to perform statistical tests. The model questions are meant to be used only as a guide, and a final survey instrument should provide an opportunity to record responses in short hand. (The final instrument is not shown here to conserve space.) The coding categories may help users to summarize the narrative information, which is notoriously difficult.

Finally, to start with a complete sample household questionnaire that can be easily adapted to specific needs, go to the **SAMPLE HOUSEHOLD QUESTIONNAIRE.** This questionnaire uses fewer than 60 model questions to collect the information for 10 essential hygiene improvement indicators and has the following structure:

- ✓ Identification and household characteristics (head of household)

- ✓ Census of all people living in the household
- ✓ Access to water supply and toilet facility, water storage and treatment, handwashing with soap (caretaker of a child under 36 or 60 months)
- ✓ Feces disposal, diarrhea prevalence, diarrhea management and care seeking (child under 36 or 60 months)
- ✓ Observation of handwashing supplies and toilet facility

**User Scenario II: Large Multi-country Program**

A group of NGOs supported by donors and foundations implements a program improving water community supplies in three countries in West Africa covering a population of approximately 1.5 million. Because of the number of partners involved, it becomes necessary to develop an overall monitoring and evaluation plan with a few agreed-upon performance indicators that would apply to all program areas and would be reported by all implementing partners. Approximately $100,000 per country is available for baseline data collection. The monitoring and evaluation specialist who leads the development of the monitoring and evaluation plan uses these guidelines to propose six essential hygiene improvement indicators with a detailed description including data sources and reporting frequency. As a next step, a baseline survey is designed that will be implemented in 1,000 households in each country using 100 model questions from these guidelines.

**How can these guidelines be used?**

- The guidelines are both a planning and a monitoring and evaluation instrument.
- The guidelines provide a reference source for measuring progress in hygiene improvement.
- The two lists of model questions are only a catalog from which to select those questions necessary to construct an assessment instrument. They are ***not*** questionnaires.
- A complete sample **HYGIENE IMPROVEMENT HOUSEHOLD SURVEY QUESTIONNAIRE** is provided separately. It contains 10 of a total of 66 indicators included in these guidelines and uses fewer than 60 model questions.
- Indicators and model questions are a guide, not a blueprint, and can be adapted for specific program needs. See Do's and don'ts in adapting or changing questions and indicators for guidance.
- Indicators and model questions are suitable for both gathering baseline data and monitoring impact and effectiveness at national, district, or community levels.
- Information is not included on generic surveying issues such as sampling, questionnaire testing, supervision and training, data analysis, or water testing, although references for these topics are provided.
- The guidelines can be used with indicators and survey guides for other health programs such as maternal and child health, nutrition, or HIV/AIDS, as well as for surveys in other sectors such as education or agriculture.
- Organizations working exclusively in the water and sanitation sector may use these guidelines alone or jointly with broader sector assessment tools that capture infrastructure investments as well as data from water and sanitation utilities about operations and maintenance.

These guidelines will help in planning and conducting the following monitoring and evaluation tasks:

- Perform a situation analysis and needs assessment to inform an overall strategy and programming options
- Develop a performance monitoring plan with indicators and data collection instruments
- Establish a baseline for current hygiene practices and develop a behavior change and communications strategy
- Assess the current handling of water and plan interventions to improve the quality of drinking water in the home
- Assess community capacity to sustain hygiene improvement interventions
- Develop tools for self-assessment and supervision of hygiene improvement interventions
- Assess the mid-term progress of hygiene improvement interventions
- Measure disparities in access and hygiene behaviors between population groups of different social, economic, or cultural characteristics (e.g., urban slums, ethnic origin, single parent or female-headed households)
- Evaluate the impact of hygiene improvement at the end of a program cycle

**User Scenario III: Health District**

Health zones in the Democratic Republic (DR) of Congo implement hygiene promotion as part of their community child health program (a.k.a. C-IMCI). A typical health zone covers a population of approximately 50,000–200,000. Proper handwashing with soap, disposal of feces, and storage of household water are the priority interventions. Approximately $50,000 is available for formative research and collecting baseline data about hygiene improvement. With assistance from the School of Public Health in Kinshasa, formative research is used to define the behavior change and communications approach. The same group uses the findings from the formative research for adapting 60 model questions in these guidelines to develop the hygiene improvement portion of a larger child health baseline survey in three health zones with a total sample of 1,200 households.

**User Scenario IV: National Level**

An African country with a population of 35 million decides to establish a more accurate assessment of access to safe water and basic sanitation and compare poor areas with others. About $500,000 is available for designing and implementing a national survey of hygiene improvement. Planners in the two ministries responsible for water and sanitation and the ministry of health get together and use these guidelines together with other references to plan the survey. They decide to conduct separate cluster sample surveys of 500 households in each of the 10 different socioeconomic regions of the country, but each region will use the same hygiene improvement questionnaire with about 80 questions. A survey preparation team starts by selecting indicators and model questions from these guidelines and goes through an adaptation process involving a medical research council and universities to conduct the necessary formative research.

Depending on whether the monitoring and evaluation take place at the national, district, or community level, the scope and depth may vary substantially. While the focus at the national and district levels may be on health impact, essential family practices, and access to improved water and sanitation hardware, more detailed information may be collected at the community level that is closely related to program activities such as household water disinfection, hygiene behaviors and knowledge, channels of communication, and community capacity. Regardless of the level

where hygiene improvement is measured, a good starting point would be the 10 essential indicators used for the **HYGIENE IMPROVEMENT HOUSEHOLD SURVEY QUESTIONNAIRE**.

The selection of indicators and assessment questions is just one step in a longer process (e.g., use of a household survey), which is summarized below. Several of these steps are important to ensure that all necessary data are collected for indicators relevant to a program, but also to ensure that the assessment is not burdened by unnecessary questions. While similar steps to those previously mentioned are involved for planning and conducting an assessment, the process will be less involved for an initial situation analysis and needs assessment than for a household survey. Steps where these guidelines can be used primarily are marked with an *. Other steps will require additional documents as references.

- *Select key indicators based on program objectives and expected results.
- *Determine what data are needed to measure the selected indicators and the information required for selecting a sample.
- Develop the overall design for the assessment including geographic focus, methods of data collection, sampling approach, personnel needs, budget, and assessment plan, indicating deadlines and responsibilities. This should take into account the purpose of the assessment, required levels of precision, resources, and information available.
- *Develop an assessment instrument based on model questions related to each indicator.
- *Clarify limitations of the selected indicators, questions, and data collection methods.
- *Develop an assessment guide including an annotated instrument and training materials.
- Sample selection based on available information about the study population.
- Develop a data entry and analysis plan.
- Translate the assessment instrument and retranslate into the original language to correct translation errors.
- Train the assessment team, which may include enumerators, interviewers, supervisors, field coordinators, and data entry personnel, as well as support staff such as drivers and secretaries.
- Pilot the assessment instrument and make final corrections.
- Conduct the survey.
- Perform data entry and analysis according to the analysis plan and prepare a report and presentation.
- Present findings; discuss the experience from conducting the assessment and lessons. Disseminate results.
- *Plan subsequent assessments taking lessons learned into account and ensuring the comparability between assessments done at different times and in different locations.

## Looking for clusters of hygiene practices in the analysis

Whether hygiene improvement interventions have a health impact can usually not be determined by examining the results for a single indicator. Instead, users of these guidelines may want to look for clusters of hygiene practices that show improvements. The literature suggests that there may be a threshold consisting of multiple factors before any health impact can be observed in field settings (Arimond and Ruel, 2002). For example, while handwashing has been shown to be very effective in a controlled environment, it may take several other measures to interrupt the fecal-oral transmission of pathogens and observe an impact on diarrhea prevalence. The additional measures would include the use of improved toilet facilities by all members of a household, the use of potties by young children, using an improved source for drinking water, storing drinking water safely, and safe food handling. All these together and handwashing with soap could form a cluster of hygiene practices. In the analysis such a cluster is often expressed in the form of an index. The index is constructed by adding up the score for each practice in the cluster, which is similar to the process described for the safe water management (see "Percentage of households that practice safe drinking water management") and food management indicators (see the indicator "Percentage of caretakers who practice safe food management"). These indices for clusters of behaviors have been shown to be more closely related to health outcomes than individual hygiene practices within the cluster.

## What additional information might be useful when assessing hygiene improvement?

These guidelines do not include information about survey design and implementation, such as sampling, supervision, logistics, budgeting, questionnaire testing, enumerator and supervisor training, data analysis, and water testing. To yield valid and reliable information, use of the sampling process is critical in selecting households to be interviewed. Commonly used survey designs that are also applicable to hygiene improvement involve these three types of sampling procedures:

- ✓ *Cluster sampling* — involves a systematic sampling process that is rapid and less costly than a true random sample, but yields less precise estimates and generally only for the program as a whole. Typical applications involve households at the district or national levels. Questionnaire size varies widely. Teams external to the program often carry out cluster sample surveys.
- ✓ *Lot Quality Assurance Sampling (LQAS)* — takes small random samples from many different communities or some other relatively small sampling unit and yields local as well as programwide estimates. It employs short questionnaires, is usually carried out by program personnel, and serves as capacity building.
- ✓ *Purposeful selection* — might be used by community workers or supervisors for spot visits to a few households. Because it does not involve any form of random sampling, it may serve as rough orientation, but it cannot objectively ascertain progress or change in a way that is grounded in survey science.

Excellent reference materials exist for designing and conducting household surveys using the first two types of sampling approaches. They are available on the CD-ROM that accompanies these guidelines.

These reference materials provide those who are planning and implementing a household survey with estimates of an appropriate sample size depending on the sampling approach chosen. The size of a sample determines the precision of the estimate for each indicator. A common cluster sample survey includes 210 households per district—30 clusters with seven households per cluster—or some other larger sampling unit, and yields a precision of roughly ±5%. LQAS surveys may include as few as 100 households to as many as several hundred households, depending on the number of survey units. Often communities or some other smaller sampling unit is involved with approximately 20 households per survey unit, and the LQAS survey will yield a precision of ±5% or better. If comparisons between different population subgroups are involved, the sample size may have to be considerably larger for either of these two sampling approaches.

The community questionnaire will commonly be applied to only a small number of residents, which may range from as few as five to 30 or more. It could be most useful to gather data from the same communities where households are interviewed. Community data therefore would complement the information collected from households and could be used to validate some of the residents' responses. The information collected from the community questionnaire is usually more qualitative than that collected from households.

*Formative research* or some form of a *consultative process* with the population covered by a program is important for the adaptation of these guidelines (see Do's and don'ts in adapting or changing questions and indicators). Formative research can include many tools such as focus groups and structured interviews or observations. The results of the formative research are essential for adapting questions and coding categories that reflect local conditions, practices, and terminology.

Additional survey information is available from other sources listed in the **REFERENCES** section.

## What are the limitations of these guidelines?

These guidelines and instruments are not intended as blueprints, but rather as a menu to choose from and adapt according to the field context and user's needs. Not all components of the Hygiene Improvement Framework are covered in these guidelines. For example, the guidelines do not address public policies and regulations, nor do they include a full range of measurements associated with water supply, sanitation, and hygiene at the community level, especially related to the operation and maintenance of water and sanitation services and other technical issues. The model questions address only very basic information about water quality such as the presence of free chlorine, and for detailed information about water quality testing, users may want to refer to appropriate WHO guidelines.

While these guidelines are for quantitative data collection, program managers can choose other methods to collect their data as well. Data that are collected through surveys are generally quantifiable, precise, and able to be analyzed using powerful statistical tests. But surveys that collect much data are costly. Much information can be gathered through qualitative methods, which tend to be more participatory and less costly, if kept simple. Qualitative methods serve formative purposes well, but they are not suitable for measuring progress or impact. Regardless of the mix of data collection methods used, the key is that programs use the information to set priorities, design interventions, develop plans of action, and monitor progress.

**Do's and don'ts in adapting or changing questions and indicators**

The design and implementation of water supply, sanitation, and hygiene interventions varies widely, which makes it necessary to adapt these guidelines to the specific program context in which they are to be used. This adaptation not only concerns the selection of indicators and survey questions, but coding categories for a survey question as well. While the coding categories included with each model question reflect the experience from multiple surveys in various geographic and cultural environments, the categories will need to be adapted to the context of each specific program. These guidelines are designed for adapting survey questions and for developing different types of assessment instruments with a minimum amount of effort and expense. The model questions provide a solid basis for the adaptation, which helps programs to avoid "reinventing the wheel" and to improve survey questions to yield information of greater validity and reliability. Users wanting to adapt indicators and model questions should consider the following points to ensure that their adaptation yields the best quality possible:

- ✓ Although these guidelines are not considered to be a blueprint, it is important to systematically select questions from the model questionnaire that are related to specific indicators. In many instances, it will be essential to use more than one survey question to collect all the information needed to obtain an estimate for a particular indicator. If fewer questions than those suggested are used, the information collected may become different from the indicator or it may become unusable. While there are different ways to formulate questions, the attempt to reduce the number of questions used often leads to asking complex questions that are error prone and more time-consuming for the interviewer and the interviewee. The advantage of using a slightly longer list of questions is that questions can remain clear, simple, and quick to answer. The reader is therefore encouraged to maintain the suggested set of questions for a specific indicator.

- ✓ Many of the model questions can be asked as stated during household interviews, but if users want to simplify the language, they need to be careful not to change the meaning of the question in the process. For example, one model question to assess the continuity of water supply reads as follows:

  - ★ In the last 2 weeks has the water from this source been unavailable for at least 1 whole day? (Coding Categories: *yes*, *no*)

This question will result in very different answers if asked in the following manner:

★ In the last two weeks, how frequently has water been available from your principal source? (Coding Categories: *all the time, several hours every day, a few times a week, less frequently, not at all*)

Or, if the question was as follows, the answers would be different again:

★ Were there any times when there was no water? (Coding Categories: *yes, no*)

The last version of the question is very easy to answer, but not very informative, because it does not offer a timeframe. The second version is more difficult to ask and answer, which will take more time and may not be very accurate. The original question is a pragmatic compromise between simplicity, accuracy, and usefulness, and is the preferred version for assessing the continuity of water supply. This question implies a minimum standard that water should be available to households on a daily basis.

Why does it matter how survey questions are asked? First, it determines how easy or difficult it is for the respondent to answer the question, and this influences the accuracy and reliability of the answer. Generally, it will be easier for people to provide rough estimates than to give precise numbers, unless the information can be taken from records such as a water bill. Second, in the example above more detailed coding categories may not necessarily yield more useful information than a simple yes or no answer would. Third, the original question seems to work well according to survey experience; therefore, it is used more frequently. This allows surveys to be compared, which would otherwise be impossible, if everyone used different questions to assess the continuity of water supply, even if the differences seemed minor.

Should a program want a precise estimate of the number of days a household was without water, it would be better to ***add*** the question to the original question dealing with frequency rather than to replace that question. In this way, the survey results could still be compared with others, and the program manager would have more specific information.

✓ How survey questions are asked influences the validity and reliability of the information obtained from the interviewee. A survey question often used asks what the interviewee "usually" does when a child passes stools. This will solicit a different answer than asking, "What did you do the last time your child passed stools?" The former tends to solicit an answer that the interviewee feels might be expected by the interviewer, especially where a program already promotes safe feces disposal practices. The latter might come closer to the interviewee's true behavior, although it still elicits an imperfect response. Using some formative and participatory research will make the adaptation more precise and relevant to the local context. A pilot test of the assessment instrument will show any issues of comprehension, relevance, and reliability.

✓ Specific model questions need to be adapted to the local context. For example, not all coding categories for water sources or toilet facilities may apply, and those that do

not should be eliminated. However, it is essential that coding categories cover all possible responses and do not overlap. Another example is community mobilization, where the range of community events and structures will depend on the approach implemented by a program. The coding categories in the model questionnaires are mere examples. Using some key informant interviews will make the adaptation more precise and relevant to the local context. A pilot test of the assessment instrument will show any issues of comprehension, relevance, and completeness.

The number of responses that can be recorded for a specific question is very important in analyzing survey results. For most questions only one valid answer is accepted, which is indicated in the questionnaire by using **numbers as coding categories**. For example, people are asked about their *main* or *principal* water source, and only one source will be recorded, although they may use more than one. If multiple answers were allowed, it would be impossible to know which of all the sources mentioned is used most frequently. Only by knowing where households get most of their water can the link to the family's health be made and can programs improve water sources effectively. It would be possible to ask people to rank all the sources they use, but this would require considerably more time. Sometimes all possible answers are of interest, and questions that allow multiple answers have **letters as coding categories** in the questionnaire.

- ✓ In most applications, questionnaires need to be translated into the local language. This may be another source of error during the adaptation process that should be avoided. To minimize the risk of changing questions and coding categories during the translation, the entire assessment instrument should be retranslated back into the original language—English in this case. This will show any discrepancies that need to be addressed.

- ✓ Asking about an event or behavior that happened not too long ago, preferably within 24 hours or less, reduces the chance for error, as one's memory tends to be less accurate the longer the recall period. Limiting the recall period to 24 hours, which is roughly equivalent to the coding categories "today" and "yesterday" combined, is appropriate for many behavior questions where the event happens daily or more frequently. A longer recall period is necessary for events that happen less frequently; for example, whether or not a child had diarrhea is assessed for the two weeks prior to the survey. Most children in developing countries go for weeks without any incidence of diarrhea, and limiting the recall period to one day would yield too few cases of diarrhea for a meaningful analysis of the survey data. However, in situations where children have frequent episodes of diarrhea, the two-week prevalence can be complemented by the question of whether the child has diarrhea at the time of the survey. The same-day prevalence allows for a cross-validation of the two-week prevalence. It is not advisable to extend the recall period to more than two weeks, because survey research has shown that responses become much less reliable.

- ✓ Programs often focus on specific interventions such as promotion of handwashing with soap or point-of-use water treatment. However, even in these circumstances,

additional important aspects of hygiene improvement should be assessed, because their status will most likely influence the outcome of the actual interventions. For example, messages about the hygienic disposal of children's feces may rely on the fact that prior activities have promoted the construction of latrines. Even though the current program may not build latrines, it would be essential to assess their presence and condition. The impact handwashing has on diarrhea prevalence is likely to be different depending on whether the means to safely dispose of feces exists or not.

- ✓ Finally, survey questions that rely on interviewee recall will always be unreliable to a more or lesser degree, depending on the period for the recall, the importance of the object of inquiry to the respondent, the sensitivity of the subject, and the level of privacy or anonymity afforded to the respondent. Many behaviors are notoriously over-reported by respondents, especially when they are aware of desirable behaviors. The reliability of measurements of hygiene behaviors can be improved in several ways, but two methods have been used successfully during household surveys and seem feasible for routine application. The first method, pocket voting, allows interviewees to respond in anonymity by inserting an item such as a pebble or piece of paper into a pocket that corresponds to a specific behavior. The second method, spot observations, lets interviewers check some household characteristics that are conditions for or the result of a hygiene behavior. For example, it is much more accurate to observe what type of toilet facility is used by a household and whether the floor and other exposed surfaces are free of visible fecal matter, than to ask the interviewee. Similarly, it will be more reliable to see the soap that is available to the household than to rely on an answer only. Users of these guidelines are encouraged to use pocket voting and spot observations instead of questions that rely on recall whenever feasible to improve upon the reliability and validity of household surveys. The following sections explain both methods, pocket voting and spot observations, in greater detail.

**Pocket voting**

Instead of asking the interviewee a question about a hygiene practice and reading out possible answers, pockets are prepared, for example, on a small board with a diagram for each pocket that depicts the corresponding response. The respondent is given one pebble or piece of paper for questions where only one response is allowed (and multiple voting items where multiple responses are possible). The respondent is asked the question and then permitted to cast his or her vote in privacy. This process can be repeated for several household members with each member given the necessary items to cast the vote. It is important that the question and each response option is well understood to yield valid results. Pocket voting can perform well with sensitive issues where respondents would not volunteer a true answer in the presence of other household members or the interviewer. The disadvantage is that pocket voting takes more time to explain and for the voting itself than a question and direct answer.

**Spot observations**

Household surveys rely mainly on questions and interviewee recall than on the direct observation of physical characteristics. Rarely do they include the direct observation of hygiene behaviors. The reasons why household surveys mostly ask questions and record the answers provided by interviewees are that questions are faster to complete than observations and less intrusive. However, the greatest disadvantage of interviewee recall is that there is often little agreement between what people will say that they do and what they actually do (Arimond and Ruel, 2002). Research has shown that the degree of discord between recall and actual practice depends on the subject matter. For example, when comparing recall with observations, the answers of caretakers who were asked about where their child defecated the last time were more reliable than answers to the question about what happened to the feces of children who did not use a toilet facility. Most caretakers largely overstated the safe disposal of feces (Lanata et al., 2004).

Based on the unreliability of interviewee recall especially of essential hygiene practices, structured observations in the household would be the ideal alternative. Researchers have used lists of specific actions as a structure for observing people directly in their household environment for hours at a time and repeated the observations on different days. Unfortunately, structured observations are time consuming, costly and intrusive. They also require a higher level of skills than asking survey questions and recording the answers. The greater skills are especially necessary for minimizing the undesirable effect that people who are observed behave differently than they normally would, which is also called the *Hawthorn effect*. Structured observations have other limitations as well. Most people do not behave the same way every time that such a behavior could be expected. For example, a woman may wash her hands before preparing food at lunchtime, but may not do so in the morning or evening. Her handwashing behavior may vary from day to day depending on other chores that she carries out. Because structured observations are time limited, they may not accurately reflect the "normal" or "typical" hygiene practice. The observation of handwashing technique has been promoted as one of the few structured observations in household surveys (Billig et al., 1999). An indicator and a list of relevant actions to observe is included in these guidelines. Usually the caretaker of children under five is asked to show how she washes her hands. Because this is a demonstration, it cannot be known whether the caretaker practices the proper handwashing technique all the time.

Because of these difficulties to conduct structured observations routinely, it is suggested that household surveys to assess hygiene improvement programs use <u>spot observations</u> as a practical and reliable alternative. The difference between spot observations and structured observations is that the former observe a conditional element for or the result of a behavior rather than the behavior itself. Useful spot observations for assessing hygiene improvement include:

- Presence of soap (a necessary condition for washing hands with soap)
- Storage containers for drinking water that have a narrow neck (compared to a template that corresponds to a 3 centimeter wide opening) and are covered (as a result of households practicing safe water storage)

- Presence of residual chlorine in drinking water stored in the households (as proof that households treat water appropriately where such methods are available and where water is not treated in the supply system)
- Type of toilet facility (as a necessary condition for using an improved toilet facility)
- Presence of fecal matter on exposed surfaces inside the toilet facility (as a condition that enables use)
- Clear access to a toilet facility (as a condition for use, but also as a result of use such as a well worn path leading to the facility)
- Food storage in covered containers and out of reach for children (as a result that food hygiene is practiced)
- Clean floors in cooking area (as a sign that food is prepared in a hygienic environment)
- Clean cooking utensils (as a result of washing utensils)
- Cleanliness of caretaker's clothes (as a general sign of cleanliness)
- Feces-free yard or household floors (as a result of a hygiene practice)
- Cleanliness of the child's face (as a result of washing a child's face to prevent trachoma)
- Fingernails without dirt (as a result of handwashing and cleaning)
- Presence of garbage and disposal facility
- Presence of livestock and other animals in the house and yard where children play (as a potential cause for fecal-oral infection)
- Measurement of nutritional status (as an additional health outcome measure for hygiene improvement to complement the measurement of diarrhea prevalence, which relies entirely on recall)

Not all these spot observations are included in these guidelines, because many have been used only sporadically in household surveys, and a health impact has yet to be established for many.

Spot observations have several advantages when compared to recall or structured observations:

- More reliable than recall
- Much less intrusive and costly than structured observations
- Require fewer skills
- Not as much affected by people reacting to the presence of an observer

Spot observations have some limitations, but these do not outweigh the disadvantages of recall and structured observations:

- Do not measure actual behaviors
- People may prepare for the survey and show a greater level of compliance with hygiene practices than they normally would
- The characterization of some conditions by the interviewer may be subjective (e.g., whether a neck of a container is narrow), which can be minimized with training, simple measurement tools and illustrations

- The status of some conditions will depend on the time of the day when the interviews are conducted and not necessarily be indicative of poor hygiene. For example, cooking utensils may still be soiled right after the main meal of the day, or fingernails may be clean early in the morning, but dirty in the afternoon when people return from the field or from other work and had not yet had time to wash.

## HELPFUL HINTS FOR USING THIS DOCUMENT

This is an interactive document intended mainly for electronic distribution, but it can be used in printed form as well. It contains many hyperlinks that take you directly from one part of the document to another. The mouse pointer becomes a pointing "hand" when it moves over hyperlinked text. (In the newest versions of MS-Word press the CTRL-key to see the hand. A reminder pops up when the curser is moved over a hyperlink. This can be changed to show the hand without pressing the CTRL-key through the menu under Tools, Options, Edit Tab and un-checking “Use CTRL+click for hyperlink”.) Click on the hyperlink and it will take you to the place indicated. Most of the links are **blue** and turn **plum** when clicked on for the first time; some will remain blue. The following parts of the document have hyperlink features:

- Table of Contents: click on a heading to move to the chapter or section (**in grey**)
- Indicators in the Indicators Diagram (in **blue**): click on the indicator to move to the indicator description in PART B
- Question Number References in the Indicators Diagram (in **blue**, hidden): click on the question number following each indicator to move to the model question in PART C
- Model Questions for each indicator (in **blue**): click on a question to move to the question in PART C
- References to the Indicators Diagram and Model Questions in the text of PART A and C (in **blue**)
- Indicator Number references in Model Questions (in **blue**): click on the number following the word "Indicator" to move to the Indicator in the **Diagram of Indicators** in PART A
- Indicator Number references in Model Questions (in **pink**, hidden): click on the number to move to the indicator description in PART B

You can easily move back and forth between the origin (where you clicked on a link) and the destination (where the link took you) by using the two arrow buttons on the WEB toolbar in MS-Word (works just like in the Internet browser). To display the WEB toolbar, go to Tools->Customize->Toolbars Tab and check the Web Toolbar.

Some of the links are "hidden," as indicated, to reduce the level of detail when printing the document. To see hidden links on screen or to print them, change the settings in the MS-Word menu: Tools->Options->Show Tab and Print Tab. Check "hidden text" under each Tab, if you want to see and print hidden hyperlinks, or uncheck both or one, if you do not.

The following information may be useful if you want to work within the document. The document makes extensive use of style formats, bookmarks, and cross-references (which can be seen when turning on the MS-Word option to View Field Codes). The advantage of this is that changing the order of or inserting new indicators and questions updates all references to existing ones automatically throughout the document. Deletions may render some cross-references invalid and display an error in its stead, which can be deleted safely. To see the new numbering after a change, select the entire document (CTRL-A or from the Edit Menu) and press the F9 key, then check “update entire table” when asked about updating the table of contents. This will renumber all cross-references momentarily.

# DIAGRAM OF INDICATORS FOR ASSESSING HYGIENE IMPROVEMENT

**Health Impact Indicator** (page 37)**:**
**Essential Family Practices:**

**0.1 % of children < 36 months of age with diarrhea in the last 2 weeks**
**0.2** Percentage of caretakers washing hands properly with soap and at appropriate times
**0.3** Percentage of children whose feces were disposed safely
**0.4** Percentage of households that practice safe drinking water management
**0.5** Percentage of caretakers who practice safe food management

**Priority Indicators**

## 1. ACCESS TO HARDWARE (page 52)

**1.1** Percentage of HHs with access to improved water sources
**1.2** Percentage of HHs that had principal water source available daily for past two weeks
**1.3** Percentage of HHs where time to collect water is 30 minutes or less
**1.4** Percentage of HHs with access to an improved and hygienic toilet facility
**1.5** Percentage of HH with access to handwashing place with essential supplies

**Supporting Indicators**

*Community Water Systems*
**1.6** Percentage of HHs that have sufficient quantities of water (20 liters per capita per day)
*Note: adapt quantity to local minimum standards*
**1.7** Percentage of HHs with access to improved water sources during dry and wet seasons

*Sanitation and Solid Waste*
**1.8** Percentage of HHs that have child-friendly feces disposal facility
**1.9** Percentage of HHs that have a hygienic solid waste disposal system

*Household Technologies & Materials*
**1.10** % of HHs that have soap
**1.11** Percentage of HHs that have water-treatment supplies
**1.12** Percentage of HHs that use a safe method for transferring drinking water from a container
**1.13** Percentage of HHs that have covered and narrow-neck water storage containers

**HH** – households **CT** – caretakers
**SC** – schoolchildren **HF** – health facility
**Model questions:** **H** – household
**C** – community **F** - facility

**How To Use This Menu**
This is an interactive document, meaning it contains hyperlinks between indicators and Model Questions; for example, click on a number to go to the corresponding survey questions, or, in the model questionnaire, click on the Indicator number to go to the indicator in this diagram; click on the indicator text to go to the description. Links are in blue text, but they may be hidden. To see them on screen or to print them, change settings in Tools->Options->Show Tab and Print Tab.

## 2. HYGIENE PROMOTION (page 66)

**2.1** % of CT who report having used soap for handwashing at least at two critical times during past 24 hours
**2.2** % of HHs using improved toilet facilities

*Communication*
**2.3** % of CT who had been reached about water, sanitation, or hygiene during past month
**2.4** % of CT who heard about hygiene promotion
**2.5** % of CT who recall at least one hygiene message
**2.6** % of CT who report that messages are understood and useful
**2.7** % of CT doing a recommended hygiene practice

*Knowledge & Attitude*
**2.8** Percentage of CT who know at least two ways to prevent diarrhea
**2.9** Percentage of CT who know at least two danger signs of diarrhea
**2.10** Percentage of CT who know how to treat drinking water
**2.11** Percentage of CT who know at least two reasons why it is important to wash hands with soap
**2.12** % of CT who know critical times for handwashing
**2.13** Percentage of CT who say that the community can do something together to prevent diarrhea

*Reported Behavior*
**2.14** % of HHs using a properly cleaned toilet facility
**2.15** % of CT who clean their water storage containers at least once per week
**2.16** % of CT who have participated in community hygiene promotion activities

INSTITUTIONAL SANITATION AND HYGIENE (page 95)

*Schools*
**3.22** % of SC with basic sanitation
**3.23** % of SC with separate facilities for boys & girls
**3.24** % of SC with access to handwashing facility
**3.25** % of SC learning about sanitation and hygiene
**3.26** % of SC who know two ways to prevent diarrhea

*Health Facilities*
**3.27** % of HF with access to an improved water source
**3.28** % of HF with improved, hygienic toilet facility
**3.29** % of HF with adequate medical waste disposal
**3.30** % of HF that use auto-disable syringes
**3.31** % of HF with adequate handwashing facility
**3.32** % of HF with adequate pest or vector control

## 3. ENABLING ENVIRONMENT (page 81)

HOUSEHOLD LEVEL
**3.1** % of HHs that know whom to contact if problem exists with water system
**3.2** % of HHs that know of water/san. committee
**3.3** % of HHs that participate in water/san. committee
**3.4** % of HHs involved in water/sanitation problem-identification & problem-solving exercises
**3.5** % of HHs paying full share of water user fee

COMMUNITY LEVEL
*Financing & Cost Recovery*
**3.6** Community has clearly defined water fee structure designed to cover recurrent costs
**3.7** % of recurrent costs recovered from user fees
**3.8** Percentage of HHs that pay full share of water fee (verification of 3.5)
**3.9** Community has three-month operating reserve for water system emergencies
**3.10** Community has a financial management system in place and functioning

*Community Management*
**3.11** Water system performs properly, giving community regular, continuous water supply
**3.12** Percentage of tested water sources at established standards
**3.13** Community organization functioning effectively to manage operations & maintenance of water supply systems
**3.14** Committee has clearly defined responsibility for overseeing both water supply and sanitation
**3.15** Committee meets regularly
**3.16** Committee meetings are conducted properly and decisions fully recorded
**3.17** Committee has capacity to oversee hygiene activities

*Community Behavior Change Capacity*
**3.18** Mechanism exists to carry out effective hygiene promotion
**3.19** Community has gone through a mobilization exercise
**3.20** A trained person or organization is responsible for carrying out hygiene behavior change activities
**3.21** A close linkage exists between local person(s)/ organization(s) & health personnel

# PART B. MONITORING HYGIENE IMPROVEMENT

## Chapter I. Introduction

Without appropriate guidance, programs are left to their own devices when defining indicators and developing appropriate assessment instruments. While some programs such as child health have well-established standards and detailed guidelines, hygiene improvement intervention programs generally do not. Like any other programs, hygiene improvement interventions are context specific and vary in objectives and scope. Although consensus has been reached about coverage indicators for water supply and toilet facilities, other important hygiene improvement elements such as hygiene behaviors or community capacity as a measure of sustainability do not have standard indicators. This lack of consensus has resulted in a multitude of survey instruments with numerous indicators and countless questions, and although they show some similarity, offering little evidence concerning their validity and reliability.

To close this gap and provide a practical reference for program personnel, USAID's Environmental Health Project (EHP) collected a broad range of documents and survey instruments related to water supply, sanitation, and hygiene. This included surveys carried out by the first EHP and its predecessor, the Water and Sanitation for Health (WASH) project; Demographic and Health Survey (DHS); Knowledge, Practice and Coverage (KPC) Survey 2000+; UNICEF's Multiple Indicator Cluster Survey (MICS); and a water supply and sanitation sector assessment tool developed by the London School of Hygiene and Tropical Medicine in collaboration with the Water Supply and Sanitation Collaborative Council and EHP. Other important documents included in the review were the *Water and Sanitation Indicators Measurement Guide* and the Joint Monitoring Programme (JMP) definitions for water supply and sanitation coverage.

EHP's review of these documents and instruments resulted in a list of about 500 survey questions that showed at least some degree of difference from each other, although several measured the same concept. The list of indicators was much shorter at 30, which meant that an indicator had not even been formulated for most survey questions. A group of hygiene improvement experts then developed a comprehensive set of 66 hygiene improvement indicators (see Diagram of Indicators) based on the three components of the Hygiene Improvement Framework: Access to Hardware, Hygiene Promotion, and Enabling Environment. They described each indicator and its operations in detail, including a concise definition and an explanation of important issues related to measurement and interpretation.

Experts then reduced the list of questions to about 220 by eliminating those questions that had low validity and reliability based on experience. Each hygiene improvement indicator was then matched with one or more of the model survey questions. As a result, these guidelines clearly match indicators with model questions. However, once this process had been completed, model questions still remained for which an indicator had not been defined because their use could be limited to special circumstances. Individual programs that may find these model questions useful are left to define their own appropriate indicator.

Although the household model questions adequately represent the hardware and hygiene promotion components of the Hygiene Improvement Framework, they do not sufficiently cover the enabling environment, because a household survey is not a suitable instrument to collect information about policies, institutions, or communities. To address this need, organizational development experts assisted in developing a separate list of about 85 model questions for the community level with the intent that these questions would collect qualitative, not quantitative, information from key informants. Nevertheless, coding categories similar to the household survey were added to facilitate the summarizing of a large amount of narrative information. Finally, about 65 model questions where developed for institutions such as schools and health facilities to assess basic conditions of water supply, sanitation and hygiene situation. It is important that these institutions and others serving the public meet minimum standards to not harm the people they serve and be models of hygiene improvement.

**Other Products to Assist Hygiene Improvement Programming**

These guidelines describe indicators and model questions related to the Hygiene Improvement Framework. EHP has developed the following additional guidelines to assist managers in planning and managing hygiene improvement interventions:

- A guide for planning all aspects of the behavior change and communication component [Joint Publication 7. Improving Health Through Behavior Change: A Process Guide on Hygiene Promotion. PAHO/EHP (2004)]
- Participatory community monitoring that describes a methodology for programs and communities to monitor progress and assess community participation, which includes qualitative methodologies and techniques [Strategic Report 9. Participatory Monitoring & Evaluation for Hygiene Improvement, Beyond the Toolbox: What else is required for effective PM&E? A Literature Review /EHP (2004)]
- Hygiene Improvement Advocacy document that explains the importance of diarrheal disease prevention through hygiene improvement [Joint Publication 8. The Hygiene Improvement Framework—A Comprehensive Approach for Preventing Childhood Diarrhea. EHP/UNICEF/World Bank/WSSCC (2004)]

# Chapter II. Preventing Diarrheal Disease through Hygiene Improvement

## The Burden of Diarrheal Disease

The loss of young life around the world due to diarrhea is devastating, and it is even more tragic for being almost entirely preventable. It is well known, for example, that more than 80% of the cases of diarrhea worldwide are the result of fecal-oral contamination. The Bellagio Child Survival Study Group lists water supply, sanitation and hygiene as one of the top ten proven preventive interventions for deaths of children under five (Jones et al. 2003). Indeed, it is estimated that up to two thirds of all the incidents of diarrhea in children could be avoided (Bateman et al. 2002) through readily available and inexpensive hygiene improvement interventions already in use in a number of developing countries (Clasen and Cairncross, 2004; Curtis et al. 2003; Hutley et al. 1997).

Annually, diarrhea accounts for the deaths of over 1.6 million children under 5—or about 15% of all deaths of children under 5 in developing countries (World Health Organization (WHO) 2002). These deaths are mostly due to diseases caused by contaminated food and water, the principal causes of diarrhea. Far too many children are dying from diseases that can be prevented through access to clean water and sanitation. At the dawn of the 21st century, some 1.1 billion people worldwide are still without access to a safe water supply and more than 2.4 billion are without adequate sanitation (WHO/UNICEF 2000). The average young child in the developing world, be it Asia, sub-Saharan Africa, or Latin America, experiences four to five episodes of diarrhea per year (Murray and Lopez 1996). Diarrhea also directly and adversely affects children's nutritional status, with malnutrition contributing to approximately half of all deaths in children under 5 in developing countries. Despite the significant decrease in mortality figures from diarrhea over the past two decades due to improvements in the treatment of dehydration, the number of deaths and the burden of disease are still unacceptably high (Murray and Lopez 1996). At the same time, the disease's related burdens on the family must be considered: mother's time to care for sick children, cost of treatment (medicines, transport, plus charges at the health facility), as well as lost work, lost wages, and the loss of productivity by the working members of the household (Guerrant et al. 2002).

To achieve significant progress in reducing the number of deaths attributed to diarrhea, its underlying causes must be addressed. It is estimated that 90% of all cases of diarrhea can be attributed to three major causes: inadequate sanitation, inadequate hygiene, and unclean water (WHO 1997). For further progress to be made in the fight against diarrhea, the focus will need to include prevention, especially in child health programs that can integrate diarrhea prevention through hygiene improvement in feasible and cost-effective ways.

## Causation

The fight against diarrhea in children under 5 has played an important part of child survival programs since their inception several decades ago. Efforts are typically concentrated on three types of intervention: managing the disease, improving resistance to the disease, and preventing the disease. The first approach, *case management* of diarrhea, has been extremely successful in

recent years in reducing child mortality. The primary means of achieving impact has been through the introduction and implementation of oral rehydration therapy—the administration of oral rehydration solution and continued feeding (both solid and fluid, including breast milk). In addition, health experts have emphasized the need for caretakers to detect the danger signs early in children under their care and to seek timely, appropriate care to prevent severe dehydration and death.

The second approach, increasing *host resistance* to diarrhea, has also had some success with the improvement of a child's nutritional status and vaccination against measles, a common cause of diarrhea. In addition, nutrition interventions, including Growth Monitoring Programs (GMP) and behavior change and communication efforts that increase birth weight, promote exclusive breastfeeding and the introduction of quality complimentary foods, promote frequent feedings, and ensure that children intake an adequate amount of micronutrients (especially vitamin A), have helped improve resistance to the disease.

The third element, *prevention* through hygiene improvement, is the focus of these guidelines. Although the health care system has dealt extensively with the symptoms of diarrhea, it has done little to reduce the overall prevalence of the disease. Despite a decline in deaths due to diarrhea, morbidity or the health burden due to diarrhea has not decreased, because health experts are treating the symptoms but not addressing the causes. Thus, diarrhea's burden on the health system, its effects on household finances and education, and its added burden on mothers have not been mitigated. These guidelines have therefore been developed in an effort to launch effective campaigns against diarrhea, striking at its three major causes: inadequate sanitation, poor hygiene, and unsafe water. Programs in numerous countries have demonstrated that interventions can and do reduce diarrhea morbidity. A vital component of successful prevention efforts is an effective monitoring and evaluation strategy and that is the focus of these guidelines. They provide managers of hygiene improvement programs with the means to track progress and achieve (as well as substantiate) results.

**Infection Pathway**

To prevent diarrhea, its causes must first be fully understood. The means by which people contract the disease are well known and are summarized and simplified in the "F diagram" (Wagner and Lanois 1958), as shown in Figure 1. This diagram describes the numerous paths by which the causal agent in diarrhea, human and animal feces, makes its way directly or indirectly to the host.

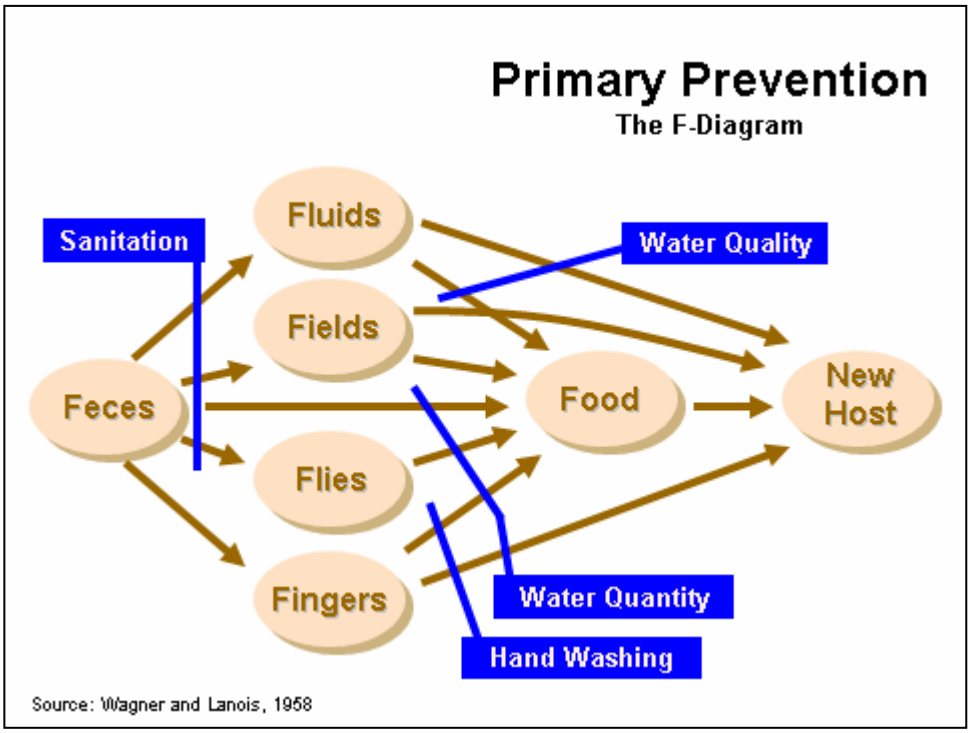



**Figure 1. The "F Diagram"**

Diarrhea can be contracted through the following five paths:

Fluids — carry disease through contaminated water
Fields — become contaminated by outdoor defecation
Flies — carry and transmit diseases
Fingers — become contaminated by bacteria that transmit disease
Food — becomes infected by fluids, flies, or fingers and then ingested

To reduce the prevalence of diarrheal disease, the paths have to be blocked. To be successful, health improvement projects and programs typically adopt and implement four preventive approaches:

- Disposing of all feces safely through improved sanitation
- Improving water quality
- Providing sufficient water quantity
- Handwashing with soap

The more paths that can be blocked, the more effective the program will be.

Hygiene improvement interventions are very effective according to the evidence from published literature. The following summarizes health benefits from improved water supply, sanitation and hygiene:

- A 30–50% reduction in the burden of diarrheal diseases is achievable through feasible primary prevention—improvements of water supply, sanitation and hygiene (Esrey et al. 1991; World Bank 1993; Curtis and Cairncross 2003).

- A recent analysis of 21 controlled field trials related to point-of-use (POU) water treatment and safe water storage at the household level, showed a reduction of 42% in diarrheal disease compared with other groups (Clasen and Cairncross 2004).

- A literature meta-analysis has found that the single hygiene practice of handwashing with soap is able to reduce diarrhea incidence by over 40% and intestinal infections (cholera, dysentery, hospitalized diarrheas due to other causes) by over 50% (Curtis and Cairncross 2003).

**Hygiene Improvement Framework**

A comprehensive approach to preventing diarrhea must address the three key elements of any successful program to fight disease: access to the necessary hardware or technologies, promotion of healthy behaviors, and support for long-term sustainability.

Mindful of the need to combat diarrhea on its multiple fronts, USAID's diarrhea prevention strategy, known as the Hygiene Improvement Framework (Figure 2), has these three core components:

- Improving access to water and sanitation "hardware"
- Promoting hygiene
- Strengthening the enabling environment

The three components are described in more detail in Figure 2 and will assist program managers in appreciating what makes a program effective in improving hygiene and how it should be evaluated. [Click on the following figure to go to (a) description (small solid box); or (b) the indicators (large box) for a component of the Hygiene Improvement Framework]

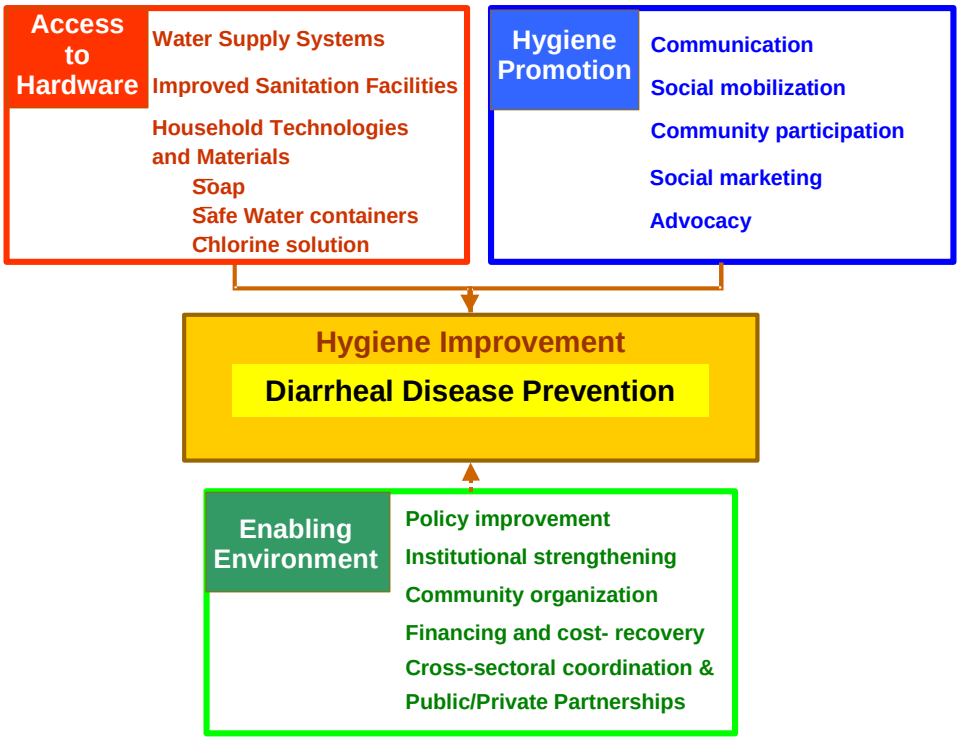



**Figure 2. Hygiene Improvement Framework**

While a comprehensive approach (combining hygiene promotion with increased access to hardware) is encouraged for maximum impact, selective or sequential approaches (e.g., starting with hygiene promotion) can be effective entry points in child, maternal, and other health programs.

1. **Improving access to hardware —** The first part of the Framework, the "hardware" component, contains three elements:
   - Water Supply Systems
   - Improved Sanitation Facilities
   - Household Technologies and Materials

   The first element, water supply systems, addresses both the issue of water quality and water quantity, which reduce the risk of contamination of food and drink. Several studies have shown that providing more water to a household or a community apparently leads to greater health benefits than simply providing safe water. More water supports better personal and domestic hygiene (e.g., handwashing, bathing, food washing, and household cleaning). And it also makes water available for income generating activities (e.g., local industries) and gardening, both of which can improve a family's diet, hence their resistance to disease. Girls who spend less time fetching water have more time for school. Similarly, ensuring access to water supply systems can greatly reduce the time women spend collecting water, allowing more time to care for young children and more time for income generating activities. However, the health effects of water quality may be

underestimated because most studies looked at water systems rather than water quality at the point-of-use, namely the household.

The second element of the hardware component, toilet facilities, involves providing facilities to dispose of human excreta in ways that safeguard the environment and public health, typically in the form of various kinds of latrines, septic tanks, and water-borne toilets. Sanitation coverage is important because fecal contamination can spread from one household to another, especially in densely populated areas. Access to toilet facilities can open school doors for girls and reduce drop-out rates, since girls often stay away from schools because of the indignity of having no privacy.

The third element, household technologies and materials, refers to the increased availability of such hygiene supplies as soap (or local substitutes), chlorine, filters, water storage containers that have narrow necks and are covered, and potties for small children. Point-of-use chlorination in the home is gaining attention as a key way to address the problem of contaminated household drinking water. It is particularly effective in areas where water and sanitation service provision is low (such as urban slums), at health care facilities where water quality is especially important, or where there is a threat of cholera or a similar epidemic. Point-of-use chlorination should be considered as part of a hygiene improvement package that also includes the other components of the Framework.

2. **Promoting hygiene** — According to UNICEF (UNICEF 1999), "hygiene promotion is a planned approach to preventing diarrheal diseases through the widespread adoption of safe hygiene practices. It begins with and is built on what local people know, do and want." In the Hygiene Improvement Framework, promoting hygiene refers to advocating for, teaching, and supporting behaviors that are known to reduce diarrheal disease, namely: proper handwashing, proper disposal of feces, and storing and using safe water, at least for drinking and preparing food.

   The second part of the Framework consists of five basic strategies that can be applied alone or in combination depending on the nature of the program. The primary target audiences are caretakers of young children and children themselves:

   - Communication
   - Social mobilization
   - Social marketing
   - Community participation
   - Advocacy.

   Integrating a hygiene promotion component into an existing child, maternal, or other health program is usually quite feasible, since many of those programs already address behavior change. Hygiene promotion is based on a good understanding of how behaviors within households and communities contribute to diarrhea morbidity in children. Formative research conducted at the community level identifies knowledge and beliefs about the causes of diarrhea, current high-risk behaviors, and any barriers or enabling factors to overcoming these behaviors. This information makes it possible to identify

hygiene changes that are feasible in order to promote concrete actions that people are both willing and able to take.

A comprehensive communication strategy raises awareness about hygiene facilities and practices, shares information, and promotes behavior change by highlighting benefits that are important to the target audience. A variety of communication channels may be used, such as traditional media, music, song and dance, community drama, literacy materials, leaflets, posters, pamphlets, videos, and home visits. Typical venues for hygiene promotion are community gatherings, health centers, schools, daycare and nutrition centers, and the household. In some settings, training health workers, teachers, and community agents in hygiene promotion skills may also be an important strategy.

Social mobilization is a process to obtain and maintain the involvement of various groups and sectors of the community in the control of disease. For example, a community group might design and implement a campaign to increase the use of soap for handwashing or to promote the proper use and maintenance of sanitation facilities.

Social marketing makes use of marketing principles and strategies to achieve social goals such as better hygiene and sanitation. A social marketing approach may involve a partnership between the public sector and manufacturers of soap or water purification products to both expand the product market and promote improved hygiene. Social marketing can create a demand for sanitation facilities and services from the agencies that are supposed to provide them.

Community participation, an essential component of the hygiene promotion process, typically involves such activities as collective examination of barriers to practicing hygiene in the community, designing measures to use sanitation facilities and improve practices, or community-based monitoring of progress in achieving behavior change. Participation means that community members from all socioeconomic, ethnic, and religious groups have a voice, including women, men and children.

Advocacy is an integral part of all aspects of hygiene promotion. Donors, program managers, and community representatives can advocate for improved hygiene behaviors and for interventions that support these behaviors to governmental and nongovernmental stakeholders (see the Joint Publication 8. The Hygiene Improvement Framework—A Comprehensive Approach for Preventing Childhood Diarrhea (EHP/UNICEF/World Bank/WSSCC 2004)).

Schools and school children are good entry points for hygiene improvement through additions to the curriculum and providing safe drinking water, sanitation and handwashing facilities for boys and girls. Health facilities and other institutions serving the public should adhere to minimum standards of hygiene improvement and serve as models to the people they serve. Assessment issues are addressed in the following and third component of the Hygiene Improvement Framework under “institutional strengthening.”

3. **Strengthening the enabling environment —** The third component to preventing diarrhea involves creating an environment—whether at the community, municipal, regional, or national level—which supports the technology and hygiene interventions envisioned in this framework. Several of these activities can be assessed in qualitative terms by using the **HYGIENE IMPROVEMENT COMMUNITY SURVEY QUESTIONS**. However, other aspects of the enabling environment, especially related to operations and maintenance of water and sanitation services as well as infrastructure investments, will require additional instruments and assessment processes such as water and sanitation sector assessments conducted in Latin and Central America.

   Supporting the enabling environment typically takes the form of one or more of these activities:

   - Policy improvement
   - Institutional strengthening
   - Community involvement
   - Financing and cost-recovery activities
   - Cross-sector and public-private partnerships

   Policies that encourage and promote sustainable hygiene improvement and prevent diarrheal diseases create the circumstances whereby these activities become development priorities and are ultimately allocated the necessary human, financial, and social resources. But good policy does not simply "happen"; it grows out of heightened awareness, which in turn depends on getting good information into the hands of policymakers. Policy improvement includes assessing the adequacy of national policies for hygiene improvement, determining where the gaps are, facilitating a process to reach consensus on a policy agenda, and developing more effective policies. There should be explicit policies for both water supply and sanitation. Of course, the existence of good policies is not sufficient unless the political will, resources, and capacity exist to implement them.

   A second key activity, institutional strengthening, includes helping national and implementing institutions to clearly define their missions and their roles and responsibilities, improve their leadership, develop sound systems and procedures, increase their technical competence, and train their staff. Capable institutions are an essential element of an effective hygiene improvement program. Institutional capacity includes the ability to adhere to minimum standards for safe water, basic sanitation and hygiene and to serve as models of hygiene improvement for the people they serve.

   The third feature of the enabling component, promoting community involvement, means developing local structures to take the responsibility for operating and maintaining local systems. When community members have done the "work" and when they have committed their own time, effort, and resources to establishing improved water and sanitation systems, they are more committed to following up on and safeguarding their investments.

The fourth element of the enabling component, financing and cost-recovery, addresses the fact that for many communities the up-front infrastructure and technology costs of hygiene improvement are a serious challenge, as are the ongoing operating and maintenance expenses. But if these interventions can be shown to be financially viable—as they have in the case of privately owned and operated public sanitary facilities and profit-making water and sanitation utilities run by the urban poor—then financing is easier to obtain. The goal is for user fees to cover the recurrent costs of water supply and sanitation services. If users are consulted in the design process, then prospects for full cost recovery of recurrent costs are more likely.

The final element of the enabling component, cross-sector and public-private partnerships, involves bringing together a number of government entities or some type of public-private collaboration. Water supply and sanitation agencies may have to work together with other ministries such as health, environment, rural development, agriculture, and planning. The government sector may join forces with elements in the private sector or nongovernmental sector to accomplish jointly what neither has sufficient resources to accomplish on its own. Establishing coordinating mechanisms such as interagency committees, steering committees, and task forces is key to effective partnerships, and successfully coordinating the activities of all the partners is likewise a key element of creating an effective enabling environment.

## Chapter III. Hygiene Improvement Indicators

The results of hygiene improvement interventions are measured through indicators that are organized hierarchically into four tiers with the number of indicators in parentheses (click on the figure to go to specific hygiene improvement components or to the HIF indicators diagram):

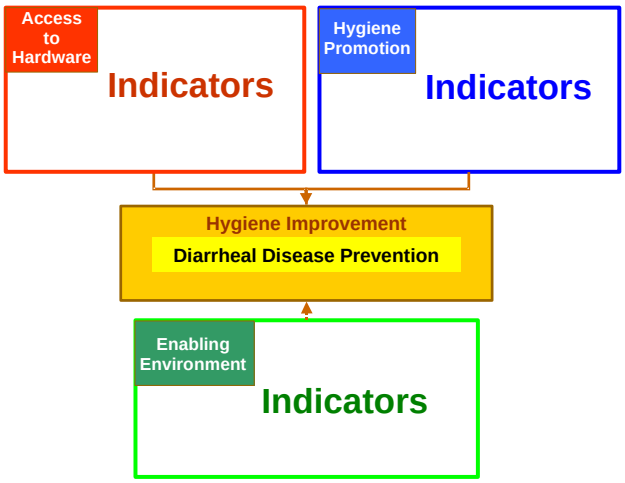
**Health impact indicator 0.1 (1)**

**Essential family practice indicators 0.2 - 0.5 (4)**

**Priority hygiene improvement indicators 1.1 - 1.5, 2.1 - 2.2, 3.1 - 3.5 (12)**

**Supporting hygiene improvement indicators 1.6 - 1.13, 2.3 - 2.16, 3.6 - 3.21 (38)**

**Institutional Sanitation and Hygiene 3.22 - 3.26 (11)**




The **health impact indicator** measures prevalence of diarrheal disease. This is the health outcome that all hygiene improvement interventions seek to improve.

The **essential family practice indicators** measure changes in those key hygiene behaviors that contribute to the greatest health impact. Not all programs address all four of the essential family behaviors. However, it would be advantageous to measure all four related indicators because together they provide a more complete picture of the current status of hygiene behavior and identify important gaps. The four essential family practices are the following:

1. Wash hands properly with soap and at critical times
2. Dispose of all feces safely, especially those of young children
3. Practice safe drinking water management in the households
4. Practice safe food management in the households

The **priority hygiene improvement indicators** measure access to hardware, effectiveness of hygiene promotion, and effectiveness of the enabling environment. They should be used for assessing water supply, sanitation, and hygiene activities according to the program components implemented, and work best when combined with essential family practices and health impact indicators to evaluate program effectiveness, also called summative evaluation. This type of evaluation is often carried out at the program, district, or national level. Because these indicators are used more frequently and are more standardized than supporting indicators, they are appropriate for comparing programs or different population groups.

The **supporting hygiene improvement indicators** can be used for assessing the baseline situation, also called formative evaluation, or to monitor program progress at a more detailed level than the other three categories of indicators. Together with formative research, which relies on qualitative methods, supportive indicators help to design particular hygiene improvement interventions. Because of their formative nature, supporting indicators are less suited for comparing programs. Institutional sanitation and hygiene indicators are listed as supporting indicators because they have not yet been applied widely. The list of supporting indicators is not exhaustive, and users of these guidelines may wish to add others to suit their own specific needs.

When selecting indicators from these guidelines, users will find the following criteria helpful in deciding which would be more appropriate:

- ✓ *Direct* measures a specific program result or objective
- ✓ *Accurate* does not accept any known issues with validity or reliability or any shortcomings
- ✓ *Objective* is unambiguous with clear definitions to be used consistently
- ✓ *Practical* collects data in a timely manner and for reasonable costs
- ✓ *Adequate* involves the minimum number of indicators necessary to ensure that progress toward hygiene improvement results is sufficiently captured

The model questions used to assess community capacity are very different from those used in the household survey. The purpose of these model questions is to obtain qualitative and descriptive information on some important issues, not to aggregate data or to perform statistical tests. The model questions are meant to be used as a guide only, and a final survey instrument should provide an opportunity to record responses in short hand. As programs gain more experience with assessing the enabling environment, this will improve program managers' and researchers' ability to monitor community capacity in the long term. In the short term, it should be seen as an interesting complement to household-level data.

**Presentation Format for Indicators**

The description of most indicators addresses seven elements as described below. In instances where some of these elements do not apply or no information is available, they are omitted from the indicator description.

*Rationale*: Provides the reason why the indicator is important and what its main uses might be.

*Definition of Terms*: Is essential to ensure that an indicator can be described without ambiguity.

*Calculation*: Describes the numerator and denominator. In the case of composite indicators, the steps necessary to aggregate data from several measurements are explained.

*Source of Data*: Explains from whom or about whom information is collected, e.g., the household, caretaker, or a child under 36- or 60–months old. Any alternative data sources are also mentioned, as well as data sources that would not be appropriate.

*Issues*: Describes known issues, which often influence the validity and reliability of an indicator.

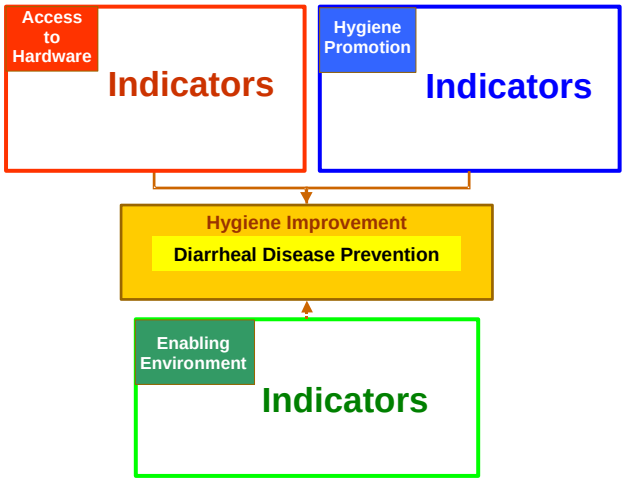
*Target Values*: Are meaningful in this guideline only if they are based on internationally agreed-upon values, e.g., the Millennium Development Goal (MDG) targets for water and sanitation. Otherwise, the target needs to be set locally or nationally as appropriate by taking into account current values of an indicator.

*Model Questions*: Lists all questions necessary for establishing a number for the indicator. The questions listed link directly to the model questions in Part C, which shows not only the question but an illustrative list of coding categories as well as filters and instructions for skipping questions contingent on a prior response.

# Chapter IV. Indicators for Health Impact and Essential Family Practices

## HEALTH IMPACT INDICATOR

There is one health impact indicator that all hygiene improvement efforts attempt to lower—the prevalence of diarrheal disease among the target population (i.e., children under 3 years or under 5 years, depending on the program strategy). However, some important limitations restrict the use of this indicator to document health impact in every program. For most programs that implement hygiene improvement interventions, measuring the four essential family practices is a more practical and useful indicator because changes in these behaviors can be more easily attributed to the interventions themselves than changes in diarrheal disease prevalence. (Click on the figure to go to specific hygiene improvement components or to the HIF indicators diagram)




**0.1** Percentage of children under 36 (or 60) months of age with diarrhea in the last two weeks

**Indicators Diagram**

*Rationale:* It is important to know the prevalence of diarrhea in the target population as a reference point. For surveys that take the seasonality and recall bias associated with this indicator into account, a comparison of baseline data with data collected after hygiene improvement interventions progress over time can be conducted to estimate the health impact.

*Definition of Terms:* This indicator is the **period prevalence** of diarrhea based on a two-week recall of the child's primary caretaker—in most cases the mother. It is defined as the proportion of children in a given sample who have had diarrhea in the preceding two weeks, which includes diarrhea at the time the data are collected. **Diarrhea** is defined as three or more loose stools passed in a 24-hour period. Age is calculated in completed months at the time that the information is collected from the caretaker. For example, any child who has not yet completed his or her 36$^{th}$ month should be included in the sample.

*Calculation:* Number of children under 36 months who have experienced diarrhea in the last two weeks divided by the total number of children under 36 months in the sample.

*Source of Data:* The data are obtained directly from the principal caretaker by means of a population-based survey of a sample of households. The accuracy of the two-week recall period is well established. The survey respondent must provide information on how many children under 36 months are in the household and whether or not they have had diarrhea in the preceding two weeks. Health service records typically underestimate the overall disease burden of diarrhea because most children with diarrhea are not taken to a health facility; therefore, such records should not be used as a data source.

*Issues:* Additional criteria may be used to define diarrhea, e.g., blood in stool that indicates more serious dysentery, but for water and sanitation interventions, the type of diarrhea does not substantially influence the type of intervention. Programs may also choose a different age range, e.g., children 0 to 59 months. However, it is important to assess the age of the child to allow reporting diarrhea prevalence by year. The highest prevalence occurs usually in children 1 to 2 years old.

Diarrheal disease prevalence is not a very accurate indicator. It relies on the ability of the caretaker of a child to recall diarrhea episodes over a period of two weeks, and it is likely that not all episodes will be recalled. Diarrhea prevalence is influenced by season and rainfall, which may change the type of water source used by households and the level of contamination. Therefore, follow-up surveys must occur in the same season to be comparable. Finally, like many health indicators, diarrhea prevalence is influenced by factors other than interventions that improve water supply, sanitation and hygiene. Natural disasters, such as hurricanes or cyclones and droughts, war, and economic crises can worsen diarrhea prevalence despite program interventions.

Because of these shortcomings, measurements of diarrheal disease prevalence programs may want to consider additional health outcome indicators that are more reliable such as the nutritional status of children under five, which is closely linked to diarrheal disease. Nutritional status is expressed in three ways:

- Wasting or acute malnutrition (weight for height)
- Stunting or chronic malnutrition (height for age)
- Underweight (weight for age)

Because nutritional status is based on actual measurements of weight, height and age of the child, it is more accurate than caretakers' recall of diarrhea episodes. However, nutritional status is impacted by many other factors beside the frequency of diarrheal disease episodes, and, similar to diarrhea, the measurements of wasting and underweight will vary by season. See reference for details about nutritional status indicators.

*Target Values:* In countries where diarrhea is a lesser health problem, diarrheal disease prevalence is well below 10%, and it may reach almost 50% among the poorest population groups in developing countries. Experience has shown that comprehensive water, sanitation, and hygiene promotion programs can decrease rates of diarrheal diseases by 30–50% (Aziz et al. 1990; Esrey et al. 1991). Hygiene improvement programs include upgrading hardware and communicating appropriate changes in behavior while strengthening the enabling environment to ensure sustainability. Handwashing promotion and point-of-use water treatment are very effective in decreasing diarrhea prevalence, with reductions of over 45% (Curtis V, Cairncross S

2003). Research from Bangladesh indicates that a greater impact of approximately a two third reduction can be achieved when interventions are combined (Bateman et al. 1995).

*Model Questions:*

159. Has [NAME OF CHILD] had diarrhea during the past 24 hours?
160. Has the child had diarrhea in the last 2 weeks?

DIARRHEA: THREE OR MORE LIQUID STOOLS IN 24 HOURS

## ESSENTIAL FAMILY PRACTICE INDICATORS

The following four indicators are considered the most important in measuring four essential family practices.

### 0.2 Percentage of caretakers washing hands properly with soap and at appropriate times

**Indicators Diagram**

***Note***: Asking people to demonstrate how they wash their hands may not be feasible in many surveys because of time constraints. Alternatively, use the following indicator:

**2.1 Percentage of caretakers who report having used soap for handwashing at least at two critical times during past 24 hours**

*Rationale:* To improve household hygiene, it is important that caregivers and those responsible for food preparation wash their hands after using the toilet facilities, after handling a child's feces, and/or before preparing food. This behavior is associated with their knowledge about proper handwashing behaviors (when and how) as well as access to safe water and handwashing facilities. Caretakers serve as a proxy for family practices. It is important that everyone in the household, including the children, wash his or her hands with soap at appropriate times.

*Definition of Terms:* **Appropriate handwashing** involves three elements: (1) handwashing supplies, (2) handwashing technique, and (3) handwashing at critical moments. The indicator is a composite of all three elements. It assigns each response category a value of 1 and adds these values to obtain the total score. Programs will usually determine a minimum score deemed to constitute appropriate handwashing practices.

People's ability to wash hands at appropriate times depends on whether households have immediate and easy access to all of the following supplies necessary for handwashing and ideally located in a dedicated place:

1. Water — from tap or container
2. Soap, ash, or other detergent
3. A device that facilitates unassisted handwashing such as a basin, sink, bucket, or tippy tap
4. Clean towel or cloth, although this is optional because air drying is an acceptable alternative

Appropriate handwashing technique involves the following:

- Uses water
- Uses soap, ash, or other detergent
- Washes both hands
- Rubs hands together at least tree times
- Dries hands hygienically — by air or with a clean cloth

Critical moments that WHO lists as the instances for maximum effect on diarrheal disease reduction include the following:

- After defecation
- After handling child's feces or cleaning a child's bottom
- Before preparing food
- Before feeding a child
- Before eating

*Calculation:* Number of caretakers who demonstrate appropriate handwashing practices (equivalent to the minimum score, e.g., 9, as in the sample calculation, deemed to constitute appropriate handwashing) divided by the total sample size.

Calculating average handwashing performance using the actual score instead of full compliance is probably not meaningful, because some elements of handwashing are essential (e.g., the use of soap). A total score of 8 out of a possible 9, as in the sample calculation, that does not include the use of soap cannot be considered appropriate handwashing practices.

**Sample Calculation: Full Compliance**

For example, based on above definitions, "washing hands properly with soap and at appropriate times" would require a total score of **9**, which is derived from a combination of

- appropriate times for handwashing – after defecation (1) and at least one other critical moment (1) are mentioned [subscore **2**]
- appropriate handwashing technique – use of water and soap (1) [ash, detergent], both hands (1), rubbed three times (1), drying hygienically (1) [subscore **4**]
- adequate place and supplies for handwashing readily available – water (1), soap [ash, detergent] (1), washing device (1) [subscore **3**]

A lower score or other responses to reach the minimum score would not constitute an appropriate behavior. Programs can adapt this method of scoring handwashing based on actual behaviors at baseline, for example, more critical times for handwashing could be required.

*Source of Data:* The interviewer asks the caretaker in the household three open-ended questions: (1) When do you wash your hands? The interviewer has a list of the critical moments, but does not prompt the caretaker, and checks each one as it is cited. (2) What handwashing supplies are available, and where do you wash your hands? The interviewer would take note of these supplies (displayed or produced within 1 minute) and the area in which handwashing is done. (3) How do you wash your hands? The interviewer has a list of steps and checks each one as it is cited, but does not prompt the caretaker. The caretaker is then asked to demonstrate handwashing.

*Issues:* Because of the interviewee's tendency to over report desirable behaviors, direct observation is more reliable. Answering these questions is also linked to the sustainability of improved behavior, especially in hygiene promotion campaigns where people may have learned the expected responses from a previous household survey, and this may poorly reflect their actual practices.

Caretakers are often asked when they "usually" wash their hands or whether they know the critical times (see model question 90 and Indicator 2.12). However, it might improve reliability to ask whether and when in the past 24 hours the caretaker used soap, noting whether hands were

washed at appropriate times among other possible uses of soap (see model question 85 and Indicator 2.1).

Handwashing behavior is influenced by the quantity of water available to the household, and this indicator should be assessed during the interview. Where water is scarce, people may resort increasingly to using recycled water. Researchers need to determine whether washing hands using recycled water is more desirable than not washing hands at all and/or whether it constitutes a considerable risk of fecal contamination.

The same questions and observations used to assess caretakers can be used to assess children, but young children will usually require the assistance of the caretaker. Observing children's handwashing practices may be culturally more acceptable in certain societies than observing adults directly.

*Target Values:* There is extensive evidence that improved handwashing leads to reductions in diarrheal disease and perhaps pneumonia. Ongoing research may provide evidence for the latter. Social marketing and hygiene promotion programs have demonstrated impressive increases in improved handwashing behaviors. Targets aimed at increasing proper handwashing by 50% over the baseline are realistic and attainable.

*Model Questions:*

136. Can you show me how you wash your hands? INTERVIEWER: OBSERVE THE HANDWASHING AND ANSWER THE FOLLOWING QUESTIONS
137. DOES THE PERSON USE WATER?
138. DOES THE PERSON USE SOAP?
139. ARE BOTH HANDS WASHED?
140. DOES HE OR SHE RUB HANDS TOGETHER THREE TIMES OR MORE?
141. HOW DOES THE PERSON DRY HIS OR HER HANDS?
142. DOES THE TOWEL OR CLOTH THE PERSON USES APPEAR TO BE CLEAN?

## 0.3 Percentage of children under 36 (or 60) months whose feces were disposed of safely

**Indicators Diagram**

*Rationale:* With exposure to feces being a primary source of diarrheal disease, it is essential for hygiene improvement that households safely dispose of both adult and child fecal matter. Children's feces, especially feces from children under 3 years, are a critical factor, because young children are more likely to contaminate the household environment, they are less likely to use a toilet facility, and their feces may contain more pathogens than that of adults.

*Definition of Terms:* The **safe disposal of feces** refers to the proportion of children under 3 years of age whose caretaker safely disposed of their stools after their last defecation.

The safe or sanitary disposal of feces indicates that feces are disposed of in a way that reduces the risk of contaminating the household environment significantly. Safe disposal means either

defecating or throwing feces in a latrine or toilet. These are considered the only safe means of disposal. Young children may defecate on the ground or use a "potty," but caretakers should then dispose of the feces in a toilet facility. In cases where washable diapers are used, the feces can be partly disposed of in a toilet facility and partly washed away. If the wastewater from washing diapers ends up in a toilet facility, the disposal is safe overall. In the case of disposable diapers, their safe disposal would entail being placed in covered garbage containers and a solid waste collection system that keeps disposable diapers out of the household and community environment, but whether these are truly safe means should be determined on a case-by-case basis. Throwing disposable diapers in toilet facilities is not recommended, because diapers clog flush-type facilities and cannot be fully decomposed in pit latrines.

A sanitary latrine or toilet that allows the safe disposal of feces includes only the following types:

- Flush toilet with connection to septic system
- Flush toilet with connection to a public sewer
- Pour-flush latrine
- Simple pit latrine
- Ventilated improved latrine

The safe disposal of feces requires a private latrine (one facility per family) or a well-maintained shared facility (private or publicly owned). Shared facilities that are not cleaned regularly and commensurate with the number of users may discourage use because of unhygienic conditions. Whatever the type, to be considered accessible the latrine must have an appropriate superstructure, at minimum, and an enclosure that bars a view into the latrine. Latrines without a minimal superstructure discourage use in many societies, but standards may vary and response categories to observations may need to be adapted accordingly. Bucket latrines and similar types that require the manual removal of feces are not considered sanitary because they risk contaminating the immediate environment.

*Calculation:* Children under 3 years of age whose caretaker indicated that they disposed of their child's stool safely after the last defecation before the interview divided by the number of children under 3 years of age in the sample. Since safe feces disposal without access to an improved toilet facility may be difficult to achieve, a more appropriate denominator might be the number of children under 3 years of age from households using such a facility.

*Source of Data*: This proposed indicator of safe feces disposal is measured by self-reporting. It assumes that the person identified as the caretaker of the child at the time of the interview would know about the handling of the child's stools. Household surveys like the Demographic and Health Survey (DHS) and the UNICEF Multiple Indicators Cluster Survey (MICS) measure this indicator. Alternatively, the information could be based on the program evaluator's observation of the caretaker and then recording how the caretaker actually handled the child's stools. However, direct observation is usually not feasible for program evaluations except as a research activity because of the complexity of designing and implementing such studies and the larger resource needs. To improve the reliability of the data collected, it is suggested to verify through observation at least the existence of a potty, toilet facility, and appropriate superstructure. In the interest of efficiency, the observation may have to be hurried in that it simply verifies whether a

potty and toilet facility and a minimal superstructure exist. If resources permit, the observer should assess the type of latrine, superstructure, presence of fecal matter, and other details that are essential to promoting the use of facilities.

*Issues*: This indicator of safe feces disposal is adapted from an indicator included in the current household questionnaire of the DHS and MICS, although it was not used by all countries. The difference lies in how the question is asked. The DHS asks caretakers how they "usually" dispose of the child's feces. Here it is suggested to only consider the "last time" when the child passed stools. This may reduce the recall bias.

This indicator suggests an age group of under 3-years old for children, which is frequently the target group for child health interventions and their relevant survey instruments. However, the age range can be adapted to meet local needs without impairing comparability as long as the child's age is measured to allow an analysis for different age groups. Children rather than caretakers are used as a unit of measurement because it is assumed that safe disposal is assessed for more than one child in the age range targeted. This can be converted into caretakers who practice the safe disposal of their children's feces. If only one child per caretaker is assessed, the results for children or caretakers as the unit of analysis will be the same.

Disposal of children's rather than adults' feces is suggested because children are more exposed to infective agents, and their feces are more likely to get into the immediate household environment. However, programs may choose to assess defecation practices of older children as well as adults.

*Target Values*: The target of improving this indicator depends on the level at baseline. Ideally, caretakers should safely dispose of all their children's feces, and all households in a community should follow the same practice. The benefits of safe disposal practices are not only to the immediate household but also to the community at large because feces from one household can easily be carried (e.g., through flies) or washed into the environment of neighboring households.

*Model Questions:*

53. What kind of toilet facility does this household use? (CHECKONE)
157. The last time [NAME OF CHILD] passed stool, where did he/she defecate?
158. The last time [NAME OF CHILD] passed stools, where were the feces disposed of? *(IF "WASHED OR RINSED AWAY", PROBE WHERE THE WASTE WATER WAS DISPOSED OF. IF "DISPOSED", PROBE WHERE IT WAS DISPOSED OF SPECIFICALLY.).*

## 0.4 Percentage of households that practice safe drinking water management

**Indicators Diagram**

*Rationale:* Even if the household has easy access to safe water, the members (especially children) could be at risk if the water is not properly stored and the storage container is not properly maintained.

*Definition of Terms*: Households that practice **safe water (SW) management** to protect drinking water from contamination should do the following:

- Use an improved water source that is within reach (30 minutes or less in rural areas and 5 minutes or less in urban areas) and accessible daily
- Cover containers and use narrow-neck containers
- Limit access of children to the drinking water by raising the water containers above ground (prevent children from putting hands in water)
- Use a different vessel to transfer water than the one used for drinking or pouring from the container
- Treat water to remove pathogens from the water (e.g., chlorination, filtration, boiling, or solar disinfection)
- Keep container clean

This is applicable to households that do not have piped water or those with piped water where the supply is irregular, forcing them to store water to ensure continuous supply.

*Calculation:* There are several ways to make the calculations.

- In its simplest form, each element of safe water management can be analyzed and reported separately. Divide the number of households for one safe water management element by the total sample size. However, this can lead to an overwhelming amount of information. The advantage is that this method can identify specific behaviors and technologies that can be addressed directly by the program.

- As the term "safe water management" suggests, it consists of several elements, behaviors, and technologies. Such a composite indicator can be expressed as "average performance" or as "full compliance." Either calculation requires two steps:

  First, determine the total number of safe water management elements that are promoted by a program. Add each element present in the household, and divide this number by the total number of safe water management elements that are promoted by a program. This results in a percentage of safe water management elements present per household.

  Second, calculate the average percentage of safe water management elements present by adding all percentages per household and dividing it by the total number of households.

**Sample Calculation: Average Performance**

**I.** **7** safe water management elements promoted:

1. Improved water source
2. Takes 30 minutes or less to fetch water
3. Source available daily for some hours
4. Storage in covered container
5. Storage in narrow-neck container
6. Container elevated, child cannot reach
7. Container last cleaned less than a week ago

**II.** Actual elements found in household: **4** (1, 3, 4, 6)

**III.** Percentage of SW elements present 4/7 = 57%

**IV.** Average number of SW elements in program area: add percent from all households and divide by total number of households in the sample

Calculating "average performance" is most appropriate when all elements are of similar importance. "Full compliance" should be used when some elements are essential and must be present. The advantage of the composite is that safe water management can be expressed in a single number, which might be useful for program evaluations. However, programs may find it useful to also perform the calculation for each safe water management element separately as suggested above because it can identify specific SW management issues.

**Alternative Calculation: Full Compliance**

**I.** **7** safe water management elements promoted:

1. Improved water source
2. Takes 30 minutes or less to fetch water
3. Source available daily for some hours
4. Storage in covered container
5. Storage in narrow-neck container
6. Container elevated, child cannot reach
7. Container last cleaned less than a week ago

**II.** Actual elements found in household: **4** (1, 3, 4, 6)

**III.** Compliance with all 7 SW elements: **No**

**IV.** Percentage of households that comply with all 7 SW elements: divide the number of households that fully comply by the total sample size

**Note**: This type of calculation is only appropriate if it is realistic to expect that households can achieve all elements, otherwise the overall result will be very low.

*Source of Data:* Ideally, interviewers should observe whether the items necessary for practicing safe water management are present. Interviewers may ask caretakers first how they store their water, but then examine the container to ascertain if it is narrow necked (small enough to prevent a child's hand to pass through), covered with a tight fitting lid, and clean, or whether hypochlorite solution is available. In the latter case, testing water for residual free chlorine would be the most reliable proof that drinking water is likely to be safe. In specific circumstances, water samples may be analyzed further in a laboratory to identify bacteriological and chemical contaminants.

*Issues:* While the access to safe water is important, it is also necessary for the household to store its water properly so that it remains safe. That means water should not be contaminated by exposure to dirt or dust (hence it should be covered), the instrument used for transferring water to/from storage container is clean, and the container itself is periodically cleaned to eliminate sources of infection. When a water source cannot be considered safe, households should treat their drinking water to remove pathogens (e.g., through chlorination, filtration, or solar disinfection). Water treatment at the household level is also referred to as "point-of-use" or POU treatment.

Effective water treatment includes the use of chlorine solution to purify the water from an unsafe source and prevent water from becoming contaminated. Water filters can be found in some settings, but although they are very effective, poor households often cannot afford them. Boiling the water has often been promoted, however, compliance has been difficult to assess and maintain. Cooking fuel is scarce in many developing countries and expensive for poor families. Moreover, boiling takes time that many caretakers do not have. Where boiling is done, the Center for Disease Control (CDC) recommends that the water should be kept at a rolling boil for 1 minute (longer in high altitudes) to ensure that it is safe and the most resistant diseases are

destroyed. Solar disinfection has been has been implemented in multiple settings, however, it is difficult to achieve at scale.

*Target Values:* As in the case of other hygiene improvement behaviors, practicing safe water management is predicated on knowledge and to some degree on access to the appropriate technology (e.g., narrow-neck water containers or hypochlorite solution). It is expected that a smaller portion of households will practice proper water management than will know what they should do. Setting a proper water management target at 50% of the households is realistic and attainable, but the proportion reached may be lower or higher depending on where a community is at the beginning of a hygiene improvement intervention (i.e., baseline) and the time available to change knowledge and practices. If water chlorination is used, residual chlorine in treated water should be between 0.2-0.5 mg/l according to WHO water quality guidelines. Higher concentrations are unnecessary and lead to noticeable chlorine taste at 3 mg/l or greater.

*Model Questions:*

8. What is *the main* source of drinking water for members of *this household?*
9. How long does it take you to go to your main water source, get water, and come back?
22. In the last 2 weeks has the water from this source been unavailable for at least 1 whole day?
27. Do you store water for drinking in the household?
28. If YES, may I see the containers, please?
29. WHAT TYPE OF CONTAINERS ARE THESE? (OBSERVE AND CHECK ALL THAT APPLY)
30. ARE THE CONTAINERS COVERED? (OBSERVE AND CHECK)
31. OBSERVE: WHERE ARE THE WATER CONTAINERS PLACED?
32. Who takes water from these containers?
33. How do you remove water from the drinking water container?
34. What do you use to remove water?
35. Are the water containers cleaned?
36. When were they cleaned last?
37. Do you treat your water in any way to make it safer to drink?
38. IF YES, what do you usually do to the water to make it safer to drink?

(ONLY CHECK MORE THAN ONE RESPONSE, IF SEVERAL METHODS ARE USUALLY USED TOGETHER, FOR EXAMPLE, CLOTH FILTRATION AND CHLORINE)

39. When did you treat your drinking water the last time using this method?
40. If water is treated by a method other than boiling, may I see the product or device?
41. IF BLEACH, CHLORINE, OR TAP WATER, TEST WATER FOR FREE CHLORINE
42. IF BLEACH, CHLORINE, OR TAP WATER, TEST WATER FOR TOTAL CHLORINE

## **0.5** Percentage of caretakers who practice safe food management

**Indicators Diagram**

*Rationale:* Water is not the only source of contamination. Much of the transmission of diarrheal disease pathogens occurs through the fecal contamination of food. Hygienic preparation, storage, and retrieval of food is the fourth essential hygiene practice.

*Definition of Terms*: Households that practice **safe food (SF) management** to protect food from contamination should be doing the following:

- Wash dishes and utensils
- Wash hands before preparing food
- Wash food, especially vegetables
- Cook food thoroughly
- Consume all food prepared, or keep leftovers to a minimum
- Cover food containers
- Limit access of children by raising the water containers above ground (prevent children from putting hands in water)
- Protect food from flies by putting food behind closed or screened doors
- Use a clean utensil to transfer food from the container

*Calculation:* There are several ways to make the calculations.

- In its simplest form, each component of safe food management can be analyzed and reported separately. Divide the number of households practicing one safe food management step by the total sample size. However, this can lead to an overwhelming amount of information. The advantage is that this method can identify specific behaviors and technologies that the program can address directly.

**Sample Calculation: Average Performance**

**I.** **6** safe food management elements promoted:

1. Wash hands before preparation
2. Wash food
3. Wash dishes and utensils
4. Store in covered container
5. Protect from flies
6. Elevate container, child cannot reach

**II.** Actual elements found in household: **2** (4, 5)

**III.** Percentage of SW elements present 2/6 = 33%

**IV.** Average number of SW elements in program area: add percentage from all households and divide by total number of households in the sample

- As the term "safe food management" suggests, it consists of several steps or behaviors and technologies. Such a composite indicator can be expressed as "average performance" or as "full compliance." Either calculation requires two steps:

  First, determine the total number of safe food management steps that are promoted by a program. Add each step performed by the household, and divide this number by the total number of safe food management steps that are

**Alternative Calculation: Full Compliance**

**I.** **6** safe food management elements promoted:

1. Wash hands before preparation
2. Wash food
3. Wash dishes and utensils
4. Store food in covered container
5. Protect from flies
6. Elevate container, child cannot reach

**II.** Actual elements found in household: **2** (4, 5)

**III.** Compliance with all 6 SF elements: **No**

**IV.** Percentage of households that comply with all 7 SF elements: divide the number of households that fully comply by the total sample size

**Note**: This type of calculation is only appropriate, if it is realistic to expect that households can achieve all elements, otherwise the overall result will be very low.

promoted by a program. This results in a percentage of safe food management steps performed per household.

Second, calculate the average percentage of safe food management steps performed by adding all percentages per household and dividing it by the total number of households.

Calculating "average performance" is most appropriate when all elements are of similar importance. "Full compliance" should be used when some elements are essential and must be present. The advantage of the composite is that safe food management can be expressed in a single number, which might be useful for program evaluations. However, programs may find it useful to also perform the calculation for each safe food management step separately as suggested above because it can identify specific behaviors.

*Source of Data:* Ideally, interviewers should observe whether the items necessary for practicing safe food management are present. Interviewers may ask caretakers first whether they have any leftovers and how they store them and then examine the container used and the place of storage.

*Issues:* Food safety is already a challenge in many developing countries because of climatic conditions of heat and dust. Stored food provides perfect growing conditions for disease pathogens causing acute watery diarrhea. Unhygienic practices that contaminate food under these conditions can quickly lead to major outbreaks of food poisoning that are often accompanied by a high rate of fatalities when the restaurant business is involved. Although such practices affect fewer people when they occur on a household level, the health of young children is equally threatened in such cases.

*Target Values:* As in the case of other hygiene improvement behaviors, practicing safe food management is predicated on knowledge and to some degree on access to the appropriate technology (e.g., storage containers or screening). It is expected that a smaller portion of households will practice proper food management than will know what they should do. Setting a proper food management target at 50% of the households is realistic and attainable, but the proportion reached may be lower or higher depending on where a community is at the beginning of a hygiene improvement intervention (i.e., baseline) and the time available to change knowledge and practices.

*Model Questions:*

143. The last time you prepared food, what steps did you go through? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED)
144. Is there any food left from the last time you cooked?
145. How long ago did you prepare the food?
146. Can you show me where you keep this food?
147. OBSERVE: ARE THE CONTAINERS COVERED?
148. OBSERVE: WHERE ARE THE FOOD CONTAINERS PLACED?
149. OBSERVE: WHAT IS THE ACCESS TO THE FOOD CONTAINERS?
150. Who takes food from these containers?
151. How do you usually remove food from the containers?

# Chapter V. Priority and Supporting Indicators for Hygiene Improvement

These additional indicators fall into two groups: ***priority indicators*** and ***supporting indicators***. Indicators in both groups are presented under each of the three components of the Hygiene Improvement Framework: access to hardware, hygiene promotion, and enabling environment.

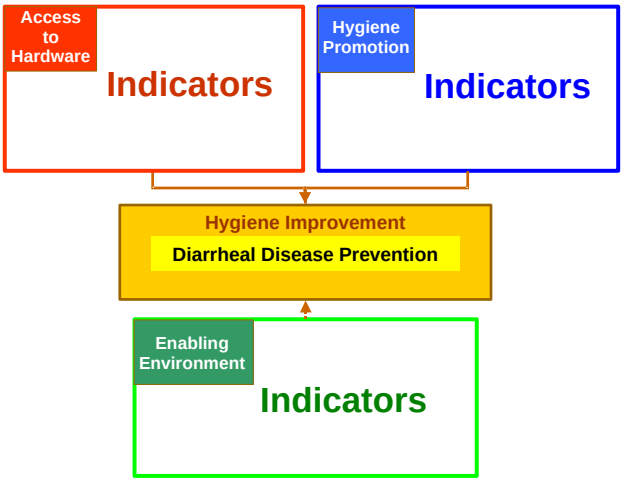
***Priority indicators*** are important and should be used for water supply, sanitation, and hygiene activities according to the program components implemented. Important linkages and connections exist between many of these indicators. As such, overall progress cannot be achieved unless improvements are made in several aspects of water supply and sanitation and hygiene promotion. For example, health impact may not reach its potential maximum if knowledge and practices relating to safe water management and handwashing are improved but toilet facilities and practices remain deficient. Thus, the connectivity of the various components and indicators should be considered as one selects appropriate indicators to measure the progress and effectiveness of hygiene improvement interventions.

There are 16 priority indicators grouped according to the three components of the Hygiene Improvement Framework (five under access to hardware, six under hygiene promotion, and five under enabling environment). When used together they have proven useful in most hygiene improvement programs since they address aspects of hygiene improvement that managers and involved communities should be undertaking.

***Supporting indicators*** allow programs to understand programming elements in greater detail, for example, small steps that make up a more complex practice such as safe water and food management. Supporting indicators provide insights into the programs at a micro level and serve increasingly formative purposes instead of merely evaluating progress and impact. Program managers have to decide which information should be collected through surveys, which is quantifiable but may be more costly to obtain, and which would be better gathered through qualitative methods—more participatory and empowering methods that might also be less costly. Qualitative methods include community (or asset) mapping, focus group discussions, seasonal diagramming, community transect walks, pocket voting on specific issues, and several others. Regardless of the mix of data collection methods used, it will be important to then utilize that information to set priorities, design interventions, and develop plans of action.

## 1. ACCESS TO HARDWARE

It is necessary to assess whether the products, technology, and hardware needed to carry out a particular hygiene behavior are available so that the behavior can be performed. (Click on the figure to go to specific hygiene improvement components or to the HIF indicators diagram)




**PRIORITY INDICATORS FOR ACCESS TO HARDWARE**

### 1.1 Percentage of households with access to an improved water source

**Indicators Diagram**

*Rationale:* Before a household's hygiene situation can improve, it must have easy access to a functioning and improved type of water source. An improved water source is an approximation of safe water because water quality is difficult and expensive to measure directly. This indicator is key for monitoring progress towards the MDG of "reducing by half the proportion of people without access to safe water by 2015."

**ACCESS**

The amount of time required to collect a household's water supply is a **surrogate measure** for the quantity of water used (see Indicator 1.6). Evidence indicates that access to the water source is an indirect indicator of water use (Boot and Cairncross 1993). The average use of liters per capita per day (lcd) can range from several hundred liters with a pipe connection to less than 10 liters when the source is more than a kilometer away. Thus, the closer a water source is to a household, the more water the household tends to utilize.

*Definition of Terms:* **Access** to the water supply means it should be available within 30 minutes or 1 kilometer of the household in rural areas and 5 minutes or 200 meters in urban areas (includes traveling both ways, waiting and collecting). The total time to fetch water, which includes time traveling to and from the source, queuing, and filling containers, should be as short as possible. Other issues surrounding access include the following:

- Quality of water, which is determined largely by convenience of access to source
- The source of water, whether it be private, public, or shared
- Degree of access, which is defined by quantity of water one is able to collect at the source
- Whether the source is year-round and available every day, 24 hours a day

Median time is defined as

- a value in an ordered set of values below and above which there is an equal number of values or which is the arithmetic mean of the two middle values if there is no one middle number

*Calculation:* Determined by how much time is consumed on a daily basis to collect enough water for the household. This will depend on distance from the water source, time spent waiting in line, and volume dispensed at the source. The minimum amount of time is required if the water is ***piped into the house*** or is available on the household ***premises*** itself. A ***moderately close*** water source requires 30 minutes or less from the household to collect water. A ***distant*** source is more than 30 minutes away and, in some circumstances, may require several hours overall to get water back to the household. The percentage of households in each category (piped on premises, moderately close, and distant) is calculated by taking the number of households in each category divided by the total number of households in the community or sample.

*Source of Data:* The water collector (usually the caretaker or head of household) is interviewed and the principal water source identified. Then the time required to get to and return from the water source is estimated, including time waiting for and filling containers. There is a possibility that households could access multiple water sources because sources may differ according to season. If a household's normal, wet-season source becomes unusable in the ***dry season*** and they are forced to travel farther to obtain water, the additional time required to obtain water from their dry-season water source must be noted and the time measured and taken into account in the family's response. If water sources vary substantially between seasons, two principal sources should be assessed for this indicator. See indicator 1.7 Percentage of households with access to improved water sources during dry and wet seasons.

*Issues:* To protect a household against frequent episodes of diarrhea, the water source must be both within easy reach and of good quality. This is a composite indicator that relates to the quantity (Indicator 1.3 Percentage of households where time to collect water is 30 minutes or less) and quality of water, which is not measured directly in these guidelines. For an approximation of water quality, see Indicator 0.4 Percentage of households that practice safe drinking water management.

Because water use varies seasonally, depending on climate and household activities, pre- and post-intervention comparisons should be conducted within the same season. Moreover, data based on a single interview may be inaccurate because family needs vary from day to day. They may collect more on a particular day for such things as brewing or washing clothes. The survey sample size should be large enough to deal with these variations.

*Target Values:* There is no standard for the correct amount of time required for a household to collect its water supply. However, the higher the percentage of households that have a water

supply available on their premises, preferably piped, the better off that community is considered to be. In general, a program should attempt to reduce the overall time it takes to bring water to the household using the technologies available. Based on available research, an acceptable maximum time and distance is estimated as follows: access should be within 30 minutes or 1 kilometer of the household in rural areas and 5 minutes or 200 meters in urban areas (including time to travel both ways, wait for and collect water).

**QUALITY**

*Definition of Terms:* An **improved water source** is defined as having the following:

- Household connection
- Standpipe (on household premises or public)
- Borehole (on household premises or public)
- Protected dug well (on household premises or public)
- Protected spring (on household premises or public)
- Rainwater collection in closed containers

An **unimproved water source** is defined as the following:

- Unprotected dug well (on household premises or public)
- Unprotected spring (on household premises or public)
- Rainwater collection in open containers
- Surface water: lake, streams, puddles, and other sources

*Calculation*: Number of households having access to one of the six types of improved water sources (regardless of distance) divided by the number of households in the sample.

*Source of Data*: The caretaker or head of household is interviewed about the water source available. If possible, it is suggested that the interviewer examine the water source and verify whether it can be classified as an improved source.

*Model Questions:*

8. What is *the main* source of drinking water for members of *this household?*
9. How long does it take you to go to your main water source, get water, and come back?

## 1.2 Percentage of households that had their principal water source available daily for the past two weeks

**Indicators Diagram**

*Rationale*: Continuity of water supply is important because access to an improved water source alone does not guarantee that households can obtain sufficient quantities.

*Definition of Terms*: **Availability** is defined in its simplest terms as water that is available on a daily basis for some hours, but not necessarily 24 hours.

*Calculation*: Number of households that had either no interruptions of their principal water source for the past two weeks or had it available every day divided by the total number of households in the sample.

*Issues:* Limiting availability to a short recall period tends to be more accurate than asking "what happens in general." Recall periods of more than two weeks are much less reliable. Only if a standard period is maintained will findings be comparable. Although water might be available every day from the source indicated, it may not necessarily be accessible during the hours when water is needed most—early in the morning or in the evening. This poses additional hardship on households, which in turn could impact girls missing school or impair a woman's workday. Programs may choose to refine this indicator by posing additional questions about the nature of the disruptions and their duration (see model questions 18 to 19 for examples). Safe water storage is a critical issue for households that cannot depend on regular access to a water source.

*Model Questions:*

22. In the last 2 weeks has the water from this source been unavailable for at least 1 whole day?

## 1.3 Percentage of households where time to collect water is 30 minutes or less

**Indicators Diagram**

*Rationale:* Based on available research (Cairncross et al. 1993), a collection time greater than 30 minutes substantially reduces the amount of water a household uses (see Figure). This research has shown that the amount of water collected varies little when the total collection time is between 3 to 30 minutes (including round trip, queuing, and filling). Activities such as socializing (unless done while queuing) and washing clothes at the source are to be excluded from the time measured. This indicator assumes that people are capable of estimating their time fairly accurately. If there are any differences in altitude between the household and the water source or the paths to obtain the water are difficult, they will be captured by a time estimate. This applies also to efforts to fill water containers, which may involve pumping or drawing water with a bucket on a rope. Estimating distance to a water source is not recommended, because it fails to capture all these elements that impact access.

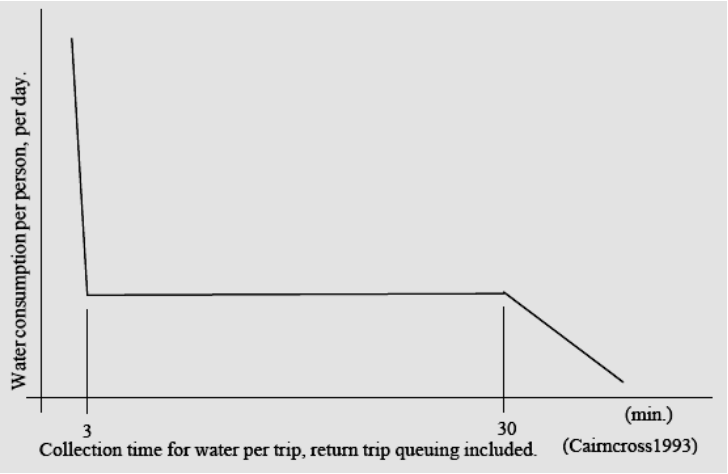



Figure Provided by Kristof Bostoen/LSHTM

*Calculation:* Households that require 30 minutes or less (in rural areas, no time has been established for urban areas) divided by the total sample.

*Issues:* There are two possible scenarios related to water use. One is that the drinking and nondrinking sources are the same, and the other is that households use different sources for different uses. For drinking water, the water quality is the most important factor, and because smaller quantities are needed, it will take less effort to obtain the water if it has to be carried home. The quality is less of an issue for nondrinking water, but because the quantity needed will be larger, it will require a greater effort if water has to be carried home. To limit the amount of survey questions asked, it would be sufficient to inquire only about the source of the drinking water and the time needed for the collection. This may be justified if it can be assumed that most households use the same source for drinking and nondrinking water. If this is not the case, the source and the time needed to collect the water should be assessed in a separate set of questions because the amount of water not used for drinking determines how much water is available for hygiene purposes.

*Model Questions:*

9. How long does it take you to go to your main water source, get water, and come back?

## 1.4 Percentage of households with access to an improved and hygienic toilet facility

**Indicators Diagram**

*Rationale:* For the hygiene situation of a household to improve, it must have easy access to functioning and hygienic toilet facilities. This composite indicator incorporates the access and quality of a facility. This indicator is key for monitoring progress towards the MDG of "reducing by half the proportion of people without access to basic sanitation by 2015."

*Definition of Terms:* **Access** means that any member of the household should be allowed to use the facility at any time day or night. Access should also consider the following:

- Whether the facility is shared, public, or private
- The amount of time to reach the facility
- The distance of the facility from the dwelling (in meters)

A toilet facility should be located within a convenient distance from the user's dwelling—30 meters or less—bearing in mind use at night and use by children and the elderly.

Safe disposal of feces requires a private latrine (one facility per family) or a well-maintained shared facility (private or publicly owned). Shared facilities that are not cleaned regularly commensurate with the number of users may discourage use because of unhygienic conditions. Whatever the type of facility, to be considered accessible it must have an appropriate superstructure, at minimum an enclosure that bars views into the latrine. Latrines without a minimal superstructure discourage use. Bucket latrines and similar types that require the manual removal of feces are not considered sanitary because of the risk of contaminating the immediate environment.

An **improved toilet facility** should meet the following criteria:
1. Type of facility should be one of the following:

- Flush toilet with connection to a public sewer
- Flush toilet with connection to a septic system
- Pour-flush toilet
- Covered pit latrine (simple type or ventilated improved pit latrine)

2. Basic superstructure of walls, roof, and door should be able to be closed to keep animals out and provide privacy

3. A place for handwashing with water and soap should be available within or next to the facility.

An improved **hygienic** facility means there are no feces on the floor, seat, or walls. While the presence of flies may indicate unhygienic conditions, this is difficult to assess objectively.

*Calculation*: Number of households with an improved and hygienic toilet facility divided by the total sample size.

*Source of Data*: The caretaker or household head is interviewed about the household's access to a toilet facility and type. The person is asked if the household has a toilet facility and, if feasible, who in the family uses it. The distance to the facility is ascertained. The interviewer also should ask whether the feces of young children are deposited into a toilet facility (see Indicators 1.2 and 1.8). After the interview, a latrine inspection should be carried out to determine if it is functioning and hygienic.

Although the presence of an improved and hygienic toilet facility is a necessary condition to eliminate feces from the household environment, it will not impact health unless all family members use it. If possible, programs should assess signs of use (e.g., well-worn path, door in good repair, absence of spider webs, presence of cleaning materials). For an individual to be counted as a user of the sanitary facility, four conditions must be met: the facility must be functioning; it must be hygienic; the person must be reported as a user; and the facility must show signs of use.

*Issues*: The existence of a toilet facility does not necessarily indicate its use. One important determinant of use is the distance of the facility from the house. There must be signs of consistent use by all family members if hygiene improvement is to be achieved; unfortunately such measures are subjective and less reliable. Indicator 2.2 Percentage of households that use an improved and hygienic toilet facility attempts to look at use by observing how accessible the toilet facility is. Because sanitation may be a sensitive topic in many cultures, the interviewers must be well trained and able to be as unobtrusive and sensitive as possible. In some countries, it may be necessary for female interviewers to interview female household members. For good program design, qualitative research on the knowledge, attitudes, and practices in excreta disposal is critical (see hygiene promotion indicators). A study should detail the types of toilet facilities available locally and not assess against types not usually found in the community to be researched.

*Target Values:* Safe disposal practices benefit not only the immediate household but also the community at large, because feces from one household can easily be carried, for example,

through flies, or washed into the environment of neighboring households. Bateman and Smith (1991) found that for maximum health impact about 75% of households in a given community should have and use hygienic toilets or latrines.

*Model Questions:*

53. What kind of toilet facility does this household use? (CHECKONE)
55. Where is the toilet facility located?
56. How far is the toilet facility from your living quarters? (IF FEASIBLE, OBSERVE)
61. How many households share this toilet facility?
62. If shared, can anybody in the neighborhood use this toilet facility or is it shared between a few households only?
68. May I see the toilet facility?
76. TOILET FACILITY OBSERVATION: IS THERE FECAL MATTER PRESENT INSIDE THE FACILITY ON FLOOR OR WALLS (HUMAN OR ANIMAL)?
125. Where do you usually wash your hands? (CHECK ALL THAT APPLY)

## 1.5 Percentage of households with access to a place to wash hands that has all essential supplies

**Indicators Diagram**

*Rationale:* For the hygiene situation of a household to improve, the primary caretaker must have easy access to a place to wash his or her hands that has water and soap within easy reach.

*Definition of Terms:* **Access** means the members of the household can wash their hands when needed.

A **proper handwashing place** should meet all of the following criteria:

1. At least one handwashing place is located in or near the toilet facility.
2. All necessary items for handwashing are present:
   - Water
   - Soap, or locally available cleansing agent such as ash or other detergent
   - Washing device allowing for unassisted handwashing (tap, basin, bucket, sink, tippy tap)
   - Clean drying material (this is optional, if drying by air is encouraged)
3. Grey water from handwashing can be safely disposed of in the following ways:
   - Grey-water pit, soak-away pit
   - Connection to a septic system or toilet facility

   The disposal of grey water is mostly an issue for households with pipe connections because they tend to use much more water than households obtaining water from other sources.

*Calculation:* Number of households with access to an appropriate handwashing place divided by the total number of households in the sample.

*Source of Data:* The caretaker or head of household is interviewed about the handwashing place. If possible, the interviewer should examine the handwashing site to determine if it is "properly" equipped with water, soap, and optionally with a basin and clean material for hand drying.

*Issues:* Handwashing behavior is strongly influenced by access to water as well as access to a properly equipped handwashing place. To be optimally effective, the handwashing place should be located in close proximity to the toilet facility so that the caregivers can conveniently clean their hands after defecation. In many poor settings there may not be a dedicated place for handwashing that has all necessary materials visible. The model questions address this issue by offering the option for the caretaker to bring out the necessary items within one minute or less, which would indicate that the items are readily accessible when needed for handwashing. In the latter case, an alternative indicator such as "Proportion of households with access to essential handwashing supplies" may be more appropriate.

*Target Values:* All households should have immediate access to all essential items for washing hands at all appropriate times. Poor households may not have a dedicated room, but should make it a habit that people wash hands properly and keep items within reach at all times.

*Model Question:*

125. Where do you usually wash your hands?
(CHECK ALL THAT APPLY)
126. Can you show me everything you use to wash your hands?
127. OBSERVATION ONLY: IS THERE WATER? INTERVIEWER: TURN ON TAP AND/OR A CHECK CONTAINER AND NOTE IF WATER IS PRESENT
128. OBSERVATION ONLY: IS THERE SOAP OR DETERGENT OR ASH?
131. OBSERVATION ONLY: IS THERE A HAND-WASHING DEVICE SUCH AS A TAP, BASIN, BUCKET, SINK, OR TIPPY TAP?
132. OBSERVATION ONLY: DOES THE WASHING DEVICE ALLOW UNASSISTED WASHING AND RINSING OF BOTH HANDS, FOR EXAMPLE, A TAP, BASIN, BUCKET, SINK, OR TIPPY TAP?
134. OBSERVATION ONLY: IS THERE A TOWEL OR CLOTH TO DRY HANDS?
135. OBSERVATION ONLY: DOES THE TOWEL OR CLOTH APPEAR TO BE CLEAN?

**Community Water Sources**

## 1.6 Percentage of households that have sufficient quantities of water (a minimum of 20 liters per capita per day)

**Indicators Diagram**

***Note*:** Adapt the quantity to local minimum standards.

*Rationale:* For the hygiene situation in a household to improve, water must not only be accessible (Indicators 1.1, 1.2, 1.3, and 1.7), it must also be available in sufficient quantity. However, the quantity of water used per capita is difficult to assess accurately and will require substantial effort during a household survey; such an effort could be at the expense of measuring other hygiene improvement indicators. As a result, programs may decide to assess water quantity only in a small subsample to obtain a rough indication of use.

*Definition of Terms:* In determining what is "**sufficient,**" the quantity of water used per capita per day should be calculated. UNICEF has defined "sufficient" quantity as an absolute minimum of 15 lcd. The Sphere Project (Oxfam 2000) suggests 15 lcd as well. This is at the low end of the recommendations made by House, Ince, and Shaw (1999), which is 15 to 25 lcd for an individual. USAID, World Bank, and WHO set the minimum standard slightly higher at 20 to 40 lcd, excluding water for cooking and cleaning.

The 20 lcd can be used as a minimum guideline when designing water supply systems, especially in rural areas.[1] The percentage of the population below the minimum amount should receive priority attention and assistance.

The amount of water collected or delivered to a home from a community source is determined through a random survey of households. Estimating the volume requires different approaches for households with pipe connection, which are located predominantly in urban areas, and those using other sources, which are located predominantly in rural areas and poor urban neighborhoods. To obtain information about the latter, the person(s) responsible for collecting most of the water is interviewed on how much water has been collected since the same time the previous day. The response is typically given in number of containers and the interviewer must ascertain the number of liters per container. This can be done by measuring the container or by viewing a picture of common water-carrying containers used in the community for which volumes are predetermined. Model questions are included below.

The proposed set of questions assumes that households collect water from a single source. Where households access water from multiple sources, additional questions of a similar nature need to

[1] For comparative purposes, it is interesting to note that water consumption per capita in the United States is estimated to be between 246 and 295 lcd.

be asked. The collection of rainwater further increases the difficulty to assess water quantities used because households usually cannot track quantities. An approximation might be obtained by inquiring about the number of times containers used to collect rainwater get filled during the rainy season; for example, one or two weeks prior to the survey. Programs may want to develop their own questions to address rainwater collection.

For households with pipe connections, interviewers should use meter-based estimates of water consumed by either copying the amounts from the invoice for the last payment period or estimating the volume based on average payment for water per period and unit price. The interviewee also should be asked the number of people in the household who are using the water. The continuity of supply needs to be taken into account as well. Where water meters are not present or defunct, measuring the volume used might be difficult. This may be particularly true in poor urban neighborhoods where the readings can be notoriously unreliable. Model questions have not yet been included for this step.

This indicator includes ***all water*** the household collects and uses for drinking, cooking/food preparation, bathing, personal and household hygiene, and sanitation (including excreta disposal). ***Safe water*** is considered to be water taken from a household connection, standpipe (on household premises or public), borehole (on household premises or public), protected dug well (on household premises or public), protected spring (on household premises or public), or closed containers that collect rainwater.

*Calculation:* Number of households with 20 lcd or more of safe water divided by the total sample size.

*Model Questions:*

12. In what type of container is the water carried from your main source?
13. What is the approximate volume in liters of:
14. How many of these containers are carried at a time?
15. How many loads do you fetch per week?

## 1.7 Percentage of households with access to improved water sources during dry and wet seasons

**Indicators Diagram**

*Rationale*: Depending on the geographic location, the same water source may not be available throughout the year, because of wet and dry seasons. For these households it will be important that water sources during both seasons are of the improved type.

*Definition of Terms:* Same as for access to improved water source priority indicator.

*Calculation:* Number of households with access to improved water sources during both wet and dry seasons divided by the total sample size.

*Model Questions:*

24. Do you use the main water source all year or only part of the year?
25. During the other part of the year, what is the main source of drinking water for members of this household?
26. How long does it take you to go to this water source, get water, and come back?

**Toilet facilities**

## 1.8 Percentage of households that have child-friendly feces disposal facility

**Indicators Diagram**

*Rationale:* The proper disposal of feces for children under 3 years is important for the hygiene improvement of a household and the community at large because it lowers risk of disease pathogens in the environment.

*Definition of Terms:* A **child-friendly facility** would contain the following:

- Smaller hole in a pit latrine or a separate child seat to put over hole
- Potty available for children under 2 years
- Proper lighting and a location within short distance (within 10 meters or less)

*Calculation:* Number of households with child-friendly facility divided by the total sample size.

*Model Questions:*

55. Where is the toilet facility located?
56. How far is the toilet facility from your living quarters? (IF FEASIBLE, OBSERVE)
68. May I see the toilet facility?
75. TOILET FACILITY OBSERVATION: DOES IT HAVE ANY OF THE FOLLOWING CHILD-FRIENDLY FEATURES? (MAY BE SEPARATE OR IN THE SAME COMPARTMENT AS AN ADULT FACILITY. OBSERVE AND CHECK ALL THAT APPLY.)

## 1.9 Percentage of households that have a hygienic solid waste disposal system

**Indicators Diagram**

*Rationale:* For the hygiene situation of a household to improve, it must have a safe way to dispose of solid waste.

*Definition of Terms:* **Solid waste** refers to all household refuse in nonliquid form. Liquid waste is often referred to as grey water and brown water (fecal matter). Composting latrines produce solid waste from fecal matter, but their use is usually for agricultural purposes and not intended as garbage.

A **disposal system** consists of the following:

- A solid waste pit near the household where solids are discarded and eventually buried
- A waste removal system where trash is collected and removed from the household vicinity on a regular basis

Incinerators are not recommended for households or small institutions, because they generally do not develop temperatures that would safely burn solid waste.

*Calculation:* Number of households with hygienic solid waste disposal system divided by the total sample size.

*Model Questions:*

207. What is the principal way you dispose of your garbage?

**Household Technology & Materials**

## 1.10 Percentage of households that have soap

**Indicators Diagram**

*Rationale:* An essential component of proper handwashing is the use of soap, without which it is difficult to reduce incidents of diarrhea. Soap eliminates diarrhea-inducing pathogens from the skin. Research in refugee settings has shown that in households where soap was present, fewer children had diarrheal diseases regardless of whether they actually used soap.

*Definition of Terms:* **Soap** refers to either homemade or commercial soap in bar or powder form.

*Calculation:* Number of households that have soap divided by the total sample size.

*Issues*: Programs may need to adapt this indicator where households cannot be expected to have soap but may use some locally acceptable alternative cleansing agent. In addition, interviewers may want to ask to see the soap or cleansing agent instead of relying on recall only for improving the accuracy of the information collected.

*Model Questions:*

83. Do you have soap? (ONLY ASK FOR THE AVAILABILITY OF SOAP HERE, NOT OF OTHER CLEANING AGENTS LIKE DETERGENTS, ASH, SAND)

## 1.11 Percentage of households that have water-treatment supplies

**Indicators Diagram**

*Rationale:* In order to reduce contamination by diarrhea-producing pathogens in the most accessible water source, households must use some form of household water treatment.

*Definition of Terms:* **Water treatment supplies** would include one of the following:

- Hypochlorite solution

- Water filter
- Bottles for solar disinfection

*Calculation:* Number of households with water treatment supplies divided by the total sample size.

*Model Questions:*

37. Do you treat your water in any way to make it safer to drink?
38. IF YES, what do you usually do to the water to make it safer to drink?
(ONLY CHECK MORE THAN ONE RESPONSE, IF SEVERAL METHODS ARE USUALLY USED TOGETHER, FOR EXAMPLE, CLOTH FILTRATION AND CHLORINE)
39. When did you treat your drinking water the last time using this method?
40. If water is treated by a method other than boiling, may I see the product or device?

## 1.12 Percentage of households that have a clean water-transferring vessel (dipper)

**Indicators Diagram**

*Rationale:* The last stage in the safe water chain is the possession and use of a clean/safe water-transferring vessel that allows the water from a safe source to be transferred to a vessel for drinking.

*Definition of Terms:* A **clean water-transferring vessel** is the container used to manipulate the stored water. It does not include the containers used to store the water in the household. Households should have one vessel that is used exclusively for transferring water from the water storage container to a drinking glass or to any other vessels or containers. The water-transferring vessel should be kept clean, off the floor, and out of reach of children. If households use plastic water storage containers and can pour water safely and cleanly from the container or use a tap, a water-transferring vessel would not be necessary. This information is also pertinent to Indicator 0.4 Percentage of households that practice safe drinking water management.

*Calculation:* Number of households with a clean water-transferring vessel divided by the total sample size.

*Sample Question:*

33. How do you remove water from the drinking water container?
34. What do you use to remove water?

## 1.13 Percentage of households that have covered or narrow-neck water storage containers

**Indicators Diagram**

*Rationale:* An important part of proper water storage is to have narrow-neck or covered containers, which minimize the possibility of contamination with diarrhea pathogens.

*Definition of Terms:* Water storage containers should have a screw-on top/lid or a plate-like **cover** that completely covers the container. A **narrow-neck container** is a suitable and acceptable substitute for covers as it offers less chance for hands to enter the container and contaminate the stored water.

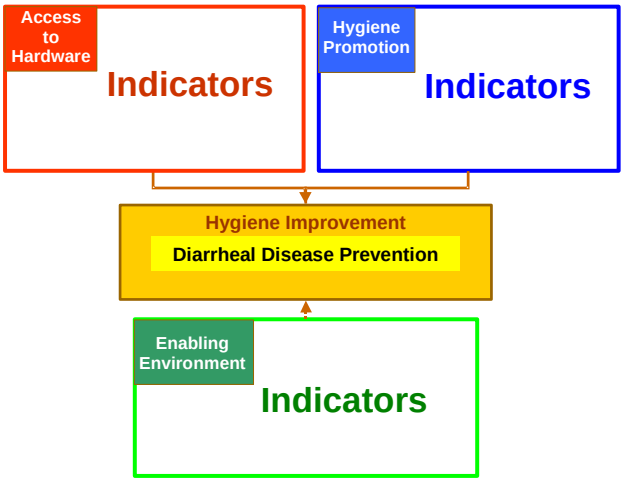
*Calculation:* Number of households with proper water storage containers divided by the total sample size.

*Model Questions:*

27. Do you store water for drinking in the household?
28. If YES, may I see the containers, please?
29. WHAT TYPE OF CONTAINERS ARE THESE? (OBSERVE AND CHECK ALL THAT APPLY)
30. ARE THE CONTAINERS COVERED? (OBSERVE AND CHECK)

## 2. HYGIENE PROMOTION

Once access to hardware has been assessed, it is then essential to look at key hygiene behaviors to see whether the population has the knowledge and attitude necessary to adopt hygiene improvement behaviors and whether they can accurately report or be observed in these behaviors. Furthermore, the activities involved in promoting hygiene behaviors should be examined. The before-mentioned efforts to improve access to safe water and toilet facilities will be of little value if the knowledge and behaviors of the target population are not improved simultaneously. (Click on the figure to go to specific hygiene improvement components or to the HIF indicators diagram)




**PRIORITY INDICATORS FOR HYGIENE PROMOTION**

**2.1** Percentage of caretakers who report having used soap for handwashing at least at two critical times during past 24 hours

**Indicators Diagram**

*Rationale:* Caretakers knowing the critical times for handwashing does not imply that they actually practice such behavior. The 24-hour recall is another way to solicit a more accurate answer about handwashing practices without actually observing the behavior, and this may be the case in the majority of surveys.

*Definition of Terms:* Not all potential users meet the desired behavior. At minimum the respondent should mention two critical times for handwashing, and this should include "after defecating."

The following practices are related to a reduced risk of diarrhea:

- Washing hands after defecating
- Washing hands after handling child's feces or cleaning a child's bottom
- Washing hands before preparing food
- Washing hands before feeding children
- Washing hands before eating

Other uses or nonspecific answers may include the following:

- Washing my children's hands
- Washing hands after eating
- Washing clothes
- Washing my body
- Washing my hands
- Washing my children
- Washing cooking utensils and dishes

*Calculation:* Number of caretakers who mentioned handwashing at appropriate times divided by the total sample size.

*Model Questions:*

83. Do you have soap? (ONLY ASK FOR THE AVAILABILITY OF SOAP HERE, NOT OF OTHER CLEANING AGENTS LIKE DETERGENTS, ASH, SAND)
84. Have you used soap today or yesterday?
85. When you used soap today or yesterday, what did you use it for? IF FOR WASHING MY OR MY CHILDREN'S HANDS IS MENTIONED, PROBE WHAT WAS THE OCCASION, BUT DO NOT READ THE ANSWERS.

(DO NOT READ THE ANSWERS, ASK TO BE SPECIFIC, ENCOURAGE "WHAT ELSE" UNTIL NOTHING FURTHER IS MENTIONED AND CHECK ALL THAT APPLY))

## 2.2 Percentage of households that use an improved and hygienic toilet facility

**Indicators Diagram**

*Rationale:* Knowing about and having access to hygienic toilet facilities is not sufficient (indicator 1.4 Percentage of households with access to an improved and hygienic toilet facility); the household members must use it on a regular basis in order to improve their hygiene situation.

*Definition of Terms:* **Hygienic** means that no feces are found on the floor, seat, or walls of the toilet facility and no flies are present. **Using a toilet facility** means that obvious signs of use exist; for example, there is an unobstructed path that looks well traveled.

*Calculation:* Number of households where observation suggests use of hygienic toilet facilities divided by the total sample size.

*Issues:* This definition of use of a toilet facility is only an approximation of actual use, which would be difficult to observe.

*Model Questions:*

53. What kind of toilet facility does this household use? (CHECKONE)
55. Where is the toilet facility located?
56. How far is the toilet facility from your living quarters? (IF FEASIBLE, OBSERVE)
61. How many households share this toilet facility?
62. If shared, can anybody in the neighborhood use this toilet facility or is it shared between a few households only?

68. May I see the toilet facility?
70. TOILET FACILITY OBSERVATION: OBSERVE ACCESS TO THE FACILITY; ARE THERE OBSTACLES IN THE PATH, ARE THERE SIGNS OF REGULAR USE?
76. TOILET FACILITY OBSERVATION: IS THERE FECAL MATTER PRESENT INSIDE THE FACILITY ON FLOOR OR WALLS (HUMAN OR ANIMAL)?

**Communication**

## 2.3 Percentage of caretakers who had been reached through different communication channels about water, sanitation, or hygiene during past month

**Indicators Diagram**

*Rationale:* In many programs, community volunteers, health workers, or extension agents are scheduled to meet regularly with community members in their homes or as a group to talk about water supply, sanitation, and hygiene. However, caretakers can be reached by other means of communication as well, for example, encounters may take place at community events, in schools or in health facilities. This indicator suggests whether these contacts happen frequently enough for hygiene promotion to be effective.

*Definition of Terms:* One contact a month seems to be the minimum acceptable.

*Calculation:* Number of caretakers who report a contact with a trained worker or volunteer divided by the total sample size.

*Model Questions:*

100. Have you been visited by or spoken with a community volunteer (promoter, animator) during the past month about water, sanitation, or hygiene?
101. If yes, which messages did you hear?
102. Do you feel that the messages you received from community volunteers were clear, understandable, and useful to you?
103. Did you try out any of the recommendations in the message?
104. Which recommendation did you try out? (ONLY CHOOSE ONE)
105. For how long did you to use it?
106. Have you been visited by or spoken with an agent or worker from a government or nongovernmental institution (health, social services, agriculture, education, etc.) during the past month about water, sanitation, or hygiene?
107. If yes, which messages did you hear?
108. Do you feel that the messages you received from agents were clear, understandable, and useful to you?
109. Did you try out any of the recommendations in the message?
110. Which recommendation did you try out? (ONLY CHOOSE ONE)
111. For how long did you to use it?
112. During the past month, were there community events where you heard about health messages?
113. If yes, did you participate in these community events?
114. If yes, which messages did you hear during these community events?
115. Do you feel that the messages during these community events were clear, understandable, and useful to you?
116. Did you try out any of the recommendations in the message?

117. Which recommendation did you try out? (ONLY CHOOSE ONE)
118. For how long did you to use it?
119. Have you heard any messages about health during the past month on the radio or TV?
120. If yes, which messages on radio/TV did you hear?
121. Do you feel that the messages on radio/TV were clear, understandable, and useful to you?
122. Did you try out any of the recommendations in the message?
123. Which recommendation did you try out? (ONLY CHOOSE ONE)
124. For how long did you to use it?

## 2.4 Percentage of caretakers who have heard about hygiene promotion

**Indicators Diagram**

*Rationale:* Practicing improved water and sanitation behaviors depends on effective communication strategies.

*Definition of Terms:* **Heard** about hygiene promotion means that caretakers can recall a hygiene promotion message or activity and can identify what kind it was. Means of delivering hygiene messages include trained workers such as health providers or community volunteers, group discussions, posters, radio/television, newspapers, and folk drama. This indicator is related to the existence of a mechanism that will deliver effective hygiene promotion. This indicator adds information obtained from several sources: community volunteers, health workers or professionals from other sectors, community events, and radio or TV. The model questions need to ascertain that the messages caretakers heard were indeed related to water supply, sanitation, and hygiene.

*Calculation:* Number of caretakers who report having heard about hygiene activities divided by the total sample size.

*Model Questions:*

100. Have you been visited by or spoken with a community volunteer (promoter, animator) during the past month about water, sanitation, or hygiene?
101. If yes, which messages did you hear?
102. Do you feel that the messages you received from community volunteers were clear, understandable, and useful to you?
103. Did you try out any of the recommendations in the message?
104. Which recommendation did you try out? (ONLY CHOOSE ONE)
105. For how long did you to use it?
106. Have you been visited by or spoken with an agent or worker from a government or nongovernmental institution (health, social services, agriculture, education, etc.) during the past month about water, sanitation, or hygiene?
107. If yes, which messages did you hear?
108. Do you feel that the messages you received from agents were clear, understandable, and useful to you?
109. Did you try out any of the recommendations in the message?
110. Which recommendation did you try out? (ONLY CHOOSE ONE)
111. For how long did you to use it?

112. During the past month, were there community events where you heard about health messages?
113. If yes, did you participate in these community events?
114. If yes, which messages did you hear during these community events?
115. Do you feel that the messages during these community events were clear, understandable, and useful to you?
116. Did you try out any of the recommendations in the message?
117. Which recommendation did you try out? (ONLY CHOOSE ONE)
118. For how long did you to use it?
119. Have you heard any messages about health during the past month on the radio or TV?
120. If yes, which messages on radio/TV did you hear?
121. Do you feel that the messages on radio/TV were clear, understandable, and useful to you?
122. Did you try out any of the recommendations in the message?
123. Which recommendation did you try out? (ONLY CHOOSE ONE)
124. For how long did you to use it?

## 2.5 Percentage of caretakers who can recall at least one hygiene message

**Indicators Diagram**

*Rationale:* It is important to confirm that the target audience has indeed been reached by the hygiene message.

*Definition of Terms:* The caretaker would be asked without prompting what the hygiene message was. The interviewer compares this to a list of messages that were communicated. It there is a match, the answer is recorded positive. Programs may want to track the actual messages mentioned to evaluate whether some message were better remembered than others.

*Calculation:* Number of caretakers who report having heard one or more specific hygiene messages divided by the total sample size.

*Model Questions:*

100. Have you been visited by or spoken with a community volunteer (promoter, animator) during the past month about water, sanitation, or hygiene?
101. If yes, which messages did you hear?
102. Do you feel that the messages you received from community volunteers were clear, understandable, and useful to you?
103. Did you try out any of the recommendations in the message?
104. Which recommendation did you try out? (ONLY CHOOSE ONE)
105. For how long did you to use it?
106. Have you been visited by or spoken with an agent or worker from a government or nongovernmental institution (health, social services, agriculture, education, etc.) during the past month about water, sanitation, or hygiene?
107. If yes, which messages did you hear?
108. Do you feel that the messages you received from agents were clear, understandable, and useful to you?
109. Did you try out any of the recommendations in the message?
110. Which recommendation did you try out? (ONLY CHOOSE ONE)

111. For how long did you to use it?
112. During the past month, were there community events where you heard about health messages?
113. If yes, did you participate in these community events?
114. If yes, which messages did you hear during these community events?
115. Do you feel that the messages during these community events were clear, understandable, and useful to you?
116. Did you try out any of the recommendations in the message?
117. Which recommendation did you try out? (ONLY CHOOSE ONE)
118. For how long did you to use it?
119. Have you heard any messages about health during the past month on the radio or TV?
120. If yes, which messages on radio/TV did you hear?
121. Do you feel that the messages on radio/TV were clear, understandable, and useful to you?
122. Did you try out any of the recommendations in the message?
123. Which recommendation did you try out? (ONLY CHOOSE ONE)
124. For how long did you to use it?

## 2.6 Percentage of caretakers who report that messages are understood and useful

**Indicators Diagram**

*Rationale:* It is essential that caretakers comprehend messages about hygiene if household knowledge is to increase and behaviors are to change.

*Definition of Terms:* Caretakers have **understood** the message if they know what activity they are encouraged to do and how to do it. For the activity to be **useful,** caretakers must report that it helped them apply their knowledge of hygiene promotion. As before, this indicator adds information obtained from several sources: community volunteers, health workers (or other professionals), community events, and radio or TV. The model questions need to ascertain that the messages heard were indeed related to water supply, sanitation, and hygiene.

*Calculation:* Number of caretakers who report understanding hygiene promotion messages and their usefulness divided by the total sample size.

*Model Questions:*

100. Have you been visited by or spoken with a community volunteer (promoter, animator) during the past month about water, sanitation, or hygiene?
101. If yes, which messages did you hear?
102. Do you feel that the messages you received from community volunteers were clear, understandable, and useful to you?
103. Did you try out any of the recommendations in the message?
104. Which recommendation did you try out? (ONLY CHOOSE ONE)
105. For how long did you to use it?
106. Have you been visited by or spoken with an agent or worker from a government or nongovernmental institution (health, social services, agriculture, education, etc.) during the past month about water, sanitation, or hygiene?
107. If yes, which messages did you hear?

108. Do you feel that the messages you received from agents were clear, understandable, and useful to you?
109. Did you try out any of the recommendations in the message?
110. Which recommendation did you try out? (ONLY CHOOSE ONE)
111. For how long did you to use it?
112. During the past month, were there community events where you heard about health messages?
113. If yes, did you participate in these community events?
114. If yes, which messages did you hear during these community events?
115. Do you feel that the messages during these community events were clear, understandable, and useful to you?
116. Did you try out any of the recommendations in the message?
117. Which recommendation did you try out? (ONLY CHOOSE ONE)
118. For how long did you to use it?
119. Have you heard any messages about health during the past month on the radio or TV?
120. If yes, which messages on radio/TV did you hear?
121. Do you feel that the messages on radio/TV were clear, understandable, and useful to you?
122. Did you try out any of the recommendations in the message?
123. Which recommendation did you try out? (ONLY CHOOSE ONE)
124. For how long did you to use it?

## 2.7 Percentage of caretakers who report that they did at least one recommended hygiene practice

**Indicators Diagram**

*Rationale:* Understanding messages and developing the necessary knowledge are just steps towards trying out and adopting essential hygiene behaviors. Additional survey questions attempt to measure whether people did follow up on the messages they heard and try out recommended hygiene practices and kept doing them (as a measure of adoption).

*Definition of Terms:* The list of recommended hygiene practices depends on the messages promoted. The information is gathered through three questions that follow each of the four communications channels (community volunteer, health agent, community event, radio/TV). First, people are asked whether they tried out any of the recommended hygiene practices. Second, those who respond positively are asked which practice it was. Third, the interviewer finds out how often this practice is preformed.

*Calculation:* Number of caretakers who report doing at least one recommended hygiene practice divided by the total sample size.

*Model Questions:*

100. Have you been visited by or spoken with a community volunteer (promoter, animator) during the past month about water, sanitation, or hygiene?
101. If yes, which messages did you hear?
102. Do you feel that the messages you received from community volunteers were clear, understandable, and useful to you?

103. Did you try out any of the recommendations in the message?
104. Which recommendation did you try out? (ONLY CHOOSE ONE)
105. For how long did you to use it?
106. Have you been visited by or spoken with an agent or worker from a government or nongovernmental institution (health, social services, agriculture, education, etc.) during the past month about water, sanitation, or hygiene?
107. If yes, which messages did you hear?
108. Do you feel that the messages you received from agents were clear, understandable, and useful to you?
109. Did you try out any of the recommendations in the message?
110. Which recommendation did you try out? (ONLY CHOOSE ONE)
111. For how long did you to use it?
112. During the past month, were there community events where you heard about health messages?
113. If yes, did you participate in these community events?
114. If yes, which messages did you hear during these community events?
115. Do you feel that the messages during these community events were clear, understandable, and useful to you?
116. Did you try out any of the recommendations in the message?
117. Which recommendation did you try out? (ONLY CHOOSE ONE)
118. For how long did you to use it?
119. Have you heard any messages about health during the past month on the radio or TV?
120. If yes, which messages on radio/TV did you hear?
121. Do you feel that the messages on radio/TV were clear, understandable, and useful to you?
122. Did you try out any of the recommendations in the message?
123. Which recommendation did you try out? (ONLY CHOOSE ONE)
124. For how long did you to use it?

**Knowledge and Attitude**

## 2.8 Percentage of caretakers who know at least two ways to prevent diarrhea

**Indicators Diagram**

*Rationale:* Hygiene improvement projects are most concerned about changing behaviors involving water use and sanitation. Such changes in behavior cannot be expected, however, until the target population knows what must be done to improve the hygiene situation in the household and the surrounding community (i.e., proper protection of drinking water and washing of hands). Once such knowledge is acquired, then it must be combined with positive attitudes, identification of barriers to behavior change, and other factors before practices can be expected to change.

*Definition of Terms:* To **prevent diarrhea** implies a reduction in the number of episodes that a child experiences. Its importance would be defined in terms of the health of the child, the health of the family, and the well-being of the community. The list of ways to prevent diarrhea includes many items not related to water supply, sanitation, and hygiene:

- Wash hands
- Use soap

- Use toilet facility to defecate
- Dispose of children's feces in toilet facility
- Bury feces
- Drink clean water
- Store water safely
- Treat water (boil, filter, chlorinate)
- Prepare and protect food hygienically
- Dispose of garbage in a pit
- Breast feed babies in general
- Breast feed only until 6-months old
- Do not offer other food/drink before 6 months
- Get measles vaccination
- Take vitamin A
- Practice good nutrition

*Calculation:* Number of caretakers who can cite two ways to prevent diarrhea divided by the total sample size.

*Model Questions:*

87. Do you think diarrhea can be prevented?
88. If yes, how do you think diarrhea can be prevented? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED)

## 2.9 Percentage of caretakers who know at least two danger signs of diarrhea

**Indicators Diagram**

*Rationale:* Although hygiene promotion focuses on the prevention of diarrhea, children will still become ill from diarrhea. Most cases are mild and will pass with proper amounts of liquids and nutrition. However, a few cases will be severe and potentially life threatening, and caretakers need to know the danger signs of severe dehydration, which requires medical care.

*Definition of Terms:* **Danger signs** the caretaker should recognize in cases of diarrhea are the following:

- Sunken eyes
- Persistent skin fold
- Blood in stool
- Irritable or restless character
- Intense thirst

*Calculation:* Number of caretakers who know at least two danger signs divided by the total sample size.

*Model Questions:*

173. Can you tell me the danger signs when a child is seriously ill from diarrhea and should be taken to a health facility? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED)

## 2.10 Percentage of caretakers who know at least one method of how to properly treat drinking water

**Indicators Diagram**

*Rationale:* If a household's water comes from an unsafe water source or is stored in an environment where it can be easily contaminated, it is important that is the water be treated appropriately to eliminate diarrhea-causing pathogens or reduce the chance of being contaminated.

*Definition of Terms:* Effective **water treatment** includes the use of chlorine solution to purify the water from an unsafe source and prevent water from becoming contaminated. **Water filters** can be found in some settings, but although they are very effective, poor households often cannot afford them. **Boiling** the water has often been promoted, however compliance has been difficult to assess and maintain. Cooking fuel is scarce in many developing countries and expensive for poor families. Moreover, boiling takes time that many caretakers do not have. Where boiling is done, the Center for Disease Control (CDC) recommend that the water should be kept at a rolling boil for 1 minute (longer in high altitudes) to ensure that it is safe and the most resistant diseases are destroyed. **Solar disinfection** has been has been implemented in multiple settings, however it is difficult to achieve at scale.

*Calculation:* Number of caretakers who can describe how to treat water from an unsafe source divided by the total sample size.

*Model Questions:*

93. What can be done to make water safer for drinking?

## 2.11 Percentage of caretakers who know at least two reasons why it is important to wash hands with soap

**Indicators Diagram**

*Rationale:* The presence of soap does not necessarily indicate its use in washing hands at critical times. At minimum caretakers should know why washing hands with soap is important. It does not seem to matter whether they cite health or removal of germs as reasons to wash hands, but rather that they have a motivating factor, which can include social pressure.

*Definition of Terms:* **Valid reasons** for washing hands with soap include the following:

- Prevents disease

- Prevents diarrhea
- Cleans hands/removes dirt
- Is good hygiene
- Prevents dirt from getting into mouth
- Prevents dirt from getting into food
- Removes germs
- Heard from parents/other family
- Heard from other people
- Heard from radio/TV
- Have seen other people do so
- Smells good
- Looks/feels clean

*Calculation:* Number of caretakers who say that it is important to practice proper hygiene behaviors divided by the total sample size.

*Model Questions:*

91. Do you believe that washing hands just with water but without soap is as good as washing hands with water and soap?
92. Why is it important to wash hands with soap? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED)

## 2.12 Percentage of caretakers who know critical times for handwashing

**Indicators Diagram**

*Rationale*: In addition to knowing how to wash their hands, it is essential that household members, especially the caretaker and those responsible for preparing food, know when it is most important to wash their hands in order to decrease the prevalence of diarrhea.

*Definition of Terms*: **Critical times** include the following (listed by WHO as instances for maximum effect on diarrheal disease reduction):

- After defecation
- After handling child's feces or cleaning a child's bottom
- Before feeding others
- Before eating
- Before preparing food

It is critically important that interviewers do not prompt responses (i.e., read out the answers). At minimum the respondent should mention two critical times for washing hands, one of which should be "after defecating."

*Calculation*:

1. Number of caretakers who know two of the five critical times to wash hands divided by the total sample size.
2. Number of caretakers who cite "after defecation" divided by the total sample size.

*Issues*: Knowledge about handwashing is not a very reliable predictor of the actual practice of handwashing. Indicator 2.1 Percentage of caretakers who report having used soap for handwashing at least at two critical times during past 24 hours and model questions 83–85 should be considered instead.

*Model Questions:*

90. When is it important to wash your hands? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED)

## 2.13 Percentage of caretakers who say that the community can do something together to prevent diarrhea

**Indicators Diagram**

*Rationale:* Household hygiene improvement depends on more than just the family's actions. It is important for programs to understand the of level of participation by household members in community groups and actions. Ideally this would include the types of groups and activities at which family members participate (see indicator 2.16. Percentage of caretakers who have participated in community hygiene improvement activities during the past month). Community participation (see Section **ENABLING ENVIRONMENT**) is therefore an important ingredient in the calculus of household hygiene improvement.

*Definition of Terms:* **"Can do something"** refers to any activity a caretaker cites that he/she and the community can perform together and that will have a positive impact on the hygiene situation or diarrhea prevention in their community.

*Calculation:* Number of caretakers who say the community together can prevent diarrhea divided by the total sample size.

*Issues*: This indicator and the related model question are essentially qualitative because they measure an attitude vis-à-vis community action, but do not indicate how active a respondent is. It provides a rough idea and may indicate that attitudes vis-à-vis community action may change over time. Programs may want to be more specific in their assessment and include measures such as increased participation or level of community participation (e.g., participation in water committees, attendance at community events) and measures of who is participating (e.g., percent of additional household members of both genders). The model questions under hygiene promotion and the enabling environment address only some basic elements of participation, and programs may want to add others.

*Model Questions:*

89. What can the community as a whole, not just you, do to prevent diarrhea? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED)

**Reported Behaviors**

## 2.14 Percentage of households that use a properly cleaned toilet facility

**Indicators Diagram**

*Rationale:* For a sanitary facility to improve the hygiene situation of a household, it must be clean and well maintained.

*Definition of Terms:* **Proper cleaning** of a toilet facility involves removing feces from the floor, seat, and walls of the facility; reducing the presence of flies (by covering the hole(s)); disinfecting the facility and **maintaining** this condition. While these details would require too much time to assess, cleaning frequency can be used as an approximation. It is assumed that cleaning a facility at least once a week can provide hygienic conditions. This may need to be adapted to local standards.

*Calculation:* Number of households that clean latrines at last once per week divided by the total sample size.

*Issues:* This indicator and the related model questions are essentially qualitative, because they measure an attitude vis-à-vis cleanliness, but do not indicate how compliant a respondent is. It provides a rough idea and may indicate that attitudes vis-à-vis cleanliness may change over time.

*Model Questions:*

66. Is the facility cleaned?
67. When was the facility cleaned last?

## 2.15 Percentage of caretakers who clean their water storage containers at least once per week

**Indicators Diagram**

*Rationale:* For safe drinking water to remain safe, it requires a clean storage container.

*Definition of Terms:* To **wash a container properly and regularly** means to use soap and water inside and out at least once a week. While these details would require too much time to assess, cleaning frequency can be used as an approximation. It is assumed that cleaning at least once a week can provide hygienic conditions. The frequency and cleaning procedure may need to be adapted to local standards.

*Calculation:* Number of caretakers who clean containers at last once per week divided by the total sample size.

*Issues*: This indicator and the related model question are essentially qualitative because they measure an attitude vis-à-vis cleanliness, but do not indicate how compliant a respondent is. It provides a rough idea and may indicate that attitudes vis-à-vis cleanliness may change over time.

*Model Questions:*

35. Are the water containers cleaned?
36. When were they cleaned last?

## 2.16 Percentage of caretakers who have participated in community hygiene improvement activities during the past month

**Indicators Diagram**

*Rationale:* Active participation by households, especially the caretakers of young children, is a sign whether communications efforts are able to motivate and mobilize people.

*Definition of Terms:* **Participation** means that individuals attend or help organizing community events. This can be hygiene promotion related activities or improvements to water and sanitation hardware.

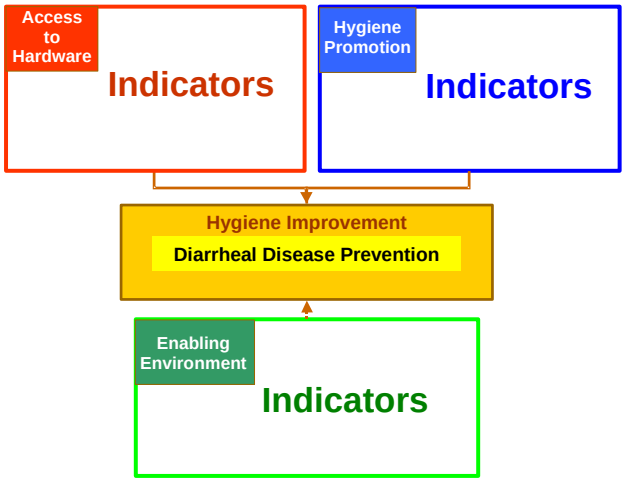
*Calculation:* Number of caretakers who report having participated in hygiene improvement activities divided by the total sample size.

*Model Questions:*

112. During the past month, were there community events where you heard about health messages?
113. If yes, did you participate in these community events?
114. If yes, which messages did you hear during these community events?
115. Do you feel that the messages during these community events were clear, understandable, and useful to you?

## 3. Enabling Environment

Enabling environment indicators are organized in two parts. The first set of indicators is measured at the household level using a household questionnaire. Like all indicators for which data are collected from households they are quantifiable. The second, and larger, set of indicators is assessed at the community level using model question for structured interviews with key informants. The information gathered from structured interviews is qualitative, but it can be summarized using the coding categories in the model questions and then be added for all communities that were assessed. The different uses and data quality of the household and community model questions are important considerations when designing hygiene improvement assessments and interpreting the findings. (Click on the figure to go to specific hygiene improvement components or to the HIF indicators diagram)




**PRIORITY INDICATORS FOR ENABLING ENVIRONMENT (HOUSEHOLD LEVEL)**

***Note***: The following indicators and questions refer to "groups" and individuals that play a role in water supply, and sometime in sanitation and hygiene, at the community level. This could lead to the misperception that this is predicated on the existence of a water/sanitation committee or a health or community development committee, which constitutes one possible type of community organization. The danger in this could be in that "successful" cases would be defined by the existence of such a committee. Although this may be acceptable in rural areas, such committees would be less of a reality in urban slums. Others that might have a role in water supply could be municipal representatives, councilors, or a local political activist. Users of this guide may want to consider such options when they adapt model questions.

### 3.1 Percentage of households that know whom to contact if problem exists with water system

**Indicators Diagram**

*Rationale*: Loss of access to a safe water supply can be detrimental to the health of family members. Therefore, for a water system to be effective, a household must know whom to contact in case of a problem.

*Definition of Terms*: The **person** to contact should be designated by the water/sanitation committee. This person may be someone sitting on the committee or someone appointed by the committee representing a neighborhood. It is important to not only have such a person, but to ensure that everyone in the community knows who this person is.

*Calculation*: The number of households that know whom they should contact divided by the total number of households in the sample.

*Model Questions:*

47. When there is a problem with your main water source, whom do you tell or ask for help?

## 3.2 Percentage of households that know of a water/sanitation committee

**Indicators Diagram**

*Rationale*: If the water/sanitation committee is to be effective, it should be widely known in the community. Community members should know of its existence and be familiar with its roles and responsibilities.

*Definition of Terms*: **Knowledge** of a water/sanitation committee means that community members are familiar with the committee, what it does, when/how often it meets, who sits on it, and whom to contact in case of a problem.

*Calculation*: The number of households that know of the water/sanitation committee divided by the total number of households in the sample.

*Model Questions:*

52. Is there a committee or group in the community that is responsible for maintenance of your principal water source?

## 3.3 Percentage of households that participate in water/sanitation committee

**Indicators Diagram**

*Rationale*: If the water/sanitation committee is truly representative of the community, community members will take an active role in its activities and participate in its meetings.

*Definition of Terms*: **Participate** means attending the water/sanitation committee meetings and being actively engaged in discussions and decision making.

*Calculation*: Number of households that attended the last water/sanitation committee meeting divided by the total number of households in the sample.

*Model Questions:*

94. Do you know whether groups in your community exist that deal with the following issues?
95. Are you a member of any of these groups and do you participate in their meetings?
96. If yes, in which groups?

## 3.4 Percentage of households involved in water/sanitation problem-identification and problem-solving exercises

**Indicators Diagram**

*Rationale*: Community mobilization is very important in generating local commitment and support, and problem identification resolution is an integral part of that process. To be effective, there should be as broad participation as possible. The more households that participate in the mobilization exercises, the better.

*Definition of Terms*: **Problem identification and problem solving** are the basis of the mobilization approach. Once community members understand the nature of the hygiene-related problems and what can be

done to solve them, they are more willing to commit themselves and their resources to improving the situation. Problem solving can occur in community groups or during community events that are part of social mobilization.

*Calculation*: The number of households that participated in the problem-identification and problem-solving exercises divided by the total number of households in the sample.

*Model Questions:*

94. Do you know whether groups in your community exist that deal with the following issues?
95. Are you a member of any of these groups and do you participate in their meetings?
96. If yes, in which groups?
97. If it is a group dealing with water supply, sanitation, or hygiene, what are the issues dealt with?
112. During the past month, were there community events where you heard about health messages?
113. If yes, did you participate in these community events?

## 3.5 Percentage of households that pay full share of water system usage fee

**Indicators Diagram**

*Rationale*: Water supply systems can only remain functional when they are maintained. In urban centers households with piped connections usually pay a fee that covers the maintenance of water supply systems. In rural and poor urban areas where most households may not have piped connections people may pay fees to collect water from standpipes or wells, which can be publicly or privately owned. Insufficient cost recovery, because no fees or not the full tariff may be paid, and the absence of public subsidies are usually the main reason why water supply systems fail. Knowing what proportion of households pay the required water tariff is essential for planning the maintenance of supply systems. The fee level may not be the same for all households and vary according to poverty levels. The researcher should interview the head of household to ascertain how much he pays for use of the water system and how often he pays it. This information can be verified by checking the records of the water/sanitation committee and the published user fee structure (see the **HYGIENE IMPROVEMENT COMMUNITY SURVEY QUESTIONS**).

*Calculation*: Number of households that pay their full share of the water system usage fee divided by the total number of households in the sample.

*Model Questions:*

43. Do you pay for water?
44. If yes, when do you pay?
46. How much do you pay per load or volume unit?

## SUPPORTING INDICATORS FOR ENABLING ENVIRONMENT (COMMUNITY LEVEL)

The next 16 supporting indicators require a separate community assessment instrument. This information cannot be obtained from the household assessment.

***Note***: The model questions used to assess community capacity differ greatly from those used for the household survey. The purpose of the latter is to collect quantitative data. Community questions are designed to obtain qualitative and descriptive information on important issues, not to aggregate data or to perform statistical tests. The community-level model questions are meant to be used as a guide only for structured interviews with key stakeholders. A final survey instrument should provide plenty of space for recording responses in short hand. The coding categories may help to summarize the narrative information, which is notoriously difficult to do for qualitative data. As programs gain more experience in assessing the enabling environment, program managers' and researchers' ability to monitor community capacity in the long run will improve. Currently, this should not be considered a precise science but rather an interesting complement to household-level data.

Many of the community model questions are quite complex and may require considerable time and effort to obtain needed information. This may be an issue in situations where busy stakeholders are interviewed. In addition, experience has shown that a fundamental problem in operations and maintenance (O&M) is that no one (even in utilities) may actually know the real cost of maintenance and that would determine tariffs. Although local authorities may know cost as a budget allocation, this is not the same as knowing "what it really costs." The end result of not knowing real costs (and resources) is a rapid deterioration of maintenance and assets.

### Financing and Cost Recovery

### 3.6 Community has clearly defined water fee structure designed to cover recurrent costs

**Indicators Diagram**

*Rationale*: To operate and maintain a water system, the community must determine, through its water/sanitation (or similar) committee, its recurrent costs, calculate total resources required, and arrive at some means to generate the needed amount, either through a household fee or fee based on quantity used.

*Definition of Terms*: **Recurrent costs** refer to all O&M costs of the water supply system that services the community, including preventive maintenance and repairs. **Water fee structure** refers to how the resources required to operate and maintain the water system are generated. This could vary. It could be a flat fee levied on each household in the community or it could be an amount based on the number of individuals in the household (e.g., a per capita charge or metered). Another possibility is to charge a set amount for a specified quantity; however, this requires that someone be present at the source to calculate and collect the amount owed.

*Calculation*: Yes or no determination – the fee structure exists or it does not.

*Model Questions:*

C25. Are fees established for water supply?
C26. How are the community/households made aware of the fees?

C27. Who established the fees?
C28. How were the fees established?
C29. How is the fee collected?
C30. What happens if someone does not pay on time?
C31. Does the community have a clearly defined water fee structure designed to cover recurrent costs?

## 3.7 Percentage of recurrent costs recovered from user fees

**Indicators Diagram**

*Rationale:* If a water system is to be sustained, it will have to be maintained, which means that its O&M costs must be recovered. Generally, members of the community are responsible for covering these costs.

*Definition of Terms:* **Recurrent costs** refer to all O&M costs of the water supply system that services the community, including preventive and corrective maintenance and repairs. These costs also include paying a person to manage the operation (e.g., get repairs done, collect fees) and procuring spare parts.

*Calculation:* Monthly recurrent costs for water supply services provided by the community divided by total monthly recurrent costs for water supply services

*Source of Data:* The head of the community water/sanitation committee is interviewed to ascertain what the O&M costs are and how much is generated through fee collection. This can be calculated on a monthly or quarterly basis. Researchers should review the committee's financial records to substantiate the information the committee provides and to verify the accuracy of the households' responses.

*Issues:* One of the primary reasons why community water systems fail is lack of financial resources. These systems are often constructed with outside funding, which is why it is so important that the community calculate its recurrent O&M costs and avoid jeopardizing its water supply system. It is also important to consider how the system will be amortized; that is, how will the cost of replacement be covered. Every system has a maximum life expectancy and will eventually have to be replaced. The community must be aware of this and develop a plan that takes these costs into consideration.

*Target Values:* In order to be sustainable, a water system must be able to collect close to 100% of its recurrent costs. The water/sanitation committee must determine if there is a gap in the amount that is collected, how large the gap is, and how the difference is going to be covered.

*Model Questions:*
C31. Does the community have a clearly defined water fee structure designed to cover recurrent costs?
C32. What are the total costs of operating and maintaining the water system for a month or quarter or year?
C33. How much revenue is generated from user fees per month or quarter or year?
C34. What percent of recurrent costs for the water supply system is recovered from user fees?

## 3.8 Percentage of households that pay full share of water fee

**Indicators Diagram**

*Rationale:* If the water system is to be maintained and sustained, it will require financial resources and support from the entire community. All households in the community should feel ownership of the water

system, hence they should contribute to the support of its operation. This participation allows them to expect and demand services when and if problems arise.

*Definition of Terms:* **Full share** should be defined by the community. There are several possibilities for what "full share" could mean. It could be a flat fee where all households pay the same amount. It could be a fee based on a sliding scale, established through a means test. In this case, the poorer households would pay a smaller amount each month while the wealthier families would pay proportionately more. The water/sanitation committee must establish this type of fee structure and agree to its particulars. This indicator is directed at the water/sanitation committee records and is also included in the household survey. The two indicators should be similar and validate each other.

*Calculation:* Number of households that pay full water fee for a specified month divided by the total number of households in the community.

*Model Questions:*

C31. Does the community have a clearly defined water fee structure designed to cover recurrent costs?
C35. How much is the fee? (USE THIS INFORMATION TO CALCULATE THE FOLLOWING INDICATOR BY COMPARING THE RESPONSE TO HOUSEHOLD QUESTION NUMBER 46 OR Error! Reference source not **found.** TO THIS AMOUNT)
C36. How many households in the household survey say they pay the fee above or more?
C37. How many households were included in the household survey in total?
C38. What percent of households are paying the full water tariff?

## 3.9 Community has three-month operating reserve for water system emergencies

**Indicators Diagram**

*Rationale:* One of the most common reasons for interruption of water service is a major breakdown and a lack of resources to repair it. Additional problems a community may face in generating a reserve fund are problems relating to fee collection and the seasonality of household income. To prevent an interruption in the supply of safe water, the water/sanitation committees could maintain a reserve to cover such contingencies.

*Definition of Terms*: **Operating reserve** is money that has been collected from the normal fee structure and is put aside or held in a special account specifically for occasions when the water supply system breaks down. **Emergencies** can be anything from a broken pump to a break in the pipe; it is something that requires resources for new spare parts and labor to carry out the repair.

*Calculation*: To determine whether a community has reserve funds requires reviewing the financial records of the water/sanitation committee to determine recurrent costs for one month. This figure should be multiplied by 3 to arrive at the amount required for a reserve fund. The evaluator should ascertain whether available funds exist in the water/sanitation committee account equal to this amount.

*Model Questions:*

C39. Are there funds set aside in the water/sanitation committee account for emergencies?
C40. Does the community have three-months operating reserve for water system emergencies?

## 3.10 Community has a financial management system in place and functioning

**Indicators Diagram**

*Rationale*: For a water/sanitation committee to be financially secure, it needs to have a reliable financial system that provides system managers and the community with an accurate picture of its financial situation.

*Definition of Terms*: **Financial management system** refers to an account of revenues and expenditures that is maintained by a trained finance manager. The finance manager should also develop and track budgets. The accuracy and transparency of the accounts is critical. An outside agency should periodically audit the financial accounts to ensure accuracy.

*Calculation*: Financial management system is reviewed and is judged to be 1) weak – in need of strengthening, 2) generally good, or 3) excellent. Community members can be asked if they have confidence in the financial systems of the water/sanitation committee.

*Model Questions:*

C41. Is there a community organization/committee to manage operations and maintenance of water supply systems?
C59. Is there a financial management system in place at the water/sanitation committee?
C60. What is the committee's involvement related to the budget?
C61. Are the accounts accurate?
C62. Are the financial dealings of the water/sanitation committee transparent?
C63. Do you have trust/confidence in the financial management of the water/sanitation committee?
C64. Does the community have a financial management system in place and is it functioning?

**Community Management**

## 3.11 Water system performs properly, giving community regular, continuous water supply

**Indicators Diagram**

*Rationale*: For hygiene improvement and diarrhea reduction to be realized, a household needs continuous access to safe water. An undependable water system results in households looking for and using alternative sources that may not be safe.

*Definition of Terms*: **Regular** and **continuous** mean that a household can have confidence that safe water is available at a given place at times established and announced by a community. The water system should not experience frequent breakdowns or interruption of service. When service is interrupted, community members should be told what the problem is, what is being done about it, and when water will again be available.

*Calculation*: The number of days per month when water was not available should be calculated for the past month and the past six months, or according to some other local standard.

*Model Questions:*

C16. Was the water system nonfunctional at any time during the last month?
C17. How frequently did the interruptions occur?
C18. For how long was water not available during the last month?

(ALL INTERRUPTIONS COMBINED)
C19. Was the water system nonfunctional at any time during the last six months?
C20. How frequently did the interruptions occur?
C21. For how long was water not available during the last six months?
(ALL INTERRUPTIONS COMBINED)
C22. Does the water system perform properly, giving the community regular, continuous water supply?

## 3.12 Percentage of tested water sources at established standards

**Indicators Diagram**

*Rationale*: It is important to periodically test and confirm the quality of the safe water source and, more importantly, determine the quality of the water coming from unsafe water sources.

*Definition of Terms:* To **test** a water source means, at a minimum, to measure free and residual chlorine. Other tests include bacteriological and chemical tests. Costs and local resources will determine what can be tested and how frequently. WHO guidelines provide all necessary information for water quality testing (reference). Once water has been tested, it should be compared to an **established standard**. This may be a local standard adapted from the WHO guidelines.

*Calculation:* Number of households with tested water sources that meet or are better than established standards divided by the total sample size.

*Model Questions:*
C23. Is water quality tested?
C24. What percent of tested water sources conform to established standards?

## 3.13 Community organization functioning effectively to manage operation and maintenance of water supply and sanitation systems

**Indicators Diagram**

***Note*:** This indicator refers only to community organizations, which could be appropriate in rural areas but may not reflect an urban situation. It may not be feasible to do an organizational capacity assessment in a project with multiple villages (e.g., 25 –to 200). Users may want to skip this indicator and rely on others in this section to determine if the committee is functioning effectively.

*Rationale:* In order for water supply and sanitation systems to function effectively and be sustained, the community must take responsibility. Experience shows that this occurs most effectively through some form of community organization, be it a water and sanitation committee or some other organized body that has specific responsibilities to manage the operation and upkeep of the water system while ensuring that the population it serves follows proper sanitation practices. The most important responsibilities of such a group are fee collection, system maintenance and repair, and promotion of the proper use of water and toilet facilities.

*Definition of Terms:* **Community organization** refers to a locally constituted body that should be selected by the community at large and be representative of all geographic and ethnic sections of the community. It is highly desirable that both men and women are represented in this community organization so that the systems can respond satisfactorily to their respective needs.

To operate **effectively** the community organization should have strong leadership (e.g., president or chairman, caretaker, treasurer, secretary), have a clearly defined mechanism for leadership transition, have a set of by-laws, maintain accounts accurately, and function in a totally transparent manner. Rules must be in place to govern the use of the water system and the community must be aware of these rules.

*Calculation:* The effectiveness of the community organization can be determined and represented in a quasi-quantitative manner. Researchers can determine a community organization's effectiveness through its total score in five different components. This score is placed on a continuum and the group is classified as beginning (0-25%), developing (26-50%), improved (51-75%), or mature (76-100%).

*Source of Data:* The data for this indicator are derived from interviews with three groups: the community organization leadership, members of the community group, and household members. It is helpful to utilize an organization assessment instrument such as the Organization Capacity Assessment (OCA) tool[2].

*Issues:* It is important to carry out a baseline of the community organization's capacity that will provide a beginning point for comparison against future assessments and enable researchers to determine progress made. This baseline will also enable the community organization to identify its strengths and weaknesses. The latter should be the focus of future trainings aimed at strengthening the organization where it needs it most. Annual periodic assessments should be held to determine how the organization has improved its management and operations, as well as to identify where it still requires additional support and technical assistance.

*Target Values:* It can be expected that at the beginning of a program, the majority of community organizations will score poorly in terms of organizational capacity. However, by the end of the five years, the majority (more than 50%) of the community organizations should be in the "improved" and "mature" categories.

*Model Questions:*

C41. Is there a community organization/committee to manage operations and maintenance of water supply systems?
C42. Is it active?
C43. Does it have strong leadership?
RATE 1 (WEAK) TO 3 (VERY STRONG).
C44. Does it have elected officers (e.g., president, secretary, treasurer)?
C45. Does it have a clearly defined mechanism for change of leadership?
C46. Does it have a set of by-laws?
C47. Does it function in a totally transparent manner?
C48. What are the responsibilities?
C49. How are the community/households made aware of this responsibility?
C50. Is a community organization/committee functioning effectively to manage operations and maintenance of water supply systems?

[2] The OCA is available from Pact, Inc (www.pactworld.org).

## 3.14 Committee has clearly defined responsibility for overseeing both water supply and sanitation systems

**Indicators Diagram**

*Rationale*: For the water/sanitation committee to be effective, it must have clearly defined objectives related to the community water supply and sanitation systems that are widely accepted by the community it serves.

*Definition of Terms*: The committee's **responsibilities** include managing the safe water system, ensuring that its accounts are in order, and ensuring that the water is continuously available. Regarding sanitation, the committee should ensure that the households have, use, and maintain toilet facilities and solid waste disposal. Because hygiene improvement relies on knowledge and behavior change, the water/sanitation committee must also take an active role in overseeing hygiene promotion activities.

*Calculation*: Interviews of water/sanitation committee and community members will help determine whether the committee is weak, average, or strong (e.g., check by-laws, review elected positions, confirm breadth of responsibility for both water and sanitation systems)

*Model Questions:*

C65. Does the community organization/committee have clearly defined responsibility for overseeing both water supply and sanitation?
C66. What hygiene and sanitation activities has the committee overseen in the past six months?
C68. Have these activities been effective (achieved their objective)?

## 3.15 Committee meets regularly

**Indicators Diagram**

*Rationale*: For the committee to do its work properly and effectively, it is necessary that it meet regularly.

*Definition of Terms*: **Regular** committee meetings means that the group gathers to review water and sanitation issues at a prescribed interval. This could be fortnightly, monthly, or quarterly, depending on the committee and community. In addition, rules should be established and written down.

*Calculation*: Review the water/sanitation committee's rules and by-laws and its records for the past year to determine the number of meetings held and their regularity.

*Model Questions:*

C51. How long ago did the committee meet?
C52. Does the community organization/committee meet regularly? If so, specify.

## 3.16 Committee meetings are conducted properly and decisions fully recorded

**Indicators Diagram**

*Rationale*: The water/sanitation committee meetings must be conducted in such a way to be effective. At these meetings, the committee should have an agenda, conduct thorough and participatory discussions, reach consensus, identify concrete next steps, develop a timeline, identify who is responsible for actions to be taken, and record the proceedings.

*Definition of Terms*: **Conducted properly** means that there is effective leadership with full participation of committee and community members and that decisions are reasonable and rational and have the support of the majority of the committee and community. **Fully recorded** refers to having notes or minutes kept of the proceedings so that anyone can refer to them if needed, and they can be reviewed at the next meeting to identify any unfinished business.

*Calculation*: Interview committee and community members to determine if the committee meetings are conducted poorly, adequately, or very well. If at all possible, attend a committee meeting and evaluate the performance. Review committee records of the last four meetings to ascertain whether the proceedings were documented properly.

*Model Questions:*

C53. Are the water/sanitation committee meetings participatory?
C54. Is there an agenda for the committee's last meeting? (ASK TO SEE IT)
C55. Who develops the agenda usually?
C56. Are important decisions reached by consensus?
C57. Are minutes kept of committee meetings? (ASK TO SEE FROM THE LAST MEETING)
C58. Are the community organization/committee meetings conducted properly and are decisions fully recorded?

## 3.17 Committee has capacity to oversee hygiene activities

**Indicators Diagram**

*Rationale*: To improve household hygiene practices, households need more than access to a safe water source. The community and individual households must be aware of proper sanitation and hygiene and modify their behavior accordingly. This will require an effective committee that can work with a hygiene promotion program to ensure this happens. During the stakeholder interview, one should try to determine what hygiene activities could be supported (i.e., by determining what is required to support such activities so that the committee can function effectively and deliver concrete results).

*Definition of Terms*: **Capacity** means that the committee possesses the ability to raise the awareness of the majority of the community and modify their behaviors involving use of water and toilet facilities. This will probably include the oversight of a local person(s) or groups that conduct hygiene promotion activities in the community, educating and reinforcing important messages.

*Calculation*: This is a subjective evaluation, but interviews with the committee and community members will allow an evaluator to conclude whether the committee is weak, average, or strong in its capacity to oversee hygiene activities.

*Model Questions:*

C63. Does the community organization/committee have the capacity to oversee hygiene activities?
C66. What hygiene and sanitation activities has the committee overseen in the past six months?
C68. Have these activities been effective (achieved their objective)?

## 3.18 Mechanism exists to carry out effective hygiene promotion

**Indicators Diagram**

*Rationale:* For hygiene knowledge and practices to be present and maintained in a community, there has to be an effective mechanism for hygiene promotion at the community level.

*Definition of Terms:* **Mechanism** refers to a person or group existing at the community level that is responsible for promoting proper hygiene knowledge and behaviors. This may include health center staff, community health workers/volunteers, or groups such as women's clubs. The effectiveness of the community promoters depends on their receiving support, guidance, and assistance in their behavior change and communication efforts from health personnel from the nearby primary care center.

**Effective hygiene promotion** means that members of the community have a high level of knowledge of proper water and sanitation practices, which results in proper behaviors and practices. This can be ascertained by findings on the hygiene promotion indicators. Effective ways to engage communities in hygiene promotion include participatory techniques and approaches that involve the community in the identification of hygiene-related problems and their solutions. The processes are referred to by different names (e.g., Participatory Leaning for Action or Participatory Rapid Appraisal). These techniques include such components as community mapping, transect walk through the community to appreciate the socioeconomic situation and availability of services, focus group discussions, priority setting, and action plan development. This participatory process greatly increases the sense of community ownership and sustainability of hygiene promotion activities.

*Calculation:* The existence of a community-level mechanism is a yes or no proposition. Whether the entity is effective or not has to be determined in a quasi-quantitative manner, utilizing a qualitative scale.

*Source of Data:* The data are derived from interviews with water/sanitation committee and community members. Once the persons or groups responsible for hygiene promotion are identified, they have to be interviewed to assess their knowledge and capacity, thereby determining their effectiveness.

*Issues:* If no community-level mechanism exists, one should be established. If one does exist but is found to be less than effective, means of strengthening this mechanism will have to be determined. For the hygiene condition of a community to be improved, the vast majority of households must practice proper water and sanitation behaviors.

*Target Values:* Every community should have a mechanism to raise hygiene improvement knowledge and behaviors and ensure that they are maintained.

*Model Questions:*

C69. Does the community have a mechanism to carry out effective hygiene promotion?
C70. Was a participatory problem identification and solution process conducted in the community?
C71. What did it include?

## 3.19 Community has gone through a mobilization exercise

**Indicators Diagram**

*Rationale*: For a community to fully appreciate the root causes of its hygiene-related problems and arrive at some solutions, community members should go through a problem-identification/problem-solving exercise that will increase their interest in and commitment to the hygiene-improvement activities.

*Definition of Terms*: **Mobilization exercise** refers to the organization of periodic community events such as festivals, plays, and market campaigns and ongoing community structures such as clubs and networks.

*Calculation*: Interviews with the committee and community members will ascertain whether they have undergone any form of mobilization intervention and carried out any of the important aspects of such an intervention. Discussing the nature of community hygiene with the same groups will demonstrate whether the mobilization exercise was done well or not.

*Model Questions:*

C69. Has the community gone through a mobilization exercise, for example, organized festivals or other events?

C70. What kind of events?

## 3.20 A trained person or organization is responsible for carrying out hygiene behavior change activities

**Indicators Diagram**

*Rationale*: Improved household hygiene is contingent upon households' increased knowledge and behavior change. For this to happen, a community must have a trained, knowledgeable agent or group based in the community that is charged with educating and promoting good hygiene among community members.

*Definition of Terms*: In most cases, a **trained person** will be a volunteer who has received minimal training in promoting the usage of safe water and proper sanitation. This person can be a local teacher, religious leader, or other respected person in the community. The worker is often referred to as a community or village health worker. The **organization** may refer to any number of different types of community-based organizations that can be used to promote improved hygiene. These would include women's clubs, mother's clubs, and youth clubs.

*Calculation*: Interview water/sanitation committee and community members on whether there is a person, persons, and/or local organization trained and actively promoting hygiene improvement in the community.

*Model Questions:*

C74. Are there trained person(s) or organization(s) responsible for carrying out hygiene behavior change activities?
C75. If yes, are these person(s) or organizations active?

## 3.21 A close linkage exists between local person(s)/organization(s) and health personnel

**Indicators Diagram**

*Rationale*: The effectiveness of the local hygiene improvement promotion person(s) or organization(s) depends on their receiving regular supportive supervision from the outreach worker(s) located at the closest primary health care facility.

*Definition of Terms*: The **health personnel** referred to in this case is the worker at the primary health care facility that is responsible for carrying out the outreach/preventive and promotive work at the community level. This is often problematic because the worker lacks transportation. To be effective, the health worker should use the community visit as an opportunity to increase the community worker's knowledge and effectiveness in bringing about behavior change.

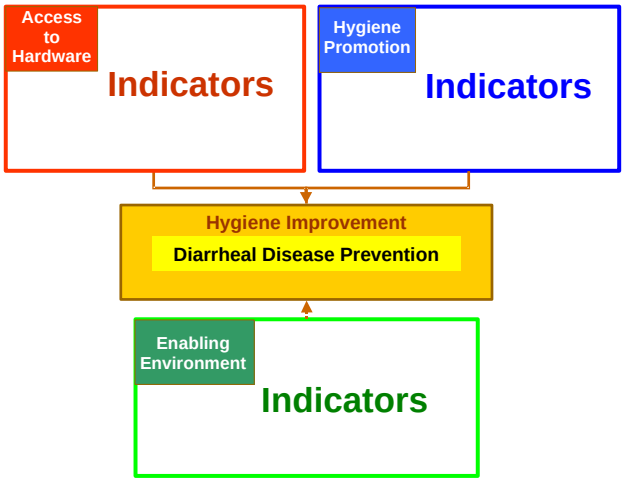
*Calculation*: Interview committee members and hygiene promotion person(s) and organization(s) to determine who supervises the local hygiene improvement activities and how frequently this person visits the community.

*Model Questions:*

C76. Does the local trained person(s) and/or the organization(s) communicate or collaborate closely with health personnel?
C77. Who is responsible for training the community hygiene promotion person(s)/ organization(s) from the health facility?
C78. Who is responsible for supervising the community hygiene promotion person(s)/ organization(s) from the health facility?
C79. When did the supervisor last visit the community?
C80. How did the supervisor support/strengthen the local person(s)/organization(s)?
C81. How many times has the supervisor visited the community in the past year?

## INSTITUTIONAL SANITATION AND HYGIENE

Safe water, basic sanitation and hygiene are not only important on the household and community levels. It is essential that institutions adhere to minimum standards for at least two reasons:




- Institutions such as schools and health facilities should provide a safe environment for the public

- Public and private institutions should serve as models for hygiene improvement and set a positive example for households and communities

Schools are especially important institutions, because they contribute to the knowledge and help from the behaviors of future parents. Many school-based programs build on the rationale that schoolchildren transfer their knowledge to peers and families. Health centers and hospitals should by definition set higher standards for water supply, sanitation and hygiene, especially to prevent infections from spreading within facilities and for disposing safely of medical waste. While it is beyond the scope of these guidelines to describe sanitation and hygiene standards for institutions in detail, examples are given for assessing schools and health facilities.

(Click on the figure to go to specific hygiene improvement components or to the HIF indicators diagram)

## SCHOOL SANITATION AND HYGIENE

The following four indicators attempt to describe access to safe water and improved sanitation and hygiene promotion at primary and secondary schools. Ideally, this information should be collected directly from schools using a separate school survey instrument, which can be developed by using the model questions for these indicators. Because the resources for a separate school survey may not be available, a second best alternative could be to interview schoolchildren at home about the situation at their school. Whether it is worthwhile to include these indicators and their model questions in a household survey must be carefully evaluated because of two potential drawbacks:

- First, the information based on children's recall at home is more error prone than their direct observation at the school.

- Second, and perhaps the more serious problem, few schoolchildren might be at home during the time of the survey. It may be unethical to request that children stay home from

school to take part in the survey given the great need for education in many developing countries. If the survey can be conducted during school holidays, it might be more feasible to collect this information at the household level.

If it is feasible to develop a separate assessment instrument for primary and secondary schools, researchers should survey those schools located in communities where households have been surveyed. For the first four of the following school-related indicators**,** the word "schoolchildren" would be replaced with "schools."

## 3.22 Percentage of schoolchildren with access to basic sanitation

**Indicators Diagram**

*Rationale:* More than 2 billion people live without access to water and toilet facilities or are unable to perform basic hygiene practices that impact health, school attendance, and school-age children's (especially girls') learning abilities. Many children miss school because they have to walk long distances to fetch water or they must care for family members who are ill as a result of poor water, sanitation, and hygiene. Worldwide, far too many schools lack basic sanitary facilities. Often those that do have a water supply and toilet facilities must deal with broken, dirty, and unsafe facilities that are not adapted to children's needs. Worldwide, as much as 4 million children ages 5 to 14, which is a period of intense physical and intellectual growth, are at risk for diarrhea and helminthes infections and its negative effects on growth, nutritional status, physical activity, cognitive development, and school performance. Investing in education, especially girls' education, to include proper water, sanitation, and hygiene promotion in and around schools, is highly cost-effective.

*Definition of Terms:* **Basic sanitation** would include the following:

- Toilet facilities in every primary school
- Attention to water, sanitation, and hygiene in schools in emergency situations

*Calculation:* Number of schoolchildren who report that their school meets the condition divided by the total sample size.

*Issues*: This indicator looks at the mere presence of a toilet facility. An assessment of its functional status would require an observation, which could be done with a school survey instrument. An indirect way to assess actual use is by asking schoolchildren whether their friends use the facility. This is believed to be more reliable than asking the student directly. See model question 184. Do your friends use the toilet facility to defecate?.

*Model Questions:*

182. Does your school have toilet facilities?

## 3.23 Percentage of schoolchildren with access to separate facilities for boys and girls

**Indicators Diagram**

*Rationale:* If both genders attend a school and the school does not provide a separate latrine for girls, it will have a negative impact on education. If the school has no latrines or handwashing facilities, or if these facilities are in a poor state of repair, then many children would rather not attend school than use the alternatives. Although the lack of adequate toilet facilities and poor hygiene affects both girls and boys, it has a stronger impact on girls, in particular, girls who are old enough to menstruate. If girls do not have access to safe, clean, separate, and private toilet facilities in their schools, they may miss school, most likely for a week every month, and then will find it hard to catch up, which in turn may make them more likely to drop out of school altogether. Many children, again mostly girls, miss school because they have to walk long distances to fetch water for their family. In schools as well, when the schoolteacher sends children to fetch water, it is predominantly girls who are sent.

*Definition of Terms:* **Separate facilities** means the following:

- Separate toilet facilities for girls and boys in every primary school

*Calculation:* Number of schoolchildren who report that their school meets this condition divided by the total sample size.

*Model Questions:*

182. Does your school have toilet facilities?
183. If yes, are there separate toilet facilities for boys and girls?

## 3.24 Percentage of schoolchildren with access to a handwashing facility

**Indicators Diagram**

*Rationale:* Washing one's hands after using a toilet is an integral part of the first-level barrier against fecal-oral transmission of pathogens. For handwashing to be an efficient barrier against fecal-oral transmission, the items mentioned as being necessary for handwashing facilities should be present. The model question, if answered correctly, will indicate only that the school has an appropriate handwashing facility, but the day-to-day practice of washing hands will not be known unless schoolchildren are observed.

*Definition of Terms:* **Access** to a handwashing facility means the following:

- Handwashing facilities and safe drinking water are available in every primary school

*Calculation:* Number of schoolchildren who report that their school meets the condition divided by the total sample size.

*Model Questions:*

189. Does your school have a place for washing one's hands?

## 3.25 Percentage of schoolchildren learning about sanitation and hygiene

**Indicators Diagram**

*Rationale:* This indicator helps to understand whether primary school children are taught the basics in hygiene and sanitation. If children can demonstrate their understanding of hygiene practices, it will prove that they have been properly taught, most likely at school, and have acquired the knowledge that might improve their behavior. Hygiene education can have two desirable effects: (1) empower children through life skills-based hygiene education and (2) accelerate the improvement of water, sanitation, and hygiene practices at home and in communities.

*Definition of Terms:* Acceptable responses from children learning about proper sanitation and hygiene include the following:

1. Disease transmission trough water and/or feces
2. Diarrhea management
3. Diarrhea prevention
4. Handwashing
5. Use of toilet facilities
6. Importance of soap
7. Clean/safe water
8. Food safety
9. Garbage disposal

A possible minimum standard of proper responses would be that respondents know three of the nine responses, including diarrhea prevention; however, such standards would have to be decided locally.

*Calculation:* Number of schoolchildren who meet the minimum knowledge standard. For example, children know three of the nine responses, including diarrhea prevention, divided by the total sample size.

*Model Questions:*

198. Have you heard about sanitation and hygiene at school?
199. If yes, what did you hear about sanitation and hygiene at school? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED)

## 3.26 Percentage of schoolchildren who know at least two ways to prevent diarrhea

**Indicators Diagram**

*Rationale:* Hygiene improvement projects are most concerned about changing behaviors involving water use and sanitation. This cannot be accomplished, however, until the target population knows what must be done to improve the hygiene situation in the household and the surrounding community (i.e., proper protection of drinking water and washing of hands). Once such knowledge is acquired, then it must be combined with positive attitudes, identification of barriers to behavior change, and other factors before practices can be expected to change

*Definition of Terms:* To **prevent diarrhea** implies a reduction in the number of episodes that a child experiences. Its importance would be defined in terms of the health of the child, the health of the family, and the well-being of the community. The list of ways to prevent diarrhea includes many items that are not related to water supply, sanitation, and hygiene:

- Wash hands
- Use soap
- Use toilet facility to defecate
- Dispose of children's feces in toilet facility
- Bury feces
- Drink clean water
- Store water safely
- Treat water (boil, filter, chlorinate)
- Prepare and protect food hygienically
- Dispose of garbage in a pit
- Breast feed babies in general
- Breast feed only until 6-months old
- Do not offer other food/drink before 6 months
- Get measles vaccination
- Take vitamin A
- Practice good nutrition

*Calculation:* Number of schoolchildren who can cite two ways to prevent diarrhea divided by the total sample size.

*Model Questions:*

202. Do you think diarrhea can be prevented (anything we can do to stop us getting diarrhoea)?
203. If yes, how do you think diarrhea can be prevented? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED)

## RAPID HEALTH FACILITY ASSESSMENT: HYGIENE IMPROVEMENT MODULE

The availability of safe water for drinking, the safe disposal of feces into toilet facilities, safe disposal of solid waste, and hygiene behaviors such as handwashing at health facilities are important for infection control in general, but especially where people with compromised immunosystems, for example, due to HIV/AIDS, are cared for. To assess where health facilities meet minimum standards of hygiene improvement (IFRC, 2000; UNHCR, 1999) a sample instrument is provided on page 163, **RAPID HEALTH FACILITY ASSESSMENT HYGIENE IMPROVEMENT MODULE**.

This hygiene improvement module is intended for different audiences, including NGO managers, Ministries of Health, health facility staff, and—with additional guidance—communities. The assessment instrument and field application may serve different needs for these audiences, including the following:

1. Assist health facility staff and program managers to improve water safety, basic sanitation, solid and medical waste disposal (USAID, 2000), and hygiene promotion at health facilities.

2. Help communities to understand and to play a greater role in improving water supply, sanitation and hygiene at facilities and community-wide.

3. Facilitate a dialog with the Ministry of Health about the importance of basic standards of water supply, sanitation, waste disposal, and hygiene in preventing infectious diseases.

4. Educate health facility staff, program managers, district health teams, and other actors with a public health mandate that water supply, sanitation, and hygiene are cost-effective, practical, and necessary approaches for reducing diarrheal disease and improving nutritional status.

In many countries peripheral health facilities provide essential preventive services and health education. However, to be a credible source for health messages, health facilities should serve as an example in the areas of disease prevention, especially diarrhea, nutrition and immunization. Health facilities can only serve as models for communities and households, if they meet basic standards of water safety, sanitation, waste disposal (WHO, 1999), and hygiene. For example, health facilities may serve as demonstration sites for safe water sources, sanitation facilities, handwashing supplies and hygiene practices. If linked with household surveys in the catchments areas of health facilities, the assessment may provide additional insights into where and why communities and households adopt desired practices or why not.

Six hygiene improvement areas are addressed in this module:

- Water supply
- Excreta disposal
- Medical waste management

- Injection safety and disposal of medical sharps
- Infection prevention
- Pest and vector control

Improvements in these six areas can strengthen health services in important ways, especially oral rehydration, growth monitoring, child feeding, and micronutrients, care of the sick child and well child, antenatal care, and postnatal care. Injection safety is covered as well, because of the need to minimize the risk of disease transmission through inadequately sterilized syringes and needles and to dispose of medical waste (Safe Injection Global Network, 2001; WHO-UNICEF-UNFPA, 1999). This module implies minimum standards for institutional hygiene improvement that may be appropriate for some countries and a rural context. It only checks for the availability and usability of the most basic infrastructure and materials, but does not attempt to relate these to facility size or client volume. Also, the bacteriological and chemical quality of water or the bacteriological safety of medical equipment is not assessed here, which is expensive and requires greater technical capacity. For an application in urban centers or in a more developed context, the assessment instrument should be adapted to higher standards. The module is suitable for peripheral health facilities such as health posts, dispensaries and health centers, an application to hospital settings will require more stringent and comprehensive criteria. The hygiene improvement module is not intended as a stand-alone application, but as a complement of existing health facility assessments (BASICS, 1998).

The module is purposefully simple by addressing only water supply, sanitation and hygiene issues that can be readily observed. Unlike other health care quality assessments, it does not attempt to assess actual practices of health workers, which could be done, but would require higher-level skills and resources for its application.

Six priority indicators can be assessed with the **RAPID HEALTH FACILITY ASSESSMENT HYGIENE IMPROVEMENT MODULE** that represent the capacity of health facilities to provide safe water, adequate toilet facilities, prerequisites for basic hygiene such as handwashing supplies and location, safe disposal of medical waste, and pest control. These six indicators may not be sufficient to adequately describe facility capacity, therefore additional supporting indicators can be calculated based on other questions in the module.

### WATER SUPPLY

## 3.27 Proportion of health facilities with access to an improved water source that is available daily

**Indicators Diagram**

*Rationale*: This is only an approximation of “safe” drinking water, because no testing of water quality is performed. Access should take into account the time it takes to bring water to the facility and the continuity of water supply. While households can spend up to 30 minutes on collecting water to satisfy basic needs, this is not feasible for health facilities with the higher demand for safe drinking water. Facilities should have access to an improved water source on premises.

*Definition of Terms:* The term "water source" is used as a synonym for water distribution or supply point.
An "improved water source" includes only:

- Piped into facility
- Piped into yard or plot
- Standpipe
- Tubewell/borehole
- Protected dug well
- Protected spring
- Rainwater collection
- Bottled

An "unimproved water source" includes:

- Unprotected dug well
- Unprotected spring
- Surface water (river, dam, pond, stream)
- Small vendor
- Tanker-truck
- Any other type of supply

Definition of "protected": A protected water source means that measures are in place to prevent water from becoming contaminated, especially through runoff. This may consist of raised well heads and covered wells or spring caps. However, such measures may not be effective in reality, and formative research prior to the survey can establish which water supply should be classified as protected or unprotected.

"Access" is defined as:

- The water supply source should be on premises.
- Continuity of water supply: Water should be available daily, meaning facilities that run without interruptions of the main source for drinking water for an entire day or more during the last 2 weeks.

*Calculation*:

Numerator: Number of health facilities with access to an improved water source.

Denominator: Total number of health facilities assessed.

*Model Questions:*

5. What is the main water source for this facility?
6. How long does it take to go to your main water source, get water, and come back?
7. In the last 2 weeks has the water from this source been unavailable for at least 1 whole day?

## 3.28 Proportion of health facilities with improved, hygienic, and gender and child appropriate toilet facilities for patients

**Indicators Diagram**

*Rationale*: The addition of "hygienic" is an attempt to approximate safe disposal and potential use by patients and staff. An adequate toilet facility much have a basic superstructure of walls, roof and door that can be closed (to keep animals out). For health facilities a place for handwashing (includes the presence of water and soap) within or next to the toilet facility is essential. Finally, health facilities should have gender and child appropriate sanitation facilities.

*Definition of Terms:*

An "improved sanitation facility" includes only:

- Flush toilet connected to sewer system
- Flush toilet connected to a septic tank
- Flush or pour-flush latrine connected to a pit
- Ventilated Improved Pit (VIP) latrine or simple pit latrine with slab (slab that can be cleaned)
- Basic superstructure present
- Gender and child appropriate

Not improved sanitation facilities include:

- Flush or pour-flush latrine that empties into the open without connection to a pit, sewage system or septic tank
- Pit latrine without slab
- Bucket latrine (where excreta are manually removed)
- Hanging latrine
- Toilet facility shared with households outside the health facility confines (staff may share facilities with patients under simplest conditions)
- Open defecation in field or bush, into plastic bags ("flying toilets")
- Open/uncovered latrines (referring to a lack of superstructure)
- No separate facilities for men and women
- No child-friendly facility

Hygienic means the absence of visible fecal matter on exposed surfaces (on seat, floor, walls, door, etc.) and presence of a handwashing facility.

*Calculation*:

Numerator: Number of health facilities with adequate sanitation facilities.

Denominator: Total number of health facilities assessed.

*Model Questions:*

20. What type of toilet facility is available at this facility for clients/patients?
21. Where is this toilet facility located?
22. CLIENT/PATIENT TOILET FACILITY: OBSERVE THE SUPERSTRUCTURE OF WALLS, ROOF AND DOOR?
23. CLIENT/PATIENT TOILET FACILITY: IF DOOR(S) ARE PRESENT, CAN THEY BE CLOSED?
24. CLIENT/PATIENT TOILET FACILITY: IF ANY TYPE OF PIT LATRINE, ARE THE HOLES COVERED?
25. CLIENT/PATIENT TOILET FACILITY: ARE THERE SEPARATE FACILITIES FOR MEN AND WOMEN?
26. CLIENT/PATIENT TOILET FACILITY: IS THERE FECAL MATTER PRESENT INSIDE THE FACILITY ON FLOOR OR WALLS OR OTHER SURFACES (HUMAN OR ANIMAL)?
27. CLIENT/PATIENT TOILET FACILITY: IS THERE A CHILD-FRIENDLY FACILITY? (MAY BE SEPARATE OR IN THE SAME COMPARTMENT AS AN ADULT FACILITY. OBSERVE AND CHECK ALL THAT APPLY.)
28. CLIENT/PATIENT TOILET FACILITY: IS THERE A PLACE FOR HANDWASHING IN THE TOILET FACILITY OR NEXT TO IT?
29. CLIENT/PATIENT TOILET FACILITY: ARE THE FOLLOWING ITEMS PRESENT AT THE PLACE FOR HANDWASHING? (OBSERVE AND CHECK ALL THAT APPLY)

## MEDICAL WASTE MANAGEMENT

### 3.29 Proportion of health facilities with adequate medical waste disposal

**Indicators Diagram**

*Rationale*: Medical waste poses special hazards, because of its potential for containing infectious and chemical contaminants, and requires stricter disposal practices than solid waste from households.

*Definition of Terms*:
Medical waste includes syringes, needles, intravenous fluid containers, dressings, expired drugs, and any materials biomedically contaminated. It is recommended that health facilities dispose separately of medical and other solid waste because of safety reasons and the need to preserve space for medical waste by not mixing it with other waste that may accumulate in a much larger volume.

An adequate waste disposal removes all medical waste from the environment and needs to meet all of the following three criteria:

- Presence of a dedicated waste disposal pit on the facility premises
- Waste covered with a layer of dirt (about 4 inches thickness are recommended).
- Superstructure that bars access to the pit for humans and animals (at minimum a fence and a gate that locks)

- Regular waste removal service where such a service is available. In such cases a waste pit may not be required.
- Safe Sharps/Needle Disposal: Health facilities should use puncture-proof containers for the collection and disposal of used disposable and auto-disable syringes, needles and other injection materials as per WHO/UNICEF recommendation.

Incinerators are not recommended for small health facilities because the risks of polluting the environment are substantially greater than waste burial. Small-scale incineration of medical waste, for example, using drum incinerators or single chamber brick incinerators, does not destroy infective agents and may spread chemical pollutants.

*Calculation*:

Numerator: Number of health facilities with adequate medical waste disposal.

Denominator: Total number of health facilities assessed.

*Model Questions:*

35. How is medical waste is disposed of? (VERIFY BY OBSERVATION)
36. IF disposal is in a waste pit, is the pit surrounded by an enclosure? (VERIFY BY OBSERVATION)
37. Is there a gate or door? (VERIFY BY OBSERVATION)
38. Is the gate or door locked? (VERIFY BY OBSERVATION)
39. Is the waste in the pit covered with dirt? (VERIFY BY OBSERVATION)
40. Where are used sharps (needles, blades, etc.) disposed of?
41. Where are used sharps (needles, blades, etc.) put in the facility before their final disposal? (ASK TO SEE CONTAINER)
42. WHAT TYPE OF CONTAINER IS USED FOR USED SHARPS - NEEDLES, BLADES, ETC.? (OBSERVE)

**INJECTION SAFETY** (Only for health facilities that provide immunization services)

## 3.30 Proportion of health facilities that use auto-disable syringes for immunization as per WHO/UNICEF recommendation

**Indicators Diagram**

*Rationale*: Injection safety is an important hygiene issue because of the risk of transmitting infectious diseases through inadequately sterilized syringes. Auto-disable syringes make sterilization unnecessary, but generate more of medical waste than reusable syringes and require adequate disposal.

*Definition of Terms*:
Auto-disable syringes can only be used once and render themselves unusable after being used. WHO/UNICEF recommend that auto-disable syringes be used for all routine and campaign

immunization activities. The use of auto-disable syringes makes sterilization of immunization equipment obsolete (and is thus not addressed in the assessment), but sterilization may still be required for injection equipment for other uses.

*Calculation*:

Numerator: Number of health facilities that use auto-disable syringes for immunization.

Denominator: Total number of health facilities assessed that offer immunization services.

*Model Questions:*

46. Does this health facility provide any immunization services (routine, fixed, mobile, campaign)?
47. Are auto-disable syringes for immunization as per WHO/UNICEF recommendation used? (ASK TO SEE SYRINGES)

## INFECTION PREVENTION

### 3.31 Proportion of health facilities with an adequate handwashing facility for health personnel

**Indicators Diagram**

*Rationale*: Frequent handwashing with soap is crucial for infection prevention in health facilities in general and especially where surgical interventions are performed. Handwashing needs to be facilitated by conveniently located handwashing places at critical points within a facility where staff interacts with patients. All necessary supplies need to be present and in easy reach. Wastewater should also be safely disposed of because of the potential contamination with biomedical matter.

*Definition of Terms*:
An "adequate" handwashing facility for health personnel is easily accessible at key points within the health facility and needs to meet all of the following three criteria:

At least one handwashing facility is located in or near (adjacent or within a few steps) the room where clients are seen and treated.

Staff's ability to wash hands at appropriate times depends on whether a place exists in the facility that has all necessary items for handwashing:

- water—from tap or container with spigot
- soap or detergent
- hand brush (especially where asepsis is important)
- basin or sink
- clean towel or cloth for drying hands

Wastewater from a sink or basin needs to be disposed of adequately to remove biomedical matter from the environment. Adequate wastewater disposal includes:

- grey-water pit, soak-away pit, or absorption trench
- connection to a sewer or septic system

Not recommended are:

- disposal in a latrine (because of a potentially large volume or cleaning and laboratory agents)
- uncontrolled run-off
- collection for further use, e.g., irrigation, pour-flush toilet (because of potential biomedical contaminants)

*Calculation*:

Numerator: Number of health facilities with an adequate handwashing facility for health personnel.

Denominator: Total number of health facilities assessed.

*Model Questions:*

51. Is there a place for handwashing in the room where clients/patients are seen or next to it?
52. Are the following items present at the place for handwashing? (OBSERVE AND CHECK ALL THAT APPLY)
53. Where is the wastewater disposed off? (OBSERVE)

### PEST AND VECTOR CONTROL

## 3.32 Proportion of health facilities with adequate pest or vector control measures

**Indicators Diagram**

*Rationale*: Malaria, dengue, encephalitis and fevers of viral origin like hanta or West-Nile are common in many countries, mostly transmitted by mosquitoes. Outbreaks of plague and typhus, which are transmitted by fleas harbored by rats, still play a role in several developing countries. Because of the serious health risk, patients admitted to health facilities need to be adequately protected from biting insects through appropriate barriers.

*Definition of Terms*:

- Pests and vectors considered here are limited to mosquitoes and similar vectors and rodents (rats and mice) that transmit diseases of major public health importance such as malaria, dengue, encephalitis and fevers of viral origin like hanta or West-Nile.

- Appropriate control measures that can be verified easily through observation include:
  - For health facilities that admit patients in areas with mosquitoes (any type)
    - Bednets impregnated with insecticides in inpatient wards (medical and maternity wards)
    - Screen covers on windows and doors of inpatient facilities
  - For all health facilities in areas with rats and mice infestation
    - Evidence of rodent traps and/or poisons

*Calculation*:

Numerator: Number of health facilities with appropriate control measures.

Denominator: Total number of health facilities assessed that are exposed to pests and/or vectors.

*Model Questions:*

58. Are rats and mice a common nuisance in this area?
59. Are rodent traps or poisons in place? (OBSERVE)
60. Are mosquitoes a common nuisance in this area?
61. Are doors and windows equipped with mosquito screens? (OBSERVE)
62. Are patients admitted at this facility or is there a maternity?
63. Are beds equipped with mosquito nets? (OBSERVE)
64. Are these mosquito nets impregnated with insecticides, and if so, are they long-lasting or do they require retreatment?
65. When were mosquito nets treated last?

## Using These Guidelines for a Situation Analysis and Needs Assessment

This chapter provides a practical application for assessing the need for hygiene improvement interventions. A situation analysis and needs assessment will rely on several data sources, some of which exist already and others that will need to be implemented using the instruments provided in these guidelines. Many health or water supply and sanitation programs will begin their planning and design process by conducting a baseline assessment. Such an assessment is important because it will allow programs to do the following:

1. Assess the situation by answering critical questions about water supply, sanitation, and hygiene and related health risks

2. Design specific interventions that will improve crucial household and community practices, including better hygiene behaviors, improved access to hardware, and a stronger enabling environment, by using baseline data together with other qualitative information

3. Monitor program progress by repeating the baseline survey, partially or completely, at mid-term

4. Evaluate program impact at critical program stages by using the same instruments as those used at baseline

The following paragraphs cite some critical questions that may be asked during the exploratory or planning phase of hygiene improvement interventions to identify problems, existing practices, and needs. For each question, relevant hygiene improvement indicators described in this document are specified. Data for some of these indicators will be available from existing published sources such as the DHS or the UNICEF MICS. For others, a baseline survey using an instrument like the **HYGIENE IMPROVEMENT HOUSEHOLD SURVEY QUESTIONNAIRE** may have to be conducted.

Such a situation analysis and needs assessment is often conducted at the district level, but it is equally applicable at community and national levels. At the national level existing data sources such as the DHS and MICS would be especially useful because they provide mostly national estimates and can serve as a baseline. As a first estimate, these data may also be useful at the district level and below, but because of wide variations at these levels, a separate baseline assessment eventually will be necessary. National-level data are not suited as a baseline for the local level, but rather as a rough reference. Moreover, the DHS and MICS are multipurpose surveys that include only a few questions related to hygiene improvement, which is generally insufficient for program planning and design.

In addition, programs usually need other relevant information about water supply and sanitation and prevailing hygiene practices that do not require formal surveys as described in these guidelines, but rather rely on qualitative assessments such as focus groups and structured interviews or observations. Such questions are provided in this chapter and “qualitative situation analysis” is indicated as a source. Qualitative assessments can serve local as well as national needs assessments, but the type of questions asked and the participants and key informants may vary.

What is the health status of the target population (children under 36 or 60 months), especially health outcomes influenced by hygiene improvement interventions?

What is the diarrheal disease prevalence?

0.1 Percentage of children under 36 (or 60) months of age with diarrhea in the last two weeks

*Source*: DHS or the UNICEF MICS, Model Hygiene Improvement Household Questions

Additional health indicators of interest to diarrheal disease prevention include the following:

- Nutritional status (rates of severe and moderate acute and chronic malnutrition)
- Prevalence of acute respiratory infections (pneumonia)

*Source*: DHS and MICS, Model Hygiene Improvement Household Questions

***Note***: Nutritional status is a better indicator for hygiene improvement interventions than diarrhea prevalence because it is a more accurate measurement and varies less by season. Concerning acute respiratory infections, efforts are underway to establish the relationship between improved hygiene, especially handwashing, and the reduction of pneumonia. Evidence from developed countries suggests a possible risk reduction. The appropriate model question is included in this guide.

- Infant mortality rate
- Under 5 mortality rate

*Source*: Information for these indicators usually does not come from survey instruments described in this guide because of the costs involved. Common sources are the DHS and MICS.

Inequities: Are there important geographic and socioeconomic differences between areas or population groups that have low versus high health status?

Compare rates for the indicators above for specific vulnerable population groups and households in high-risk environments:

Urban versus rural populations
Urban poor versus urban nonpoor
Urban slum areas versus nonslum areas
Geographic regions of a country

*Source*: DHS and MICS allow separate analyses for specific population groups to a limited extent (e.g., urban versus rural). For more specific data needs (e.g., about urban slum or small geographic areas), an instrument based on Model Hygiene Improvement Household Questions will need to be applied.

Is the current access to water supply and sanitation hardware adequate; is water quantity sufficient; and is the quality of services acceptable?

Household coverage

1.1 Percentage of households with access to an improved water source

*Source*: Global Assessment Report of the WHO/UNICEF Joint Monitoring Programme (JMP), DHS and MICS, Model Hygiene Improvement Household Questions

1.4 Percentage of households with access to an improved and hygienic toilet facility

*Source*: Global Assessment Report of the WHO/UNICEF JMP, DHS and MICS, Model Hygiene Improvement Household Questions

1.11 Percentage of households that have water-treatment supplies

*Source*: Model Hygiene Improvement Household Questions

Institutional coverage (schools, health facilities)

3.22 Percentage of schoolchildren with access to basic sanitation
3.23 Percentage of schoolchildren with access to separate facilities for boys and girls
3.24 Percentage of schoolchildren with access to a handwashing facility

*Source for all indicators above*: Model Hygiene Improvement Household Questions, which are intended for application at the household level, but the school water supply, sanitation, and hygiene section of the questionnaire could be applied directly to schools with only minor modifications. Similar questions can be asked to students, teachers, and headmasters. A qualitative situation analysis using questions in the model questionnaire as a guide will be helpful in the absence of specific school surveys.

Proportion of health facilities with improved water supply and toilet facilities.

*Source*: A separate health facility assessment, which is available on request. Questions about water supply and toilet facilities are similar to those asked at schools, but the disposal of medical waste and the existence of handwashing facilities for medical staff are of additional concern. A qualitative situation analysis will be helpful in the absence of specific health facility surveys.

Quantity of water

1.3 Percentage of households where time to collect water is 30 minutes or less

*Source*: DHS and MICS, Model Hygiene Improvement Household Questions

1.6 Percentage of households that have sufficient quantities of water (a minimum of 20 liters per capita per day)

*Source*: Model Hygiene Improvement Household Questions

Quality of water and solid waste disposal

1.2 Percentage of households that had their principal water source available daily for the past two weeks

*Source*: Model Hygiene Improvement Household Questions

1.9 Percentage of households that have a hygienic solid waste disposal system

*Source*: Model Hygiene Improvement Household Questions

<u>Inequities</u>: Are there important geographic and socioeconomic differences between areas or population groups that have low versus high coverage, a daily minimum quantity of safe water for drinking and for hygiene, and differences in quality of services?

Compare rates above for specific vulnerable population groups and high-risk environments:

Urban versus rural populations

Urban poor versus urban nonpoor
Urban slum areas versus nonslum areas
Geographic regions of a country

*Source*: Will usually require a survey using an instrument based on Model Hygiene Improvement Household Questions. DHS and the MICS do not yet provide much of this information.

Are current household practices related to water supply, sanitation, and hygiene likely to increase exposure to diarrhea causing pathogens unnecessarily?

Do people wash hands properly with soap and at critical times?

0.2 Percentage of caretakers washing hands properly with soap and at appropriate times

*Source*: Model Hygiene Improvement Household Questions

Do caretakers dispose of all feces safely, especially those of young children?

0.3 Percentage of children under 36 (or 60) months whose feces were disposed of safely

*Source*: DHS or the UNICEF MICS, Model Hygiene Improvement Household Questions

Do households practice safe drinking water management?

0.4 Percentage of households that practice safe drinking water management

*Source*: Model Hygiene Improvement Household Questions

Do households practice safe food management?

0.5 Percentage of caretakers who practice safe food management

*Source*: Model Hygiene Improvement Household Questions

Do schoolchildren learn about sanitation and hygiene?

3.25 Percentage of schoolchildren learning about sanitation and hygiene

*Source*: Model Hygiene Improvement Household Questions

Inequities: Are there important geographic and socioeconomic differences between areas or population groups that have higher and lower risk because of related practices? Compare rates above for specific vulnerable population groups as before.

What are the strengths and weaknesses of the enabling environment, including the communities, institutions, and policies?

Developing an instrument by selecting model questions from the second list, the **HYGIENE IMPROVEMENT COMMUNITY SURVEY QUESTIONS**, allows a rapid assessment of community management and financing of water supply and sanitation systems and hygiene activities. Information can be collected from a few

community stakeholders and local government officials. Other key informants for this type of information will be found in public agencies, utilities, and private service providers.

Are there effective community organizations that manage water supply, sanitation, and hygiene activities and services?

3.7 Percentage of recurrent costs recovered from user fees
3.8 Percentage of households that pay full share of water fee
3.11 Water system performs properly, giving community regular, continuous water supply
3.13 Community organization functioning effectively to manage operation and maintenance of water supply and sanitation systems

*Source for all indicators above*: Model Hygiene Improvement Community Questions, qualitative situation analysis

What are common water supply and sanitation problems in the target communities?

*Source*: Model Hygiene Improvement Community Questions, qualitative situation analysis

Are there effective national and regional institutions to manage water supply and sanitation services? If so, who and how effective are they? Who is responsible for hygiene promotion?

Is there a supportive national policy environment that includes plans for water supply, sanitation, and hygiene? What are they?

Are pro-poor policies in place in the public and private sectors? What are they?

Are there strong private service providers? Who are they?

Are there strong nongovernmental organizations that support water supply, sanitation, and hygiene? Who and how effective are they? Are they engaged in hygiene promotion?

Do partnerships exist or are there opportunities for public-private partnerships that can improve water supply, sanitation, and hygiene for the poor? What are they?

Are there donors with a major investment in water supply and sanitation? Is hygiene included? Is there an opportunity to add a hygiene component to an infrastructure focus?

What water supply, sanitation, and hygiene programs exist? How effective are they? Who supports them?

Does the education sector cover sanitation and hygiene in the curriculum for primary and secondary schools?

Do programs exist that target schools for improvements in water supply, sanitation, and hygiene? Which organizations provide support?

Do programs exist that target health facilities for improvements in water supply, sanitation, and hygiene? Which organizations provide support?

*Information source* for all questions above: Qualitative situation analysis

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# GLOSSARY

**Brown water:** is a mix of water and excrements that is produced by water-based sanitation systems.

**Grey water:** is wastewater from washing activities such as personal hygiene, laundry or cleaning dishes.

**Hyperlinks:** connect different places in a document by placing special marks in or around text. By placing the pointer over a hyperlink and clicking on it, the text at the destination of the link is displayed.

**Indicators:** are critical information about selected areas of performance, usually expressed as an index or ratio, monitored at regular intervals, and compared to one or more standards. Indicators describe various aspects of the operation of a program, service, or institution. They must be relevant (actually represent what they purport to), reliable (based on statistics that can be assembled consistently and accurately), accessible (constructed on a regular and consistent basis), and clear (easy to understand). They are frequently tracked for over three to five years. In the institutional evaluation process, indicators relevant to the operation and performance of each program and service are collected and reviewed annually and as trends over a three to five-year period (Google Web Dictionary 7/27/2004).

**Model Question:** are survey questions that are derived from numerous survey experiences and can serve as the basis for developing a complete survey questionnaire. Often several model questions are related to each other and need to be used as a group to yield valid information.

**Units of Measurement:** are people, groups or objects about whom or which data are collected.

The following units of measurement are used in all three Hygiene Improvement Framework components. They have the same meaning throughout these guidelines.

- **Caretakers –** those individuals who care for children under 36 (or 60) months of age. This person may or may not be the head of a household or a blood relative.

- **Committees –** groups formed within the community (see definition of community) to carry out community activities.

- **Communities –** groupings of individuals at the village level, the zonal level, the district level, the municipal level, and other levels. It is essential that programs clearly define and delineate "their" target community.

- **Households** - members of a family (nuclear or extended) sharing meals and household resources (including food stock and any income).

- **Schoolchildren –** children of school age (country specific) who are attending school.

# MODEL SURVEY QUESTIONS

## Structure of Model Questions and Coding Conventions

The model questions, as well as the sample household questionnaire, are structured as follows:

| | |
|---|---|
| Header: | Unique questionnaire identification number that is generated when printing the questionnaire through a mail-merge function. The last digit can be used to select a household or person within a household from a list of 10 or fewer at random. If there are more than 10, the last two digits of the identification number can be used. |
| 1st column: | Sequence number (assigned automatically) |
| 2nd column: | Questions, observations, instructions, and filters |
| 3rd column: | Coding categories |
| 4th column: | Skip instructions indicating the number of the next question to be asked |

Coding categories follow these conventions:

Questions are written in lower case.

OBSERVATIONS OF ITEMS IN THE HOUSEHOLD AND INSTRUCTIONS FOR THE INTERVIEWER ARE WRITTEN IN CAPITAL LETTERS.

**Numbered** coding categories indicate that only one response to a question is allowed (see reserved numbers below).

**Characters** indicate that multiples responses are allowed (see reserved characters below).

**Single digits** are used for up to five coding categories, not counting "other," "not applicable," and "don't know."

**Double digits** are used for more than five coding categories, not counting "other," "not applicable," and "don't know," starting with "11."

**Increments of 10** are used for major coding categories, for example, 11 … 21 … 31 … etc.

**6 or 96** are reserved for "other"; usually the interviewer is asked to note the response verbatim.

**7 or 97** are reserved for "not applicable."

**8 or 98** are reserved for "don't know."

**98, 998, 9998, etc.,** are reserved for numeric responses such as time estimates or currency values to indicate "don't know." The number of digits needs to be large enough to ensure that it falls outside the range of valid responses. For example, to estimate the time required in minutes to fetch water, three instead of two digits must be used because 98 minutes would be a possible response, but 998 minutes seem implausible.

**99, 999, 9999, etc.,** are reserved for numeric responses such as time estimates or currency values to indicate "in excess of this amount." It indicates a response that falls totally out of the expected range and may indicate that the question was incomprehensible or not understood. The number of digits needs to be large enough to ensure that it falls outside the range of valid responses.

**Special codes** can be assigned as needed. For example, when asking to estimate the time required in minutes to fetch water, "996" indicates "water source is on premises." As before, the number of digits needs to be large enough to ensure that it falls outside the range of valid responses.

**"X"** is reserved for "other"; usually the interviewer is asked to note the response verbatim.

**"Y"** is reserved for "not applicable."

**"Z"** is reserved for "don't know."

The symbol "➔" followed by a number instructs the interviewer to "go to question number #," if the respondent mentions the coding category to the left of "➔."

# INSTITUTION(S) [*NAMES*] RESPONSIBLE FOR THE SURVEY

## HYGIENE IMPROVEMENT HOUSEHOLD SURVEY QUESTIONS
### KNOWLEDGE, PRACTICE, AND COVERAGE OF WATER SUPPLY, SANITATION, AND HYGIENE IN [*NAME OF DISTRICT/REGION*]

### INTRODUCTION TO THE HOUSEHOLD

The [*name of the institution(s)*] are now implementing a project to address basic health needs in this [*name of the region, district, area, community, etc.*], including household water supply and sanitation. As part of the planning process, we are conducting a survey of households in villages that are being considered for participation in the project now and later. The purpose of the survey is to ensure that the project meets the needs of the people of these villages for essential health services, safe water, and better sanitation and hygiene.

The questions asked of participating households will focus on the following information:

Information about the household and the people living here
The current situation of water supply and sanitation
Knowledge and practices concerning hygiene
Other health care and household practices

Because time is limited, not all households in the project villages will be included in the survey. A computer analysis will be conducted on the information collected in this survey for the project areas as a whole. Names and addresses of participants will not be included in the analysis or report, nor will information about a person's household be shared with anyone else. Participation is voluntary. If for any reason you do not wish to participate, you can choose not to, and you can object to answering any specific question or questions in the questionnaire. There are no disadvantages to deciding not to participate or not to answer certain questions. However, we would greatly appreciate your cooperation.

The entire interview will take approximately 45 minutes and involve several members of your household. Do you agree to participate?

**Yes** **No**

*Interviewer, if the household refuses to participate, or if the survey cannot be done at the present time for other reasons, please fill out the following page to the extent possible, including characteristics of the household and the people living there.*

| | | | |
|---|---|---|---|
| | If GPS readings are taken, note the latitude, longitude and altitude here.<br>Latitude in degrees, minutes, seconds | | |
| | Longitude in degrees, minutes, seconds | | |
| | Altitude in meters | | |

## A- LOCATION

A1 : DISTRICT ----------

A2 : SUBDISTRICT ----------

A3 : VILLAGE/TOWN ----------

A4 : HOUSEHOLD ID NUMBER ----------

NAME OF HEAD OF HOUSEHOLD: _____

Gender of Head of Household: **M F** (*circle one*) Age: _____ (*in years*)

*Interview Language*: ➔

Language A..... 1
Language B..... 2
Language C ..... 3

## B- HOUSEHOLD CHARACTERISTICS and ELIGIBILITY

| B.1: Wall Construction | B.2: Floor Construction | B.3: Roof Construction |
|---|---|---|
| Brick or cement blocks ..... 1 | Tile ..... 1 | Cement ..... 1 |
| Stone ..... 2 | Concrete..... 2 | Earth ..... 2 |
| Mud..... 3 | Earth..... 3 | Tin ..... 3 |
| Raffia ..... 4 | | Straw..... 4 |
| Other : _____ 6 | Other _____ 6 | Other _____ 6 |
| **B.4 :** TYPE OF DWELLING<br>HOUSE / APARTMENT | **B.5** : Children 0-59 months living here: : YES | **B.6** : Caretakers of children 0-59 months present: YES |

## NUMBER OF VISITS TO HOUSEHOLD

| | 1 | 2 | FINAL VISIT | * RESULT OF EACH VISIT |
|---|---|---|---|---|
| Date | | | | NO RETURN VISIT NEEDED<br>Completed ..... 1<br>Refused ..... 2<br>Partially completed, return visit not agreed to ..... 3<br>People absent for extended period . 4<br>Dwelling empty ..... 5<br>RETURN VISIT INDICATED<br>Partially completed, return agreed... 6<br>No eligible person present..... 7<br>Other: _____ 8 |
| Interviewer ID | | | | |
| Result* | | | | |
| **If return visit indicated, enter date for next visit** | | | | |

## C- SURVEY COMPONENTS COMPLETED FOR THIS HOUSEHOLD

| **C.7** Household interview completed: | **C.8** Caretaker interview completed: | **C.9** Other questionnaire completed: |
|---|---|---|
| YES / NO | YES / NO | YES / NO |

| FIELD | | | OFFICE |
|---|---|---|---|
| **Interviewer Completed Date** | **Field Supervisor Checked Date** | **Study Supervisor Checked Date** | **Data Entry Specialist Entry Date** |
| **Person's ID** | **Person's ID** | **Person's ID** | **Person's ID** |

## HOUSEHOLD QUESTIONNAIRE
## (Interview head of household or his/her replacement)

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 1. | How many households are part of this compound?<br>INTERVIEWER: SELECT ONE HOUSEHOLD, IF THERE IS MORE THAN ONE | [ ][ ] | |
| 2. | How many people live in this household?<br><br>LIST IN TABLE "D" ON THE FOLLOWING PAGE ALL CARETAKERS AND THEIR CHILDREN 0-59 MONTHS AS WELL AS THE OLDEST CHILD ATTENDING A PRIMARY SCHOOL | _____ | |
| 3. | What is the education of the head of household? | NO FORMAL SCHOOLING.....11<br>PRIMARY, INCOMPLETE.....12<br>PRIMARY, COMPLETED.....13<br>SECONDARY, INCOMPLETE .....14<br>SECONDARY, COMPLETED.....15<br>SECONDARY, PROFESSIONAL LEVEL.....16<br>COLLEGE/UNIVERSITY, INCOMPLETE.....17<br>COLLEGE/UNIVERSITY, COMPLETED.....18<br>DON'T KNOW_____98 | |
| 4. | Can the head of household read, write, or both?<br>CHECK ALL THAT APPLY | CAN READ ..... A<br>CAN WRITE..... B | |
| 5. | Does your household own the following items (if in working order only)?<br><br>READ ALL ITEMS AND MARK THOSE MENTIONED. | CAR/TRUCK..... A<br>MOTORCYCLE ..... B<br>BICYCLE ..... C<br>BOAT/PIROGUE/OUTBOARD..... D<br>RADIO ..... E<br>RADIO WITH CASSETTE TAPE..... F<br>TELEVISION..... G<br>REFRIGERATOR ..... H<br>SEWING MACHINE.....I<br>KEROSENE OR GAS COOKER .....J<br>COLMAN or KEROSENE LAMP ..... K<br>LARGE LIVESTOCK .....L<br>SMALL LIVESTOCK.....M<br>LAND FOR SUBSISTENCE FARMING..... N<br>LAND FOR CASH CROP (COFFEE, COCO, TEE, VEGETABLES, OTHERS).....O<br>SHELVES ..... P<br>CHAIRS OF WOOD.....Q<br>TABLES OF WOOD ..... R<br>CHAIRS OF PLASTIC OR METAL..... S<br>TABLES OF PLASTIC OR METAL ..... T<br>GAS GENERATOR OR SOLAR PANEL..... U<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW..... Z | |
| 6. | Do you own your dwelling, including the land? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |
| 7. | If not, how likely is it that you could be evicted from this dwelling: very likely, somewhat likely, or not at all likely | VERY LIKELY .....1<br>SOMEWHAT LIKELY .....2<br>NOT AT ALL LIKELY .....3<br>DON'T KNOW .....8 | |

**TABLE D: LIST OF ALL HOUSEHOLD MEMBERS (CARETAKER, CHILDREN 0-59 MONTHS, AND SCHOOLCHILDREN)**

We would like to start this discussion by listing the people who are members of this household, starting with the caretaker of children under 5 years of age.

| ID# | NAME | SEX | AGE FOR PEOPLE AGE 5 YEARS AND OVER | AGE FOR CHILDREN 0- 59 MONTHS | RELATIONSHIP OF PRIMARY CARETAKER TO THIS CHILD | ORPHAN, LOST BOTH PARENTS BECAUSE OF:* | |
|---|---|---|---|---|---|---|---|
| | List primary caretakers, followed by all her/his children 0-59 months and the oldest child attending elementary school. [Do not list visitors.] | Circle M or F | In **YEARS**, Use 2 digits | In **MONTHS**, Use 2 digits | Mother .....1<br>Grandmother .....2<br>Sister .....3<br>Aunt .....4<br>Father .....5<br>Brother.....6<br>Grandfather) .....7<br>Other family (female).....8<br>Other family (male).....9<br>Not family (female) .....10<br>Not family (male) .....11 | War / Civil Unrest (*check*) | HIV/ AIDS (*check*) |
| **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** |
| **1** | | **M F** | | | | | |
| **2** | | **M F** | | | | | |
| **3** | | **M F** | | | | | |
| **4** | | **M F** | | | | | |
| **5** | | **M F** | | | | | |
| **6** | | **M F** | | | | | |
| **7** | | **M F** | | | | | |
| **8** | | **M F** | | | | | |
| **9** | | **M F** | | | | | |
| **10** | | **M F** | | | | | |
| **11** | | **M F** | | | | | |
| **12** | | **M F** | | | | | |

* If one parent is lost due to war or civil unrest and the other due to HIV/AIDS, check each column. If both parents are lost due to the same cause, check only one column.

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| | **WATER SUPPLY** | | |
| 8. | What is the main source of drinking water for members of this household? [3]<br>(CHECK ONE)<br>[Indicator 1.1] | PIPED WATER ..... 11<br>STANDPIPE ..... 12<br>TUBEWELL/BOREHOLE ..... 13<br>PROTECTED DUG WELL ..... 14<br>UNPROTECTED DUG WELL ..... 15<br>PROTECTED SPRING ..... 16<br>UNPROTECTED SPRING ..... 17<br>RAIN WATER COLLECTION ..... 18<br>SMALL WATER VENDOR/PEDDLER ..... 19<br>TANKER TRUCK ..... 20<br>BOTTLED WATER ..... 21<br>SURFACE WATER<br>(RIVER/STREAM/POND/LAKE/DAM) ..... 22<br>OTHER _____ 96<br>(SPECIFY) | |
| 9. | How long does it take you to go to your main water source, get water, and come back?<br>(CHECK ONE)<br>[Indicator 1.3] | MINUTES [ ][ ][ ]<br>ON PREMISES ..... 996<br>DON'T KNOW ..... 998 | <br>➔11<br>➔11 |
| 10. | If water is not on premises, who usually collects water?<br>(CHECK ALL THAT APPLY) | ADULT WOMEN ..... A<br>SCHOOL AGE FEMALE CHILDREN ..... B<br>ADULT MEN ..... C<br>SCHOOL AGE MALE CHILDREN ..... D<br>YOUNG, PRE-SCHOOL AGE CHILDREN ..... E<br>OTHER _____ X<br>(SPECIFY) | |
| 11. | What is the main source of water used by this household for handwashing? | PIPED WATER ..... 11<br>STANDPIPE ..... 12<br>TUBEWELL/BOREHOLE ..... 13<br>PROTECTED DUG WELL ..... 14<br>UNPROTECTED DUG WELL ..... 15<br>PROTECTED SPRING ..... 16<br>UNPROTECTED SPRING ..... 17<br>RAIN WATER COLLECTION ..... 18<br>SMALL WATER VENDOR/PEDDLER ..... 19<br>TANKER TRUCK ..... 20<br>SURFACE WATER<br>(RIVER/STREAM/POND/LAKE/DAM) ..... 21<br>OTHER _____ 96<br>(SPECIFY) | |
| | **Optional: Water Quantity Used by Household where Water Source is not in the Dwelling** | | |
| 12. | In what type of container is the water carried from your main source?<br>[Indicator 1.6] | GALLON (PLASTIC OR METAL) ..... 1<br>BUCKET ..... 2<br>DRUM/BARREL ..... 3<br>JERRY CAN ..... 4<br>JERKIN ..... 5<br>OTHER ..... 6<br>(SPECIFY)<br>DON'T KNOW ..... 8 | |

[3] Coding categories to be developed locally and revised based on the pretest; however, the broad categories must be maintained.

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 13. | What is the approximate volume in liters of:<br><br>[Note: If these are containers of standard size and consistently used by all households, this does not have to be asked during the survey, but can be calculated at time of date entry.]<br>[Indicator 1.6] | GALLON (PLASTIC OR METAL) _____ ltrs<br>BUCKET _____ ltrs<br>DRUM/BARREL _____ ltrs<br>JERRY CAN _____ ltrs<br>JERKIN _____ ltrs<br>OTHER _____ ltrs<br>DON'T KNOW..... 98 | |
| 14. | How many of these containers are carried at a time?<br>[Indicator 1.6] | [ ][ ] | |
| 15. | How many loads do you fetch per week?<br>[Indicator 1.6] | [ ][ ] | |
| | **Continuity of Water Supply** | | |
| 16. | How long does it usually take to fill a [NAME OF A CONTAINER COMMONLY USED] from your main water source?<br><br>[NOTE THE VOLUME OF THE CONTAINER FOR WATER FLOW CALCULATIONS: _____ liters/gallons (circle one)] | 1 MINUTE OR LESS .....1<br>MORE THAN 1 MINUTE/LESS THAN 5 .....2<br>MORE THAN 5 MINUTES/LESS THAN 1 HOUR .....3<br>1 HOUR OR LONGER.....4<br>DON'T KNOW.....8 | |
| 17. | In the last 2 weeks has the water from this source been unavailable for at least 1 whole day?<br>[Indicator 1.2] | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | <br>➔22<br>➔22 |
| 18. | For how many days did you not have water? | [ ][ ]<br><br>DON'T KNOW.....98 | |
| 19. | When there was no water from your main water source, what did you do to get water for drinking? | WAIT UNTIL WATER BECOMES AVAILABLE.....1<br>GET WATER FROM A DIFFERENT SOURCE .....2<br>OTHER _____ 6<br>(SPECIFY)<br>DON'T KNOW.....8 | ➔22<br><br>➔22<br><br>➔22 |
| 20. | When you got water from a different source, what was the main source of drinking water for members of this household?[4]<br>(CHECK ONE) | PIPED WATER .....11<br>STANDPIPE .....12<br>TUBEWELL/BOREHOLE .....13<br>PROTECTED DUG WELL.....14<br>UNPROTECTED DUG WELL.....15<br>PROTECTED SPRING.....16<br>UNPROTECTED SPRING.....17<br>RAIN WATER COLLECTION .....18<br>SMALL WATER VENDOR/PEDDLER .....19<br>TANKER TRUCK.....20<br>BOTTLED WATER .....21<br>SURFACE WATER<br>(RIVER/STREAM/POND/LAKE/DAM) .....22<br>OTHER _____ 96<br>(SPECIFY) | |
| 21. | How long does it take you to go to this water source, get water, and come back? | MINUTES [ ][ ][ ]<br><br>ON PREMISES.....996<br>DON'T KNOW..... 998 | |
| 22. | On days when water has water been available from your main source, was it available all the time or only for several hours a day? | ALL THE TIME.....1<br>SEVERAL HOURS A DAY .....2<br>DON'T KNOW.....8 | |

[4] Coding categories to be developed locally and revised based on the pretest; however, the broad categories must be maintained.

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 23. | Was water usually available during the following times? (CHECK ALL MENTIONED) | MORNING ..... A<br>DURING THE DAY ..... B<br>EVENING..... C<br>AT NIGHT ..... D<br>VARIES, NO REGULAR TIMES ..... E<br>DON'T KNOW.....Z | |
| | **Seasonal Change in Water Source** | | |
| 24. | Do you use the main water source all year or only part of the year?[Indicator 1.7] | ALL YEAR.....1<br>PART OF THE YEAR .....2 | ➔27 |
| 25. | During the other part of the year, what is the main source of drinking water for members of this household?[Indicator 1.7] | PIPED WATER .....11<br>STANDPIPE .....12<br>TUBEWELL/BOREHOLE .....13<br>PROTECTED DUG WELL.....14<br>UNPROTECTED DUG WELL.....15<br>PROTECTED SPRING.....16<br>UNPROTECTED SPRING.....17<br>RAIN WATER COLLECTION .....18<br>SMALL WATER VENDOR/PEDDLER .....19<br>TANKER TRUCK.....20<br>BOTTLED WATER .....21<br>SURFACE WATER<br>(RIVER/STREAM/POND/LAKE/DAM) .....22<br>OTHER _____ 96<br>(SPECIFY) | |
| 26. | How long does it take you to go to this water source, get water, and come back?[Indicator 1.7] | MINUTES [ ][ ][ ]<br>ON PREMISES.....996<br>DON'T KNOW..... 998 | |
| | **Water Storage, Handling, Treatment and Cost** | | |
| 27. | Do you store water for drinking in the household? [Indicator 0.4, 1.13] | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | <br>➔37<br>➔37 |
| 28. | If YES, may I see the containers, please?[Indicator 0.4, 1.13] | YES.....1<br>NO .....2 | <br>➔37 |
| 29. | WHAT TYPE OF CONTAINERS ARE THESE? (OBSERVE AND CHECK ALL THAT APPLY) [Indicator 0.4, 1.13]<br>Narrow mouthed: opening is 3 cm or less (interviewers use template) | NARROW MOUTHED .....1<br>WIDE MOUTHED .....2<br>OF BOTH TYPES.....3 | |
| 30. | ARE THE CONTAINERS COVERED? (OBSERVE AND CHECK) [Indicator 0.4, 1.13] | ALL ARE.....1<br>SOME ARE.....2<br>NONE ARE .....3 | |
| 31. | OBSERVE: WHERE ARE THE WATER CONTAINERS PLACED? [Indicator 0.4] | ON THE FLOOR.....1<br>ELEVATED ABOVE THE FLOOR.....2 | |
| 32. | Who takes water from these containers? (CHECK ALL THAT APPLY) [Indicator 0.4] | ADULTS..... A<br>SCHOOL AGE CHILDREN..... B<br>CHILDREN UNDER 5..... C | |
| 33. | How do you remove water from the drinking water container? [Indicator 0.4, 1.12] | POURING .....1<br>DIPPING .....2<br>BOTH POURING AND DIPPING .....3<br>CONTAINER HAS A SPIGOT or TAP .....4<br>OTHER _____6<br>(SPECIFY)<br>DON'T KNOW.....8 | ➔37<br><br><br>➔37<br>➔37<br><br>➔37 |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 34. | What do you use to remove water?<br>[Indicator 0.4, 1.12] | SAME RECEPTACLE/CUP USED TO DRINK FROM1<br>RECEPTACLE RESERVED FOR RETRIEVING WATER.....2 | |
| 35. | Are the water containers cleaned?<br>[Indicator 2.15] | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | <br>➔37<br>➔37 |
| 36. | When were they cleaned last?<br>[Indicator 2.15] | TODAY OR YESTERDAY .....11<br>LESS THAN ONE WEEK AGO .....12<br>SEVERAL WEEKS AGO .....13<br>NEVER .....16<br>OTHER _____96<br>(SPECIFY)<br>DON'T REMEMBER.....98 | |
| 37. | Do you treat your water in any way to make it safer to drink?<br>[Indicator 0.4, 1.11] | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | <br>➔43<br>➔43 |
| 38. | IF YES, what do you usually do to the water to make it safer to drink? (ONLY CHECK MORE THAN ONE RESPONSE, IF SEVERAL METHODS ARE USUALLY USED TOGETHER, FOR EXAMPLE, CLOTH FILTRATION AND CHLORINE)<br>[Indicator 0.4, 1.11] | BOIL..... A<br>ADD BLEACH/CHLORINE ..... B<br>SIEVE IT THROUGH CLOTH..... C<br>WATER FILTER (CERAMIC, SAND, COMPOSITE) D<br>SOLAR DISINFECTION ..... E<br>SEDIMENTATION .....F<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW.....Z | <br><br><br><br><br><br><br>➔43 |
| 39. | When did you treat your drinking water the last time using this method?<br>[Indicator 0.4, 1.11] | TODAY .....11<br>YESTERDAY.....12<br>OVER ONE DAY AGO/LESS THAN ONE WEEK...13<br>ONE WEEK AGO OR MORE/LESS THAN A MONTH AGO.....14<br>ONE MONTH AGO OR MORE .....15<br>DON'T REMEMBER.....98 | |
| 40. | If water is treated by a method other than boiling, may I see the product or device?<br>(NOTE AS APPLICABLE)<br>[Indicator 0.4, 1.11] | BLEACH/CHLORINE IS PRESENT ..... A<br>BLEACH/CHLORINE CONTAINERS ARE EMPTY . B<br>CLOTH FILTER PRESENT ..... C<br>WATER FILTER PRESENT ..... D<br>SOLAR DISINFECTION PRESENT ..... E<br>OTHER _____F<br>(SPECIFY PRODUCT PRESENT)<br>NONE AVAILABLE.....G | |
| 41. | IF BLEACH, CHLORINE, OR TAP WATER, TEST WATER FOR FREE CHLORINE<br>[Indicator 0.4] | DETECTABLE FREE CHLORINE RESIDUALS<br>YES.....1<br>NO .....2<br><br>FREE CHLORINE _____mg/l or ppm<br>*(circle one)*<br>NOT DONE.....7 | |
| 42. | IF BLEACH, CHLORINE, OR TAP WATER, TEST WATER FOR TOTAL CHLORINE<br>[Indicator 0.4] | DETECTABLE TOTAL CHLORINE RESIDUALS<br>YES.....1<br>NO .....2<br><br>TOTAL CHLORINE _____mg/l or ppm<br>*(circle one)*<br>NOT DONE.....7 | |
| 43. | Do you pay for water?<br>[Indicator 3.5, validation of C3.8] | YES.....1<br>NO .....2 | <br>➔47 |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 44. | If yes, when do you pay?<br>[Indicator 3.5, validation of C3.8] | EVERY LOAD.....1<br>EVERY DAY.....2<br>EVERY WEEK.....3<br>EVERY MONTH.....4<br>BY VOLUME/WATER METER.....5<br>OTHER.....6<br>(SPECIFY)<br>DON'T KNOW.....8 | ➔46<br>➔46<br>➔46<br>➔46<br><br>➔46<br><br>➔47 |
| 45. | If you pay by volume/water meter, what is the unit? | PER CUBIC METER/CUBIC FOOT.....1<br>PER LITER/GALLON.....2<br>OTHER.....6<br>(SPECIFY)<br>DON'T KNOW.....8 | |
| 46. | How much do you pay per load or volume unit?<br>[Indicator 3.5, validation of C3.8] | CURRENCY | |
| | **Community Management** | | |
| 47. | When there is a problem with your main water source, whom do you tell or ask for help?<br>[Indicator 3.1] | NOBODY.....A<br>WATER MANAGEMENT COMMITTEE.....B<br>PERSON IN THE COMMUNITY RESPONSIBLE FOR MAINTENANCE.....C<br>MAINTENANCE WORKER FROM OUTSIDE THE COMMUNITY.....D<br>LOCAL GOVERNMENT.....E<br>MAYOR.....F<br>TRADITIONAL LEADER.....G<br>RELIGIOUS LEADER.....H<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |
| 48. | Have you ever contacted this person or group before? | YES.....1<br>NO.....2<br>DON'T KNOW.....8 | <br>➔52<br>➔52 |
| 49. | If yes, was the person helpful? | YES.....1<br>NO.....2<br>DON'T KNOW.....8 | |
| 50. | If yes, was the problem solved? | YES.....1<br>NO.....2<br>DON'T KNOW.....8 | |
| 51. | Do you know whether anyone else contacted this person or group for a problem related to your water source? | YES.....1<br>NO.....2<br>DON'T KNOW.....8 | |
| 52. | Is there a committee or group in the community that is responsible for maintenance of your principal water source? [Indicator 3.2] | YES.....1<br>NO.....2<br>DON'T KNOW.....8 | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| | **EXCRETA DISPOSAL** | | |
| 53. | What kind of toilet facility does this household use? (CHECK ONE) [Indicator 0.3, 1.4, 2.2] | FLUSH TO PIPED SEWER SYSTEM ..... 11<br>FLUSH TO SEPTIC SYSTEM ..... 12<br>POUR-FLUSH TO PIT..... 13<br>FLUSH OR POUR-FLUSH ELSEWHERE ..... 14<br>VIP/SIMPLE PIT LATRINE WITH FLOOR/SLAB .... 15<br>PIT LATRINE WITHOUT FLOOR/SLAB ..... 16<br>COMPOSTING/DRY LATRINE ..... 18<br>SERVICE OR BUCKET LATRINE (WHERE EXCRETA ARE MANUALLY REMOVED)..... 19<br>HANGING LATRINE..... 20<br>NO FACILITY, FIELD, BUSH, PLASTIC BAG..... 21 | ➔55<br><br>➔55<br><br>➔55<br><br>➔55<br>➔55<br>➔80 |
| 54. | If a pit or septic system, how frequently is it emptied? | AT LEAST ONCE A YEAR .....1<br>EVERY COUPLE OF YEARS.....2<br>NEVER .....3<br>DON'T KNOW.....8 | |
| 55. | Where is the toilet facility located?[Indicator 0.3, 1.4, 1.8, 2.2] | INSIDE OR ATTACHED TO DWELLING .....1<br>ELSEWHERE ON PREMISES .....2<br>OUTSIDE PREMISES .....3 | ➔57 |
| 56. | How far is the toilet facility from your living quarters? (IF FEASIBLE, OBSERVE) [Indicator 1.8] | LESS THAN 10 METERS.....1<br>10 TO 50 METERS.....2<br>OVER 50 METERS.....3<br>DON'T KNOW.....8 | |
| 57. | Do children under 5 use this toilet facility? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |
| 58. | Is the toilet facility used by day and night? | DAY AND NIGHT.....1<br>DAYTIME ONLY.....2<br>NIGHTTIME ONLY .....3<br>DON'T KNOW.....8 | |
| 59. | Does your toilet facility cause any problems for you or your neighbors? | YES.....1<br>NO .....2 | <br>➔61 |
| 60. | IF YES, what problems? | POOLING AROUND HOUSE..... A<br>POOLING AROUND NEIGHBOR'S HOUSE ..... B<br>COST OF EVACUATION ..... C<br>BAD SMELLS ..... D<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |
| 61. | How many households share this toilet facility? [Indicator 1.4, 2.2] | Number [ ][ ]<br><br>NOT SHARED .....00<br>MORE THAN 20 .....21<br>DON'T KNOW..... 98 | <br><br>➔66<br><br>➔66 |
| 62. | If shared, can anybody in the neighborhood use this toilet facility or is it shared between a few households only? [Indicator 1.4, 2.2] | ANYBODY IN THE NEIGHBORHOOD CAN USE ....1<br>SHARED BETWEEN FEW HOUSEHOLDS ONLY...2<br>DON'T KNOW.....8 | <br>➔66<br>➔66 |
| 63. | If shared, are there separate facilities for men and women? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |
| 64. | How much do you pay to use the toilet facility? | _____ CURRENCY<br>NOTHING .....000<br>DON'T KNOW.....998<br>1,000 OR MORE.....999 | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 65. | Do children have to pay? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |
| 66. | Is the facility cleaned?<br>[Indicator 2.8] | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | <br>➔68<br>➔68 |
| 67. | When was the facility cleaned last?<br>[Indicator 2.8] | TODAY .....1<br>YESTERDAY.....2<br>LESS THAN ONE WEEK AGO .....3<br>SEVERAL WEEKS AGO .....4<br>NEVER .....5<br>OTHER _____6<br>(SPECIFY)<br>DON'T REMEMBER.....8 | |
| 68. | May I see the toilet facility?<br>[Indicator 1.4, 1.8, 2.2]<br>Place the following observations at the end of the questionnaire. To avoid disrupting the flow of the interview do these observations after all questions have been asked. | YES.....1<br>NO .....2 | <br>➔80 |
| 69. | RETURN TO QUESTION 53 AND VERIFY THAT THE TYPE OF LATRINE INDICATED THERE IS CORRECT | YES, IS CORRECT .....1<br>NO, CORRECTION MADE.....2<br>DID NOT VERIFY .....8 | |
| 70. | TOILET FACILITY OBSERVATION: OBSERVE ACCESS TO THE FACILITY; ARE THERE OBSTACLES IN THE PATH, ARE THERE SIGNS OF REGULAR USE?<br>[Indicator 2.2] | DENSE VEGETATION .....A<br>WASTE OR DEBRIS IN ITS PATH .....B<br>MAJOR CREVICES OR POTHOLES.....C<br>MUD.....D<br>ENTRANCE IS OBSTRUCTED .....E<br>PATH IS CLEAR.....F<br>PATH WELL WORN AS SIGN OF REGULAR USE G<br>OTHER OBSERVATION _____X | |
| 71. | TOILET FACILITY OBSERVATION: OBSERVE THE SUPERSTRUCTURE OF WALLS, ROOF AND DOOR | HAS WALLS ..... A<br>HAS A ROOF..... B<br>HAS DOOR(S)..... C<br>SUPERSTRUCTURE DAMAGED..... D<br>NO SUPERSTRUCTURE..... E | |
| 72. | TOILET FACILITY OBSERVATION: IF DOOR(S) ARE PRESENT, CAN THEY BE CLOSED? | YES, ARE UNLOCKED .....1<br>YES, ARE LOCKED .....2<br>NO .....3<br>IMPOSSIBLE TO DETERMINE.....8 | |
| 73. | TOILET FACILITY OBSERVATION: IF ANY TYPE OF PIT LATRINE, ARE THE HOLES COVERED? | YES.....1<br>NO .....2<br>NOT A PIT LATRINE.....3 | |
| 74. | TOILET FACILITY OBSERVATION: ARE THERE SEPARATE FACILITIES FOR MEN AND WOMEN? | YES.....1<br>NO .....2<br>CANNOT IDENTIFY .....8 | |
| 75. | TOILET FACILITY OBSERVATION: DOES IT HAVE ANY OF THE FOLLOWING CHILD-FRIENDLY FEATURES? (MAY BE SEPARATE OR IN THE SAME COMPARTMENT AS AN ADULT FACILITY. OBSERVE AND CHECK ALL THAT APPLY.)<br>[Indicator 1.8] | PIT LATRINE WITH SMALLER HOLE ..... A<br>LOWER SEAT ..... B<br>POTTY AVAILABLE ..... C<br>NONE OF THE ABOVE..... D<br>CANNOT IDENTIFY ..... Y<br>NOT A PIT LATRINE.....Z | |
| 76. | TOILET FACILITY OBSERVATION: IS THERE FECAL MATTER PRESENT INSIDE THE FACILITY ON FLOOR OR WALLS (HUMAN OR ANIMAL)?<br>[Indicator 1.4] | YES.....1<br>NO .....2<br>CANNOT ASSESS .....8 | |
| 77. | TOILET FACILITY OBSERVATION: IS THERE FECAL MATTER CLEARLY VISIBLE IN THE PIT AT LESS THAN 30 CENTIMETERS DEPTH? [As a sign that the pit is full] | YES.....1<br>NO .....2<br>CANNOT ASSESS .....8 | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 78. | TOILET FACILITY OBSERVATION: IS THERE A PLACE FOR HANDWASHING IN THE TOILET FACILITY OR WITHIN 10 METERS? | YES.....1<br>NO .....2 | <br>➔80 |
| 79. | TOILET FACILITY OBSERVATION: ARE THE FOLLOWING ITEMS PRESENT AT THE PLACE FOR HANDWASHING?<br>(OBSERVE AND CHECK ALL THAT APPLY) | WATER FROM TAP OR CONTAINER ..... A<br>SOAP OR DETERGENT ..... B<br>ASH ..... C<br>TOWEL OR CLOTH ..... D<br>BASIN OR SINK ..... E<br>NONE OF THE ABOVE.....F | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| | **QUESTIONNAIRE FOR PRIMARY CARETAKER OF CHILDREN LESS THAN 36 (OR 60) MONTHS**<br>**HYGIENE BEHAVIORS** | | |
| 80. | Now, I would like to ask _____[NAME OF CARETAKER] about hygiene: | ID number from list: ____ ____ | |
| 81. | What is your education? | NO FORMAL SCHOOLING.....11<br>PRIMARY, INCOMPLETE.....12<br>PRIMARY, COMPLETED.....13<br>SECONDARY, INCOMPLETE .....14<br>SECONDARY, COMPLETED.....15<br>SECONDARY, PROFESSIONAL LEVEL.....16<br>COLLEGE/UNIVERSITY, INCOMPLETE.....17<br>COLLEGE/UNIVERSITY, COMPLETED.....18<br>DON'T KNOW_____98 | |
| 82. | Can you read, write, or both?<br>CHECK ALL THAT APPLY | CAN READ ..... A<br>CAN WRITE..... B | |
| | **Hygiene Behaviors and Knowledge** | | |
| 83. | Do you have soap? (ONLY ASK FOR THE AVAILABILITY OF SOAP HERE, NOT OF OTHER CLEANING AGENTS LIKE DETERGENTS, ASH, SAND)<br>[Indicator 1.10, 2.1] | FOUND IN HANDWASHING PLACE .....1<br>BROUGHT BY CARETAKER WITHIN 1 MIN .....2<br>NO .....3 | <br><br>➔86 |
| 84. | Have you used soap today or yesterday?<br>[Indicator 2.1] | YES.....1<br>NO .....2 | <br>➔86 |
| 85. | When you used soap today or yesterday, what did you use it for? IF FOR WASHING MY OR MY CHILDREN'S HANDS IS MENTIONED, PROBE WHAT WAS THE OCCASION, BUT DO NOT READ THE ANSWERS.<br><br>(DO NOT READ THE ANSWERS, ASK TO BE SPECIFIC, ENCOURAGE "WHAT ELSE" UNTIL NOTHING FURTHER IS MENTIONED AND CHECK ALL THAT APPLY))<br>[Indicator 2.1] | WASHING CLOTHS.....A<br>WASHING COOKING POTS OR DISHES .....B<br>WASHING MY BODY.....C<br>WASHING MY CHILDREN.....D<br>WASHING CHILD'S BOTTOMS .....E<br>WASHING MY CHILDREN'S HANDS.....F<br>WASHING HANDS AFTER DEFECATING..... G<br>WASHING HANDS AFTER CLEANING CHILD .....H<br>WASHING HANDS BEFORE FEEDING CHILD ..... I<br>WASHING HANDS BEFORE PREPARING FOOD .. J<br>WASHING HANDS BEFORE EATING .....K<br>OTHER _____ X<br>(SPECIFY)<br>DON'T REMEMBER.....Z | |
| 86. | What do you think can cause diarrhea in young children? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED)<br><br>NOTE: FOOD INCLUDES MILK, YOGURT, ETC. | BAD/DIRTY WATER.....A<br>BAD/DIRTY FOOD .....B<br>POOR HYGIENE.....C<br>FECES/DEFECATING IN THE OPEN.....D<br>DIRTY HANDS .....E<br>GERMS.....F<br>FLIES..... G<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |
| 87. | Do you think diarrhea can be prevented?<br>[Indicator 2.8] | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | <br>➔90<br>➔90 |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 88. | If yes, how do you think diarrhea can be prevented? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED)<br>[Indicator 2.8] | WASH HANDS .....A<br>USE SOAP .....B<br>USE TOILET FACILITY TO DEFECATE.....C<br>DISPOSE CHILDREN'S FECES IN TOILET FACILITY .....D<br>BURY FECES.....E<br>DRINK CLEAN WATER.....F<br>STORE WATER SAFELY..... G<br>TREAT WATER (BOIL, FILTER, CHLORINATE).....H<br>PREPARE FOOD HYGIENICALLY/PROTECT..... I<br>DISPOSE OF GARBAGE IN A PIT ..... J<br>BREAST FEEDING IN GENERAL.....K<br>BREAST FEEDING ONLY UNTIL 6 MONTHS ..... L<br>NO OTHER FOOD/DRINK BEFORE 6 MONTHS.... M<br>MEASLES VACCINATION .....N<br>VITAMIN A..... O<br>GOOD NUTRITION .....P<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |
| 89. | What can the community as a whole, not just you, do to prevent diarrhea? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED)<br>[Indicator 2.12] | PROVIDE CLEAN WATER.....A<br>HELP TO CONSTRUCT LATRINES .....B<br>MAKE MATERIALS FOR LATRINE CONSTRUCTION AVAILABLE AT LOW COST.....C<br>MAKE SOAP AVAILABLE AT LOW COST .....D<br>MAKE WATER DISINFECTANT AVAILABLE AT LOW COST.....E<br>CLEAN VILLAGE CAMPAIGNS .....F<br>TRAIN PROMOTERS/ANIMATORS ..... G<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |
| 90. | When is it important to wash your hands? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED)<br>[Indicator 2.12] | BEFORE PREPARING FOOD OR COOKING.....A<br>BEFORE EATING.....B<br>BEFORE FEEDING CHILDREN .....C<br>AFTER CLEANING/CHANGING BABY .....D<br>AFTER DEFECATING.....E<br>AFTER EATING.....F<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |
| 91. | Do you believe that washing hands just with water but without soap is as good as washing hands with water and soap?<br>[Indicator 2.11] | WATER WITHOUT SOAP IS AS GOOD.....1<br>WATER WITH SOAP IS BETTER.....2<br>DON'T KNOW.....8 | |
| 92. | Why is it important to wash hands with soap? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED)<br>[Indicator 2.11] | PREVENT DISEASE .....A<br>PREVENT DIARRHEA .....B<br>CLEAN HANDS/REMOVE DIRT .....C<br>BECAUSE IS GOOD HYGIENE.....D<br>PREVENT DIRT GETTING INTO MOUTH .....E<br>PREVENT DIRT GETTING INTO FOOD .....F<br>REMOVE GERMS..... G<br>HEARD FROM PARENTS/OTHER FAMILY.....H<br>HEARD FROM OTHER PEOPLE..... I<br>HEARD FROM RADIO/TV..... J<br>OTHER PEOPLE/EVERYBODY DOES SO.....K<br>SMELLS GOOD ..... L<br>LOOKS/FEELS CLEAN ..... M<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 93. | What can be done to make water safer for drinking?<br>[Indicator 2.10] | BOIL.....1<br>ADD BLEACH/CHLORINE.....2<br>SIEVE IT THROUGH CLOTH.....3<br>WATER FILTER.....4<br>SOLAR DISINFECTION.....5<br>OTHER _____6<br>(SPECIFY)<br>DON'T KNOW.....8 | |
| | **Community Participation** | | |
| 94. | Do you know whether groups in your community exist that deal with the following issues?<br>CHECK ALL THAT ARE ACKNOWLEDGED.<br>[Indicator 3.3] | WATER SUPPLY.....A<br>SANITATION/HYGIENE.....B<br>CHILD HEALTH.....C<br>MATERNAL HEALTH.....D<br>NUTRITION.....E<br>AGRICULTURE.....F<br>EDUCATION.....G<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | <br><br><br><br><br><br><br><br><br>➔98 |
| 95. | Are you a member of any of these groups and do you participate in their meetings?<br>CHECK ALL THAT ARE ACKNOWLEDGED<br>[Indicator 3.3] | IS A MEMBER.....A<br>PARTICIPATES IN MEETINGS AND OTHER EVENTS.....B<br>NO MEMBERSHIP OR PARTICIPATION.....C | <br><br>➔98 |
| 96. | If yes, in which groups?<br>CHECK ALL MENTIONED<br>[Indicator 3.3] | WATER SUPPLY.....A<br>SANITATION/HYGIENE.....B<br>CHILD HEALTH.....C<br>MATERNAL HEALTH.....D<br>NUTRITION.....E<br>AGRICULTURE.....F<br>EDUCATION.....G<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | <br><br>➔98<br>➔98<br>➔98<br>➔98<br>➔98<br>➔98<br><br>➔98 |
| 97. | If it is a group dealing with water supply, sanitation, or hygiene, what are the issues dealt with?<br>CHECK ALL MENTIONED<br>[Indicator 3.4] | CONSTRUCT WATER SUPPLY.....A<br>CONSTRUCT PUBLIC LATRINES.....B<br>CONSTRUCT PRIVATE LATRINES.....C<br>FUNDRAISING.....D<br>USER FEES.....E<br>MAINTENANCE OR REPAIRS.....F<br>SPARE PARTS.....G<br>CLEANING.....H<br>WATER SHED/SOURCE PROTECTION.....I<br>WATER RIGHTS/ACCESS.....J<br>WATER DISTRIBUTION.....K<br>IRRIGATION SYSTEM.....L<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| | **Channels of Communication** | | |
| 98. | What is your main source of information about personal and household hygiene?<br><br>(ONE ANSWER ONLY) | RADIO OR TV ..... 11<br>NEWSPAPER OR MAGAZINE ..... 12<br>HEALTH OUTREACH WORKER ..... 13<br>HEALTH CLINIC STAFF ..... 14<br>SOCIAL WORKER ..... 15<br>SCHOOL..... 16<br>AT WORK ..... 17<br>GRANDMOTHER ..... 18<br>OTHER FRIENDS OR FAMILY ..... 19<br>MOSQUE/CHURCH ..... 20<br>KORAN/BIBLE..... 21<br>OTHER BOOKS, POSTER OR BROCHURE ..... 22<br>WOMAN'S/YOUTH OR SIMILAR GROUP..... 23<br>COMMUNITY COMMITTEE (HEALTH, DEVELOPMENT, AGRICULTURE, ETC.) ..... 24<br>COMMUNITY FESTIVAL OR OTHER EVENT ..... 25<br>NOBODY ..... 26<br>OTHER _____ 96<br>(SPECIFY)<br>DON'T KNOW.....98 | |
| 99. | What is your main source of information about child health in general?<br><br>(ONE ANSWER ONLY) | RADIO OR TV ..... 11<br>NEWSPAPER OR MAGAZINE ..... 12<br>HEALTH OUTREACH WORKER ..... 13<br>HEALTH CLINIC STAFF ..... 14<br>SOCIAL WORKER ..... 15<br>SCHOOL..... 16<br>AT WORK ..... 17<br>GRANDMOTHER ..... 18<br>OTHER FRIENDS OR FAMILY ..... 19<br>MOSQUE/CHURCH ..... 20<br>KORAN/BIBLE..... 21<br>OTHER BOOKS, POSTER OR BROCHURE ..... 22<br>WOMAN'S/YOUTH OR SIMILAR GROUP..... 23<br>COMMUNITY COMMITTEE (HEALTH, DEVELOPMENT, AGRICULTURE, ETC.) ..... 24<br>COMMUNITY FESTIVAL OR OTHER EVENT ..... 25<br>NOBODY ..... 26<br>OTHER _____ 96<br>(SPECIFY)<br>DON'T KNOW.....98 | |
| 100. | Have you been visited by or spoken with a community volunteer (promoter, animator) during the past month about water, sanitation, or hygiene?<br>[Indicator 2.3, 2.4, 2.5, 2.6] | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | <br>➔106<br>➔106 |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 101. | If yes, which messages did you hear?<br>[Indicator 2.3, 2.4, 2.5, 2.6] | WASH HANDS .....A<br>USE SOAP .....B<br>USE TOILET FACILITY TO DEFECATE.....C<br>DISPOSE CHILDREN'S FECES IN TOILET FACILITY .....D<br>BURY FECES.....E<br>DRINK CLEAN WATER.....F<br>STORE WATER SAFELY..... G<br>TREAT WATER (BOIL, FILTER, CHLORINATE).....H<br>PREPARE FOOD HYGIENICALLY/ PROTECT..... I<br>DISPOSE OF GARBAGE IN A PIT ..... J<br>BREAST FEEDING IN GENERAL.....K<br>BREAST FEEDING ONLY UNTIL 6 MONTHS ..... L<br>NO OTHER FOOD/DRINK BEFORE 6 MONTHS.... M<br>MEASLES VACCINATION .....N<br>VITAMIN A..... O<br>GOOD NUTRITION .....P<br>INCREASED DRINKING DURING DIARRHEA ..... Q<br>FEEDING DURING DIARRHEA.....R<br>ORAL REHYDRATION SOLUTION .....S<br>DIARRHEA IN GENERAL .....T<br>HEALTH IN GENERAL .....U<br>BUILD WATER SUPPLY.....V<br>BUILD LATRINES.....W<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |
| 102. | Do you feel that the messages you received from community volunteers were clear, understandable, and useful to you?<br>(CHECK ALL MENTIONED)<br>[Indicator 2.3, 2.4, 2.5, 2.6] | WERE CLEAR ..... A<br>WERE UNDERSTANDABLE..... B<br>WERE USEFUL..... C<br>NONE OF THE ABOVE..... D<br>DON'T KNOW.....Z | |
| 103. | Did you try out any of the recommendations in the message?[Indicator 2.3, 2.4, 2.5, 2.6] | YES.....1<br>NO .....2 | |
| 104. | Which recommendation did you try out? (ONLY CHOOSE ONE)[Indicator 2.3, 2.4, 2.5, 2.6] | WASH HANDS WITH SOAP ..... 11<br>DISPOSE OF CHILDREN'S FECES ..... 12<br>TREAT DRINKING WATER ..... 13<br>STORE DRINKING WATER SAFELY..... 14<br>PROTECT FOOD ..... 15<br>DISPOSE OF GARBAGE PROPERLY ..... 16<br>BREASTFEED..... 17<br>GIVE MORE FLUID TO CHILD WITH DIARRHEA . 18<br>GIVE ORS ..... 19<br>OTHER _____ 96<br>(SPECIFY)<br>DON'T KNOW.....98 | |
| 105. | For how long did you to use it?[Indicator 2.3, 2.4, 2.5, 2.6] | ONCE .....1<br>EVERY DAY .....2<br>NOT EVERY DAY, BUT NOW AND THEN .....3<br>WHEN REQUIRED.....4<br>DON'T USE IT .....5 | |
| 106. | Have you been visited by or spoken with an agent or worker from a government or nongovernmental institution (health, social services, agriculture, education, etc.) during the past month about water, sanitation, or hygiene?<br>[Indicator 2.3, 2.4, 2.5, 2.6] | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | <br>➔112<br>➔112 |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 107. | If yes, which messages did you hear?<br>[Indicator 2.3, 2.4, 2.5, 2.6] | WASH HANDS .....A<br>USE SOAP .....B<br>USE TOILET FACILITY TO DEFECATE.....C<br>DISPOSE CHILDREN'S FECES IN TOILET FACILITY .....D<br>BURY FECES.....E<br>DRINK CLEAN WATER.....F<br>STORE WATER SAFELY..... G<br>TREAT WATER (BOIL, FILTER, CHLORINATE).....H<br>PREPARE FOOD HYGIENICALLY/ PROTECT..... I<br>DISPOSE OF GARBAGE IN A PIT ..... J<br>BREAST FEEDING IN GENERAL.....K<br>BREAST FEEDING ONLY UNTIL 6 MONTHS ..... L<br>NO OTHER FOOD/DRINK BEFORE 6 MONTHS.... M<br>MEASLES VACCINATION .....N<br>VITAMIN A..... O<br>GOOD NUTRITION .....P<br>INCREASED DRINKING DURING DIARRHEA ..... Q<br>FEEDING DURING DIARRHEA.....R<br>ORAL REHYDRATION SOLUTION .....S<br>DIARRHEA IN GENERAL .....T<br>HEALTH IN GENERAL .....U<br>BUILD WATER SUPPLY.....V<br>BUILD LATRINES.....W<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |
| 108. | Do you feel that the messages you received from agents were clear, understandable, and useful to you?<br>(CHECK ALL MENTIONED)<br>[Indicator 2.3, 2.4, 2.5, 2.6] | WERE CLEAR ..... A<br>WERE UNDERSTANDABLE..... B<br>WERE USEFUL..... C<br>NONE OF THE ABOVE..... D<br>DON'T KNOW.....Z | |
| 109. | Did you try out any of the recommendations in the message?[Indicator 2.3, 2.4, 2.5, 2.6] | YES.....1<br>NO .....2 | |
| 110. | Which recommendation did you try out? (ONLY CHOOSE ONE)[Indicator 2.3, 2.4, 2.5, 2.6] | WASH HANDS WITH SOAP ..... 11<br>DISPOSE OF CHILDREN'S FECES ..... 12<br>TREAT DRINKING WATER ..... 13<br>STORE DRINKING WATER SAFELY..... 14<br>PROTECT FOOD ..... 15<br>DISPOSE OF GARBAGE PROPERLY ..... 16<br>BREASTFEED..... 17<br>GIVE MORE FLUID TO CHILD WITH DIARRHEA . 18<br>GIVE ORS ..... 19<br>OTHER _____ 96<br>(SPECIFY)<br>DON'T KNOW.....98 | |
| 111. | For how long did you to use it?[Indicator 2.3, 2.4, 2.5, 2.6] | ONCE .....1<br>EVERY DAY .....2<br>NOT EVERY DAY, BUT NOW AND THEN .....3<br>WHEN REQUIRED.....4<br>DON'T USE IT .....5 | |
| 112. | During the past month, were there community events where you heard about health messages? Can you give examples?<br>CHECK ALL MENTIONED.<br>[Indicator 2.3, 2.5, 2.6, 2.16, 3.4] | FESTIVAL..... A<br>THEATER..... B<br>MARKET DAY ACTIVITIES..... C<br>CLEAN VILLAGE CAMPAIGN ..... D<br>NO ..... E<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | <br><br><br><br>➔119<br><br>➔119 |
| 113. | If yes, did you participate in these community events?<br>[Indicator 2.3, 2.4, 2.5, 2.6, 2.16, 3.4] | YES.....1<br>NO .....2<br>DON'T REMEMBER.....8 | <br>➔119<br>➔119 |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 114. | If yes, which messages did you hear during these community events? [Indicator 2.3, 2.4, 2.5, 2.6, 2.16] | WASH HANDS ....A<br>USE SOAP ....B<br>USE TOILET FACILITY TO DEFECATE....C<br>DISPOSE CHILDREN'S FECES IN TOILET FACILITY ....D<br>BURY FECES....E<br>DRINK CLEAN WATER....F<br>STORE WATER SAFELY.... G<br>TREAT WATER (BOIL, FILTER, CHLORINATE)....H<br>PREPARE FOOD HYGIENICALLY/ PROTECT.... I<br>DISPOSE OF GARBAGE IN A PIT .... J<br>BREAST FEEDING IN GENERAL....K<br>BREAST FEEDING ONLY UNTIL 6 MONTHS .... L<br>NO OTHER FOOD/DRINK BEFORE 6 MONTHS.... M<br>MEASLES VACCINATION ....N<br>VITAMIN A.... O<br>GOOD NUTRITION ....P<br>INCREASED DRINKING DURING DIARRHEA .... Q<br>FEEDING DURING DIARRHEA....R<br>ORAL REHYDRATION SOLUTION ....S<br>DIARRHEA IN GENERAL ....T<br>HEALTH IN GENERAL ....U<br>BUILD WATER SUPPLY....V<br>BUILD LATRINES....W<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW....Z | |
| 115. | Do you feel that the messages during these community events were clear, understandable, and useful to you?<br>(CHECK ALL MENTIONED)<br>[Indicator 2.3, 2.4, 2.5, 2.6 | WERE CLEAR .... A<br>WERE UNDERSTANDABLE.... B<br>WERE USEFUL.... C<br>NONE OF THE ABOVE.... D<br>DON'T KNOW....Z | |
| 116. | Did you try out any of the recommendations in the message?[Indicator 2.3, 2.4, 2.5, 2.6] | YES....1<br>NO ....2 | |
| 117. | Which recommendation did you try out? (ONLY CHOOSE ONE)[Indicator 2.3, 2.4, 2.5, 2.6] | WASH HANDS WITH SOAP .... 11<br>DISPOSE OF CHILDREN'S FECES .... 12<br>TREAT DRINKING WATER .... 13<br>STORE DRINKING WATER SAFELY.... 14<br>PROTECT FOOD .... 15<br>DISPOSE OF GARBAGE PROPERLY .... 16<br>BREASTFEED.... 17<br>GIVE MORE FLUID TO CHILD WITH DIARRHEA . 18<br>GIVE ORS .... 19<br>OTHER _____ 96<br>(SPECIFY)<br>DON'T KNOW....98 | |
| 118. | For how long did you to use it?[Indicator 2.3, 2.4, 2.5, 2.6] | ONCE ....1<br>EVERY DAY ....2<br>NOT EVERY DAY, BUT NOW AND THEN ....3<br>WHEN REQUIRED....4<br>DON'T USE IT ....5 | |
| 119. | Have you heard any messages about health during the past month on the radio or TV?<br>(CHECK ALL MENTIONED)<br>[Indicator 2.3, 2.4, 2.5, 2.6] | RADIO .... A<br>TV .... B<br>NO .... C<br>DON'T KNOW....Z | <br><br>➔125<br>➔125 |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 120. | If yes, which messages on radio/TV did you hear?<br>[Indicator 2.3, 2.4, 2.5, 2.6] | WASH HANDS .....A<br>USE SOAP .....B<br>USE TOILET FACILITY TO DEFECATE.....C<br>DISPOSE CHILDREN'S FECES IN TOILET FACILITY .....D<br>BURY FECES.....E<br>DRINK CLEAN WATER.....F<br>STORE WATER SAFELY..... G<br>TREAT WATER (BOIL, FILTER, CHLORINATE).....H<br>PREPARE FOOD HYGIENICALLY/ PROTECT..... I<br>DISPOSE OF GARBAGE IN A PIT ..... J<br>BREAST FEEDING IN GENERAL.....K<br>BREAST FEEDING ONLY UNTIL 6 MONTHS ..... L<br>NO OTHER FOOD/DRINK BEFORE 6 MONTHS.... M<br>MEASLES VACCINATION .....N<br>VITAMIN A..... O<br>GOOD NUTRITION .....P<br>INCREASED DRINKING DURING DIARRHEA ..... Q<br>FEEDING DURING DIARRHEA.....R<br>ORAL REHYDRATION SOLUTION .....S<br>DIARRHEA IN GENERAL .....T<br>HEALTH IN GENERAL .....U<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |
| 121. | Do you feel that the messages on radio/TV were clear, understandable, and useful to you?<br>(CHECK ALL MENTIONED)<br>[Indicator 2.3, 2.4, 2.5, 2.6] | WERE CLEAR..... A<br>WERE UNDERSTANDABLE..... B<br>WERE USEFUL..... C<br>NONE OF THE ABOVE..... D<br>DON'T KNOW.....Z | |
| 122. | Did you try out any of the recommendations in the message?[Indicator 2.3, 2.4, 2.5, 2.6] | YES.....1<br>NO .....2 | |
| 123. | Which recommendation did you try out? (ONLY CHOOSE ONE)[Indicator 2.3, 2.4, 2.5, 2.6] | WASH HANDS WITH SOAP ..... 11<br>DISPOSE OF CHILDREN'S FECES ..... 12<br>TREAT DRINKING WATER ..... 13<br>STORE DRINKING WATER SAFELY..... 14<br>PROTECT FOOD ..... 15<br>DISPOSE OF GARBAGE PROPERLY ..... 16<br>BREASTFEED..... 17<br>GIVE MORE FLUID TO CHILD WITH DIARRHEA . 18<br>GIVE ORS ..... 19<br>OTHER _____ 96<br>(SPECIFY)<br>DON'T KNOW.....98 | |
| 124. | For how long did you to use it?[Indicator 2.3, 2.4, 2.5, 2.6] | ONCE .....1<br>EVERY DAY .....2<br>NOT EVERY DAY, BUT NOW AND THEN .....3<br>WHEN REQUIRED.....4<br>DON'T USE IT .....5 | |
| | **Handwashing Place** | | |
| 125. | Where do you usually wash your hands?<br>(CHECK ALL THAT APPLY)<br>[Indicator 1.5] | IN OR NEAR TOILET FACILITY .....1<br>IN OR NEAR KITCHEN.....2<br>ELSEWHERE ON PREMISES .....3<br>OUTSIDE PREMISES .....4<br>NO SPECIFIC PLACE.....5 | |
| 126. | Can you show me everything you use to wash your hands?<br>[Indicator 1.5] | YES.....1<br>NO .....2 | ➔136 |
| 127. | OBSERVATION ONLY: IS THERE WATER? INTERVIEWER: TURN ON TAP AND/OR A CHECK CONTAINER AND NOTE IF WATER IS PRESENT<br>[Indicator 1.5] | YES, FOUND IN HANDWASHING PLACE.....1<br>BROUGHT BY CARETAKER WITHIN 1 MIN .....2<br>NO .....3 | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 128. | OBSERVATION ONLY: IS THERE SOAP OR DETERGENT OR ASH? [Indicator 1.5] | FOUND IN HANDWASHING PLACE .....1<br>BROUGHT BY CARETAKER WITHIN 1 MIN .....2<br>NO .....3 | <br><br>➔131 |
| 129. | OBSERVATION ONLY: IF THERE IS SOAP, DETERGENT, OR ASH, MARK ALL THAT ARE PRESENT? | SOAP..... A<br>DETERGENT..... B<br>ASH ..... C | <br>➔131<br>➔131 |
| 130. | If it is soap, which brand?<br><br>[This is a question for programs with a public/private partnership with soap manufacturers for handwashing or where it is planned.] | TRADITIONAL SOAP ..... 11<br>LAUNDRY SOAP..... 12<br>BRAND A..... 13<br>BRAND B..... 14<br>BRAND C..... 15<br>BRAND D..... 16<br>OTHER _____ 96<br>(SPECIFY)<br>DON'T KNOW.....98 | |
| 131. | OBSERVATION ONLY: IS THERE A HAND-WASHING DEVICE SUCH AS A TAP, BASIN, BUCKET, SINK, OR TIPPY TAP? [Indicator 1.5] | YES, FOUND IN HANDWASHING PLACE .....1<br>BROUGHT BY CARETAKER WITHIN 1 MIN .....2<br>NO .....3 | |
| 132. | OBSERVATION ONLY: DOES THE WASHING DEVICE ALLOW UNASSISTED WASHING AND RINSING OF BOTH HANDS, FOR EXAMPLE, A TAP, BASIN, BUCKET, SINK, OR TIPPY TAP? [Indicator 1.5] | YES.....1<br>NO .....2 | |
| 133. | OBSERVATION ONLY: WHAT METHOD IS USED TO DISPENSE WATER? | TAP OR SPIGOT..... A<br>TIPPY TAP OR SIMILAR DEVICE ..... B<br>PIPE WITHOUT TAP..... C<br>POUR WATER INTO A BASIN OR BUCKET ..... D<br>POUR WATER FROM CONTAINER ONTO HANDS ASSISTED BY ANOTHER PERSON ..... E<br>POUR WATER FROM CONTAINER ONTO HANDS WITHOUT ASSISTANCE .....F<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |
| 134. | OBSERVATION ONLY: IS THERE A TOWEL OR CLOTH TO DRY HANDS? [Indicator 1.5] | YES, FOUND IN HANDWASHING PLACE .....1<br>BROUGHT BY CARETAKER WITHIN 1 MIN .....2<br>NO .....3 | <br><br>➔136 |
| 135. | OBSERVATION ONLY: DOES THE TOWEL OR CLOTH APPEAR TO BE CLEAN?[Indicator 1.5] | YES.....1<br>NO .....2 | |

**Handwashing Practice**

[Usually the caretaker is asked to demonstrate. In addition, or where culturally more appropriate, the caretaker can be asked to show how a child under 36 (or 60) months washes his or her hands.]

| | | | |
|---|---|---|---|
| 136. | Can you show me how you wash your hands? INTERVIEWER: OBSERVE THE HANDWASHING AND ANSWER THE FOLLOWING QUESTIONS [Indicator 0.2] | YES.....1<br>NO .....2 | <br>➔143 |
| 137. | DOES THE PERSON USE WATER? [Indicator 0.2] | YES.....1<br>NO .....2 | |
| 138. | DOES THE PERSON USE SOAP? [Indicator 0.2] | YES.....1<br>NO .....2 | |
| 139. | ARE BOTH HANDS WASHED? [Indicator 0.2] | YES.....1<br>NO .....2 | |
| 140. | DOES HE OR SHE RUB HANDS TOGETHER THREE TIMES OR MORE? [Indicator 0.2] | YES.....1<br>NO .....2 | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 141. | HOW DOES THE PERSON DRY HIS OR HER HANDS? [Indicator 0.2] | WITH TOWEL OR CLOTH ....1<br>IN THE AIR ....2<br>GARMENT ....3<br>OTHER _____ 6<br>(SPECIFY) | |
| 142. | DOES THE TOWEL OR CLOTH THE PERSON USES APPEAR TO BE CLEAN? [Indicator 0.2] | YES ....1<br>NO ....2 | |
| | **Food Preparation, Storage, and Handling Practice** | | |
| 143. | The last time you prepared food, what steps did you go through? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED) [Indicator 0.5] | WASH HANDS BEFORE PREPARATION ....A<br>WASH UTENSILS AND CONTAINERS BEFORE PREPARATION ....C<br>WASH FOOD THOROUGHLY ....D<br>COOK FOOD THOROUGHLY ....E<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ....Z | |
| 144. | Is there any food left from the last time you cooked? [Indicator 0.5] | YES ....1<br>NO ....2 | ➔152 |
| 145. | How long ago did you prepare the food? (CHECK ONE) [Indicator 0.5] | LESS THAN AN HOUR AGO ....1<br>SEVERAL HOURS AGO ....2<br>YESTERDAY ....3<br>SEVERAL DAYS AGO ....4<br>DON'T KNOW ....8 | |
| 146. | Can you show me where you keep this food? [Indicator 0.5] | YES ....1<br>NO ....2 | ➔152 |
| 147. | OBSERVE: ARE THE CONTAINERS COVERED? [Indicator 0.5] | ALL ARE ....1<br>NONE ARE ....2<br>SOME ARE ....3 | |
| 148. | OBSERVE: WHERE ARE THE FOOD CONTAINERS PLACED? [Indicator 0.5] | ON THE FLOOR ....1<br>ELEVATED ABOVE THE FLOOR ....2 | |
| 149. | OBSERVE: WHAT IS THE ACCESS TO THE FOOD CONTAINERS? [Indicator 0.5] | KEPT IN REFRIGERATOR ....1<br>KEPT BEHIND SOLID DOORS ....2<br>KEPT BEHIND SCREENED DOORS ....3<br>CONTAINERS ARE IN THE OPEN ....4 | |
| 150. | Who takes food from these containers? (CHECK ALL THAT APPLY) [Indicator 0.5] | ADULTS ....A<br>SCHOOL AGE CHILDREN ....B<br>CHILDREN UNDER 5 ....C | |
| 151. | How do you <u>usually</u> remove food from the containers? [Indicator 0.5] | UTENSILS DEDICATED FOR REMOVAL ....1<br>SAME UTENSILS USED FOR EATING ....2<br>FINGERS ....3<br>POURING FROM THE CONTAINER ....4<br>OTHER _____ 6<br>(SPECIFY)<br>DON'T KNOW ....8 | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 152. | Can you tell me how you keep food safe to eat? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED) | WASH HANDS BEFORE PREPARATION.....A<br>WASH HANDS BEFORE EATING.....B<br>WASH UTENSILS AND CONTAINERS BEFORE PREPARATION.....C<br>WASH FOOD THOROUGHLY.....D<br>COOK FOOD THOROUGHLY.....E<br>CONSUME ALL FOOD AT ONCE.....F<br>AVOID KEEPING LEFTOVERS..... G<br>REHEAT LEFTOVERS WELL BEFORE EATING.....H<br>COVER FOOD CONTAINERS.....I<br>PREVENT FLIES FROM TOUCHING THE FOOD ... J<br>KEEP FOOD IN COLD PLACE OR REFRIGERATOR .....K<br>KEEP FOOD BEHIND DOORS OR SCREEN ..... L<br>USE CLEAN UTENSILS FOR RETRIEVING FOOD M<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |
| 153. | Who is the main food preparer in this household? | THE RESPONDENT.....1<br>OTHER ADULT FEMALE.....2<br>GRANDMOTHER.....3<br>SCHOOL AGE GIRL.....4<br>MALE HOUSEHOLD MEMBER.....5<br>OTHER _____6<br>(SPECIFY)<br>DON'T KNOW.....8 | |
| | **Use of Toilet facility** | | |
| 154. | The last time you had to defecate while at home, where did you go? | USED THE TOILET FACILITY.....1<br>GO SOMEWHERE ELSE.....2<br>DON'T REMEMBER.....8 | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|

**CARETAKER QUESTIONNAIRE ABOUT CHILD LESS THAN 36 (OR 60) MONTHS**
**FECES DISPOSAL AND DIARRHEA**
**(*Additional copies of this questionnaire have to be prepared or columns added to the questionnaire for each additional child under five of the same caretaker; print additional copies or add columns and complete the information above that identifies the household*)**

| | | | |
|---|---|---|---|
| 155. | Now, I would like to ask you about _____[*name of child*] | ID number from list: ____ ____ | |
| 156. | When is it important for a young child (3 years or older) to wash his/her hands or have his/her mother wash them for him/her? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED) | BEFORE EATING.....A<br>AFTER DEFECATING.....B<br>AFTER EATING.....C<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |
| 157. | The last time [NAME OF CHILD] passed stool, where did he/she defecate?<br>[Indicator 0.3] | USED SANITATION FACILITY ..... 11<br>USED POTTY..... 12<br>USED WASHABLE DIAPERS..... 13<br>USED DISPOSABLE DIAPERS ..... 14<br>WENT IN HOUSE/YARD..... 15<br>WENT OUTSIDE THE PREMISES ..... 16<br>WENT IN HIS/HER CLOTHS ..... 17<br>OTHER _____ 96<br>(SPECIFY)<br>DON'T KNOW.....98 | ➔160 |
| 158. | The last time [NAME OF CHILD] passed stools, where were the feces disposed of? (IF "WASHED OR RINSED AWAY", PROBE WHERE THE WASTE WATER WAS DISPOSED OF. IF "DISPOSED", PROBE WHERE IT WAS DISPOSED OF SPECIFICALLY.).<br>[Indicator 0.3] | DROPPED INTO TOILET FACILITY..... 11<br>RINSED/WASHED AWAY<br>WATER DISCARDED INTO TOILET FACILITY21<br>WATER DISCARDED INTO SINK OR TUB CONNECTED TO DRAINAGE SYSTEM..... 22<br>WATER DISCARDED OUTSIDE..... 23<br>DISPOSED<br>INTO SOLID WASTE/TRASH..... 31<br>SOME WHERE IN YARD..... 32<br>OUTSIDE PREMISES..... 33<br>BURIED ..... 41<br>DID NOTHING/LEFT IT THERE..... 51<br>OTHER _____ 96<br>(SPECIFY)<br>DON'T KNOW.....98 | |
| | **Diarrhea** | | |
| 159. | Has [NAME OF CHILD] had diarrhea during the past 24 hours?<br>DIARRHEA: THREE OR MORE LIQUID STOOLS IN 24 HOURS<br>[Indicator 0.1] | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | ➔161 |
| 160. | Has the child had diarrhea in the last 2 weeks?<br>DIARRHEA: THREE OR MORE LIQUID STOOLS IN 24 HOURS<br>[Indicator 0.1] | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | <br>➔172<br>➔172 |
| 161. | Did the stool contain:<br><br>CHECK ALL MENTIONED | BLOOD ..... A<br>MUCUS..... B<br>DON'T KNOW.....Z | |
| 162. | Now I would like to know how much [NAME OF CHILD] was offered to drink during the diarrhea. Was he/she offered less than usual to drink, about the same amount, or more than usual to drink?<br><br>IF LESS, PROBE: Was he/she offered much less than usual to drink or somewhat less? | MUCH LESS..... 1<br>SOMEWHAT LESS ..... 2<br>ABOUT THE SAME..... 3<br>MORE..... 4<br>NOTHING TO DRINK..... 5<br>DON'T KNOW.....8 | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 163. | Now I would like to know how much [NAME OF CHILD] was offered to eat during the diarrhea. Was he/she offered less than usual to eat, about the same amount, or more than usual to eat?<br><br>IF LESS, PROBE: Was he/she offered much less than usual to eat or somewhat less? | MUCH LESS ..... 1<br>SOMEWHAT LESS ..... 2<br>ABOUT THE SAME ..... 3<br>MORE ..... 4<br>NOTHING TO EAT ..... 5<br>DON'T KNOW ..... 8 | |
| 164. | Is [NAME OF CHILD] breast-fed? | YES ..... 1<br>NO ..... 2<br>DON'T KNOW ..... 8 | <br>➔166<br>➔166 |
| 165. | Now I would like to know how much breastfeeding [NAME OF CHILD] was offered during the diarrhea. Was he/she offered the breast less than usual, about the same, or more breast milk than usual?<br><br>IF LESS, PROBE: Was he/she offered the breast much less than usual or somewhat less? | MUCH LESS ..... 1<br>SOMEWHAT LESS ..... 2<br>ABOUT THE SAME ..... 3<br>MORE ..... 4<br>NO BREAST MILK ..... 5<br>DON'T KNOW ..... 8 | |
| 166. | Was he/she given any of the following to drink during the diarrhea? | A FLUID MADE FROM A SPECIAL PACKET CALLED [*LOCAL NAME*] ..... A<br>A GOVERNMENT OR NGO-RECOMMENDED HOMEMADE FLUID ..... B<br>NONE OF THESE FLUIDS ..... C<br>DON'T KNOW ..... Z | |
| 167. | Was anything (else) given to treat the diarrhea? | PILL OR SYRUP ..... A<br>INJECTION ..... B<br>INTRAVENOUS FLUID (I.V.) ..... C<br>HOME OR TRADITIONAL MEDICINE ..... D<br>NOTHING ELSE WAS GIVEN ..... E<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ..... Z | |
| 168. | Did you seek medical advice or treatment for the diarrhea? | YES ..... 1<br>NO ..... 2<br>DON'T KNOW ..... 8 | <br>➔172<br>➔172 |
| 169. | Where did you seek advice or treatment?<br><br>IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE.<br><br>_____<br>(NAME OF PLACE)<br><br>RECORD ALL ANSWERS.<br>ASK THE QUESTION AND WHEN INTERVIEWEE ANSWERS, ASK IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE. | PUBLIC SECTOR<br>GOV. HOSPITAL ..... A<br>GOV. HEALTH CENTER ..... B<br>GOV. HEALTH POST ..... C<br>GOV. MOBILE CLINIC ..... D<br>GOV. FIELD WORKER ..... E<br>OTHER GOV. _____ F<br>(SPECIFY)<br><br>PRIVATE MEDICAL SECTOR<br>PVT. HOSPITAL ..... G<br>PVT. HEALTH CENTER/CLINIC ..... H<br>PVT. PHARMACY ..... I<br>PVT. DOCTOR ..... J<br>PVT. MOBILE CLINIC ..... K<br>PVT. FIELD WORKER ..... L<br>OTHER PVT. MEDICAL _____ M<br>(SPECIFY)<br><br>OTHER SOURCE<br>MARKET/SHOP ..... N<br>DRUG PEDDLER/HAWKER ..... O<br>TRADITIONAL PRACTITIONER ..... P<br>FAMILY MEMBER ..... Q<br>OTHER _____ R<br>(SPECIFY)<br><br>DON'T KNOW ..... Z | |
| 170. | How much did you pay in total for all treatments you sought for this diarrhea? | _____ CURRENCY<br>NOTHING ..... 0000<br>DON'T KNOW ..... 9998 | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 171. | If not, why did you not seek treatment? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED) | NO MONEY ....A<br>TOO FAR ....B<br>CHILD NOT SERIOUSLY ILL ....C<br>NOBODY TO GO TO ....D<br>PLACE HAS NO DRUGS ....E<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ....Z | |
| 172. | Can you tell me the danger signs when a child is seriously ill in general? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED) | NOT ABLE TO DRINK OR BREAST FEED ....A<br>VOMITS EVERYTHING ....B<br>CONVULSION ....C<br>SLEEPY OR UNCONSCIOUS ....D<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ....Z | |
| 173. | Can you tell me the danger signs when a child is seriously ill from diarrhea and should be taken to a health facility? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED)<br>[Indicator 2.9] | SUNKEN EYES ....A<br>PERSISTENT SKIN FOLD ....B<br>BLOOD IN STOOL ....C<br>IRRITABLE OR RESTLESS ....D<br>DRINKS EAGERLY/THIRSTY ....E<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ....Z | |

**Pneumonia and Fever**

[IN CHILD HEALTH PROGRAMS THE SAME QUESTIONS ABOUT FEEDING, CARE SEEKING, AND DANGER SIGNS AS ABOVE ARE ASKED AGAIN SEPARATELY FOR PNEUMONIA AND FEVER.
DANGER SIGNS WILL HAVE DIFFERENT RESPONSES FOR EACH DISEASE.]

| | | | |
|---|---|---|---|
| 174. | Has [NAME OF CHILD] had pneumonia in the last 2 weeks?<br><br>[Evidence in developed countries has shown that handwashing may significantly reduce acute respiratory tract infections. If feasible, pneumonia prevalence could be assessed as another health outcome, but like diarrhea, it is likely to show important seasonal variability.] | YES ....1<br>NO ....2<br>DON'T KNOW ....8 | |
| 175. | Has [NAME OF CHILD] had fever in the last 2 weeks? | YES ....1<br>NO ....2<br>DON'T KNOW ....8 | |
| 176. | Does your household have any bed nets that can be used while sleeping? | YES ....1<br>NO ....2<br>DON'T KNOW ....8 | <br>➔180<br>➔180 |
| 177. | Did [NAME OF CHILD] sleep under a bed net last night? | YES ....1<br>NO ....2<br>DON'T KNOW ....8 | |
| 178. | What type of net is it? | LONG-LASTING TREATMENT (DOES NOT REQUIRE RE-TREATMENT) ....1<br>TREATED (DIPPED IN A SOLUTION) ....2<br>REGULAR NET (NOT TREATED) ....3<br>DON'T KNOW ....8 | ➔180<br><br>➔180<br>➔180 |
| 179. | If treated, when was it impregnated the last time? | IS A NEW NET ....1<br>LESS THAN 6 MONTH AGO ....2<br>OVER 6 MONTHS AGO ....3<br>NEVER ....4<br>DON'T KNOW ....8 | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| | **SCHOOL CHILD QUESTIONNAIRE ABOUT SCHOOL SANITATION AND HYGIENE** | | |
| 180. | Now, I would like to ask _____[NAME OF SCHOOLCHILD] about hygiene: | ID number from list: ____ ____ | |
| 181. | What grade are you in? | [ ][ ] | |
| 182. | Does your school have toilet facilities? [Indicator 0, 3.23] | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | <br>➔189<br>➔189 |
| 183. | If yes, are there separate toilet facilities for boys and girls? [Indicator 3.23] | YES.....1<br>NO .....2<br>SCHOOL HAS ONLY BOYS OR GIRLS .....3<br>DON'T KNOW.....8 | |
| 184. | Do your friends use the toilet facility to defecate? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | <br>➔186<br>➔186 |
| 185. | If not, why not? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED) | DIRTY .....A<br>OUT OF ORDER .....B<br>TOO FAR.....C<br>IS LOCKED.....D<br>SMELLS BAD .....E<br>IS ONLY FOR TEACHERS .....F<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |
| 186. | Do you have to wait in line when you want to use the toilet facility at your school? | ALWAYS.....1<br>SOMETIMES .....2<br>NEVER .....3 | |
| 187. | Who cleans the facility?<br><br>PROBE IF CLEANED BY STUDENTS ABOUT WHO IS RESPONSIBLE FOR ORGANIZING | NOBODY .....11<br>STUDENTS ASSIGNED BY TEACHER.....12<br>STUDENTS ORGANIZED BY STUDENTS OR ASSOCIATION .....13<br>CLEANER OR CARETAKER .....14<br>TEACHER.....15<br>OTHER _____96<br>(SPECIFY)<br>DON'T KNOW.....98 | ➔189<br><br><br><br><br><br><br>➔189 |
| 188. | When was it cleaned last? | TODAY .....11<br>LESS THAN ONE WEEK AGO .....12<br>SEVERAL WEEKS AGO .....13<br>NEVER .....16<br>OTHER _____96<br>(SPECIFY)<br>DON'T REMEMBER.....98 | |
| 189. | Does your school have a place for washing one's hands? [Indicator 3.24] | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | <br>➔198<br>➔198 |
| 190. | How often is there water? | ALWAYS..... 1<br>MOST OF THE TIME..... 2<br>SOMETIMES ..... 3<br>RARELY ..... 4<br>NEVER ..... 5<br>OTHER _____ 6<br>(SPECIFY) | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 191. | How often is there soap? | ALWAYS ..... 1<br>MOST OF THE TIME ..... 2<br>SOMETIMES ..... 3<br>RARELY ..... 4<br>NEVER ..... 5<br>OTHER _____ 6<br>(SPECIFY) | |
| 192. | Is the handwashing place in the school toilet facility or within 10 meters? | YES ..... 1<br>NO ..... 2<br>DON'T KNOW ..... 8 | |
| 193. | Do your friends wash their hands after they use the toilet facility? | YES ..... 1<br>NO ..... 2<br>DON'T KNOW ..... 8 | ➔198<br><br>➔198 |
| 194. | If not, what is the main reason why not? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED) | NOT NECESSARY ..... A<br>NO WATER ..... B<br>NO SOAP ..... C<br>NO TOWEL ..... D<br>WATER IS DIRTY ..... E<br>PLACE IS DIRTY OR MUDDY ..... F<br>CANNOT REACH BASIN OR WATER ..... G<br>IS LOCKED ..... H<br>IS ONLY FOR TEACHERS ..... I<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ..... Z | |
| 195. | When is it important to wash your hands? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED) | BEFORE PREPARING FOOD OR COOKING ..... A<br>BEFORE EATING ..... B<br>BEFORE FEEDING CHILDREN ..... C<br>AFTER CHANGING BABY ..... D<br>AFTER DEFECATING ..... E<br>AFTER EATING ..... F<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ..... Z | |
| 196. | Do you believe that washing hands just with water but without soap is as good as washing hands with water and soap? | WATER WITHOUT SOAP IS AS GOOD ..... 1<br>WATER WITH SOAP IS BETTER ..... 2<br>DON'T KNOW ..... 8 | |
| 197. | Why is it important to wash hands with soap? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED) | PREVENT DISEASE ..... A<br>PREVENT DIARRHEA ..... B<br>CLEAN HANDS/REMOVE DIRT ..... C<br>BECAUSE IS GOOD HYGIENE ..... D<br>PREVENT DIRT GETTING INTO MOUTH ..... E<br>PREVENT DIRT GETTING INTO FOOD ..... F<br>REMOVE GERMS ..... G<br>HEARD FROM PARENTS/OTHER FAMILY ..... H<br>HEARD FROM OTHER PEOPLE ..... I<br>HEARD FROM RADIO/TV ..... J<br>OTHER PEOPLE DO SO ..... K<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ..... Z | |
| 198. | Have you heard about sanitation and hygiene at school?<br>[Indicator 3.25] | YES ..... 1<br>NO ..... 2<br>DON'T KNOW ..... 8 | <br>➔200<br>➔200 |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 199. | If yes, what did you hear about sanitation and hygiene at school? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED)<br>[Indicator 3.25] | DISEASE TRANSMISSION (WATER or FECES) .....A<br>DIARRHEA MANAGEMENT .....B<br>DIARRHEA PREVENTION.....C<br>HANDWASHING .....D<br>USING TOILET FACILITIES.....E<br>IMPORTANCE OF SOAP.....F<br>CLEAN OR SAFE WATER..... G<br>FOOD SAFETY .....H<br>GARBAGE DISPOSAL..... I<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |
| 200. | Can you describe to me what "diarrhea" is?<br><br>DO NOT READ ANSWERS. ENCOURAGE ONCE. CHECK ALL THAT ARE MENTIONED. | WATERY OR BLOODY STOOLS ..... A<br>ABDOMINAL PAINS..... B<br>DON'T KNOW.....Z | ➔204 |
| 201. | What do you think can cause diarrhea? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED). | BAD/DIRTY WATER.....A<br>BAD/DIRTY FOOD .....B<br>POOR HYGIENE.....C<br>FECES/DEFECATING IN THE OPEN.....D<br>DIRTY HANDS .....E<br>GERMS.....F<br>FLIES..... G<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |
| 202. | Do you think diarrhea can be prevented (anything we can do to stop us getting diarrhoea)?<br>[Indicator 3.26] | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | <br>➔204<br>➔204 |
| 203. | If yes, how do you think diarrhea can be prevented? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED)<br>[Indicator 3.26] | WASH HANDS .....A<br>USE SOAP .....B<br>USE TOILET FACILITY TO DEFECATE.....C<br>DISPOSE CHILDREN'S FECES IN TOILET FACILITY<br>.....D<br>BURY FECES.....E<br>DRINK CLEAN WATER.....F<br>STORE WATER SAFELY..... G<br>TREAT WATER (BOIL, FILTER, CHLORINATE).....H<br>PREPARE FOOD HYGIENICALLY/ PROTECT..... I<br>DISPOSE OF GARBAGE IN A PIT ..... J<br>BREAST FEEDING IN GENERAL.....K<br>BREAST FEEDING ONLY UNTIL 6 MONTHS ..... L<br>NO OTHER FOOD/DRINK BEFORE 6 MONTHS.... M<br>MEASLES VACCINATION .....N<br>VITAMIN A..... O<br>GOOD NUTRITION .....P<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| | **WASTE (GREY) WATER DISPOSAL** | | |
| 204. | How do you dispose of water that has been used for washing dishes, doing laundry, and bathing? | PIPED DRAIN<br>IN SOAK-AWAY/CESSPIT/SEPTIC SYSTEM....11<br>STREET SURFACE OR EMPTY SPACE OUTSIDE PREMISES....12<br>INTO PREMISES' YARD....13<br>DIRECTLY TO GARDEN....14<br>POURED OR CARRIED<br>INTO TOILET FACILITY....21<br>STREET SURFACE OR EMPTY SPACE OUTSIDE PREMISES....22<br>INTO PREMISES' YARD....23<br>INTO GARDEN....24<br>OTHER_____....96 | |
| | **GARBAGE DISPOSAL** | | |
| 205. | Where do you keep your garbage until you get rid of it? | IN DWELLING....1<br>GET RID OF IT IMMEDIATELY....2<br>OTHER_____6<br>(SPECIFY) | <br>➔207 |
| 206. | OBSERVE ONLY: IS THE GARBAGE COVERED? | YES....1<br>UNCOVERED, BUT NO GARBAGE....2<br>UNCOVERED, BUT WITH GARBAGE....3 | |
| 207. | What is the principal way you dispose of your garbage? [Indicator 1.9] | COLLECTED FROM HOME<br>BY GOVERNMENT....11<br>BY COMMUNITY ASSOCIATION....12<br>BY PRIVATE COMPANY....13<br>COLLECTED AT NEIGHBORHOOD BOX<br>BY GOVERNMENT....21<br>BY COMMUNITY ASSOCIATION....22<br>BY PRIVATE COMPANY....23<br>DISPOSED WITHIN PREMISES<br>IN WASTE PIT....31<br>NO PIT....32<br>DISPOSED OUTSIDE PREMISES<br>IN WASTE PIT/DUMP SITE....41<br>ANYWHERE....42<br>BURNED....51<br>BURIED....52<br>COMPOSTED....53<br>RECYCLED....54<br>FED TO ANIMALS....55<br>OTHER_____96<br>(SPECIFY)<br>DON'T KNOW....98 | <br><br><br><br><br><br><br><br>➔209<br>➔209<br><br>➔209<br>➔209<br>➔209<br>➔209<br>➔209<br>➔209<br>➔209<br>➔209 |
| 208. | If garbage is collected, how frequently? | AT LEAST ONCE PER WEEK....1<br>AT LEAST ONCE EVERY OTHER WEEK....2<br>AT LEAST ONCE PER MONTH....3<br>LESS FREQUENT....4<br>OTHER_____6<br>(SPECIFY)<br>DON'T KNOW....8 | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| | **HOUSEHOLD ENVIRONMENT** | | |
| 209. | ASK TO SEE THE ROOM WHERE COOKING TAKES PLACE: OBSERVE EVIDENCE OF INDOOR SMOKE | SMOKE-FILLED ROOM .....A<br>BLACKENED CEILING OR WALLS.....B<br>OPEN FIRE PLACE.....C<br>NO EXHAUST .....D<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |
| 210. | Is livestock (poultry, goats, pigs, etc.) kept inside living quarters at night? | YES.....1<br>NO .....2 | ➔212 |
| 211. | IF YES, OBSERVE PRESENCE OF LIVESTOCK IN LIVING QUARTERS DURING VISIT | LIVESTOCK FOUND IN LIVING QUARTERS .....1<br>NON FOUND.....2 | |
| 212. | ARE FECES (HUMAN OR ANIMAL) VISIBLE IN THE HOUSE OR IN THE YARD? | YES.....1<br>NO .....2 | |
| 213. | IS THERE GARBAGE LYING IN THE OPEN IN THE HOUSE OR IN THE YARD? | YES.....1<br>NO .....2 | |
| 214. | IS THERE SEWAGE IN THE YARD? | YES.....1<br>NO .....2 | |
| 215. | IS THERE GARBAGE OUTSIDE THE PREMISES OR IN THE STREETS WITHIN 10 METERS OF DWELLING? | YES.....1<br>NO .....2 | |
| 216. | IS THERE SEWAGE OR ARE THERE OPEN SEWERS OUTSIDE THE PREMISES OR IN THE STREETS WITHIN 10 METERS OF THE DWELLING? | YES.....1<br>NO .....2 | |
| 217. | IS THERE CONSIDERABLE SMOKE AROUND PREMISES COMING FROM THE OUTSIDE? | YES.....1<br>NO .....2 | ➔end |
| 218. | DOES THE SMOKE COME FROM BURNING GARBAGE IN THE AREA? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |

**Before leaving this household, verify the entire questionnaire and indicate the outcome of the interview on the second page.**

**Then thank those who participated in the interview:**

***Thank you for your participation and good bye!***

**Do not forget to visit water points and garbage dumpsites accessed by this household as part of the community questionnaire (a separate instrument) before moving on to the next community.**

# INSTITUTION(S) [*NAMES*] RESPONSIBLE FOR THE SURVEY

## HYGIENE IMPROVEMENT COMMUNITY SURVEY QUESTIONS
### WATER SUPPLY, SANITATION, AND HYGIENE SITUATION IN [*NAME OF DISTRICT/REGION*]

### INTRODUCTION TO THE COMMUNITY INTERVIEWEE

The [*name of the institution(s)*] are now implementing a project to address basic health needs in this [*name of the region, district, area, community, etc.*], including water supply, sanitation, and hygiene. As part of the planning process, we are conducting a survey of households in communities that are being considered for participation in the project now and later. The purpose of the survey is to ensure that the project meets the needs of the people of these villages for essential health services, safe water, and better sanitation and hygiene. We would like to speak with you as well as several other community leaders. We would like to know more about the water supply, sanitation, and hygiene situation in this community [*name*]:

Water and sanitation systems operations and maintenance
Financing and cost recovery
Community capacity in hygiene promotion
Other water supply, sanitation-, and hygiene-related issues

Because time is limited, not all communities in the project area will be included in the survey. A computer analysis will be conducted on the information collected in this survey for the project area as a whole. Names and addresses of interviewees will not be included in the analysis or report, nor will information about your specific community be shared with anyone else. Participation is voluntary. If for any reason you do not wish to participate, you can choose not to, and you may object to answering any specific question or questions in the questionnaire. There are no disadvantages if you decide not to participate or not to answer certain questions. However, we would greatly appreciate your cooperation.

The entire interview will take approximately 45 minutes. Do you agree to participate?

**Yes** **No**

*Interviewer, if the community leader refuses to participate, or if the survey cannot be done at the present time for other reasons, please fill out the following page to the extent possible.*

| | | | |
|---|---|---|---|
| | If GPS readings are taken, note the latitude, longitude and altitude here.<br>Latitude in degrees, minutes, seconds | | |
| | Longitude in degrees, minutes, seconds | | |
| | Altitude in meters | | |

## A- LOCATION

A1 : DISTRICT ---------- [ ]

A2 : SUB-DISTRICT ---------- [ ][ ]

A3 : VILLAGE/TOWN ---------- [ ][ ]

NAME OF HEAD OF COMMUNITY LEADER: _____

ROLE/TITLE IN THE COMMUNITY: _____

Gender of interviewee: **M F** (*circle one*) Age: _____ (*in years*)

*Interview Language*: ➔

Language A..... 1
Language B..... 2
Language C ..... 3

## B- COMMUNITY CHARACTERISTICS

| B.1: Type of community | B.2: Socioeconomic status | B.3: Census Information |
|---|---|---|
| Rural village..... 1 | Informal slum settlement..... 1 | Population:_____ |
| Small town..... 2 | Recognized slum ..... 2 | Number of households: _____ |
| Urban neighborhood..... 3 | Mixed residential ..... 3 | Census ID:_____ |
| Peri-urban community ..... 4 | Industrial area ..... 4 | Map ID: _____ |
| Other : _____ 6 | Other _____ 6 | Other _____ |

## NUMBER OF VISITS TO CONDUCT THE INTERVIEW

| | 1 | 2 | FINAL VISIT | * RESULT OF EACH VISIT |
|---|---|---|---|---|
| Date | [ ][ ][ ] | [ ][ ][ ] | [ ][ ][ ] | NO RETURN VISIT NEEDED<br>Completed ..... 1<br>Refused ..... 2<br>Partially completed, return visit not agreed to ..... 3<br>Person absent for extended period . 4 |
| Interviewer ID | [ ][ ] | [ ][ ] | [ ][ ] | |
| Result* | [ ] | [ ] | [ ] | RETURN VISIT INDICATED<br>Partially completed, return agreed... 5<br>Person expected back soon ..... 6<br>Other: _____ 8 |
| **If return visit indicated, enter date for next visit** | | [ ][ ][ ] | [ ][ ][ ] | |

| FIELD | | | OFFICE |
|---|---|---|---|
| **Interviewer Completed Date** | **Field Supervisor Checked Date** | **Study Supervisor Checked Date** | **Data Entry Specialist Entry Date** |
| [ ][ ][ ] | [ ][ ][ ] | [ ][ ][ ] | [ ][ ][ ] |
| **Person's ID** | **Person's ID** | **Person's ID** | **Person's ID** |
| [ ][ ] | [ ][ ] | [ ][ ] | [ ][ ] |

| NO | QUESTIONS, OBSERVATIONS, FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| | **COMMUNITY INFORMATION** | | |
| 1. | What level of formal education did you attain? | NO FORMAL SCHOOLING.....11<br>PRIMARY, INCOMPLETE.....12<br>PRIMARY, COMPLETED.....13<br>SECONDARY, INCOMPLETE .....14<br>SECONDARY, COMPLETED .....15<br>SECONDARY, PROFESSIONAL LEVEL.....16<br>COLLEGE/UNIVERSITY, INCOMPLETE.....17<br>COLLEGE/UNIVERSITY, COMPLETED.....18<br>DON'T KNOW_____98 | |
| 2. | Can you read, write, or both?<br>CHECK ALL THAT APPLY | CAN READ ..... A<br>CAN WRITE..... B | |
| 3. | Does the community have the following facilities (if operational only)?<br><br>READ ALL ITEMS AND MARK THOSE MENTIONED. | PRIMARY SCHOOL ..... A<br>SECONDARY SCHOOL..... B<br>COLLEGE/UNIVERSITY ..... C<br>HOSPITAL..... D<br>HEALTH CENTER..... E<br>PAVED ROADS..... F<br>WATER SUPPLY NETWORK .....G<br>SEWER SYSTEM..... H<br>SEWER TREATMENT PLANT .....I<br>MAJOR INDUSTRY.....J<br>MAJOR AGRICULTURAL INDUSTRY/PLANTATIONK<br>ROAD ACCESS BY VEHICLE .....L<br>RIVER ACCESS BY PACKBOAT .....M<br>ELECTRICITY ..... N<br>TOURISM ..... O<br>PROXIMITY TO NATURE RESERVE..... P<br>MINING OPERATIONS ..... Q<br>CRAFTS AND ARTISAN ..... R<br>AIRPORT..... S<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW..... Z | |
| 4. | What is the principal source of drinking water for members of your community? [5]<br>(CHECK ONE) | PIPED WATER<br>HOUSE CONNECTIONS (YARD/BUILDING).....11<br>PUBLIC STANDPIPES.....12<br>WATER FROM OPEN WELL<br>INDIVIDUAL WELLS .....21<br>OPEN PUBLIC WELL.....22<br>WATER FROM COVERED WELL OR BOREHOLE<br>PROTECTED INDIVIDUAL WELLS .....31<br>PROTECTED PUBLIC WELL.....32<br>BOREHOLE.....33<br>SURFACE WATER<br>SPRING.....41<br>RIVER/STREAM.....42<br>POND/LAKE .....43<br>DAM.....44<br>RAINWATER<br>STORED IN COVERED CONTAINERS.....51<br>STORED IN OPEN CONTAINERS .....52<br>COMMERCIAL WATER VENDORS<br>SMALL WATER VENDORS/PEDDLERS.....61<br>TANKER TRUCK.....62<br>BOTTLED WATER .....63<br><br>OTHER _____ 96<br>(SPECIFY)<br>NOT ASSESSED.....97<br>DON'T KNOW.....98 | |

[5] Coding categories to be developed locally and revised based on the pretest; however, the broad categories must be maintained.

| NO | QUESTIONS, OBSERVATIONS, FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 5. | If there are wells, are these mostly: | SURFACE (10 METERS OR LESS) ..... A<br>SHALLOW (OVER 10 - 100 METERS) ..... B<br>DEEP (OVER 100 - 300 METERS) ..... C<br>VERY DEEP (OVER 300 METERS) ..... D<br>NO WELLS ..... E<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW..... Z | |
| 6. | If reticulated water systems, is the water treated? How? | CHLORINATED ..... A<br>FILTERED ..... B<br>SEDIMENTATION ..... C<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW..... Z | |
| 7. | What are the most common water supply problems? | LEAKS ..... A<br>BROKEN PIPES ..... B<br>ILLEGAL WITHDRAWAL ..... C<br>BROKEN METERS..... D<br>FEES NOT PAID ..... E<br>SEDIMENTS..... F<br>SMELLS.....G<br>BACTERIOLOGICAL CONTAMINANTS ..... H<br>TREATMENT NOT WORKING .....I<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW..... Z | |
| 8. | Are the following institutions supplied with water every day: | PRIMARY SCHOOLS (PIPED CONNECTION) ..... A<br>PRIMARY SCHOOLS<br>(STAND PIPE ON PREMISES) ..... B<br>SECONDARY SCHOOLS (PIPED CONNECTION). C<br>SECONDARY SCHOOLS<br>(STAND PIPE ON PREMISES) ..... D<br>HEALTH CENTER (PIPED CONNECTION) ..... E<br>HEALTH CENTER (STAND PIPE ON PREMISES). F<br>HOSPITAL (PIPED CONNECTION) .....G<br>HOSPITAL (STAND PIPE ON PREMISES) ..... H<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW..... Z | |
| 9. | What is the <u>second most important</u> source of drinking water for members of your community?[6]<br>(CHECK ONE) | PIPED WATER<br>HOUSE CONNECTIONS (YARD/BUILDING).....11<br>PUBLIC STANDPIPES.....12<br>WATER FROM OPEN WELL<br>INDIVIDUAL WELLS .....21<br>OPEN PUBLIC WELL.....22<br>WATER FROM COVERED WELL OR BOREHOLE<br>PROTECTED INDIVIDUAL WELLS .....31<br>PROTECTED PUBLIC WELL.....32<br>BOREHOLE.....33<br>SURFACE WATER<br>SPRING.....41<br>RIVER/STREAM.....42<br>POND/LAKE .....43<br>DAM.....44<br>RAINWATER<br>STORED IN COVERED CONTAINERS.....51<br>STORED IN OPEN CONTAINERS .....52<br>COMMERCIAL WATER VENDORS<br>SMALL WATER VENDORS/PEDDLERS.....61<br>TANKER TRUCK.....62<br>BOTTLED WATER .....63<br><br>OTHER _____ 96<br>(SPECIFY)<br>NOT ASSESSED.....97<br>DON'T KNOW.....98 | |

[6] Coding categories to be developed locally and revised based on the pretest; however, the broad categories must be maintained.

| NO | QUESTIONS, OBSERVATIONS, FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 10. | What type of toilet facilities is most common in this community? (CHECK ONE) ] | FLUSH TOILET WITH CONNECTION TO A PUBLIC SEWER ..... 11<br>FLUSH TOILET WITH CONNECTION TO SEPTIC SYSTEM ..... 12<br>POUR-FLUSH LATRINE ..... 13<br>OPEN PIT LATRINE ..... 14<br>SIMPLE PIT LATRINE, PIT COVERED ..... 15<br>VENTILATED IMPROVED PIT LATRINE ..... 16<br>SERVICE OR BUCKET LATRINE (WHERE EXCRETA ARE MANUALLY REMOVED) ..... 17<br>PUBLIC/COMMUNITY TOILET FACILITY ..... 18<br>OTHER _____ 96<br>(SPECIFY)<br>NOT ASSESSED ..... 97 | |
| 11. | What are the most common sanitation problems? | DEFECATION IN THE OPEN ..... A<br>OPEN SEWERS ..... B<br>BLOCKED SEWERS ..... C<br>PIT OVERFLOWS ..... D<br>SEWAGE OVERFLOWS DURING STORMS ..... E<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ..... Z | |
| 12. | Do the following institutions have hygienic and functioning toilet facilities on site: | PRIMARY SCHOOLS ..... A<br>SECONDARY SCHOOLS ..... B<br>HEALTH CENTER ..... C<br>HOSPITAL ..... D<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ..... Z | |
| 13. | Are there areas with high water tables, which are unsuitable for dug latrines? | YES ..... 1<br>NO ..... 2<br>DON'T KNOW ..... 8 | |
| 14. | Are there any ecological or composting latrines in this community? | YES ..... 1<br>NO ..... 2<br>DON'T KNOW ..... 8 | |
| 15. | Are the following institutions supplied with electricity: | PRIMARY SCHOOLS ..... A<br>SECONDARY SCHOOLS ..... B<br>HEALTH CENTER ..... C<br>HOSPITAL ..... D<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ..... Z | |
| 16. | Was the water system nonfunctional at any time during the last month? | YES ..... 1<br>NO ..... 2<br>DON'T KNOW ..... 8 | <br>➔19<br>➔19 |
| 17. | How frequently did the interruptions occur? | EVERY DAY ..... 1<br>AT LEAST ONCE A WEEK ..... 2<br>LESS THAN ONCE A WEEK, BUT MORE THAN ONCE ..... 3<br>ONCE ..... 4<br>DON'T KNOW ..... 8 | |
| 18. | For how long was water not available during the last month? (ALL INTERRUPTIONS COMBINED) | LESS THAN A DAY ..... 1<br>MORE THAN A DAY, BUT LESS THAN A WEEK ..... 2<br>MORE THAN A WEEK ..... 3<br>NO WATER PAST MONTH ..... 4<br>DON'T KNOW ..... 8 | |
| 19. | Was the water system nonfunctional at any time during the last six months? | YES ..... 1<br>NO ..... 2<br>DON'T KNOW ..... 8 | <br>➔22<br>➔22 |
| 20. | How frequently did the interruptions occur? | EVERY DAY ..... 1<br>AT LEAST ONCE A WEEK ..... 2<br>AT LEAST ONCE A MONTH ..... 3<br>LESS THAN ONCE A MONTH, BUT MORE THAN ONCE ..... 4<br>ONCE ..... 5<br>DON'T KNOW ..... 8 | |

| NO | QUESTIONS, OBSERVATIONS, FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 21. | For how long was water not available during the last six months? (ALL INTERRUPTIONS COMBINED) | LESS THAN A DAY ..... 1<br>MORE THAN A DAY, BUT LESS THAN A WEEK .... 2<br>MORE THAN A WEEK ..... 3<br>NO WATER PAST MONTH ..... 4<br>DON'T KNOW ..... 8 | |
| 22. | Does the water system perform properly, giving the community regular, continuous water supply? [Indicator C3.11] | YES ..... 1<br>NO ..... 2<br>DON'T KNOW ..... 8 | |
| 23. | Is water quality tested? [Indicator C3.12] | YES ..... 1<br>NO ..... 2<br>DON'T KNOW ..... 8 | <br>➔50<br>➔50 |
| 24. | What percent of tested water sources conform to established standards? [Indicator C3.12] | [ ][ ][ ] % Percent | |
| 25. | Are fees established for water supply? | YES ..... 1<br>NO ..... 2<br>DON'T KNOW ..... 8 | |
| 26. | How are the community/households made aware of the fees? | PUBLIC DISPLAY ..... A<br>PUBLIC ANNOUNCEMENT ..... B<br>FLYERS DISTRIBUTED TO HOUSEHOLDS ..... C<br>NO COMMUNICATION TO COMMUNITY ..... D<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ..... Z | |
| 27. | Who established the fees? | COMMUNITY ..... A<br>TRADITIONAL LEADERS ..... B<br>MAYOR ..... C<br>LOCAL GOVERNMENT ..... D<br>DISTRICT/PROVINCIAL GOVERNMENT ..... E<br>NATIONAL GOVERNMENT ..... F<br>NGO ..... G<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ..... Z | |
| 28. | How were the fees established? | VOTE ..... A<br>DECREE WITH COMMUNITY INPUT ..... B<br>DECREE WITHOUT COMMUNITY INPUT ..... C<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ..... Z | |
| 29. | How is the fee collected? | DEDICATED FEE COLLECTORS ..... A<br>GENERAL TAX COLLECTORS ..... B<br>PEOPLE PAY AT OFFICE ..... C<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ..... Z | |
| 30. | What happens if someone does not pay on time? | RECEIVES A REMINDER ..... A<br>COLLECTOR VISITS AGAIN ..... B<br>WATER TURNED OFF ..... C<br>ACCESS REFUSED ..... D<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ..... Z | |
| 31. | Does the community have a clearly defined water fee structure designed to cover recurrent costs? [Indicator C3.6] | YES ..... 1<br>NO ..... 2<br>DON'T KNOW ..... 8 | |
| 32. | What are the total costs of operating and maintaining the water system for a month or quarter or year? | _____ CURRENCY<br><br>PER MONTH / QUARTER / YEAR (CIRCLE ONE) | |

| NO | QUESTIONS, OBSERVATIONS, FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 33. | How much revenue is generated from user fees per month or quarter or year? | _____ CURRENCY<br><br>PER MONTH / QUARTER / YEAR (CIRCLE ONE) | |
| 34. | What percent of recurrent costs for the water supply system is recovered from user fees?<br>[Indicator C3.7] | [ ][ ][ ] % Percent | |
| 35. | How much is the fee? (USE THIS INFORMATION TO CALCULATE THE FOLLOWING INDICATOR BY COMPARING THE RESPONSE TO HOUSEHOLD QUESTION NUMBER 46 OR **Error! Reference source not found.** TO THIS AMOUNT)<br><br>SPECIFY PER: LOAD, DAY, WEEK, MONTH, CUBIC METER, LITER, ETC. | _____ CURRENCY<br><br>PER _____ | |
| 36. | How many households in the household survey say they pay the fee above or more? | [ ][ ][ ][ ] NUMBER OF HOUSEHOLDS | |
| 37. | How many households were included in the household survey in total? | [ ][ ][ ][ ] NUMBER OF HOUSEHOLDS | |
| 38. | What percent of households are paying the full water tariff?<br>[Indicator C3.8 and for verification of indicator 3.5] | [ ][ ][ ] % Percent | |
| 39. | Are there funds set aside in the water/sanitation committee account for emergencies? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |
| 40. | Does the community have three-months operating reserve for water system emergencies?<br>[Indicator C3.9] | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |
| 41. | Is there a community organization/committee to manage operations and maintenance of water supply systems? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |
| 42. | Is it active? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |
| 43. | Does it have strong leadership?<br>RATE 1 (WEAK) TO 3 (VERY STRONG). | WEAK .....1<br>AVERAGE .....2<br>STRONG .....3<br>DON'T KNOW.....8 | |
| 44. | Does it have elected officers (e.g., president, secretary, treasurer)? | PRESIDENT/CHAIR ..... A<br>SECRETARY..... B<br>TREASURER..... C<br>NONE OF THESE ..... D<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW..... Z | |
| 45. | Does it have a clearly defined mechanism for change of leadership? | CLEAR.....1<br>NOT CLEAR .....2<br>DON'T KNOW.....8 | |
| 46. | Does it have a set of by-laws? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |
| 47. | Does it function in a totally transparent manner? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |

| NO | QUESTIONS, OBSERVATIONS, FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 48. | What are the responsibilities? | PLANNING ..... A<br>BUDGETING ..... B<br>MONITORING/SUPERVISION..... C<br>FEE SETTING ..... D<br>OPERATIONS AND MAINTENANCE OF SYSTEM E<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW..... Z | |
| 49. | How are the community/households made aware of this responsibility? | PUBLIC DISPLAY ..... A<br>PUBLIC ANNOUNCEMENT..... B<br>FLYERS DISTRIBUTED TO HOUSEHOLDS ..... C<br>NO COMMUNICATION TO COMMUNITY..... D<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW..... Z | |
| 50. | Is a community organization/committee functioning effectively to manage operations and maintenance of water supply systems?<br>[Indicator 3.13] | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |
| 51. | How long ago did the committee meet? | LESS THAN TWO WEEKS AGO .....1<br>LESS THAN A MONTH AGO .....2<br>LESS THAN THREE MONTHS AGO.....3<br>LESS THAN A YEAR AGO .....4<br>OVER A YEAR AGO .....5<br>NEVER .....6<br>DON'T KNOW.....8 | |
| 52. | Does the community organization/committee meet regularly? If so, specify.<br>[Indicator C3.15] | AT LEAST ONCE EVERY TWO WEEKS.....1<br>AT LEAST ONCE A MONTH.....2<br>AT LEAST ONCE A QUARTER .....3<br>AT LEAST ONCE A YEAR .....4<br>IN INTERVALS GREATER THAN A YEAR.....5<br>NO MEETINGS.....6<br>DON'T KNOW.....8 | <br><br><br><br><br>➔59<br>➔59 |
| 53. | Are the water/sanitation committee meetings participatory? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |
| 54. | Is there an agenda for the committee's last meeting? (ASK TO SEE IT) | YES, SEEN.....1<br>YES, BUT NOT SEEN.....2<br>NO .....3<br>DON'T KNOW.....8 | |
| 55. | Who develops the agenda usually? | COMMITTEE .....1<br>COMMITTEE CHAIR/LEADERS .....2<br>MAYOR.....3<br>OTHER _____ 6<br>(SPECIFY)<br>DON'T KNOW.....8 | |
| 56. | Are important decisions reached by consensus? | YES, BY UNANIMOUS VOTE.....11<br>YES, BY MAJORITY VOTE.....12<br>NO, MADE BY COMMITTEE LEADERSHIP AFTER CONSULTATION WITH MEMBERS .....13<br>NO, MADE BY COMMITTEE LEADERSHIP WITHOUT CONSULTATION WITH MEMBERS .....14<br>NO, MADE BY THE CHAIR AFTER CONSULTATION WITH MEMBERS .....15<br>NO, MADE BY THE CHAIR WITHOUT CONSULTATION WITH MEMBERS .....16<br>OTHER _____ 66<br>(SPECIFY)<br>DON'T KNOW.....88 | |
| 57. | Are minutes kept of committee meetings? (ASK TO SEE FROM THE LAST MEETING) | YES, SEEN.....1<br>YES, BUT NOT SEEN.....2<br>NO .....3<br>DON'T KNOW.....8 | |
| 58. | Are the community organization/committee meetings conducted properly and are decisions fully recorded?<br>[Indicator C3.16] | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |

| NO | QUESTIONS, OBSERVATIONS, FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 59. | Is there a financial management system in place at the water/sanitation committee? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |
| 60. | What is the committee's involvement related to the budget? | DEVELOPS A BUDGET..... A<br>TRACK EXPENDITURES AGAINST THE BUDGET B<br>DON'T KNOW.....Z | |
| 61. | Are the accounts accurate? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |
| 62. | Are the financial dealings of the water/sanitation committee transparent? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |
| 63. | Do you have trust/confidence in the financial management of the water/sanitation committee? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |
| 64. | Does the community have a financial management system in place and is it functioning?<br>[Indicator C3.10] | YES IN PLACE AND FUNCTIONING .....1<br>YES IN PLACE BUT NOT FUNCTIONING .....2<br>NO .....3<br>DON'T KNOW.....8 | |
| 65. | Does the community organization/committee have clearly defined responsibility for overseeing both water supply and sanitation?<br>[Indicator C3.14] | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |
| 66. | Does the community organization/committee have the capacity to oversee hygiene activities?<br>[Indicator C3.17] | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |
| 67. | What hygiene and sanitation activities has the committee overseen in the past six months? | VILLAGE CLEANUP..... A<br>GARBAGE DISPOSAL..... B<br>TOILET FACILITIES..... C<br>HYGIENE BEHAVIORS ..... D<br>HANDWASHING ..... E<br>USING TOILET FACILITIES .....F<br>KEEPING WATER SAFE IN THE HOUSEHOLD..... G<br>KEEPING FOOD SAFE IN THE HOUSEHOLD ..... H<br>NONE .....I<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW.....Z | |
| 68. | Have these activities been effective (achieved their objective)? | YES, ALL .....1<br>YES, SOME.....2<br>NO .....3<br>DON'T KNOW.....8 | |
| 69. | Does the community have a mechanism to carry out effective hygiene promotion?<br>[Indicator C3.18] | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |
| 70. | Was a participatory problem identification and solution process conducted in the community? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | <br>➔72<br>➔72 |
| 71. | What did it include? | MAPPING ..... A<br>FOCUS GROUP DISCUSSION ..... B<br>PRIORITY SETTING ..... C<br>DEVELOPMENT OF A PLAN OF ACTION ..... D<br>OTHER _____X<br>(SPECIFY)<br>DON'T KNOW.....Z | |
| 72. | Has the community gone through a mobilization exercise, for example, organized festivals or other events? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | <br>➔74<br>➔74 |

| NO | QUESTIONS, OBSERVATIONS, FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 73. | What kind of events?<br>[Indicator C3.19] | FESTIVAL ..... A<br>MARKET SHOW ..... B<br>CLEAN VILLAGE CAMPAIGN ..... C<br>NO ..... D<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ..... Z | |
| 74. | Are there trained person(s) or organization(s) responsible for carrying out hygiene behavior change activities?<br>(CHECK ALL THAT APPLY)<br>[Indicator C3.20] | PERSON(S) FROM THE COMMUNITY ..... A<br>ORGANIZATION(S) ..... B<br>NO ..... C<br>DON'T KNOW ..... Z | |
| 75. | If yes, are these person(s) or organizations active? | YES, THE COMMUNITY PERSON(S) ARE ..... A<br>YES, THE COMMUNITY ORGANIZATION(S) ARE B<br>NONE ARE ACTIVE ..... C<br>DON'T KNOW ..... Z | |
| 76. | Does the local trained person(s) and/or the organization(s) communicate or collaborate closely with health personnel?<br>[Indicator C3.21] | YES ..... 1<br>NO ..... 2<br>DON'T KNOW ..... 8 | |
| 77. | Who is responsible for <u>training</u> the community hygiene promotion person(s)/ organization(s) from the health facility? | NURSE ..... A<br>TECHNICIAN ..... B<br>OTHER OUTREACH WORKER ..... C<br>NOBODY ..... D<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ..... Z | |
| 78. | Who is responsible for <u>supervising</u> the community hygiene promotion person(s)/ organization(s) from the health facility? | NURSE ..... A<br>TECHNICIAN ..... B<br>OTHER OUTREACH WORKER ..... C<br>NOBODY ..... D<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ..... Z | |
| 79. | When did the supervisor last visit the community? | LESS THAN TWO WEEKS AGO ..... 1<br>LESS THAN A MONTH AGO ..... 2<br>LESS THAN THREE MONTHS AGO ..... 3<br>LESS THAN A YEAR AGO ..... 4<br>OVER A YEAR AGO ..... 5<br>NEVER ..... 6<br>DON'T KNOW ..... 8 | |
| 80. | How did the supervisor support/strengthen the local person(s)/organization(s)? | ON THE JOB TRAINING ..... A<br>REVIEW OF DOCUMENTS ..... B<br>DISCUSSION ..... C<br>FORMAL INSTRUCTIONS ..... D<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ..... Z | |
| 81. | How many times has the supervisor visited the community in the past year? | 1-2 ..... 1<br>3-6 ..... 2<br>7-12 ..... 3<br>MORE THAN 12 TIMES ..... 4<br>NEVER ..... 5<br>DON'T KNOW ..... 8 | |
| 82. | Are there garbage dumps inside this community?<br>(OBSERVE, IF POSSIBLE) | YES ..... 1<br>NO ..... 2 | ➔end |
| 83. | If there are, do people from this community scavenge the dumps?<br>(OBSERVE, IF POSSIBLE) | YES ..... 1<br>NO ..... 2 | |
| 84. | If there are, are any of the dumps burning, even partly?<br>(OBSERVE, IF POSSIBLE) | YES ..... 1<br>NO ..... 2 | |

***Thank you for your participation and good bye!***

# RAPID HEALTH FACILITY ASSESSMENT: HYGIENE IMPROVEMENT MODULE

IDENTIFICATION

CLUSTER NUMBER .....

FACILITY NUMBER .....

RECORD NUMBER .....

| | | | |
|---|---|---|---|
| | If GPS readings are taken, note the latitude, longitude and altitude here.<br>Latitude in degrees, minutes, seconds | | |
| | Longitude in degrees, minutes, seconds | | |
| | Altitude in meters | | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| | **RESPONDENT BACKGROUND CHARACTERISTICS** | | |
| 1. | What is your position in this health facility?[1]<br>(CHECK ONE) | IN-CHARGE ..... 11<br>MEDICAL DOCTOR ..... 12<br>NURSE ..... 13<br>MIDWIFE ..... 14<br>AUXILIARY ..... 15<br>SUPPORT (cleaning, security, maintenance) ..... 16<br>COMMUNITY HEALTH WORKER/VOLUNTEER .... 17<br>OTHER _____ 96<br>(SPECIFY) | |
| 2. | What type of facility is this?<br>(CHECK ONE) | HEALTH CENTER ..... 1<br>DISPENSARY ..... 2<br>HEALTH POST ..... 3<br>COMMUNITY HEALTH POST ..... 4<br>OTHER _____ 6<br>(SPECIFY) | |
| 3. | What is the type of ownership?<br>(CHECK ONE) | PUBLIC, GOVERNMENT ..... 1<br>PUBLIC, COMMUNITY ..... 2<br>PRIVATE, NGO ..... 3<br>PRIVATE, OTHER ..... 4 | |
| 4. | What type of services does this facility provide?<br>(CHECK ALL THAT APPLY) | OUTPATIENT ..... A<br>INPATIENT ..... B<br>MATERNITY ..... C<br>OTHER _____ X<br>(SPECIFY) | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| | **WATER SUPPLY** | | |
| 5. | What is the main water source for this facility?[1]<br>(CHECK ONE)<br>[Indicator3.27] | PIPED WATER ..... 11<br>STANDPIPE ..... 12<br>TUBEWELL/BOREHOLE ..... 13<br>PROTECTED DUG WELL ..... 14<br>UNPROTECTED DUG WELL ..... 15<br>PROTECTED SPRING ..... 16<br>UNPROTECTED SPRING ..... 17<br>RAIN WATER COLLECTION ..... 18<br>SMALL WATER VENDOR/PEDDLER ..... 19<br>TANKER TRUCK ..... 20<br>BOTTLED WATER ..... 21<br>SURFACE WATER<br>(RIVER/STREAM/POND/LAKE/DAM) ..... 22<br>OTHER _____ 96<br>(SPECIFY) | |
| 6. | How long does it take to go to your main water source, get water, and come back?<br>[Indicator 3.27] | MINUTES [ ][ ][ ]<br>ON PREMISES ..... 996<br>DON'T KNOW ..... 998 | |
| 7. | In the last 2 weeks has the water from this source been unavailable for at least 1 whole day?<br>[Indicator 3.27] | YES ..... 1<br>NO ..... 2<br>DON'T KNOW ..... 8 | |
| 8. | How long does it usually take to fill a [NAME OF A CONTAINER COMMONLY USED] from your main water source?<br><br>[NOTE THE VOLUME OF THE CONTAINER FOR WATER FLOW CALCULATIONS: _____ liters/gallons (circle one)] | 1 MINUTE OR LESS ..... 1<br>MORE THAN 1 MINUTE/LESS THAN 5 ..... 2<br>MORE THAN 5 MINUTES/LESS THAN 1 HOUR ..... 3<br>1 HOUR OR LONGER ..... 4<br>DON'T KNOW ..... 8 | |
| 9. | Do you store water in the facility? | YES ..... 1<br>NO ..... 2 | **➔14** |
| 10. | IF YES, may I see the containers, please? | YES ..... 1<br>NO ..... 2 | |
| 11. | WHAT TYPE OF CONTAINERS ARE THESE? (OBSERVE AND CHECK ALL THAT APPLY)<br>Narrow mouthed: opening is 3 cm or less (interviewers use template) | NARROW MOUTHED ..... 1<br>WIDE MOUTHED ..... 2<br>OF BOTH TYPES ..... 3 | |
| 12. | ARE THE CONTAINERS COVERED? (OBSERVE AND CHECK) | ALL ARE ..... 1<br>SOME ARE ..... 2<br>NONE ARE ..... 3 | |
| 13. | Do the containers have a spigot?<br>(OBSERVE AND CHECK) | ALL DO ..... 1<br>SOME DO ..... 2<br>NONE DO ..... 3 | |
| 14. | Do you treat your drinking water in any way to make it safer to drink? | YES ..... 1<br>NO ..... 2 | **➔19** |
| 15. | IF YES, what do you usually do to the water to make it safer to drink? (ONLY CHECK MORE THAN ONE RESPONSE, IF SEVERAL METHODS ARE USUALLY USED TOGETHER, FOR EXAMPLE, CLOTH FILTRATION AND CHLORINE) | BOIL ..... A<br>ADD BLEACH/CHLORINE ..... B<br>SIEVE IT THROUGH CLOTH ..... C<br>WATER FILTER (CERAMIC, SAND, COMPOSITE) D<br>SOLAR DISINFECTION ..... E<br>SEDIMENTATION ..... F<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ..... Z | |
| 16. | When did you treat your drinking water the last time using this method? | TODAY ..... 11<br>YESTERDAY ..... 12<br>OVER ONE DAY AGO/LESS THAN ONE WEEK ... 13<br>ONE WEEK AGO OR MORE/LESS THAN A MONTH AGO ..... 14<br>ONE MONTH AGO OR MORE ..... 15<br>DON'T REMEMBER ..... 98 | |
| 17. | IF BLEACH, CHLORINE, OR TAP WATER, TEST WATER FOR FREE CHLORINE | DETECTABLE FREE CHLORINE RESIDUALS<br>YES ..... 1<br>NO ..... 2<br><br>FREE CHLORINE _____mg/l or ppm<br>*(circle one)*<br>NOT DONE ..... 7 | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 18. | IF BLEACH, CHLORINE, OR TAP WATER, TEST WATER FOR TOTAL CHLORINE | DETECTABLE TOTAL CHLORINE RESIDUALS<br>YES.....1<br>NO .....2<br><br>TOTAL CHLORINE _____mg/l or ppm<br>*(circle one)*<br>NOT DONE.....7 | |
| 19. | What is the main source of water used by this household for handwashing? | PIPED WATER .....11<br>STANDPIPE .....12<br>TUBEWELL/BOREHOLE .....13<br>PROTECTED DUG WELL.....14<br>UNPROTECTED DUG WELL .....15<br>PROTECTED SPRING.....16<br>UNPROTECTED SPRING .....17<br>RAIN WATER COLLECTION .....18<br>SMALL WATER VENDOR/PEDDLER .....19<br>TANKER TRUCK.....20<br>SURFACE WATER<br>(RIVER/STREAM/POND/LAKE/DAM) .....21<br>OTHER _____ 96<br>(SPECIFY) | |

## EXCRETA DISPOSAL

| | | | |
|---|---|---|---|
| 20. | What type of toilet facility is available at this facility for clients/patients? (OBSERVE AND CHECK ONE)<br>[Indicator 3.28] | FLUSH TO PIPED SEWER SYSTEM ..... 11<br>FLUSH TO SEPTIC SYSTEM ..... 12<br>POUR-FLUSH TO PIT..... 13<br>FLUSH OR POUR-FLUSH ELSEWHERE ..... 14<br>VIP/SIMPLE PIT LATRINE WITH FLOOR/SLAB .... 15<br>PIT LATRINE WITHOUT FLOOR/SLAB ..... 16<br>COMPOSTING/DRY LATRINE ..... 18<br>SERVICE OR BUCKET LATRINE (WHERE EXCRETA ARE MANUALLY REMOVED) ..... 19<br>HANGING LATRINE..... 20<br>NO FACILITY, FIELD, BUSH, PLASTIC BAG..... 21 | **➔30** |
| 21. | Where is this toilet facility located?<br>[Indicator 3.28] | INSIDE OR ATTACHED TO FACILITY .....1<br>ELSEWHERE ON PREMISES .....2<br>OUTSIDE PREMISES .....3 | |
| 22. | CLIENT/PATIENT TOILET FACILITY: OBSERVE THE SUPERSTRUCTURE OF WALLS, ROOF AND DOOR?<br>[Indicator 3.28] | HAS WALLS .....A<br>HAS A ROOF.....B<br>HAS DOOR(S).....C<br>SUPERSTRUCTURE DAMAGED.....D<br>NO SUPERSTRUCTURE.....E | |
| 23. | CLIENT/PATIENT TOILET FACILITY: IF DOOR(S) ARE PRESENT, CAN THEY BE CLOSED?<br>[Indicator 3.28] | YES..... 1<br>NO ..... 2 | |
| 24. | CLIENT/PATIENT TOILET FACILITY: IF ANY TYPE OF PIT LATRINE, ARE THE HOLES COVERED?<br>[Indicator 3.28] | YES..... 1<br>NO ..... 2<br>NOT A PIT LATRINE..... 3 | |
| 25. | CLIENT/PATIENT TOILET FACILITY: ARE THERE SEPARATE FACILITIES FOR MEN AND WOMEN?<br>[Indicator 3.28] | YES..... 1<br>NO ..... 2 | |
| 26. | CLIENT/PATIENT TOILET FACILITY: IS THERE FECAL MATTER PRESENT INSIDE THE FACILITY ON FLOOR OR WALLS OR OTHER SURFACES (HUMAN OR ANIMAL)?<br>[Indicator 3.28] | YES..... 1<br>NO ..... 2 | |
| 27. | CLIENT/PATIENT TOILET FACILITY: IS THERE A CHILD-FRIENDLY FACILITY?<br>(MAY BE SEPARATE OR IN THE SAME COMPARTMENT AS AN ADULT FACILITY. OBSERVE AND CHECK ALL THAT APPLY.)<br>[Indicator 3.28] | PIT LATRINE WITH SMALLER HOLE .....A<br>LOWER SEAT .....B<br>POTTY AVAILABLE .....C<br>NONE .....D | |
| 28. | CLIENT/PATIENT TOILET FACILITY: IS THERE A PLACE FOR HANDWASHING IN THE TOILET FACILITY OR NEXT TO IT?<br>[Indicator 3.28] | YES..... 1<br>NO ..... 2 | **➔ 30** |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 29. | CLIENT/PATIENT TOILET FACILITY: ARE THE FOLLOWING ITEMS PRESENT AT THE PLACE FOR HANDWASHING? (OBSERVE AND CHECK ALL THAT APPLY) [Indicator 3.28] | WATER FROM TAP OR CONTAINER ..... A<br>SOAP OR DETERGENT ..... B<br>TOWEL OR CLOTH ..... C<br>BASIN OR SINK ..... D<br>DRAIN ..... E<br>NONE OF THE ABOVE ..... F | |
| 30. | Are there separate toilet facilities for staff? | YES ..... 1<br>NO ..... 2 | <br>➔35 |
| 31. | What type of toilet facility is available at this facility for staff? (OBSERVE AND CHECK ONE) | FLUSH TO PIPED SEWER SYSTEM ..... 11<br>FLUSH TO SEPTIC SYSTEM ..... 12<br>POUR-FLUSH TO PIT ..... 13<br>FLUSH OR POUR-FLUSH ELSEWHERE ..... 14<br>VIP/SIMPLE PIT LATRINE WITH FLOOR/SLAB .... 15<br>PIT LATRINE WITHOUT FLOOR/SLAB ..... 16<br>COMPOSTING/DRY LATRINE ..... 18<br>SERVICE OR BUCKET LATRINE (WHERE EXCRETA ARE MANUALLY REMOVED) ..... 19<br>HANGING LATRINE ..... 20<br>NO FACILITY, FIELD, BUSH, PLASTIC BAG ..... 21 | <br><br><br><br><br><br><br><br><br><br>➔35 |
| 32. | Where is this toilet facility located? | INSIDE OR ATTACHED TO FACILITY ..... 1<br>ELSEWHERE ON PREMISES ..... 2<br>OUTSIDE PREMISES ..... 3 | |
| 33. | STAFF TOILET FACILITY: IS THERE A PLACE FOR HANDWASHING IN THE TOILET FACILITY OR NEXT TO IT? | YES ..... 1<br>NO ..... 2 | <br>➔ 35 |
| 34. | STAFF TOILET FACILITY: ARE THE FOLLOWING ITEMS PRESENT AT THE PLACE FOR HANDWASHING? (OBSERVE AND CHECK ALL THAT APPLY) | WATER FROM TAP OR CONTAINER ..... A<br>SOAP OR DETERGENT ..... B<br>HAND BRUSH ..... C<br>TOWEL OR CLOTH ..... D<br>BASIN OR SINK ..... E<br>DRAIN ..... F<br>NONE OF THE ABOVE ..... G | |

## MEDICAL WASTE MANAGEMENT

| | | | |
|---|---|---|---|
| 35. | How is medical waste is disposed of? (VERIFY BY OBSERVATION) [Indicator 3.29] | INCINERATOR ..... 1<br>WASTE PIT ..... 2<br>WASTE COLLECTION ..... 3<br>ELSEWHERE ..... 4 | ➔40<br><br>➔40<br> |
| 36. | IF disposal is in a waste pit, is the pit surrounded by an enclosure? (VERIFY BY OBSERVATION) [Indicator 3.29] | YES ..... 1<br>NO ..... 2<br>BROKEN ..... 3 | |
| 37. | Is there a gate or door? (VERIFY BY OBSERVATION) [Indicator 3.29] | YES ..... 1<br>NO ..... 2 | <br>➔39 |
| 38. | Is the gate or door locked? (VERIFY BY OBSERVATION) [Indicator 3.29] | YES ..... 1<br>NO ..... 2<br>BROKEN ..... 3 | |
| 39. | Is the waste in the pit covered with dirt? (VERIFY BY OBSERVATION) [Indicator 3.29] | YES ..... 1<br>NO ..... 2<br>CANNOT DETERMINE ..... 8 | |
| 40. | Where are used sharps (needles, blades, etc.) disposed of? [Indicator 3.29] | INCINERATOR ..... 1<br>WASTE PIT ..... 2<br>WASTE COLLECTION ..... 3<br>ELSEWHERE ..... 4 | |
| 41. | Where are used sharps (needles, blades, etc.) put in the facility before their final disposal? (ASK TO SEE CONTAINER) [Indicator 3.29] | DEDICATED SHARPS CONTAINER ..... 1<br>BIN FOR GENERAL WASTE ..... 2<br>NO SPECIFIC PLACE ..... 3 | <br>➔44<br>➔44 |
| 42. | WHAT TYPE OF CONTAINER IS USED FOR USED SHARPS - NEEDLES, BLADES, ETC.? (OBSERVE) [Indicator 3.29] | PUNCTURE PROOF (PLASTIC OR METAL) ..... 1<br>SOFT, NOT PUNCTURE PROOF ..... 2 | |
| 43. | IS THE CONTAINER COVERED? | COVERED WITH LID ..... 1<br>NOT COVERED ..... 2 | |
| 44. | Is there a waste removal service that collects medical waste from this facility? | YES ..... 1<br>NO ..... 2 | <br>➔46 |
| 45. | How regular is the medical waste removal service? | AT LEAST ONCE A WEEK ..... 1<br>REGULAR, BUT NOT EVERY WEEK ..... 2<br>IRREGULAR ..... 3 | |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| | **SAFE INJECTIONS** | | |
| 46. | Does this health facility provide any immunization services (routine, fixed, mobile, campaign)? [Indicator 3.30] | YES ..... 1<br>NO ..... 2 | **➔51** |
| 47. | Are auto-disable syringes for immunization as per WHO/UNICEF recommendation used? (ASK TO SEE SYRINGES) [Indicator 3.30] | YES ..... 1<br>NO ..... 2<br>NONE AVAILABLE ..... 9 | |
| 48. | Where are auto-disable syringes placed after use? (ASK TO SEE CONTAINER) | DEDICATED SHARPS CONTAINER ..... 1<br>BIN FOR GENERAL WASTE ..... 2<br>NO SPECIFIC PLACE ..... 3 | <br>**➔51**<br>**➔51** |
| 49. | WHAT TYPE OF CONTAINER IS USED FOR USED AUTO-DISABLE SYRINGES? | PUNCTURE PROOF (PLASTIC OR METAL) ..... 1<br>SOFT, NOT PUNCTURE PROOF ..... 2 | |
| 50. | IS THE CONTAINER COVERED? | COVERED WITH LID ..... 1<br>NOT COVERED ..... 2 | |
| | **INFECTION PREVENTION** | | |
| 51. | Is there a place for handwashing in the room where clients/patients are seen or next to it? [Indicator 3.31] | YES ..... 1<br>NO ..... 2 | **➔54** |
| 52. | Are the following items present at the place for handwashing? (OBSERVE AND CHECK ALL THAT APPLY) [Indicator 3.31] | WATER FROM TAP OR CONTAINER ..... A<br>SOAP OR DETERGENT ..... B<br>HAND BRUSH ..... C<br>TOWEL OR CLOTH ..... D<br>BASIN OR SINK ..... E<br>DRAIN ..... F<br>NONE OF THE ABOVE ..... G | |
| 53. | Where is the wastewater disposed off? (OBSERVE) [Indicator 3.31] | SEWER SYSTEM ..... 1<br>SEPTIC SYSTEM ..... 2<br>LATRINE ..... 3<br>GREY WATER PIT OR TRENCH ..... 4<br>COLLECTION FOR REUSE ..... 5<br>DISPOSED ELSEWHERE IN THE OPEN ..... 6 | |
| 54. | Visit the locations where clients/patients are seen and judge the general state of cleanliness:<br>RANK ON A SCALE FROM 1 TO 5 AS FOLLOWS:<br>5 No evidence of dirt, refuse, or human waste<br>4 (between 5 and 3)<br>3 Generally clean, some dust or litter, no human waste<br>2 (between 3 and 1)<br>1 Dirt, refuse and human waste like feces or blood | VERY CLEAN ..... 5<br>..... 4<br>CLEAN ..... 3<br>..... 2<br>POOR CLEANLINESS ..... 1<br><br>NOT ASSESSED ..... 7 | |
| 55. | Is there disinfectant available to clean medical equipment, furniture, or floors? (ASK TO SEE) | YES ..... 1<br>NO ..... 2 | |
| 56. | Is there evidence of promotional activities related to water, sanitation and hygiene?<br>(ARE POSTERS AND OTHER EDUCATIONAL MATERIALS ON DISPLAY IN CLIENT/PATIENT AREAS) | YES ..... 1<br>NO ..... 2 | |
| 57. | Are waste bins present in client/patient areas? (OBSERVE) | YES ..... 1<br>NO ..... 2 | |
| | **PEST AND VECTOR CONTROL** | | |
| 58. | Are rats and mice a common nuisance in this area? [Indicator 3.32] | YES ..... 1<br>NO ..... 2 | **➔ 60** |
| 59. | Are rodent traps or poisons in place? (OBSERVE) [Indicator 3.32] | YES ..... 1<br>NO ..... 2 | |
| 60. | Are mosquitoes a common nuisance in this area? [Indicator 3.32] | YES ..... 1<br>NO ..... 2 | <br>➔end |
| 61. | Are doors and windows equipped with mosquito screens? (OBSERVE) [Indicator 3.32] | YES ..... 1<br>NO ..... 2 | |
| 62. | Are patients admitted at this facility or is there a maternity? [Indicator 3.32] | YES ..... 1<br>NO ..... 2 | <br>➔end |
| 63. | Are beds equipped with mosquito nets? (OBSERVE) [Indicator 3.32] | YES ..... 1<br>NO ..... 2 | <br>➔end |

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 64. | Are these mosquito nets impregnated with insecticides, and if so, are they long-lasting or do they require retreatment? [Indicator 3.32] | LONG-LASTING ..... 1<br>REQUIRE RETREATMENT ..... 2<br>NO ..... 3 | ➔end<br><br>➔end |
| 65. | When were mosquito nets treated last? [Indicator 3.32] | 6 MONTHS AGO OR LESS ..... 1<br>OVER 6 MONTHS AGO ..... 2<br>NEVER ..... 3<br>DON'T KNOW ..... 8 | |

***Thank you for your participation and good bye!***

# SAMPLE HOUSEHOLD QUESTIONNAIRE

## 10 ESSENTIAL HYGIENE IMPROVEMENT INDICATORS

This sample questionnaire of fewer than 60 model questions collects all the information necessary for the following 10 essential hygiene improvement indicators:

**0.1 Percentage of children under 36 (or 60) months of age with diarrhea in the last two weeks**

**0.3 Percentage of children under 36 (or 60) months whose feces were disposed of safely**

**0.4 Percentage of households that practice safe drinking water management:**
Including water stored in covered and narrow-neck containers and water treatment where promoted programmatically

**1.1 Percentage of households with access to an improved water source**

**1.2 Percentage of households that had their principal water source available daily for the past two weeks**

**1.3 Percentage of households where time to collect water is 30 minutes or less**

**1.5 Percentage of households with access to a place to wash hands that has all essential supplies**

**1.7 Percentage of households with access to an improved and hygienic toilet facility**

**2.1 Percentage of caretakers who report having used soap for handwashing at least at two critical times during past 24 hours**

**2.2 Percentage of households that use an improved and hygienic toilet facility**

In addition to these 10 essential indicators, handwashing practice might be useful where it can be measured:

**0.2 Percentage of caretakers washing hands properly with soap and at appropriate times**

# INSTITUTION(S) [*NAMES*] RESPONSIBLE FOR THE SURVEY

## HYGIENE IMPROVEMENT HOUSEHOLD SURVEY QUESTIONNAIRE
### KNOWLEDGE, PRACTICE, AND COVERAGE OF WATER SUPPLY, SANITATION, AND HYGIENE IN [*NAME OF DISTRICT/REGION*]

### INTRODUCTION TO THE HOUSEHOLD

The [*name of the institution(s)*] are now implementing a project to address basic health needs in this [*name of the region, district, area, community, etc.*], including household water supply and sanitation. As part of the planning process, we are conducting a survey of households in villages that are being considered for participation in the project now and later. The purpose of the survey is to ensure that the project meets the needs of the people of these villages for essential health services, safe water, and better sanitation and hygiene.

The questions asked of participating households will focus on the following information:

Information about the household and the people living here
The current situation of water supply and sanitation
Knowledge and practices concerning hygiene
Other health care and household practices

Because time is limited, not all households in the project villages will be included in the survey. A computer analysis will be conducted on the information collected in this survey for the project areas as a whole. Names and addresses of participants will not be included in the analysis or report, nor will information about your household be shared with anyone else. Participation is voluntary; you can choose not to participate, and if you can object to answering any specific question or questions in the questionnaire. There are no disadvantages if you decide not to participate or not to answer certain questions. However, we would greatly appreciate your cooperation.

The entire interview will take approximately 45 minutes and involve several members of your household. Do you agree to participate?

**Yes** **No**

*Interviewer, if the household refuses to participate, or if the survey cannot be done at the present time for other reasons, please fill out the following page to the extent possible, including characteristics of the household and the people living there.*

| | | | |
|---|---|---|---|
| | If GPS readings are taken, note the latitude, longitude and altitude here.<br>Latitude in degrees, minutes, seconds | | |
| | Longitude in degrees, minutes, seconds | | |
| | Altitude in meters | | |

## A- LOCATION

A1 : DISTRICT ----------

A2 : SUB-DISTRICT ----------

A3 : VILLAGE/TOWN ----------

A4 : HOUSEHOLD ID NUMBER ----------

NAME OF HEAD OF HOUSEHOLD: _____

Gender of Head of Household: **M F** (*circle one*) Age: _____ (*in years*)

*Interview Language*: ➔

Language A..... 1
Language B..... 2
Language C ..... 3

## B- HOUSEHOLD CHARACTERISTICS and ELIGIBILITY

| B.1: Wall Construction | B.2: Floor Construction | B.3: Roof Construction |
|---|---|---|
| Brick or cement blocks ..... 1 | Tile ..... 1 | Cement ..... 1 |
| Stone ..... 2 | Concrete..... 2 | Earth ..... 2 |
| Mud..... 3 | Earth..... 3 | Tin ..... 3 |
| Raffia ..... 4 | | Straw..... 4 |
| Other : _____ 6 | Other _____ 6 | Other _____ 6 |
| **B.4 :** TYPE OF DWELLING HOUSE / APARTMENT | **B.5** : Children 0-59 months living here: : YES | **B.6** : Caretakers of children 0-59 months present: YES |

## NUMBER OF VISITS TO HOUSEHOLD

| | 1 | 2 | FINAL VISIT | * RESULT OF EACH VISIT |
|---|---|---|---|---|
| Date | | | | NO RETURN VISIT NEEDED<br>Completed ..... 1<br>Refused ..... 2<br>Partially completed, return visit not agreed to ..... 3<br>People absent for extended period . 4<br>Dwelling empty ..... 5<br>RETURN VISIT INDICATED<br>Partially completed, return agreed... 6<br>No eligible person present..... 7<br>Other: _____ 8 |
| Interviewer ID | | | | |
| Result* | | | | |
| **If return visit indicated, enter date for next visit** | | | | |

## C- SURVEY COMPONENTS COMPLETED FOR THIS HOUSEHOLD

| **C.7** Household interview completed: | **C.8** Caretaker interview completed: | **C.9** Other questionnaire completed: |
|---|---|---|
| YES / NO | YES / NO | YES / NO |

| FIELD | | | OFFICE |
|---|---|---|---|
| **Interviewer Completed Date** | **Field Supervisor Checked Date** | **Study Supervisor Checked Date** | **Data Entry Specialist Entry Date** |
| **Person's ID** | **Person's ID** | **Person's ID** | **Person's ID** |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| | **QUESTIONNAIRE FOR HEAD OF HOUSEHOLD OR REPRESENTATIVE** | | |
| 1. | How many households are part of this compound?<br>**INTERVIEWER: SELECT ONE HOUSEHOLD, IF THERE IS MORE THAN ONE** | [ ][ ] | |
| 2. | How many people live in this household?<br><br>**LIST IN TABLE "D" ALL CARETAKERS AND THEIR CHILDREN 0-59 MONTHS** | _____ | |
| 3. | What is the education of the head of household? | NO FORMAL SCHOOLING.....11<br>PRIMARY, INCOMPLETE.....12<br>PRIMARY, COMPLETED.....13<br>SECONDARY, INCOMPLETE.....14<br>SECONDARY, COMPLETED.....15<br>SECONDARY, PROFESSIONAL LEVEL.....16<br>COLLEGE/UNIVERSITY, INCOMPLETE.....17<br>COLLEGE/UNIVERSITY, COMPLETED.....18<br>DON'T KNOW_____98 | |
| 4. | Can the head of household read, write, or both?<br>CHECK ALL THAT APPLY | CAN READ ..... A<br>CAN WRITE..... B | |
| 5. | Does your household own the following items (if in working order only)?<br><br>READ ALL ITEMS AND MARK THOSE MENTIONED. | CAR/TRUCK..... A<br>MOTORCYCLE ..... B<br>BICYCLE ..... C<br>BOAT/PIROGUE/OUTBOARD ..... D<br>RADIO ..... E<br>RADIO WITH CASSETTE TAPE..... F<br>TELEVISION..... G<br>REFRIGERATOR ..... H<br>SEWING MACHINE..... I<br>KEROSENE OR GAS COOKER ..... J<br>COLMAN or KEROSENE LAMP ..... K<br>LARGE LIVESTOCK ..... L<br>SMALL LIVESTOCK..... M<br>LAND FOR SUBSISTENCE FARMING..... N<br>LAND FOR CASH CROP (COFFEE, COCO, TEE,<br>VEGETABLES, OTHERS)..... O<br>SHELVES ..... P<br>CHAIRS OF WOOD..... Q<br>TABLES OF WOOD ..... R<br>CHAIRS OF PLASTIC OR METAL..... S<br>TABLES OF PLASTIC OR METAL..... T<br>GAS GENERATOR OR SOLAR PANEL..... U<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW..... Z | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 6. | What is the principal way you dispose of your garbage? | COLLECTED FROM HOME<br>BY GOVERNMENT ..... 11<br>BY COMMUNITY ASSOCIATION ..... 12<br>BY PRIVATE COMPANY ..... 13<br>COLLECTED AT NEIGHBORHOOD BOX<br>BY GOVERNMENT ..... 21<br>BY COMMUNITY ASSOCIATION ..... 22<br>BY PRIVATE COMPANY ..... 23<br>DISPOSED WITHIN PREMISES<br>IN WASTE PIT ..... 31<br>NO PIT ..... 32<br>DISPOSED OUTSIDE PREMISES<br>IN WASTE PIT/DUMP SITE ..... 41<br>ANYWHERE ..... 42<br>BURNED ..... 51<br>BURIED ..... 52<br>COMPOSTED ..... 53<br>RECYCLED ..... 54<br>FED TO ANIMALS ..... 55<br>OTHER _____ 96<br>(SPECIFY)<br>DON'T KNOW ..... 98 | <br><br><br><br><br><br><br><br><br>➔8<br>➔8<br><br>➔8<br>➔8<br>➔8<br>➔8<br>➔8<br>➔8<br>➔8<br><br>➔8 |
| 7. | If garbage is collected, how frequently? | AT LEAST ONCE PER WEEK ..... 1<br>AT LEAST ONCE EVERY OTHER WEEK ..... 2<br>AT LEAST ONCE PER MONTH ..... 3<br>LESS FREQUENT ..... 4<br>OTHER _____ 6<br>(SPECIFY)<br>DON'T KNOW ..... 8 | |
| 8. | Do you own your dwelling, including the land? | YES ..... 1<br>NO ..... 2<br>DON'T KNOW ..... 8 | <br>➔next section<br> |
| 9. | If not, how likely is it that you could be evicted from this dwelling: would you say very likely, somewhat likely, or not at all likely? | VERY LIKELY ..... 1<br>SOMEWHAT LIKELY ..... 2<br>NOT AT ALL LIKELY ..... 3<br>DON'T KNOW ..... 8 | |

## TABLE D: LIST OF ALL CARETAKERS AND CHILDREN 0-59 MONTHS

We would like to start this discussion by listing the people who are members of this household, starting with the caretaker of children under 5 years of age.

| ID# | NAME | SEX | AGE FOR PEOPLE AGE 5 YEARS AND OVER | AGE FOR CHILDREN 0- 59 MONTHS | RELATIONSHIP OF PRIMARY CARETAKER TO THIS CHILD | ORPHAN, LOST BOTH PARENTS BECAUSE OF:* | |
|---|---|---|---|---|---|---|---|
| | List primary caretakers, followed by all her/his children 0-59. [Do not list visitors.] | Circle M or F | In **YEARS**, Use 2 digits | In **MONTHS**, Use 2 digits | Mother .....1<br>Grandmother .....2<br>Sister .....3<br>Aunt .....4<br>Father .....5<br>Brother.....6<br>Grandfather) .....7<br>Other family (female).....8<br>Other family (male).....9<br>Not family (female) .....10<br>Not family (male) .....11 | War / Civil Unrest (*check*) | HIV/ AIDS (*check*) |
| **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** |
| **1** | | **M F** | | | | | |
| **2** | | **M F** | | | | | |
| **3** | | **M F** | | | | | |
| **4** | | **M F** | | | | | |
| **5** | | **M F** | | | | | |
| **6** | | **M F** | | | | | |
| **7** | | **M F** | | | | | |
| **8** | | **M F** | | | | | |
| **9** | | **M F** | | | | | |
| **10** | | **M F** | | | | | |
| **11** | | **M F** | | | | | |
| **12** | | **M F** | | | | | |

* If one parent is lost due to war or civil unrest and the other due to HIV/AIDS, check each column. If both parents are lost due to the same cause, check only one column.

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| | **QUESTIONNAIRE FOR PRIMARY CARETAKER OF CHILDREN LESS THAN 36 (OR 60) MONTHS**<br>**WATER SUPPLY, SANITATION, WATER STORAGE, AND TREATMENT, HANDWASHING WITH SOAP** | | |
| 10. | Now, I would like to ask _____[NAME OF CARETAKER] about hygiene: | ID number from list: ____ ____ | |
| 11. | What schooling do you have? | NO FORMAL SCHOOLING.....11<br>PRIMARY, INCOMPLETE.....12<br>PRIMARY, COMPLETED.....13<br>SECONDARY, INCOMPLETE .....14<br>SECONDARY, COMPLETED.....15<br>SECONDARY, PROFESSIONAL LEVEL.....16<br>COLLEGE/UNIVERSITY, INCOMPLETE.....17<br>COLLEGE/UNIVERSITY, COMPLETED.....18<br>DON'T KNOW_____98 | |
| 12. | Can you read, write, or both?<br>CHECK ALL THAT APPLY | CAN READ ..... A<br>CAN WRITE..... B | |
| 13. | What is the main source of drinking water for members of this household?<br>(CHECK ONE) | PIPED WATER.....11<br>STANDPIPE .....12<br>TUBEWELL/BOREHOLE .....13<br>PROTECTED DUG WELL.....14<br>UNPROTECTED DUG WELL.....15<br>PROTECTED SPRING.....16<br>UNPROTECTED SPRING.....17<br>RAIN WATER COLLECTION .....18<br>SMALL WATER VENDOR/PEDDLER .....19<br>TANKER TRUCK.....20<br>BOTTLED WATER .....21<br>SURFACE WATER<br>(RIVER/STREAM/POND/LAKE/DAM) .....22<br>OTHER _____ 96<br>(SPECIFY) | |
| 14. | How long does it take you to go to your main water source, get water, and come back? | MINUTES [ ][ ][ ]<br>ON PREMISES.....996<br>DON'T KNOW..... 998 | |
| 15. | In the last 2 weeks has the water from this source been unavailable for at least 1 whole day? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | |
| 16. | Do you use this water source all year or only part of the year? | ALL YEAR.....1<br>PART OF THE YEAR .....2 | ➔18 |
| 17. | During the other part of the year, what is the main source of drinking water for members of this household? | PIPED WATER.....11<br>STANDPIPE .....12<br>TUBEWELL/BOREHOLE .....13<br>PROTECTED DUG WELL.....14<br>UNPROTECTED DUG WELL.....15<br>PROTECTED SPRING.....16<br>UNPROTECTED SPRING.....17<br>RAIN WATER COLLECTION .....18<br>SMALL WATER VENDOR/PEDDLER .....19<br>TANKER TRUCK.....20<br>BOTTLED WATER .....21<br>SURFACE WATER<br>(RIVER/STREAM/POND/LAKE/DAM) .....22<br>OTHER _____ 96<br>(SPECIFY) | |
| 18. | Do you store water? | YES.....1<br>NO .....2 | <br>➔22 |
| 19. | IF YES, may I see the containers, please? | YES.....1<br>NO .....2 | <br>➔22 |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 20. | WHAT TYPE OF CONTAINERS ARE THESE? (OBSERVE AND CHECK ALL THAT APPLY)<br>Narrow mouthed: opening is 3 cm or less (interviewers use template) | NARROW MOUTHED ..... 1<br>WIDE MOUTHED ..... 2<br>OF BOTH TYPES ..... 3 | |
| 21. | ARE THE CONTAINERS COVERED? (OBSERVE AND CHECK) | ALL ARE ..... 1<br>SOME ARE ..... 2<br>NONE ARE ..... 3 | |
| 22. | Do you treat your water in any way to make it safer to drink? | YES ..... 1<br>NO ..... 2 | ➔25 |
| 23. | IF YES, what do you usually do to the water to make it safer to drink? (ONLY CHECK MORE THAN ONE RESPONSE, IF SEVERAL METHODS ARE USUALLY USED TOGETHER, FOR EXAMPLE, CLOTH FILTRATION AND CHLORINE) | BOIL ..... A<br>ADD BLEACH/CHLORINE ..... B<br>SIEVE IT THROUGH CLOTH ..... C<br>WATER FILTER (CERAMIC, SAND, COMPOSITE) D<br>SOLAR DISINFECTION ..... E<br>SEDIMENTATION ..... F<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ..... Z | |
| 24. | When did you treat your drinking water the last time using this method? | TODAY ..... 11<br>YESTERDAY ..... 12<br>OVER ONE DAY AGO/LESS THAN ONE WEEK ... 13<br>ONE WEEK AGO OR MORE/LESS THAN A MONTH AGO ..... 14<br>ONE MONTH AGO OR MORE ..... 15<br>DON'T REMEMBER ..... 98 | |
| 25. | What is the main source of water used by this household for handwashing? | PIPED WATER ..... 11<br>STANDPIPE ..... 12<br>TUBEWELL/BOREHOLE ..... 13<br>PROTECTED DUG WELL ..... 14<br>UNPROTECTED DUG WELL ..... 15<br>PROTECTED SPRING ..... 16<br>UNPROTECTED SPRING ..... 17<br>RAIN WATER COLLECTION ..... 18<br>SMALL WATER VENDOR/PEDDLER ..... 19<br>TANKER TRUCK ..... 20<br>SURFACE WATER (RIVER/STREAM/POND/LAKE/DAM) ..... 21<br>OTHER _____ 96<br>(SPECIFY) | |
| 26. | What kind of toilet facility does this household use? (CHECK ONE) | FLUSH TO PIPED SEWER SYSTEM ..... 11<br>FLUSH TO SEPTIC SYSTEM ..... 12<br>POUR-FLUSH TO PIT ..... 13<br>FLUSH OR POUR-FLUSH ELSEWHERE ..... 14<br>VIP/SIMPLE PIT LATRINE WITH FLOOR/SLAB .... 15<br>PIT LATRINE WITHOUT FLOOR/SLAB ..... 16<br>COMPOSTING/DRY LATRINE ..... 18<br>SERVICE OR BUCKET LATRINE (WHERE EXCRETA ARE MANUALLY REMOVED) ..... 19<br>HANGING LATRINE ..... 20<br>NO FACILITY, FIELD, BUSH, PLASTIC BAG ..... 21 | ➔29 |
| 27. | Where is this toilet facility located? | INSIDE OR ATTACHED TO DWELLING ..... 1<br>ELSEWHERE ON PREMISES ..... 2<br>OUTSIDE PREMISES ..... 3 | |
| 28. | How many households share this toilet facility? (ASK REGARDLESS OF LOCATION) | Number [ ][ ]<br>NOT SHARED ..... 00<br>MORE THAN 20 ..... 21<br>DON'T KNOW ..... 98 | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 29. | Do you have soap in your household?<br>(ONLY ASK FOR THE AVAILABILITY OF SOAP HERE, NOT OF OTHER CLEANING AGENTS LIKE DETERGENTS, ASH, SAND) | FOUND IN HANDWASHING PLACE ..... 1<br>BROUGHT BY CARETAKER WITHIN 1 MIN ..... 2<br>NO ..... 3 | <br><br>➔32 |
| 30. | Have you used soap today or yesterday? | YES..... 1<br>NO ..... 2 | <br>➔32 |
| 31. | When you used soap today or yesterday, what did you use it for? IF FOR WASHING MY OR MY CHILDREN'S HANDS IS MENTIONED, PROBE WHAT WAS THE OCCASION, BUT DO NOT READ THE ANSWERS.<br><br>(DO NOT READ THE ANSWERS, ASK TO BE SPECIFIC, ENCOURAGE "WHAT ELSE" UNTIL NOTHING FURTHER IS MENTIONED AND CHECK ALL THAT APPLY) | WASHING CLOTHS ..... A<br>WASHING MY BODY ..... B<br>WASHING MY CHILDREN ..... C<br>WASHING CHILD'S BOTTOMS ..... D<br>WASHING MY CHILDREN'S HANDS ..... E<br>WASHING HANDS AFTER DEFECATING ..... F<br>WASHING HANDS AFTER CLEANING CHILD ..... G<br>WASHING HANDS BEFORE FEEDING CHILD ..... H<br>WASHING HANDS BEFORE PREPARING FOOD ... I<br>WASHING HANDS BEFORE EATING ..... J<br>OTHER _____ X | |

## CARETAKER QUESTIONNAIRE ABOUT CHILD LESS THAN 36 (OR 60) MONTHS
## FECES DISPOSAL AND DIARRHEA

**(*Additional copies of this questionnaire have to be prepared for each additional child under five of the same caretaker; Print additional copies and complete the information above that identifies the household*)**

| | | | |
|---|---|---|---|
| 32. | Now, I would like to ask you about _____[NAME OF CHILD] | ID number from list: ____ ____ | |
| 33. | The last time [NAME OF CHILD] passed stool, where did he/she defecate? | USED SANITATION FACILITY ..... 11<br>USED POTTY..... 12<br>USED WASHABLE DIAPERS..... 13<br>USED DISPOSABLE DIAPERS ..... 14<br>WENT IN HOUSE/YARD..... 15<br>WENT OUTSIDE THE PREMISES ..... 16<br>WENT IN HIS/HER CLOTHS ..... 17<br>OTHER _____ 96<br>(SPECIFY)<br>DON'T KNOW.....98 | ➔35 |
| 34. | The last time [NAME OF CHILD] passed stools, where were the feces disposed of? (IF "WASHED OR RINSED AWAY", PROBE WHERE THE WASTE WATER WAS DISPOSED OF. IF "DISPOSED", PROBE WHERE IT WAS DISPOSED OF SPECIFICALLY. | DROPPED INTO TOILET FACILITY..... 11<br>RINSED/WASHED AWAY<br>WATER DISCARDED INTO TOILET FACILITY21<br>WATER DISCARDED INTO SINK OR TUB CONNECTED TO DRAINAGE SYSTEM..... 22<br>WATER DISCARDED OUTSIDE..... 23<br>DISPOSED<br>INTO SOLID WASTE/TRASH..... 31<br>SOME WHERE IN YARD..... 32<br>OUTSIDE PREMISES..... 33<br>BURIED ..... 41<br>DID NOTHING/LEFT IT THERE..... 51<br>OTHER _____ 96<br>(SPECIFY)<br>DON'T KNOW.....98 | |

**Diarrhea**

| | | | |
|---|---|---|---|
| 35. | Has [NAME OF CHILD] had diarrhea during the past 24 hours?<br>*Diarrhea: three or more liquid stools in 24 hours* | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | ➔37 |
| 36. | Has [NAME OF CHILD] had diarrhea in the last 2 weeks? | YES.....1<br>NO .....2<br>DON'T KNOW.....8 | <br>➔46<br>➔46 |
| 37. | Now I would like to know how much [NAME OF CHILD] was offered to drink during the diarrhea. Was he/she offered less than usual to drink, about the same amount, or more than usual to drink?<br><br>IF LESS, PROBE: Was he/she offered much less than usual to drink or somewhat less? | MUCH LESS..... 1<br>SOMEWHAT LESS ..... 2<br>ABOUT THE SAME..... 3<br>MORE..... 4<br>NOTHING TO DRINK..... 5<br>DON'T KNOW.....8 | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 38. | Now I would like to know how much [NAME OF CHILD] was offered to eat during the diarrhea. Was he/she offered less than usual to eat, about the same amount, or more than usual to eat?<br><br>IF LESS, PROBE: Was he/she offered much less than usual to eat or somewhat less? | MUCH LESS ..... 1<br>SOMEWHAT LESS ..... 2<br>ABOUT THE SAME ..... 3<br>MORE ..... 4<br>NOTHING TO EAT ..... 5<br>DON'T KNOW ..... 8 | |
| 39. | Is [NAME OF CHILD] breast-fed? | YES ..... 1<br>NO ..... 2<br>DON'T KNOW ..... 8 | <br>➔41<br>➔41 |
| 40. | Now I would like to know how much breastfeeding [NAME OF CHILD] was offered during the diarrhea. Was he/she offered the breast less than usual, about the same, or more breast milk than usual?<br><br>IF LESS, PROBE: Was he/she offered the breast much less than usual or somewhat less? | MUCH LESS ..... 1<br>SOMEWHAT LESS ..... 2<br>ABOUT THE SAME ..... 3<br>MORE ..... 4<br>NO BREAST MILK ..... 5<br>DON'T KNOW ..... 8 | |
| 41. | Was he/she given any of the following to drink during the diarrhea? | A FLUID MADE FROM A SPECIAL PACKET CALLED [*LOCAL NAME*] ..... A<br>A GOVERNMENT-RECOMMENDED HOMEMADE FLUID ..... B<br>NONE OF THESE FLUIDS ..... C<br>DON'T KNOW ..... Z | |
| 42. | Was anything (else) given to treat the diarrhea? | PILL OR SYRUP ..... A<br>INJECTION ..... B<br>INTRAVENOUS FLUID (I.V.) ..... C<br>HOME OR TRADITIONAL MEDICINE ..... D<br>NOTHING ELSE WAS GIVEN ..... E<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ..... Z | |
| 43. | Did you seek medical advice or treatment for the diarrhea? | YES ..... 1<br>NO ..... 2<br>DON'T KNOW ..... 8 | <br>➔45<br>➔45 |
| 44. | Where did you seek advice or treatment?<br><br>IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE.<br><br>_____<br>(NAME OF PLACE)<br><br>RECORD ALL ANSWERS.<br>ASK THE QUESTION AND WHEN INTERVIEWEE ANSWERS, ASK IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE. | PUBLIC SECTOR<br>GOV. HOSPITAL ..... A<br>GOV. HEALTH CENTER ..... B<br>GOV. HEALTH POST ..... C<br>GOV. MOBILE CLINIC ..... D<br>GOV. FIELD WORKER ..... E<br>OTHER GOV. _____ F<br>(SPECIFY)<br><br>PRIVATE MEDICAL SECTOR<br>PVT. HOSPITAL ..... G<br>PVT. HEALTH CENTER/CLINIC ..... H<br>PVT. PHARMACY ..... I<br>PVT. DOCTOR ..... J<br>PVT. MOBILE CLINIC ..... K<br>PVT. FIELD WORKER ..... L<br>OTHER PVT. MEDICAL _____ M<br>(SPECIFY)<br><br>OTHER SOURCE<br>MARKET/SHOP ..... N<br>DRUG PEDDLER/HAWKER ..... O<br>TRADITIONAL PRACTITIONER ..... P<br>FAMILY MEMBER ..... Q<br>OTHER _____ R<br>(SPECIFY)<br><br>DON'T KNOW ..... Z | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 45. | If not, why did you not seek treatment? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED) | NO MONEY ....A<br>TOO FAR ....B<br>CHILD NOT SERIOUSLY ILL ....C<br>NOBODY TO GO TO ....D<br>PLACE HAS NO DRUGS ....E<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ....Z | |
| 46. | Can you tell me the danger signs when a child is seriously ill in general? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED) | NOT ABLE TO DRINK OR BREAST FEED ....A<br>VOMITS EVERYTHING ....B<br>CONVULSION ....C<br>SLEEPY OR UNCONSCIOUS ....D<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ....Z | |
| 47. | Can you tell me the danger signs when a child is seriously ill from diarrhea and should be taken to a health facility? (DO NOT READ THE ANSWERS, ENCOURAGE BY ASKING IF THERE IS ANYTHING ELSE UNTIL S/HE SAYS THERE IS NOTHING ELSE AND CHECK ALL MENTIONED) | SUNKEN EYES ....A<br>PERSISTENT SKIN FOLD ....B<br>BLOOD IN STOOL ....C<br>IRRITABLE OR RESTLESS ....D<br>DRINKS EAGERLY/THIRSTY ....E<br>OTHER _____ X<br>(SPECIFY)<br>DON'T KNOW ....Z | |

## OBSERVATION OF HANDWASHING SUPPLIES AND TOILET FACILITY

| | | | |
|---|---|---|---|
| 48. | Where do you usually wash your hands? | IN OR NEAR TOILET FACILITY ....1<br>IN OR NEAR KITCHEN ....2<br>ELSEWHERE ON PREMISES ....3<br>OUTSIDE PREMISES ....4<br>NO SPECIFIC PLACE ....5 | |
| 49. | Can you show me everything you use to wash hands? | YES ....1<br>NO ....2 | <br>➔54 |
| 50. | OBSERVATION ONLY: IS THERE WATER? INTERVIEWER: TURN ON TAP AND/OR A CHECK CONTAINER AND NOTE IF WATER IS PRESENT | FOUND IN HANDWASHING PLACE ....1<br>BROUGHT BY CARETAKER WITHIN 1 MIN ....2<br>NO ....3 | |
| 51. | OBSERVATION ONLY: IS THERE SOAP OR DETERGENT OR ASH? CIRCLE THE ITEM PRESENT | FOUND IN HANDWASHING PLACE ....1<br>BROUGHT BY CARETAKER WITHIN 1 MIN ....2<br>NO ....3 | |
| 52. | OBSERVATION ONLY: IS THERE A HANDWASHING DEVICE SUCH AS A TAP, BASIN, BUCKET, SINK, OR TIPPY TAP? | FOUND IN HANDWASHING PLACE ....1<br>BROUGHT BY CARETAKER WITHIN 1 MIN ....2<br>NO ....3 | |
| 53. | OBSERVATION ONLY: IS THERE A TOWEL OR CLOTH TO DRY HANDS? | FOUND IN HANDWASHING PLACE ....1<br>BROUGHT BY CARETAKER WITHIN 1 MIN ....2<br>NO ....3 | |
| 54. | May I see the toilet facility? | YES ....1<br>NO ....2<br>DOES NOT HAVE TOILET FACILITY ....3 | <br>➔end<br>➔end |
| 55. | TOILET FACILITY OBSERVATION: OBSERVE ACCESS TO THE FACILITY; ARE THERE OBSTACLES IN THE PATH, ARE THERE SIGNS OF REGULAR USE?<br>FOR TOILET FACILITIES IN THE DWELLING ONLY CATEGORIES "G, H, X" APPLY. | DENSE VEGETATION ....A<br>WASTE OR DEBRIS IN ITS PATH ....B<br>MAJOR CREVICES OR POTHOLES ....C<br>MUD ....D<br>PATH IS CLEAR ....E<br>PATH WELL WORN AS SIGN OF REGULAR USE F<br>ENTRANCE IS OBSTRUCTED .... G<br>FACILITY IS LOCKED ....H<br>OTHER OBSERVATION _____ X<br>CANNOT ASSESS ....Z | |

| NO. | QUESTIONS, OBSERVATIONS, AND FILTERS | CODING CATEGORIES | SKIP |
|---|---|---|---|
| 56. | TOILET FACILITY OBSERVATION: IS THERE FECAL MATTER PRESENT INSIDE THE FACILITY - ON SEAT, FLOOR, DOOR OR WALLS (HUMAN OR ANIMAL)? | YES.....1<br>NO .....2<br>CANNOT ASSESS .....8 | |

***Thank you for your participation and good bye!***