ANNEXES

A. Collecting background data: Sample questionnaire on knowledge and practices ............................................................... 148

B. Developing a proposal for a Safe Water System project .......... 154

C. How to test concentration of freshly-produced sodium hypochlorite for quality assurance .................................................. 157

- Hypochlorite Production Record ......................................... 159

D. Planning worksheets:

- Worksheet for assessing possible household water storage vessels ................................................................. 160
- Worksheet for assessing possible distribution methods .................................................................................. 161

E. Examples of educational and promotional materials ............. 162

F. Training in motivational interviewing .................................................. 167

G. Formative research .................................................................. 170

- Sample focus group discussion questions about water treatment and storage ........................................... 172
- Sample focus group discussion guide for brand name, logo, and slogan .................................................. 174

H. Potential channels of communication ........................................ 176

I. Example training curriculum from Zambia: Clorin home water chlorination .................................................. 179
ANNEX A: COLLECTING BACKGROUND DATA: SAMPLE QUESTIONNAIRE ON KNOWLEDGE AND PRACTICES

Date of interview _____/_____/200_
Index subject study no. _______
Household no. _______
Interviewer’s name _________________________________________

Demographic data
1. Name of principal respondent __________________________
2. Relationship of respondent to the head of household
   a = Husband  b = Wife  c = Son
   d = Daughter  e = Other (specify) ____________
3. Name of the village _________________________________

I WOULD LIKE TO ASK YOU ABOUT THE SOURCES OF INCOME FOR YOUR HOUSEHOLD
4. What are the main sources of income for the household?
   a. Professional technical or managerial job
   b. Large scale agriculture
   c. Small scale agriculture
   d. Sales or services
   e. Skilled manual labor
   f. Unskilled manual labor
   g. Other _______________________________________

5. What is the type of the house (Look at the house and circle the appropriate choice below)
   a. The walls are made of mud and the roof is grass-thatched.
   b. The walls made of mud and the roof is of iron sheets.
   c. The walls are made of bricks and the roof is grass-thatched.
   d. The walls are made of bricks and the roof is made of iron sheets.
   e. The walls are made of bricks and the roof is made of tiles.

6. Which of the following things do you have in your house?
   a. Beds Yes No Don’t know
   [If yes] how many? _____
   b. Bicycle Yes No Don’t know
   c. Car Yes No Don’t know
   d. Truck Yes No Don’t know
   e. Radio Yes No Don’t know
   f. TV Yes No Don’t know
   g. Refrigerator Yes No Don’t know
   h. Electricity Yes No Don’t know
   i. Stove Yes No Don’t know
   [if yes] Is it electric  kerosene  gas

7. Do you keep any animals or birds in your household?
   (If yes) record the type and number of animals/birds kept in the table below. (If no go to question 8)

148
Type of animal/bird  | 1 = Yes  | 2 = No  | Number of animals/birds kept
--- | --- | --- | ---
Cows  | 1  | 2  |  
Goats  | 1  | 2  |  
Sheep  | 1  | 2  |  
Pigs  | 1  | 2  |  
Chicken / Ducks  | 1  | 2  |  
Other  | 1  | 2  |  

I WOULD LIKE TO ASK YOU ABOUT THE SOURCE AND HANDLING OF HOUSEHOLD WATER

8. From where do you usually collect the water you use in the house? Do not read the options to the respondent. Mark all the sources that apply
   a. Pond or dam
   b. Lake
   c. Stream or river
   d. Well
   e. Borehole
   f. Spring
   g. Rainwater
   h. Water-tap
   i. Other__________________________

9. With what container do you collect the water you use in the household? (Ask to see the vessel that is usually used to collect water)
   a. No container
   b. Bucket
   c. Jerrycan
   d. Barrel / drum
   e. Clay pot
   f. Sauce –pan
   g. Directly from the tap
   h. Other (specify)__________________

10. Do you think this water is safe to drink without any treatment?
    1 = Yes  2 = No  3 = I do not know

11. What type of container do you use to store water for drinking in the house? (Look at the vessel usually used to store drinking water) (Do not read, circle all that apply)
   a. No container
   b. Bucket
   c. Jerrycan
   d. Barrel/drum
   e. Clay-pot
   f. Saucepan
   e. Jug
   f. Kettle
   g. Bottles
   h. Other (Specify)
12. What type of water storage vessel does the household use?
   See if it is
   a. Wide mouthed
   b. Narrow mouthed
   c. Other. (Describe)__________________

13. Is the water in the storage vessel covered?
   1 = Yes       2 = No

14. Do you process this water in any way to make it safer to drink?
   1 = Yes       2 = No       3 = Don’t know

15. If yes what do you do to the water to make it safer to drink? (Circle all that apply)
   a. Boil
   b. Add bleach
   c. Sieve it through cloth
   d. Other (Specify)__________________

16. What do you use to get/pour drinking water out of the storage container
   (Look and circle all that applies)
   a. Nothing
   b. Cup
   c. Ladle
   d. Pitcher
   e. Bowl
   f. Bucket
   g. Pour water directly from container
   h. Other (Specify)__________________

17. What toilet facility do you use? (Do not read the options. Circle all that apply.)
   a. In the bushes or on the ground?
   b. In a latrine?
   c. Other (specify)__________________

18. Can I see the type of soap that you use? (Look at the soap and comment whether)
   1 = Soap available       2 = Soap not available

Observations to be made by the interviewer

Ask to look at the toilet facility and record

19. What toilet facility does this household use?
   a. No facilities
   b. Pit latrine
   c. Other____________________________
20. **Is there water for hand washing near or at the toilet?**
   1 = Yes  2 = No

**Inspect the compound and observe for**

21. **Are there any visible excreta in the yard? (If no go to 22)**
   a. Human feces  1 = Yes  2 = No
   b. Animal feces  1 = Yes  2 = No
   c. Unknown excreta  1 = Yes  2 = No

22. **If yes how many stools are observed?**
   a. Small amount (1-2 feces)
   b. Moderate amount (3-4 feces)
   c. Large amount (>5 feces)
23. Record the names and age of all people who currently live in the household.

<table>
<thead>
<tr>
<th>No</th>
<th>Names</th>
<th>ID No.</th>
<th>Age</th>
<th>Sex</th>
<th>Relationship to head of household</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 = M</td>
<td>Husband</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 = F</td>
<td>Child</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Grandchild</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Other relative</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Not related</td>
</tr>
</tbody>
</table>

|     |       |        | 1 2 | a b c d e | a b c d e | a b c d e | a b c d e | a b c d e | a b c d e | a b c d e | a b c d e | a b c d e | a b c d e | a b c d e |

1 52
Check form at the end of the visit

• Water vessel inspected
• Water from the household storage vessel sampled
• Water source inspected
• Water from the source sampled
• Toilet facility inspected
• The compound inspected

Say goodbye to the family after going through the check form above
ANNEX B: DEVELOPING A PROPOSAL FOR A SAFE WATER SYSTEM PROJECT

Many donors have a particular form or list of items to be included in a project proposal. It is important to follow prescribed guidelines to provide information that the donor will use to decide about funding a project.

Before preparing a proposal, ask donors for their guidelines for proposals. Also contact others who have written successful proposals for that donor. They may have helpful suggestions on what to include and how to present it. The Safe Water System is still a relatively novel idea, so the idea must be sold to the donor.

Below are some elements often required in proposals:

CORE ELEMENTS

A. Title of project

B. Summary:
   - Project location(s)
   - Project staff including names and positions of country staff and external staff
   - Contact persons -- name, phone number, fax number, Email address
   - Target population – estimated total population
   - Duration of the project (years)
   - Budget – estimated total cost and amount being sought from this donor

C. Introduction:
   - Background on the country, region and site of the project, including demographics, climate, economic situation, political situation, and major constraints to development efforts
   - Overview of the project -- Who, what, when, where, why and how
   - Resources – available human, material and financial resources and how they can be utilized in this project
   - How this project relates to ongoing projects or activities (if any) related to water safety or projects in the area also funded by this donor

D. Problem statement:
   - Describe the problem and its causes, morbidity, mortality and other short-term and long-term effects in the community
Describe what the communities, the government, NGOs and other agencies are doing or plan to do about it
Present any needs assessments undertaken or any relevant statistics or research findings
Describe the purpose and the rationale for this initiative

E. Project description:
   Goals and objectives of the project
   Indicators: process indicators and impact indicators (if any)
   Main activities
   Expected outputs
   Describe the project activities, their timing, duration, and expected outputs
   Describe how they relate to the objectives and goals

F. Operational plan:
   Describe the intervention strategies
   Discuss technical needs assessment, and areas of sustainable collaboration
   Describe how the government (MOH) and communities will actively participate in this project
   Describe interagency cooperation
   Discuss possibilities to leverage donor funds
   Discuss how the project will strengthen the capacity of local organizations and communities

G. Project management:
   Describe staffing patterns: delineate the number and type of staff required, and describe how they are to be organized to carry out project activities and program management with optimal efficiency
   Outline clearly lines of communication and channels for a smooth and efficient management: technical assistance, project activities reports, problem solving, mediating conflicts. This will allow all the various actors to understand the set-up from the beginning and prevent unnecessary burden of miscommunications and frustrations.
   Describe project main physical requirements: buildings, vehicles, equipment, project materials and explain briefly their purpose
   Indicate the nature and quantity of any in-kind contributions by local communities, organizations, host government and other agencies (if any)
H. Monitoring and evaluation:
   Describe briefly the information system, how it fits with the MOH health information system or other government or commercial information system.
   Describe necessary baseline studies (if any), how they will be done, when and by whom.
   Discuss timing for evaluation.
   Describe the reporting system: timing and feedback.
   Describe role of different partners in monitoring and reporting: local communities, MOH, NGO staff, external staff.
   Explain how feedback from various partners will be incorporated into decision making on the project.

I. Budget
   Cash budget: Staffing costs
   Material and equipment
   Vehicle operations and maintenance
   Office operations
   Training
   Evaluation
   Travel and lodging
   Technical assistance
   Indirect costs

   In-Kind budget: Material and equipment
   Personnel
   Other (specify)

   Total costs

SUPPLEMENTARY ELEMENTS (OPTIONAL)

J. Innovative aspects of the proposal
K. Capacity building to be achieved
L. Sustainability
M. Leveraging/multiplier potential for additional funding beyond this donor.

ATTACHMENTS

Maps (country and program area)
Workplan: Detailed project timeline for each month of the project period

156
ANNEX C: HOW TO TEST CONCENTRATION OF FRESHLY-PRODUCED SODIUM HYPOCHLORITE FOR QUALITY ASSURANCE

Materials needed:
- 1 ml pipettes
- Pipetter (for drawing up solution into the pipette)
- 2 100-ml graduated cylinders
- Distilled water
- Colorimetric chlorine comparator (Hach kits, test strips, other colorimeters)

Testing procedure:
- Fill both graduated cylinders with 99 ml of distilled water.
- Draw up 1 ml of freshly-prepared sodium hypochlorite and put it in first graduated cylinder, mix well.
- Draw up 1 ml of solution from first graduated cylinder and put it in second graduated cylinder, and mix well.
- Measure the solution in the second graduated cylinder in the chlorine comparator—the result will be measured in mg/liter.
- With this method, the units in mg/liter correspond exactly to the concentration of the disinfectant produced. (For example, if the solution from the second graduated cylinder is 0.5 mg/liter, then the sodium hypochlorite solution is 0.5%).

Basis of this calculation:

First graduated cylinder:
\[ X \text{ mg hypochlorite solution/100ml (99ml H}_2\text{O + 1ml of hypochlorite solution)} = X \text{ mg/100ml} \]

Second graduated cylinder:
\[ Y \text{ mg x 1ml of solution from 1}^{\text{st}} \text{ cylinder/100ml (99ml H}_2\text{O + 1 ml 1}^{\text{st}} \text{ cylinder solution)} = Y \text{ mg/100ml} \]

Example:
- If the sodium hypochlorite solution is 0.5%, this equals 0.5 gm/100ml, which equals 500 mg/100ml. In 1 ml, there are 5 mg.

  Therefore, in the first cylinder, you have:
  5 mg/100ml (99 ml H2O + 1 ml hypochlorite solution)
  1 ml of this solution has 0.05 mg of solution.

  In the second cylinder, you have:
  0.05 mg/100ml (99 ml H2O + 1 ml solution from first cylinder)

  The concentration of this solution in mg/liter (which is what is measured in the chlorine comparators) is 0.5 mg/liter. If you get this measurement in the chlorine comparator after doing this procedure, the sodium hypochlorite solution is 0.5 gm/100ml or 0.5%.
Alternative Testing Procedure for Sodium Hypochlorite Concentration (if graduated cylinders are not available)

Materials needed:
- 1ml pipette
- 1 20 liter container
- distilled water
- chlorine comparator

Testing procedure:
- Fill 20 liter container (attempt to fill exactly; variation by a few ml will not appreciably affect results).
- Add 2ml of sodium hypochlorite solution and mix well.
- Measure this solution with chlorine comparator.
- With this method, the units in mg/liter correspond to the concentration of the disinfectant produced. (For example, if the solution is 0.5 mg/liter, then the sodium hypochlorite solution is 0.5%).

Example:
If the concentration of the sodium hypochlorite solution is 0.5%, or 0.5gm/100ml, or 500mg/100ml, in 1ml of solution there are 5 mg.

In 2ml of solution, there are 10mg.

10mg/20 liters = 0.5mg/liter. If you get this measurement in the chlorine comparator after doing this procedure, the sodium hypochlorite solution is 0.5 gm/100ml or 0.5%.
For quality assurance of bleach production, a form should be used to monitor each production run of sodium hypochlorite. The following form is a sample:

**Hypochlorite Production Record**

<table>
<thead>
<tr>
<th>Date</th>
<th>Operator</th>
<th>Time machine turned on</th>
<th>Time machine turned off</th>
<th>Salt (kg)</th>
<th>Water (liters)</th>
<th>Sodium hypochlorite concentration</th>
<th>pH</th>
<th>No. of bottles filled</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### ANNEX D: WORKSHEET FOR ASSESSING POSSIBLE HOUSEHOLD WATER STORAGE VESSELS

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume: standard, 10-30 L, marked</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inlet with screw-on lid; no access to dip with hands or cup</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faucet or narrow mouth to pour water</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to inside for cleaning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Device for measuring disinfectant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructions for use, disinfection and cleaning affixed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certification of MOH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other comments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance in field trials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall assessment</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## WORKSHEET FOR ASSESSING POSSIBLE DISTRIBUTION METHODS

<table>
<thead>
<tr>
<th>Possible Distribution Methods</th>
<th>Project cost</th>
<th>Demand creation</th>
<th>Product recognition</th>
<th>Effectiveness of distribution</th>
<th>Accessibility of product for consumers</th>
<th>Product price</th>
<th>Control over product price</th>
<th>Potential for sustainability</th>
</tr>
</thead>
</table>
ANNEX E: EXAMPLES OF EDUCATIONAL AND PROMOTIONAL MATERIALS

Brochure from Madagascar
USE PURIFIED WATER FOR DRINKING BUT ALSO FOR...

- WASHING HANDS
- WASHING FRUITS AND VEGETABLES
- WASHING COOKING UTENSILS

Do not put Clorox in wells
Do not put Clorox in buckets
Do not expose Clorox to the sun

KEEP AWAY FROM CHILDREN

WATER PURIFICATION SOLUTION

Poster from Zambia
I buy **Clorin** with my other EVERYDAY ITEMS like . . . MEALIE MEAL SOAP COOKING OIL

Use **Clorin** all year long to make your water safe to drink.

*Poster from Zambia*
Until now, the only way to make water safe to drink was to boil it. Boiling requires a lot of charcoal and can get quite expensive.

**K600**

Ukulika lelo, ukwipika amenshi ya kunwa enahila yaliyotye iyakuyamishamo. Ukwipika kulafwika amalasha ayemgi elyo enahila shimo no lupiya uwilingi.

**Making Your Water Safe To Drink With Clorin**

Sangusheni amenshi yenu aya suma ukunwa musunge no lupiya. Bomfya umutu wa Clorin.

Now there is a safe, effective and affordable way to purify your drinking water: Clorin only costs K10 for each 20 litres of water.

**K10**

Nomba kuli inahila iyakuwamishamo amenshi yakunwa iyabula ubwafya ku bumi, lobomba, kabilia iyanka umutengo: Clorin ishilikwafye K10 pali 20 litres ya chikunkubiti chamenshi.

*Poster from Zambia*
Motivational interviewing is described in section 7.0. In Zambia, volunteer community health promoters who were members of the local Neighborhood Health Committees were trained to use a communication approach based on the method known as motivational interviewing when interacting with community residents to promote the Safe Water System. Below is some further explanation of the method and training volunteers to implement it, based on experience in Zambia.

In sessions to train community volunteers to use motivational interviewing, the trainer describes the theoretical model of the stages of readiness to change and the methods of working with people at the different stages. Throughout the training, volunteers are encouraged to provide examples of their experiences as health promoters working in the community. The trainer then weaves these examples into the discussion, exercises, and practice to illustrate the theory and application of motivational interviewing.

The trainer describes the essential elements of effective brief interventions and discusses examples provided by the volunteers. The Miller and Rollnick books on motivational interviewing use the acronym FRAMES to describe these elements (Feedback, Responsibility, Advice, Menu, Empathy, and Self Efficacy):

- **Feedback** involves non-judgemental sharing of local data on diarrhea rates, incidence of cholera, and water quality within the residents' own community. If needed, education on the causes of diarrhea and cholera can be delivered, within a motivational interviewing framework.
- **Responsibility** for change is emphasized to reside solely within the community resident.
- **Advice** is given but permission is requested beforehand. It is made clear that the views offered are solely the personal ones of the volunteer. The resident is free to weigh how the offered suggestions fit within his or her own values and ideas, and to accept or reject the advice.
- A **menu** of options for dealing with the problem is also beneficial.
- An **empathic** style is critical throughout the entire interchange.
- **Self efficacy**, or self confidence in achieving change, is supported whenever possible. If someone does not believe change is feasible, her or she is not likely to even begin to try. It is very important to support any thought, desire, or attempt at behavior change by expressing belief that change is achievable for that person.
The trainer describes the tools of motivational interviewing which the volunteers practice in training:

- use of open-ended questions
- affirmations
- reflective listening, and
- summarizing.

A good portion of the training focuses on developing the tools of summarizing and reflective listening. Reflective listening is the most difficult skill. Volunteers need a lot of practice to develop this skill and some volunteers develop the skill better than others. (A useful strategy in the field is to use a buddy system whereby volunteers with stronger skills are paired up with ones with weaker skills.)

The trainer also introduces principles of motivational interviewing:

- expressing empathy
- developing discrepancy
- avoiding argumentation
- rolling with resistance
- supporting self efficacy.

Since the principles are closely related to the elements and tools, they serve as a reminder as well as to unify the ideas.

Another important concept is eliciting change statements from residents. The trainer teaches this along with summarizing so the volunteers learn what to reinforce from what is said during an interaction. Most volunteers can understand this concept, though implementing it in the field is more difficult.

Throughout the training, the trainer emphasizes the style and spirit of motivational interviewing which involves an empathic, collaborative approach and avoids direct persuasion. If the timing and progress are right, the volunteer can offer an invitation for the individual to consider the benefits of using the Safe Water System. Volunteers learn that by working through a resident’s ambivalence, using motivational interviewing tools and style, and supporting and developing a person’s ideas about change, it is quite possible that a resident will make a commitment to adopt the Safe Water System. Subsequent interventions with the resident can then focus on maintaining the behavior change.

At the end of the training, the expectation is that the volunteers have understood the main ideas and have begun to master implementation
of some of them, so that they can be more effective than they would be if delivering health education in the traditional didactic, authoritarian way. However, they still need further field supervision and guidance by the trainer.

In two Zambia studies, the rates of use of the Safe Water System were significantly higher in communities using a motivational interviewing approach when compared to communities using standard health education or to those using social marketing and health education. These higher rates have been sustained over time.

More work is needed to develop training specifically for motivational interviewing used in public health interventions in developing countries. Further adaptation of motivational interviewing, and other brief negotiation methods based on motivational interviewing, is expected. Training in motivational interviewing approaches must be provided by individuals previously trained and experienced in the method.

For further information, contact:
Dr. Angelica Thevos
Department of Psychiatry and Behavioral Sciences
Medical University of South Carolina
67 President Street
PO Box 250861
Charleston, SC 29425
USA

Email: thevosak@musc.edu
ANNEX G: FORMATIVE RESEARCH

Formative research is the basis for an effective strategy for behavior change. Collecting background data for a safe water system project is described in section 1.0. Additional formative research is described in section 7.1.

This annex summarizes some major points about formative research and provides some example focus group discussion guides:

- Sample focus group discussion questions about water treatment and storage (used by CARE Kenya Nyanza Healthy Water Project)
- Sample focus group discussion guide for brand name, logo, and slogan development (used by CARE Kenya Nyanza Healthy Water Project)

ABOUT FORMATIVE RESEARCH

Plan of Formative Research

- Identify risk practices
- Select practices for intervention
- Select target populations (e.g., mothers of young children, school age students, opinion leaders)
- Determine most effective and relevant messages for target populations (e.g., for mothers—“good mothers provide safe water for kids”; for students—“help kill microbes that cause illness.”)
- Determine channels of communication (e.g., radio messages, street theatre, discussions in schools, health centers, markets)
- Design and field test communication and other behavior change strategies and materials

Formative Research Methods

Site study
- Topic: characterize each sector of town/region
- Information sources: meet with leaders, women’s groups, health personnel

Focus groups
- Topics: water sources, causes of diarrhea, diarrhea treatment and prevention, health priorities of community, hygienic
practices/excreta disposal, child feeding, access to health education, animals in compound
Information sources: Women’s groups, opinion leaders, educators, health personnel (traditional vs. modern), community organization

**Evaluation of health status**
Information sources: Epidemiologic data – local government, health centers/posts, special studies of causes of diarrhea, case control/cohort studies

**Structured observation**
Topics: water sources, water treatment practices, water storage practices, human waste disposal
Information sources: Households

**Structured interviews**
Topics: water handling, hygienic practices, methods of communication
Information sources: Health workers, mothers

**Knowledge, attitudes, practices, beliefs (KAPB) study**
Quantitative study of KAPB re: water handling, diarrhea prevention, communication sources
Information sources: Households

**HINTS:**
Cross check data for consistency.
Need political commitment at all levels for project to work.
Formative research team should include outsiders trained in public health, social sciences, and insiders who know community.
Sample Focus Group Discussion Questions
(Used by CARE Kenya Nyanza Healthy Water Project)

1. Introductions and statement of purpose of the meeting
   Name, occupation, education level, marital status, family size

2. What are your main service needs in your village?
   What are the major health problems in your village?

3. What do you understand by safe drinking water?
   What do you think makes water unsafe for drinking? (at source and at home)
   What can you do to make the water safe?

   **Once boiling is mentioned**

4. How many of you boil drinking water?
   What fuel do you use?
   How long do you take to collect the fuel?
   How much does the fuel cost you if bought?
   How long do you take to light the fire?
   How long does the water take to boil?
   How long does the water take to cool?
   On average how much water do you boil per day?
   What do you like about boiling?
   What do you dislike about boiling?

   **If chemicals are mentioned**

5. How did you hear about these chemicals?
   Which chemicals are these?
   How are they used?
   Have you ever tried them?
   What do you like about chemical treatment of drinking water?
   What do you dislike about chemical treatment of drinking water?

6. What are the qualities of a safe water storage vessel?

   **Show clay pot** (20 liters estimated volume)

7. How many of you use clay pots to store drinking water?
   Can water in clay pots be contaminated?
   How?
   How do you clean the clay pots?
   After how long?
   How much does it cost?
   How long does it last?
   What do you like about storing drinking water in a clay pot?
   What do you dislike about storing drinking water in a clay pot?
**Show common plastic container**

8. How many of you use this to store drinking water?
   Can water in this container be contaminated?
   How?
   How do you clean this container?
   How much does it cost?
   How long does it last?
   What do you like about storing water in this container?
   What do you dislike about storing water in this container?

**Show specialized container**

9. What do you think about this container?
   What special features does it have? (Different from the other two)
   Can water in this container be contaminated?
   How?
   How would you clean this container?
   How much do you think it might cost?
   How can you make water cool in such a container?
   What do you like / dislike about storing water in this container?
   Are you willing to buy such a container if it is in the market?
   What is the maximum amount of money you can pay for the container if you were to buy it?

**Comparison of the three containers**

10. Out of these 3 containers, which one do you prefer for water storage and why?

**Decision-making**

11. Who decides on which water storage container to buy for the household?
   Why is he/she the one who makes the decision?
   Who decides on the general household expenditure?

EXPECTED DURATION OF INTERVIEW: 1 HOUR 30 MINUTES
Sample Focus Group Discussion Guide for Brand Name, Logo, and Slogan Development
(Used by CARE Kenya Nyanza Healthy Water Project)

1. Introduction of respondents and moderator
   Purpose of discussion.

2. If a safe chemical for water treatment was available to you and
   supposing you were to buy, where would you expect to buy it?
   Why?
   How much would you pay for it at the most if you were to buy the
   chemical to last you one month?
   Where do you expect the chemical to have been produced? (Local,
   Nairobi or Imported)

3. **Brand Name**
   *Read out suggested names.*
   What do you think about that name?
   What do you associate the name with?
   Does it arouse negative feelings or positive feelings?
   Why?
   Pronounce it.
   Which one do you prefer for a safe water treatment chemical?
   (No. 1, 2, & 3)
   Why?

4. **Logo**
   *Show different logo drawings*
   What do you think is the meaning of this symbol?
   What do you associate with it?
   Does it arouse negative feelings or positive feelings to you?
   Why?
   Which one do you prefer for a safe water storage chemical? (No. 1,
   2, & 3)
   Why?

5. **Slogan**
   *Read different slogans*
   What do you understand by the following statement?
   Does it remind you of any good or bad thing?
   Which is that?
   Which one do you recommend for a safe water treatment chemical?
   (No. 1, 2, & 3)
   Why?
6. **Colour**
   Which colour do you associate with clean drinking water?

   *Show different colours*
   Which of these colours do you associate with clean water?
   Which one would you prefer for a safe water treatment chemical?

7. **Unsealed & sealed bottles**
   Which of these two capping systems do you prefer for a safe water treatment chemical?
   Why?
ANNEX H: POTENTIAL CHANNELS OF COMMUNICATION

Interpersonal Channels

Interpersonal channels include community meetings, door to door visits, health worker/client interactions, interactions between shopkeepers or other sales agents and their customers, teacher/student interactions and any other direct communication through project staff or peers.

The advantages of interpersonal channels compared with other channels include:

- ease of approach for smaller projects
- potential to use locally appropriate terms
- allows selective targeting of specific groups
- high impact in communities
- effectiveness in rural areas where there is greater community cohesiveness and potential for sharing information by word of mouth
- message delivery is interactive with the potential for discussion and clarification of messages
- potential for incorporating novel approaches like motivational interviewing
- increased efficiency when well-traveled, well-connected persons in the society are the communicators

Disadvantages of interpersonal channels compared with other channels include:

- low coverage and low rate of message repetition per person
- relatively high costs per person reached
- if special staff added for a promotional campaign, coverage of a target population requires large numbers of staff for a short term campaign or long term staff inputs for a longer campaign; high salary, training and transport costs
- staff drop out
- less effective in urban areas and among other less cohesive communities.

Local Media

Local media can include drama, songs sung by traditional musicians, puppet shows, storytelling, or public announcements by religious leaders or other local leaders at community gatherings. Local media can be useful for raising awareness, generating interest and discussion, and may be effective in improving acceptance.
Advantages of local media include:
- communities can easily identify with the source of the information
- messages can be delivered using the most locally appropriate language and terminology
- messages delivered in an entertaining way may be better remembered

Potential disadvantages of local media channels are:
- relatively low audience exposure to messages or repetition of messages, because dramas or performances may only happen occasionally
- messages may be missed if people focus on the entertainment or if the messages are difficult to understand

Mass Media

Mass media include radio, television, video, films and cassettes. These channels can increase awareness and interest, and convey messages in a dramatic and meaningful way. Access to mass media is increasing rapidly in developing countries and radio ownership is high, particularly in urban centers.

Advantages of mass media include:
- wide coverage
- low cost per person reached
- messages can be focused on a target audience by attaching them to mass media programs that reach the target audience. Soap operas on radio and television are especially good channels for conveying messages because they are ongoing and provide the opportunity to convey more complicated messages and repeat them frequently.
- are effective to motivate individuals to purchase and use products by associating them with a desired lifestyle

Disadvantages of mass media include:
- Not everyone has access to mass media (less access in rural areas, poorer people).
- Preparing radio and television spots can be expensive, though donors or government sponsored stations may give free airtime.
- Message delivery is not interactive.
• Areas and people reached by broadcasts may not correspond with areas targeted for the project.

Printed Materials

Printed materials include posters, labels on vessels or disinfectant containers, sales brochures, leaflets, newspapers and newsletters. They encourage people to take action, convey information quickly and reach many people.

Advantages of printed materials include:

• Labels, brochures, leaflets are a useful channel for providing instructions. Even if people cannot read, they generally have access to someone who can explain instructions to them. Labels have the advantage of always being available when a product is used.
• Newsletters can be useful to update health workers or sales outlets about information such as changes in product availability, progress of the project, and answers to frequently-asked questions.

Disadvantages of printed materials include:

• Printed materials may not reach people who need them. Posters must be placed where many people will see them. Leaflets must be distributed carefully to reach many people. Printed materials must be re-supplied to clinics, sales outlets, and other distributors such as neighborhood health committees.
• Some cultures are not used to receiving information in written form. Some languages and dialects do not have a written form. Some people are not literate.
• Some terms may not be understood. Pictures may be misinterpreted. (These disadvantages can be overcome with pre-testing and by combining print materials with face to face interactions in which terms, pictures and messages can be explained.)
• Unless printed materials are well designed and tested, they may not convey the intended messages to the audience.
8AM: Opening and Introduction (30-45 minutes)

- Welcome participants to the Clorin Home Water Chlorination Workshop
- Explain that the workshop will continue until about noon with a break for tea
- Introduce yourself and explain that we will begin with introductions. Ask participants to give their name, where they are from, and what they expect to learn from this workshop. Write responses on the flipchart about what they expect to learn so that you can come back to it at the end.
- Start with yourself. Introduce yourself and explain whom you work for.

Explain to participants what is SFH.

- SFH is a Zambian non-government organization dedicated to improving the health of Zambians by marketing essential health products to the public and by educating Zambians about important health concerns. SFH works in the areas of AIDS prevention, family planning, and child health. For AIDS prevention, we sell Maximum condoms and Lovers Plus condoms. For family planning we sell Safeplan oral contraceptive pills and Prolact vaginal foaming tablets. For child health we sell POWERCHEM mosquito nets and retreatment kits for malaria prevention, and Clorin home water chlorination solution for water borne disease prevention. If they have questions about products other than Clorin, they can ask at the end of the training.

Next explain about the Clorin Home Water Chlorination Solution project.

- The objective of the Clorin home water chlorination project is to reduce the cases of diarrhea and cholera in Zambia. Clorin is a chlorine solution that is used to disinfect home drinking water. It
kills most bacteria in water that cause disease, including
cholera.

- The product has been developed largely through the support of
  the Centers for Disease Control in the United States. The Clorin
  project started in Zambia in September 1998 in 5 pilot sites in
  Lusaka and Kitwe. It was expanded to cover Lusaka, Kitwe,
  and Ndola in 1999, and now in 2000 it is expanding nationwide.

- To date, more than 350,000 bottles of Clorin have been sold.
  There has been tremendous demand for Clorin, especially in
  the rainy season when cases of diarrhea increase, and when
  there are outbreaks of cholera. Clorin has the support of the
  Central Board of Health, and is often mentioned as a way to
  prevent cholera. In fact, because of this, Clorin has been widely
  associated with cholera prevention. SFH in our communications
  efforts would like to emphasize that Clorin should be used to
disinfect your water all year round, not just in the cholera
season. This is because diarrhea is a serious problem among
children in Zambia, and diarrheal diseases occur throughout the
year. Far more children die of diarrhea each year than cholera,
which makes it even more important that people treat their
water to prevent diarrhea, especially among children.

Next explain the objectives of today’s Clorin training program. During
the course of today’s training, we will cover the following topics (write on
a flipchart):

- Review the important facts about diarrhea and cholera –
  transmission, symptoms, and consequences.
- Understand what Clorin is and how to use Clorin.
- Learn the essential messages to discuss with people in the
  communities about Clorin.
- Practice communication skills/selling techniques.

Ask the class if they have any questions.

8:30AM: DIARRHEA AND CHOLERA – THE PROBLEM (30 MIN)

Diarrhea Transmission

Objective: Review transmission and signs and symptoms of diarrhea
and cholera.
Tell the group that you are going to read a story about diarrhea, and then discuss it afterwards:

STORY: The clinic director from _________ (name a local clinic) has just admitted a seriously ill child to the clinic. Mrs. ________ has just brought her 3 year old daughter Grace to the clinic at 10pm because she had had diarrhea for the previous 4 days, and was very weak. The doctor examined Grace and found that she was very dehydrated, and had a severe case of diarrhea. He gave her some medicine, and admitted her for further observation. Two days later, Grace was feeling better and playing. Mr and Mrs. _______ were very relieved, and thanked the clinic doctor. The doctor gave Mr. And Mrs. ________ some advice on how Grace and the whole family could prevent themselves from getting diarrhea and other water borne diseases.

After reading the story, discuss these questions and write all answers on the flipchart:

1. How do you think Grace got diarrhea?
   Answers to look for:
   - Diarrhea can be caused by drinking contaminated water, eating contaminated food, or from contaminated hands going into the mouth, or indirectly from not washing hands before eating, after going to the toilet.
   - Cholera is a bacteria that is most often transmitted by contaminated water.

2. What signs and symptoms can a person get from diarrhea and cholera?
   Diarrhea – can result in weakness, dehydration
   Cholera – severe diarrhea, dehydration

3. What could have happened if the parents had delayed more in taking Grace to the clinic?
   She might have died

4. If the child has a mild case of diarrhea, what is the proper treatment?
   Oral rehydration solution. If the child doesn’t recover in 2 days, take the child to the clinic. If people say Clorin is the proper treatment, explain to them that Clorin is for treatment of water to prevent diarrhoea and not a treatment for diarrhoea. If the child has severe diarrhea, take the child immediately to the clinic. Give lots of fluids (treated water)
5. How do you think the parents could have prevented Grace from getting diarrhea?
   Make sure that the home drinking water is treated with Clorin to disinfect it.
   Use a closed container with a lid to store drinking water.
   Make sure that Grace washes her hands before eating and after going to the toilet.
   Prevent food from getting contaminated by the cook washing her/his hands before preparing food, and by covering leftover food.

6. What is the best way to prevent Cholera?
   Cholera is most commonly transmitted by contaminated water, so disinfecting your water is the best way to prevent cholera.
   Disinfect your water with Clorin, or boil your water.
   Use a closed container with a lid to store drinking water.
   Good sanitation – use toilets/latrines, keep environment clean.
   When people die of cholera, it is because of the severe dehydration from the diarrhea that is caused by the cholera bacteria. A person with severe diarrhea should be taken to the clinic immediately, and also given plenty of fluids (disinfected water).

7. If Grace got diarrhea from drinking contaminated water, what are the ways that the water could have gotten contaminated?
   From the pipe, in the well (at the source)
   By a dirty water container
   By a person scooping water out with an unclean cup or putting an unclean hand in the water

At the end of the discussion, you should summarize what the participants have said, and add any information that was not mentioned. Ask questions of the group that will get them to say the correct answers.

9AM CLORIN – THE SOLUTION (1 HR)

The Clorin Home Water Chlorination Product

Objective: Participants understand the benefits of Clorin and how to use Clorin.

Explain to the group that this component of the training is to help them understand what is Clorin. Hold up the product. Explain that Clorin is a chlorine solution. Chlorine is a chemical that will kill most bacteria in
water that cause disease and diarrhea, including cholera. Treating drinking water with Clorin is one of the best ways to prevent diarrhea and cholera.

The Clorin is sold for 500 kwacha per bottle. One bottle on average is enough for a family of 6 people for one month. The clinics and retail outlets buy Clorin for K350 kwacha. The K150 difference is for sales commission for the clinic sales agents, and trade margin for the retail outlets (use flip chart to explain if necessary). These prices are subsidized which means that SFH does not make a profit on them. The program is funded by donors, and Clorin is sold at a low price so that we can reduce the diarrhea and cholera cases in Zambia and improve people’s health.

Next explain that before you demonstrate how to dose Clorin, you will tell them about how to properly store drinking water. As discussed earlier, water can be contaminated in several ways. One of the most common ways that water can be contaminated is by storing water in an open bucket where people put their hands into the bucket to scoop water out. A person’s hands can easily contaminate water, even if it is already treated. So you must store your water in a closed container with a lid. Pour the water out instead of scooping it out.

Once you have filled your closed, narrow mouth container with water, you put Clorin into the container according to the directions. Only a small amount of Clorin is needed to disinfect your drinking water. Can someone tell me from the brochure, how much Clorin do I put into a 20L container?

- Fill inside ring of the lid with Clorin and pour into container.

That is correct. You fill the inside ring of the lid once with Clorin and then pour it into the container with the water. Then you close the container and shake it. Then you must wait for 30 minutes for the Clorin to kill all the germs before you can drink it.

Can anyone tell me how much Clorin do I put into a 2.5L container? A 5L container?

- Fill outside rim of lid once with Clorin.
- Fill outside rim of lid twice with Clorin.

In order for them to understand how to use the product better, let’s conduct the following exercise:

Split the group in to 3 groups by having them count off 1-2-3.
Explain to the three groups that this is the situation: Someone from their neighborhood has just bought this Clorin. They need your help in figuring out what it is and how to use it. Give each group a Clorin bottle and one container (different size to each group) and ask them to read the instructions and put the correct amount of Clorin into the container.

After they have agreed how much to put into the container, switch the containers until they have tried all three.

Then ask one member of each group to come to the front and correctly dose one container each. Ask the rest of the group if they are dosing it correctly.

Ask the group if they have any questions.

Then explain what will happen if they put too much Clorin in the water.

If someone puts too much Clorin in the water, no harm will result to anybody. The only result of putting too much Clorin in the water is that you will smell the Clorin, or the water will taste like chlorine. So if anyone ever complains that the taste or the smell changes after they put Clorin in the water, what do you tell them?

That they have probably overdosed their water. Explain to them how to correctly dose it.

Some people ask if you can put Clorin in a well to disinfect the whole well

No, this does not work. Do not pour Clorin down a well.

10 AM  REVIEW OF CONTENT (30 min)

Objective: Review of the content to this point and clarification of any content that is not clear.

Give everyone a slip of paper, or instruct them to find the blank piece of paper that is in their folder. Instruct them to write on the paper one thing they have learned and one question that they have.

Collect the papers, and read them to the class. Ask members of the class to answer the questions for the rest of the class and answer any yourself that others cannot answer.

Ask if there is anything else that is unclear, and break for tea.

TEA: 10am – 10:15am
10:15AM – COMMUNICATION – SELLING Clorin (1 Hr)

Objective: What and how to communicate the benefits and correct use of Clorin

Divide the group into 2-3 groups of three or four by counting off 1-2-3-4 (not more than three groups if possible). Tell them they are to develop a short skit that shows what are the most important points to tell a person when they are selling Clorin to a person. *(If the group is for retailers they should pretend they are going to sell Clorin to a customer. If the group is a drama, they are pretending they are educating the group about diarrhea, and trying to convince them to go to buy Clorin).*

Tell them that the skit should include what they think are the most important things that they should tell the customer, such as asking them if they know how you get diarrhea or cholera, and how to properly dose water to prevent diarrhea. Tell them to come up with the other important points that they need to tell the customer. The person playing the community member or customer is skeptical. This person must think of all the reasons possible, why they would not want to use Clorin (i.e. price, never treated water, my water is clean etc)

After the groups have finished, discuss the main points that they want to talk to the customer about. Ask them to tell you the points, and you write them on the flipchart.

The main points should be as follows – if any are missing after they finish telling you what they have thought of, then you should ask them questions so that they say what is missing:

1) Did they ask (not tell): How do you get diarrhea/cholera? *(Discussion of how diarrhea/cholera can be transmitted through contaminated water and get rid of any misconceptions)*

2) Did they ask (not tell): Do you know how you can prevent diarrhea/cholera? *(Discussion of disinfecting water with Clorin, storing water in a closed container, washing hands before eating, cooking, and after using toilet, covering food etc)*

3) Explain the product – what is Clorin, what does it do, and how do you use it properly *(i.e. Clorin is a solution that kills all germs in water that can cause diarrhea and cholera. Inner ring once for 20L container etc, shake and let rest for 30 minutes before drinking)*
4) Explain how to store the water safely (i.e. use a closed, narrow mouth container with a lid. Pour water out instead of scooping to avoid re-contamination)

5) Explain that water treated with Clorin is safe for adults and children. The taste and smell of the water will not change if Clorin is used correctly.

6) Explain that you can find Clorin in pharmacies, clinics, drug stores, and supermarkets for only K500.

7) Address any barriers to purchase or use
   - Too expensive
     (it’s cheaper in the long run than taking your child to the clinic for treatment. It can save your life by preventing cholera. It will save you time that you have to take off of work by taking your child to the clinic. It costs less than one glass of beer)
   - My water is safe because it looks clear and comes from the tap
     (Even tap water can be contaminated. The germs are too small to see, so even if the water looks clear, it can be contaminated. The city does not treat the water all the time, and it can get re-contaminated in the pipes anyway)
   - I have never treated my water. Why should I start now?
     (Has your child ever had diarrhea? It was probably from drinking contaminated water. Your water can have germs at any time. You should always treat your water.)
   - I only need to treat my water in the rainy season.
     (Your water can have germs that can cause diarrhea at any time of the year. Treat your water with Clorin all year round)

After the discussion, ask one group to perform their skit. Tell the rest of the class to watch for any of the main messages that were left out.

After the skit, ask the class to point out any messages that were left out.

11:15AM (If Neighborhood Health Committees or Clinics) GO OVER BOOK KEEPING FORMS (30 min)

11:45AM REVIEW OF EXPECTATIONS AND CONCLUSIONS (30 min)

Objective: Make sure the expectations and objectives of the course have been met.
Let’s review the essential messages about Clorin. What are some of the essential messages that you would want to tell a customer or community member about Clorin?

- Clorin will help prevent diarrhea and cholera in your family.
- Clorin will kill bacteria (germs) in your water that causes diarrhea, including cholera.
- Clorin should be dosed according to the instructions. Inner ring for 20L container, etc.
- Store your water in a closed container with a lid to avoid re-contamination.
- Even tap water or water that looks clear can have germs. All drinking water must be treated with Clorin.
- Diarrhea can be a problem all year round. Treat your water all year round, not just in the rainy season.
- Clorin can be found in clinics, pharmacies, drug stores, and supermarkets for just K500.
- Clorin is a prevention against diarrhea, NOT a treatment for diarrhea. Diarrhea is treated with oral rehydration solution.

Refer to the original expectations and objectives. Check them off to make sure they have been met.

Ask participants if there is anything that is unclear.

Ask the participants what they thought of the training and if they have suggestions for improvement or things they would like to know that were not covered.

Congratulate the participants and tell them that they should go out and actively try to educate people in their communities about diarrhea and cholera, and teach them to use Clorin to treat their water all year round.

Thank the participants. Give out certificates.