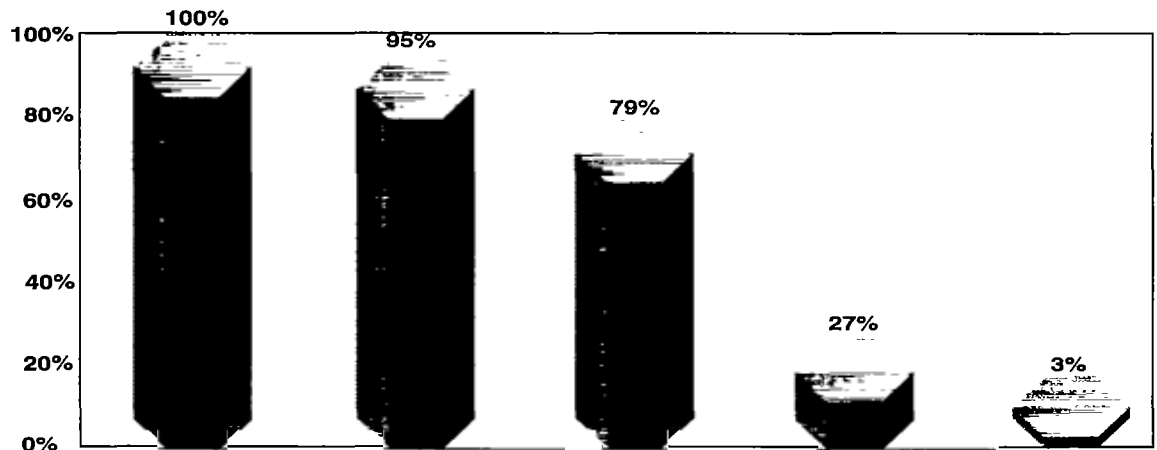


Library
IRC International Water
and Sanitation Centre
Tel.: +31 70 30 889 80
Fax: +31 70 35 899 84

REPORT ON THE BASELINE SURVEY AND QUALITATIVE ASSESSMENTS

February 1996



CARE
BANGLADESH

Sanitation and Family Education Resource (SAFER) Project

822-BD96-14902

**REPORT
ON
THE BASELINE SURVEY
AND
QUALITATIVE ASSESSMENTS**

February 1996

Report Prepared by
Md. Sharifuzzaman

Reviewed and Edited by
Florence Durandin
Afroza Ahmed
Afroza Akhter

Sanitation and Family Education Resource (SAFER) Project

LIBRARY IRC
PO Box 93190, 2509 AD THE HAGUE
Tel.: +31 70 30 689 80
Fax: +31 70 35 899 64

BARCODE: 14 902

LG:

822 B096



TABLE OF CONTENTS

ACKNOWLEDGEMENTS	iv
ACRONYMS	v
GLOSSARY	vi
EXECUTIVE SUMMARY	vii
1. INTRODUCTION.....	1
1.1 Background of the Project	1
1.2 Objectives of the Baseline Survey	1
1.3 Objective of the Qualitative Studies	2
1.4 Purpose of the Report	2
2. METHODOLOGY OF BASELINE.....	3
2.1 Description of the Project Area and Overview.....	3
2.2 Questionnaire Development	3
2.3 Key Variables collected Through The survey	3
2.4 Sample Design	4
2.5 Application of the Questionnaire and Field Data Collection.....	5
2.6 Data Management and Statistical Analysis	5
2.7 The Analysis Strategy: Identifying Problems and Setting Priorities	5
3. METHODOLOGY OF THE QUALITATIVE STUDIES.....	5
4. RESULTS OF THE BASELINE	6
4.1 General Description of the Study Households	6
4.2 Diarrhea Prevalence	7
4.3 Water Sources and Water Use Patterns	7
4.4 Access to Sanitation Facilities	9
4.5 Latrine Use and Feces Disposal	10
4.6 Environmental cleanliness and contamination	12
4.7 Knowledge on Diarrhea Prevention	13
4.8 Hand Washing Behavior	15

4.9	Food Hygiene	18
4.10	Diarrhea Treatment	19
4.11	Characteristics of the Tubewell Caretakers and Condition of the Tubewell	20
5.	FINDINGS FROM THE QUALITATIVE STUDIES	21
5.1	Observation on Latrine Use and Defecation Habit	21
5.2	Observation on Pond Water Use	21
5.3	Kitchen Observation	21
5.4	Tubewell Observation	21
5.5	Focus Group Discussion and Case Study on Pit Latrine Design.....	22
5.6	Case Study on Pit Latrine Design	22
5.7	Observation on Open Well	23
6.	COMPARATIVE ANALYSIS OF FINDINGS OF THE SAFE AND THE SAFER BASELINE SURVEY	24
7.	CONCLUSIONS AND RECOMMENDATIONS.....	27

LIST OF TABLES

1.	Survey Area Information	3
2.	Summary of Characteristics of the Study Households.....	7
3.	Diarrhea Prevalence Among Children under Five	7
4.	Summary of Water Source Selection	9
5.	Summary of Latrine Access	10
6.	Summary of Reported Defecation Sites	11
7.	Summary of Observed Environmental Cleanliness and Contamination.....	12
8.	Summary of Knowledge on Diarrhea Prevention.....	14
9.	Summary of Reported Hand Washing Times	16
10.	Summary of Hand Washing Technique.....	17
11.	Summary of Observed ASH/SOAP Available in Household	18
12.	Summary of Food Hygiene Behaviors.....	18
13.	Summary of Diarrhea Treatment.....	19
14.	Characteristics of the Tubewell Area and Caretakers.....	20

LIST OF FIGURES

1.	Summary of Environmental Contamination	13
2.	Summary of Knowledge of Diarrhea Prevention.....	15
3.	Summary of Hand Washing Technique	17
4.	Summary of Diarrhea Treatment.....	20

LIST OF ANNEXES

Annex-1	Map of the Study Area
Annex-2	Survey Questionnaire
Annex-3	Field Data Collection Team
Annex-4	References

ACKNOWLEDGEMENTS

At first we would like to express our deep sense of gratitude and thanks to Ms. Raquiba Akhter Jahan, former coordinator, SAFE/R project who took the initiative for developing such a survey report and assisted in designing the same.

We are thankful to Dr. Florence Durandin, Sector Coordination, Health and Population, CARE Bangladesh for her valuable guidance and feedback to this report at the initial stage in addition to her keen attention and interest in this report.

Mr. Hasanul Islam deserves special recognition for his enormous efforts for ensuring all the data entry and support in developing data entry program as well as for assistance in data management.

We extend our sincere thanks and appreciation to all SAFER staff members as noted below for their dedicated contributions through out survey.

Anjona Chakrobari
Archana Das
Chinu Prova Debi
Mita Barua
Monika Shom
Rinku Bhattacharjee
Sarwar Jahan
Shaheen Parvin
Shahin Jahan Chowdhury
Shamima Akter
Shelley Das
Md. Delwar Hossain
Md. Mahatabuddin
A K M Mahmud Hassan
A K M Zahidul Islam
Md. Sharifuzzaman
A M M Moniruzzaman
Alok Majumder
Sirajul Hoque

We wish to record our thanks and appreciation to the respondents of the survey in the selected project areas who provided us with the valuable information and extended their cooperation during the course of data collection to execute the survey.

Last but not the least, sincere thanks and regards also go to Afroza Ahmed, Afroza Akhter and Sharifuzzaman for their hard work for finalizing the report.

ACRONYMS

BNGOs	Bangladeshi Non-Government Organizations
DPHE	Department of Public Health Engineering
FGD	Focus Group Discussions
FT	Field Trainer
LGS	Labon, Gur Solution, a home made sugar-salt oral rehydration solution
NGOs	Non-Government Organizations
ORS	Oral Rehydration Solution
PRA	Participatory Rural Appraisal
SAFE	Sanitation and Family Education Pilot Project
SAFER	Sanitation and Family Education Resource Project
TA	Technical Assistance
WASH	Water Sanitation and Hygiene Project

GLOSSARY

Hanging Latrine	Elevated latrine structure with an open area below allowing feces to fall into a pond, ditch, or on the ground. Hanging latrines are typically built around the edge of a pond or over a ditch
Pit Latrine	A dug latrine with a 2 meter deep pit, a diameter of one and a half hands, a bamboo slab or squat area and a separate cover plate.
"Sanitary" Latrine	Similar to a pit latrine, but superior in construction, often made of brick and/or mortar, and with a larger pit.
Hygienic Waterseal Latrine	Similar to a sanitary latrine, but with a goose neck water seal slab/squat plate. Also called a "pour-flush" latrine.
Unhygienic Waterseal Latrine	Similar to a Hygienic waterseal latrine, but with a broken goose neck and faeces goes out in any way.
Hygienic Latrine	A latrine that effectively isolates feces from the environment, that is a "sanitary" water seal or pit latrine. Hanging latrines are not considered to be hygienic latrines. "Sanitary" water seal, or pit latrines with openings in the pits that allow faeces to drain out and contaminate the environment were classified as hanging latrines.
Fixed Defecation Site	A solution provided by community mothers as an alternative to open defecation by young children (3-5 years old) Consists of a shallow dug hole, two bricks and a stick.
Tubewell	A small diameter protected (sealed) well with a handpump attached.
Open Well	A larger diameter unprotected and shallow dug well. A bucket or similar utensil is used to collect water from an open well.

EXECUTIVE SUMMARY

The Sanitation and Family Education Resource (SAFER) Project started under the Health and Population Sector of CARE Bangladesh since July 1995. In SAFER project, there are two model sites (One in PM Khali union in Cox's Bazar Sadar Thana and the other in Khyachara union in Mirsharai thana) are maintaining as experimental sites for continuous testing of new methodologies, training materials and hands-on sharing the SAFER methodology with BNGOs. The main approach of SAFER project is providing Technical Assistance (TA) as well as training to partner NGOs on better programming issues for sanitation and hygiene programs.

The baseline information is collected from SAFER model sites through qualitative and quantitative surveys to identify key problems in hygiene behavior and key areas for intervention.

The specific objectives of the baseline survey were:

- ① To gather information about the community for documentation of existing knowledge, attitudes and practices related to water, sanitation and hygiene;
- ② To assess the needs of the community for the planned interventions; and
- ③ To compare evaluation indicators before and after the intervention dissemination in order to assess the relative effectiveness of the intervention.

The questionnaire was revised into final form through review and pre-testing based on the SAFE pilot baseline survey questionnaire. The key variables are included in the questionnaire information are variables such as socioeconomic and background, diarrhea among children under age five, water source, water storage and handling, access to latrine, latrine use and feces disposal, hand washing knowledge and behavior, and knowledge on diarrhea prevention, treatment and management.

A multi-stage cluster sample technique was used to select households for the survey. Clusters were defined as the tubewell catchment areas, that is those households under a single caretaker that use a specified tubewell nearby. A total of 30 clusters in each union were used in the sample design. Each cluster included 5 households plus the household of the tubewell caretaker totalling 6 households per cluster. Thus a total 360 households of two unions were included in the sample design. The statistical analysis was done using SPSS/PC⁺.

A combination of different qualitative techniques such as observations, case studies, key informant interviews, focus group discussions, participatory rural appraisal (PRA) were used in the survey.

The baseline survey data provided the following results:

General Description of the Study Households

Among the 360 households in both model sites, and there were no children less than 5 years of age in 20 tubewell caretaker's households. Among the remaining 340 households with children under five, 56% had one child, 35% had two children, and 9% had 3 or more children. Ninety five

percent families were Muslim and 5% were Hindu. Almost all mothers had no formal education (77%), 21% mothers had formal education from grade 1 to grade 9, and only 2% had secondary or higher education. Most of the households 94% were katcha in construction and 54% households had a tin or concrete roof.

Diarrhea Prevalence

Around 21% of atleast one child of below 5 years had diarrhea in the last 24 hours and around 36% of atleast one child of below 5 years had diarrhea over the last 2 weeks from the time of the survey conducted.

Water Sources and Water Use Patterns

Almost all respondent 359 used tubewell water for drinking except one household that exclusively used pond water for drinking, 59% households used tubewell water for cooking and 44% households obtained pond water for cooking.

Access to Sanitation Facilities

76% families had access to any type of latrine. Among those, the most commonly used type of latrines were unhygienic (unhygienic waterseal 8% and hanging latrine 74%) with relatively few hygienic latrines ("sanitary latrine" 2%, hygienic waterseal 14% and pit latrine 2%) and 29% families had access to a latrine that was shared with at least one other households.

Latrine Use and Feces Disposal

86% respondents reported that they used latrine for defecation while only 18% of respondents used hygienic latrine and most of them (88%) used unhygienic latrine. 71% men in the study households used latrine for defecation. Out of them 16% men used hygienic latrine and the rest used unhygienic latrine. 59% families with children over 5 years used latrine, 12% defecated in a hygienic latrine while almost 88% defecated in unhygienic latrine. Only 8% children between 3 to 5 years used a latrine and 4% children used fixed place for defecation. About 97% households demonstrated disposal of feces from the yard in an unhygienic fashion of those children under 5 who do not use fixed place/latrine and in 35% households the feces observed being left open.

Environmental cleanliness and contamination

Human feces were noticed in the yard in 22% households and garbages were observed in the yard of 31% households. Feces observed in one or more piles on the way to latrine in 50% households and 38% households had feces in one or more piles in its latrine structure.

Knowledge on Diarrhea Prevention

Seventy three percent mothers gave answers about any means to prevent diarrhea while 50% of the mothers could not give the correct answers about the means of diarrhea prevention. 28% of the mothers could cite atleast one correct means of prevention known while 23% of the mothers could cite two or more means of prevention known.

44% of the respondents had health knowledge on food hygiene, 6% on clean water, 10% on hand washing, 7% on sanitation. None of the respondents could tell anything about breast feeding.

Hand Washing Behavior

About the common times (i.e. when) the respondents washed their hands, the responses were as; before food serving (4%), before feeding children (2%), before eating (36%), after defecation (29%), after cleaning child's bottom (8%), and after disposal of child's feces (5%).

6% households had ash/soap near the kitchen, less than 1% households had ash/soap near the latrine while 12% households had ash/soaps available in places other than the kitchen or the latrine for hand washing purpose.

Food Hygiene

91% households were observed to use lid over food and 93% households used lid to cover drinking water. About 77% respondents reported that they used additional water (if needed) during cooking, out of them 52% used tubewell water and 48% used pond water as additional water during cooking.

Diarrhea Treatment

76% of the mothers reported that they used LGS once in their entire life while 18% mothers stated about the correct ingredients of LGS.

61% of the mothers reported that they gave ORS or home made LGS during the last episode of diarrhea, 21% respondents stated that they used traditional treatment, 58% applied homeopath treatment, 6% mothers did not give any treatment, 54% mothers continued breast feeding while 74% of the respondents continued normal food.

Based on these results, priorities for intervention include:

Diarrhea Prevalence

- Stress should be given on the possibility of the prevention of diarrhea.

Water: Water source and water use pattern

- Reinforce on using tubewell water for drinking
- Stress and focus on intervention that disseminates information on the increased risks of diarrhea due to using pond water especially for drinking purpose
- Target those people who are using a particular open well water that is treated as holy water and make them realize that water of that particular well should be treated as highly contaminated, like pond water. Get diarrheal cases as supportive to that statement in that particular community.

Sanitation: Access to Latrines and Use

- Use hygienic latrine
- Promote local hygienic latrine (pit latrine)
- Practice latrine use by the children of 3-5 years
- Practice fixed place for defecation by children under five
- Dispose feces in a sanitary fashion

Environmental Cleanliness and Contamination

- Keep environment clean and free from contamination
- Keep latrine (inside and outside) clean

Knowledge of Diarrhea Prevention

- Get an idea about the community people's existing knowledge on diarrheal prevention through Focus Group Discussion
- Enhance knowledge on diarrheal prevention

Hand Washing Behaviors

- Improve knowledge on when hand washing is important for health
- Focus on hand washing behavior

Food Hygiene

- Keep food and stored water covered

Diarrhea Treatment

- Give ORS/LGS during diarrhea
- Continue breastfeeding during diarrhea
- Continue normal food during diarrhea
- Focus on LGS preparation

1. INTRODUCTION

1.1 Background of the Project

From January 1993 to June 1995, CARE-Bangladesh implemented the Sanitation And Family Education (SAFE) project in the Chittagong district. SAFE evolved from a previous post cyclone (April 1991) relief effort WASH (Water and Sanitation/Hygiene) Project. The SAFE project focussed on hygiene and sanitation behavior change among the community people. This pilot project developed, tested and implemented a range of innovative extension and monitoring methodologies and approaches for behavior change programming. Within the first year of the pilot implementation, the project achieved impressive results in terms of behavior change and diarrhea prevalence reduction (Report on the SAFE Final Surveys, February 1995).

After the evaluation of the SAFE project, CARE-Bangladesh designed a project, SAFER (Sanitation and Family Education Resource), that drew heavily on the lessons learned and experience from SAFE. SAFER will support and strengthen efforts of Bangladeshi NGOs (BNGOs) to plan and implement high quality hygiene education programs as most of the BNGOs focus their water and sanitation programs on providing hardware to communities (latrines, tubewells). Few local NGOs include limited education activities as part of a Primary Health Care program, that are often provided in a traditional way and with inadequate community- extension skills.

In SAFER project, there are two model sites as experimental sites for continuous testing of new methodologies, training materials and hands-on sharing the SAFER methodology with BNGOs. The main approach of SAFER project is providing Technical Assistance (TA) as well as training to partner NGOs on better programming issues for sanitation and hygiene programs.

1.2 Objectives of the Baseline Survey

Baseline information was collected from the SAFER model sites to provide information to identify key problems in hygiene behavior and to identify key areas for intervention. The baseline survey was the primary means of collecting this information. In addition, baseline information collection helped analyze these problems and define important behavioral and cultural parameters.

In practice, the qualitative and quantitative information collection activities were not separate and sequential, but were integrated into a cycle to collect, analyse, and formulate questions that required further information.

The specific objectives of the baseline survey were:

- ① To gather information about the community for documentation of existing knowledge, attitudes and practices related to water, sanitation and hygiene;
- ② To assess the needs of the community for the planned interventions; and
- ③ To compare evaluation indicators before and after the intervention dissemination in order to assess the relative effectiveness of the intervention.

1.3 Objectives of the Qualitative Studies

The objectives of the qualitative studies were used to address the followings:

- ① To define questions, terminology, and response categories for the baseline survey instrument;
- ② To define the nature of the problems and to devise appropriate and effective interventions;
- ③ To answer questions arose out of the baseline survey;
- ④ To facilitate community participation in the process of defining the problems and finding solutions; and
- ⑤ To identify the influential individuals in the community considered by the community itself.

1.4 Purpose of the Report

This report is primarily meant to the general people, while it is most directly addressed to help the SAFER project staff to develop and refine interventions, implement the monitoring system, and to evaluate the project.

This report especially focuses on hygiene education behavior program. It particularly describes how the information is used on current beliefs and practices in the project communities in order to focus and develop SAFER hygiene education interventions.

2. METHODOLOGY OF BASELINE

2.1 Description of the Project Area and Overview

The SAFER model sites are located in Chittagong and Cox's Bazar districts. The Khyachara union of Mirsharai thana in Chittagong district and PM Khali union of Cox's Bazar sadar thana in Cox's Bazar district have been chosen as the two model sites.

Table 1

<u>District</u>	<u>Thana</u>	<u>Union</u>	<u>Population</u>	<u>Households</u>	<u>Tubewells</u>
Chittagong	Mirsharai	Khyachara	20,016	3413	803
Cox's Bazar	Cox's Bazar sadar	PM Khali	23,335	3326	662

2.2 Questionnaire Development

The questionnaire has been revised into final form through review and pre-test, based on the SAFE pilot baseline survey questionnaire. The principles of revision of the questionnaire included:

- collect only necessary information relevant to the baseline objectives;
- close and precode questions to the extent possible to facilitate data management and analysis;
- be consistent in questionnaire format and coding to decrease errors during information collection and data entry, and increase time efficiency;
- collect data by observation whenever practical, and otherwise decrease the possibility for misreporting by making the questions clear and precise, and asking a question in more than one way for internal consistency checks; and
- pretest before finalizing the questionnaire.

The questionnaire included questions on knowledge and practice. It also included spot observations and demonstrations.

2.3 Key Variables collected through the survey

- Socioeconomic and background variables
- Diarrhea prevalence in children under age 5
- Water source
- Water storage and handling
- Latrine access
- Latrine usage and feces disposal
- Environmental cleanliness
- Hygiene knowledge and behavior
- Diarrhea treatment knowledge and behavior

2.4 Sample Design

A multi-stage cluster sample technique was used to select households for the survey. Clusters were defined as tubewell catchment areas, that is those households under a single caretaker that use a specified tubewell nearby. A list of tubewells, tubewell caretakers, and number of user households for each tubewell was obtained from the DPHE, a local NGO, and WASH/CARE's records. These records were checked and revised in the field by the SAFER project staff. The number of user households per tubewell ranged from 6 to 34 (those with less than 6 households were excluded from the sample). A total of 30 clusters in each union were used in the sample design. Each cluster included 5 households and the household of the tubewell caretaker totalling 6 households per cluster. Thus a total 360 households of two unions were included in the sample design.

The sample was taken by listing and numbering all the tubewell areas in one cell sequentially. Then 30 cluster was chosen randomly. Random numbers were generated using Epistat computer software.

Selection criteria for the survey of user households were:

- Those households that used exclusively the identified tubewell within the selected cluster.
- There was at least one child less than 5 years (60 months) of age living in each household at the time of the survey.

2.5 Application of the Questionnaire and Field Data Collection

The household questionnaire was applied to 6 households in each selected cluster. That is, the caretaker's household and the 5 tubewell user households. The questionnaire was administered by 12 field staff and 6 supervisors. These six supervisors managed the quality control during data collection. Data were collected in the surveyed area from November 02 till November 05, 1996 and from November 14 till November 15, 1996. Thus total six days were required for data collection.

2.6 Data Management and Statistical Analysis

Questionnaire data were entered daily during field data collection. The data were entered by a trained and experienced data manager using Foxpro 2.5 program. The range and consistency checks were done at the time of data entry. The Data entry was completed within two days of completion of the fieldwork. The statistical analysis was done using SPSS/PC+.

2.7 The Analysis Strategy: Identifying Problems and Setting Priorities

The SAFER approach in the model sites was to focus on key behaviors that were strongly associated with diarrhea and to build up current behaviors and practices in the community. The analysis strategy was, therefore, to find the frequency of "ideal" hygiene behaviors in the community. Frequencies yielded information such as "how something common or frequent" was existent in the community like how many households had latrines of a specific type, how many mothers were familiar with the prevention of diarrhea, etc. The, priority behaviors for intervention were then further refined.

3. METHODOLOGY OF THE QUALITATIVE STUDIES

A combination of the following qualitative techniques such as Observations, Case studies, Key Informant Interviews, Focus Group Discussions and Participatory Rural Appraisal (PRA) mapping were used in the survey. Each of these methods are briefly described below :

Observation involved watching and recording particular behaviors in specific places, such as water collection from a specific tubewell for a set period of time at different intervals in a day. These observations could be structured or un-structured. In some cases a check list was prepared and spot checks were made at different sites. Instruments were designed to allow the observers to record what they saw.

Case Study was a qualitative research method that provided a detailed analysis of a single "case". A case study tried to give the "whole story" of a particular event or situation. A case study could be as broad as a certain community, a culture, or (in this case) selected household members that were involved in a sanitation and hygiene education program.

Key informants were individuals who had knowledge about a particular aspect of culture and were able to communicate this. Thus, the caretaker of a tubewell might have been well-informed about water collection, while a mother might have been well-informed about disposal of infant feces. Individuals varied in the type and level of knowledge.

Focus Group Discussions (FGD) involved interviewing of a group of 6-10 individuals who were not previously known to each other, but shared a common interest. For example, a focus group discussion with female tubewell caretakers about the water use. The group context allowed for new issues to be raised, and the participants stimulated each other to discuss the topic.

Participatory Rural Appraisal (PRA)/ Community Mapping : *Community Mapping* was a method that involved asking groups of respondents from a specific locality to draw a map using locally available resources such as a mud floor, beans and seeds or whatever was appropriate and easy to manipulate. Thus, the construction of a map of a locality could be the focal point for discussions about the place and its community. It was a method that could rapidly yield information about an area and its population.

For qualitative assessments no scientific calculation was done for sampling. Considering SAFER resources and time availability, the qualitative studies were done as per need and recommendations came out from the staff workshop based upon the quantitative findings.

The analysis strategy of the qualitative assessments was to find out current beliefs, norms and attitudes existing in the community in relation to the perfect hygiene behaviors. For example, during observation of tubewell site kolshi was not covered by lid at the time of moving with water, hands were not washed with sop/ash/mud after defecation etc.

4. RESULTS OF THE BASELINE

4.1 General Description of the Study Households

The SAFER baseline survey included 360 households in both model sites, and there were no children less than 5 years of age in 20 tubewell caretaker's households. Among the remaining 340 households with children under five, 56% had one child, 35% had two children, and 9% had 3 or more children. Ninety five percent families were Muslim and 5% were Hindu. Almost all mothers had no formal education (77%), 21% mothers had formal education from grade I to grade 9, and only 2% had secondary or higher education. Most of the households 94% were katcha in construction and 54% households had a tin or concrete roof.

Table 2

SUMMARY OF CHARACTERISTICS OF THE STUDY HOUSEHOLDS			
<u>Characteristic</u>	<u>Percent of Households</u>		
	<u>Overall</u>	<u>PM Khali</u>	<u>Khyachara</u>
Number of children 0 to 5 years of age ¹			
One	56%	46%	66%
Two	35%	40%	29%
Three or more	9%	14%	4%
Religion			
Muslim	95%	97%	93%
Hindu		5%	3%
Khyachara			7%
Respondent's (Mother's) formal schooling			
None	77%	82%	72%
Grade 1 to 4	7%	5%	8%
Grade 5 to 9	14%	13%	15%
secondary or more	2%	0	4%
House type			
Wall construction			
Katcha	94%	90%	98%
Pucca or semi-pucca	6%	6%	10%
Roof construction			
Straw	46%	46%	53%
Tin/concrete	54%	54%	47%

n = 360, 180, 180 (Overall, PM Khali, Khyachara), unless stated otherwise			
¹ n= 340, 177, 163			

4.2 Diarrhea Prevalence

Around 21% of atleast one child of below 5 years had diarrhea in the last 24 hours and around 36% of atleast one child of below 5 years had diarrhea over the last 2 weeks from the time of the survey conducted.

Table 3

DIARRHEA PREVALENCE AMONG CHILDREN UNDER FIVE			
<u>Household prevalence</u>	<u>Percent of Households</u>		
	<u>Overall</u>	<u>PM Khali</u>	<u>Khyachara</u>
Diarrhea in a child in the household within the <u>previous 24 hours</u>	21%	25%	17%
Diarrhea in a child in the household within the <u>previous 2 weeks</u>	36%	40%	31%
----- n= 340, 177, 163 (Overall, PM Khali, Khyachara)			

4.3 Water Sources and Water Use Patterns

Almost all respondent 359 ($\approx 100\%$) used tubewell water for drinking except one household that exclusively used pond water for drinking, 59% households used tubewell water for cooking and 44% households obtained pond water for cooking, 34% families used tubewell water for bathing and 74% used pond water. While 44% families used tubewell water for washing utensils, 68% families used pond water for washing utensils.

Table 4

SUMMARY OF WATER SOURCE SELECTION				
<u>Water Source</u>	<u>Percent of Households</u>			
	<u>Drinking</u>	<u>Cooking</u>	<u>Bathing</u>	<u>Wash Utensils</u>
Tubewell				
Overall	100%	59%	34%	44%
PM Khali	100%	98%	65%	70%
Khyachara	99%	19%	3%	17%
Pond				
Overall	<1%	44%	74%	68%
PM Khali	-	3%	50%	40%
Khyachara	<1%	85%	98%	96%
Open Well				
Overall	1%	1%	1%	
PM Khali	-	-	1%	<1%
Khyachara	-	1%	-	<1%

n= 360, 180, 180 (Overall, PM Khali, Khyachara)
Note: The percentage add to more than 100% for each water use column because some households use more than one source. No reported used is indicated by "-".

4.4 Access to Sanitation Facilities

76% families had access to any type of latrine. Among those, the most commonly used type of latrines were unhygienic (unhygienic waterseal 8% and hanging latrine 74%) with relatively few hygienic latrines ("sanitary latrine" 2%, hygienic waterseal 14% and pit latrine 2%) and 29% families had access to a latrine that was shared with at least one other households.

Table 5

SUMMARY OF LATRINE ACCESS			
<u>Service</u>	<u>Percent of Households</u>		
	<u>Overall</u>	<u>PM Khali</u>	<u>Khyachara</u>
Latrine Access¹			
None	24%	40%	8%
Any type of latrine	76%	60%	92%
Ownership			
Private 71%	71%	72%	
Shared 29%	29%	28%	
Latrine Type			
Hygienic Latrine*	18%	13%	22%
Unhygienic Latrine	82%	87%	78%
Latrine Type			
Hanging Latrine	74%	80%	69%
Unhygienic Waterseal Latrine	8%	7%	9%
Hygienic Water seal Latrine	14%	9%	18%
"Sanitary" Latrine	2%	2%	2%
Pit Latrine	2%	2%	2%

¹ n=360, 180, 180 (Overall, PM Khali, Khyachara) unless stated otherwise n=274, 108, 166 * Hygienic Water Seal, Pit, or "Sanitary Latrine"			

4.5 Latrine Use and Feces Disposal

86% respondents reported that they used latrine for defecation while only 18% of respondents used hygienic latrine and most of them (88%) used unhygienic latrine.

71% men in the study households used latrine for defecation. Out of them 16% men used hygienic latrine and the rest used unhygienic latrine.

59% families with children over 5 years used latrine, 12% defecated in a hygienic latrine while almost 88% defecated in unhygienic latrine.

Only 8% children between 3 to 5 years used a latrine and 4% children used fixed place for defecation.

Table 6

SUMMARY OF REPORTED DEFECCATION SITES				
<u>Defecation Site</u>	<u>Woman</u>	<u>Man</u>	<u>Child >5¹</u>	<u>Child 3-5²</u>
Latrine				
Overall 86%	71%	59%	8%	
PM Khali	75%	53%	48%	4%
Khyachara	97%	88%	70%	13%
Fixed Place				
Overall <1%	-	3%	4%	
PM Khali	<1%	-	3%	-
Khyachara	-	-	3%	8%
Woods/Bushes/Field				
Overall 8%	11%	11%	12%	
PM Khali	14%	19%	14%	9%
Khyachara	1%	3%	8%	15%
Pond/River/Canel				
Overall-	3%	4%	5%	
PM Khali	-	4%	5%	7%
Khyachara	-	3%	2%	2%
Yard				
Overall-	-	<1	27%	
PM Khali	-	-	1%	35%
Khyachara	-	-	-	18%
No Fixed Place				
Overall 6%	7%	22%	45%	
PM Khali	10%	14%	27%	45%
Khyachara	2%	<1%	17%	44%

n= 360, 180, 180 (Overall, PM Khali, Khyachara)				
¹ n=289, 146, 143				
² n=218, 120, 98				

About 97% households demonstrated disposal of feces from the yard in an unhygienic fashion of those children under 5 who do not use fixed place/latrine and in 35% households the feces observed being left open.

4.6 Environmental cleanliness and contamination

The household environment was contaminated. Human feces were noticed in the yard in 22% households and garbages were observed in the yard of 31% households.

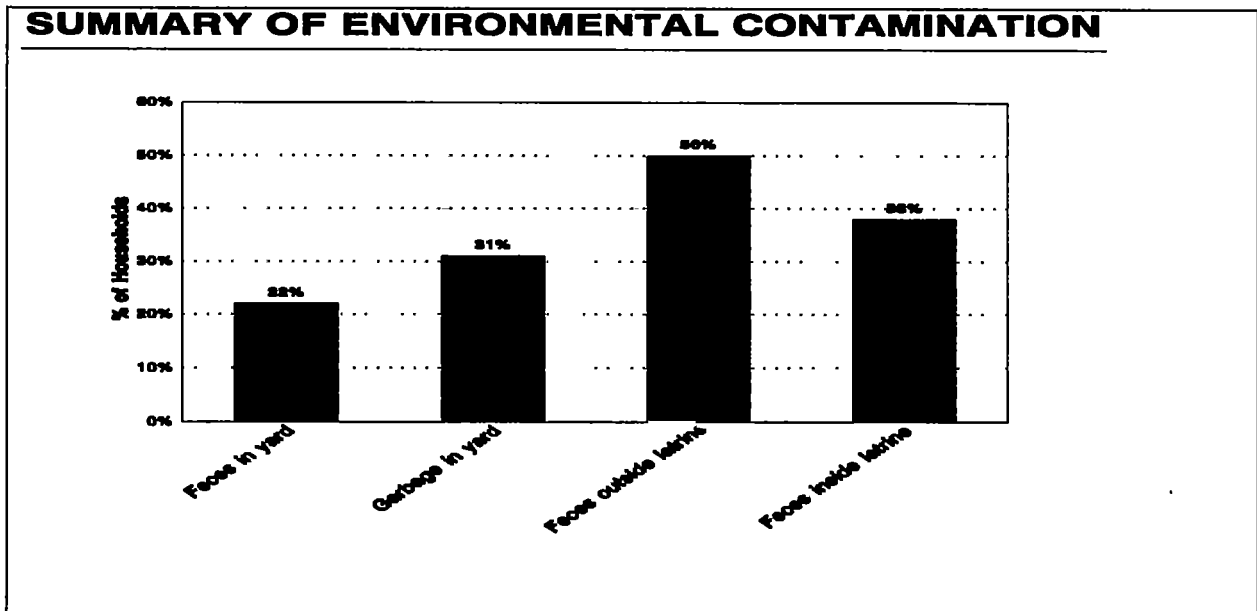
There were feces observed in one or more piles on the way to latrine in 50% households and 38% households had feces in one or more piles in its latrine structure.

Table 7

Observation	Percent of Households		
	<u>Overall</u>	<u>PM Khali</u>	<u>Khyachara</u>
Feces in the yard	22%	37%	7%
Garbage in the yard	31%	47%	15%
Feces outside the latrine ¹	50%	62%	39%
Feces inside the latrine ²	38%	50%	29%

n=360, 180, 180 (Overall, PM Khali, Khyachara), unless stated otherwise
¹n=274, 108, 166
²n=274, 108, 166

Figure 1



4.7 Knowledge on Diarrhea Prevention

Seventy three percent mothers gave answers about any means to prevent diarrhea while 50% of the mothers could not give the correct answers about the means of diarrhea prevention. 28% of the mothers could cite at least one correct means of prevention known while 23% of the mothers could cite two or more means of prevention known.

44% of the respondents had health knowledge on food hygiene, 6% on clean water, 10% on hand washing, 7% on sanitation. None of the respondents could tell anything about breast feeding.

Table 8

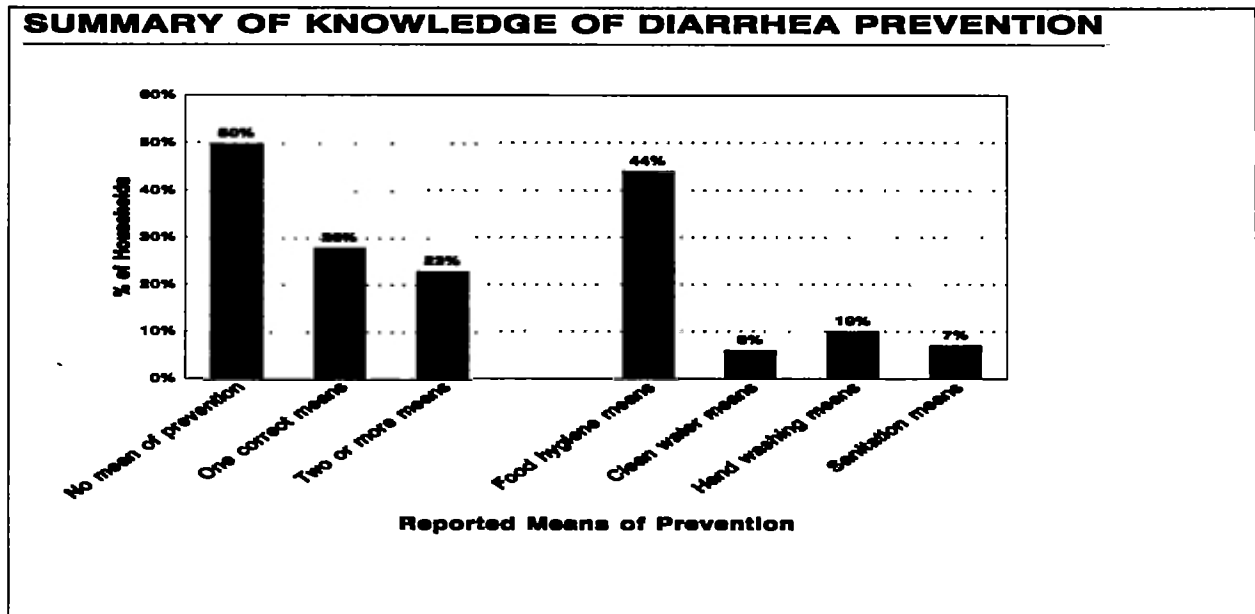
SUMMARY OF KNOWLEDGE ON DIARRHEA PREVENTION			
Means of Prevention Mentioned	<u>Percent of Households</u>		
	<u>Overall</u>	<u>PM Khali</u>	<u>Khyachara</u>
Food Hygiene ¹	44%	38%	50%
Clean Water ¹	6%	3%	9%
Hand Washing ¹	10%	7%	14%
Sanitation ¹	7%	6%	8%
Breastfeeding -	-	-	
No means of prevention	50%	58%	41%
One correct means of prevention ²	28%	27%	29%
Two or more means of prevention ²	23%	15%	30%

n=360, 180, 180 (Overall, PM Khali, Khyachara)

¹ Mentioned at least one related means of diarrhea prevention

² Mentioned all 5 areas (Food Hygiene, Clean Water, Hand Washing, Sanitation and breastfeeding)

Figure 2



4.8 Hand Washing Behavior

About the common times (i.e. when) the respondents washed their hands, the responses were as, a) regularly wash hands before food preparation or cooking (22%), b) before food serving (4%), c) before feeding children (2%), d) before eating (36%), e) before praying (27%), f) after eating (19%), g) after defecation (29%), h) after cleaning child's bottom (8%), i) after disposal of child's feces (5%), and j) after handling animal feces (16%).

Table 9

SUMMARY OF REPORTED HAND WASHING TIMES			
<u>Hand Washing Times (When)</u>	<u>Percent of Households</u>		
	<u>Overall</u>	<u>PM Khali</u>	<u>Khyachara</u>
Before food preparation or cooking	22%	29%	15%
Before food serving	4%	5%	3%
Before feeding children	2%	2%	2%
Before eating	36%	41%	32%
Before praying	27%	42%	12%
After eating	19%	20%	18%
After defecation	29%	23%	35%
After cleaning the child's bottom	8%	9%	7%
After disposal of child's feces	5%	3%	6%
After handling animal feces	16%	17%	14%
No times mentioned*	35%	35%	35%
One time mentioned*	47%	48%	46%
Two times mentioned*	16%	14%	18%
Three times mentioned*	2%	3%	1%

n= 360, 180, 180 (Overall, PM Khali, Khyachara)
* 6 Hand Washing Times: Before food serving/handling; before eating; before feeding children; after defecation; after cleaning the child'd bottom; and after disposal of children's feces.

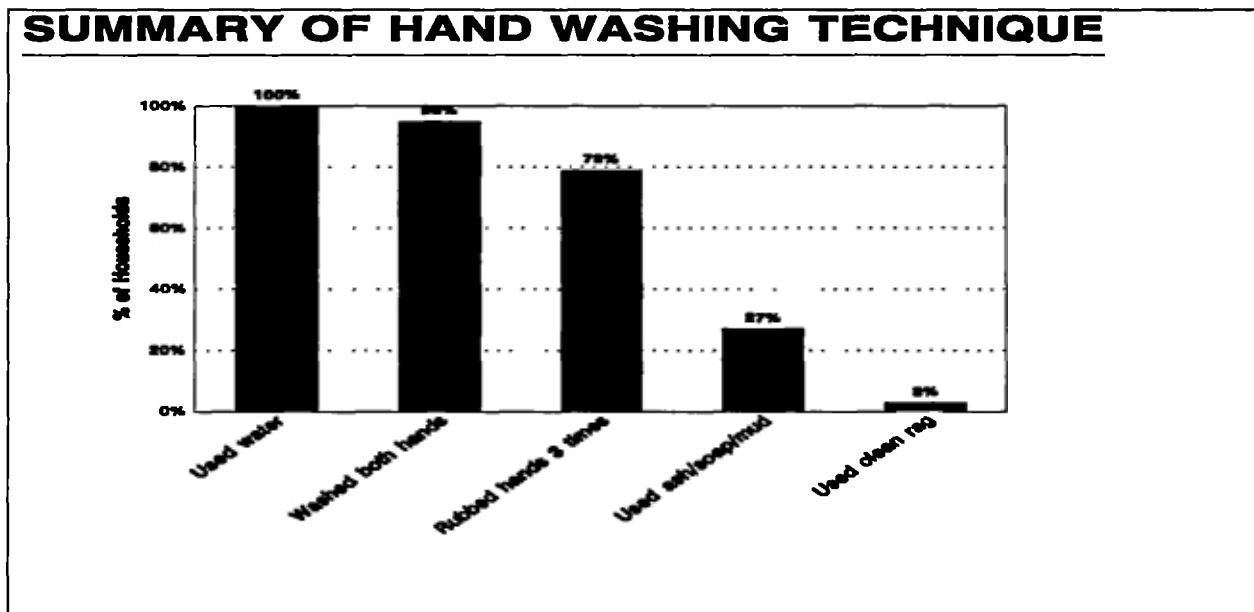
When the respondents were asked to demonstrate how they wash their hands, 88% respondents demonstrated their hand washing technique. Out of them almost all respondents used water, among them, 95% washed both hands, 79% rubbed hands at least for 3 times, 27% used ash/soap/mud, and only 3% used clean rag to dry up their hands while 88% respondents used sari/unclean rag to dry up hands.

Table 10

SUMMARY OF HAND WASHING TECHNIQUE			
Demonstrated Technique	<u>Percent of Households</u>		
	<u>Overall</u>	<u>PM Khali</u>	<u>Khyachara</u>
Used water	100%	100%	100%
Washed both hands	95%	97%	93%
Rubbed hands three times	79%	74%	84%
Used ash/soap/mud	27%	24%	31%
Used clean rag for hand drying	3%	3%	3%
All of the above areas demonstrated	2%	1%	3%

n=315, 160, 155 (Overall, PM Khali, Khyachara)

Figure 3



Ash/Soaps were available in few households in different places. 6% households had ash/soap near the kitchen, less than 1% households had ash/soap near the latrine while 12% households had ash/soaps available in places other than the kitchen or the latrine.

Table 11

SUMMARY OF OBSERVED ASH/SOAP AVAILABLE IN HOUSEHOLD			
<u>Characteristic</u>	<u>Percent of Households</u>		
	Overall	PM Khali	Khyachara
Ash/soap available in household			
Near Kitchen	6%	3%	9%
Near Latrine	<1%	-	<1%
Other place	12%	9%	14%

n= 360, 180, 180 (Overall, PM Khali, Khyachara)			

4.9 Food Hygiene

91% households were observed to use lid over food and 93% households used lid to cover drinking water. About 77% respondents reported that they used additional water (if needed) during cooking, out of them 52% used tubewell water and 48% used pond water as additional water during cooking.

Table 12

SUMMARY OF FOOD HYGIENE BEHAVIORS			
<u>Characteristic</u>	<u>Percent of Households</u>		
	<u>Overall</u>	<u>PM Khali</u>	<u>Khyachara</u>
Observation:			
Food was kept covered	91%	87%	96%
Drinking water was covered	93%	92%	94%
Reported Behavior:			
Add water at the end of cooking	77%	72%	82%
Add tubewell water ¹	52%	93%	15%
Add pond water ¹	48%	6%	84%

n=360, 180, 180 (Overall, PM Khali, Khyachara)			
¹ n=277, 129, 148			

4.10 Diarrhea Treatment

76% of the mothers reported that they used LGS once in their entire life while 18% mothers stated about the correct ingredients of LGS.

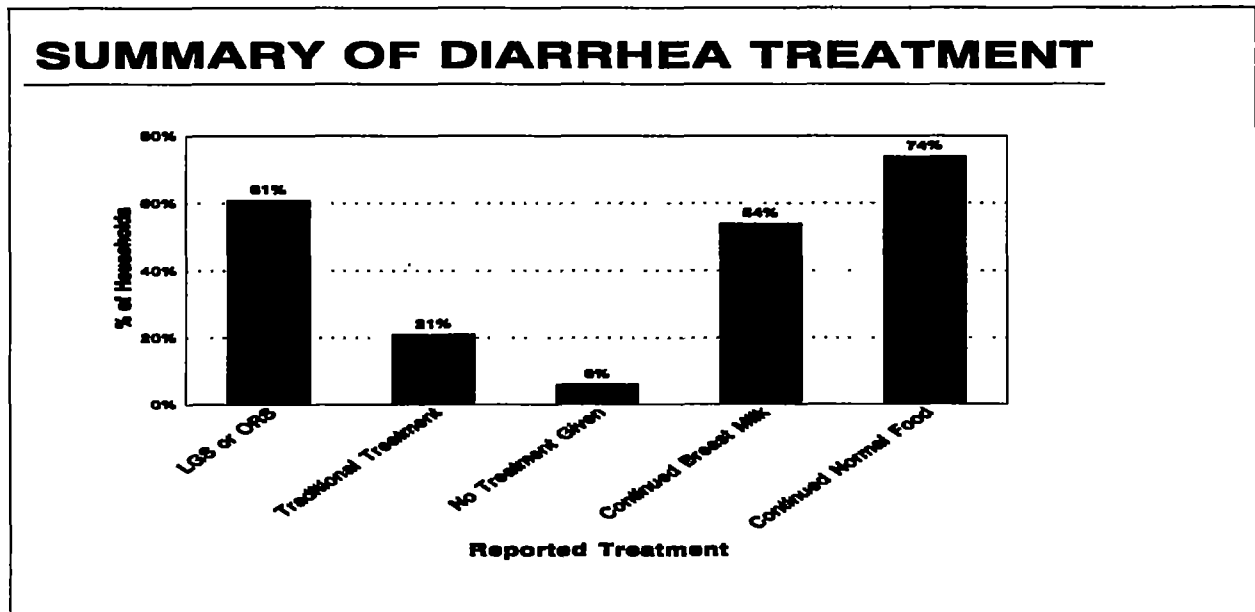
61% of the mothers reported that they gave ORS or home made LGS during the last episode of diarrhea, 21% respondents stated that they used traditional treatment, 58% applied homeopath treatment, 6% mothers did not give any treatment, 54% mothers continued breast feeding while 74% of the respondents continued normal food.

Table 13

Characteristic	Percent of Households		
	Overall	PM Khali	Khyachara
Reported treatment of the last episode of Diarrhea: ¹			
Gave LGS or ORS	61%	57%	64%
Traditional Treatment	21%	7%	35%
Continued breastfeeding	54%	55%	52%
Continued normal food	74%	76%	72%
No treatment given	6%	11%	1%
Knowledge ² :			
Correct ingredients and quantities to make LGS	18%	9%	28%

¹ n=340, 177, 163 (Overall, PM Khali, Khyachara)			
² n=360, 180, 180			

Figure 4



4.11 Characteristics of the Tubewell Caretakers and Condition of the Tubewell
Table 14

CHARACTERISTICS OF THE TUBEWELL AREA AND CARETAKERS	
<u>Characteristic</u>	<u>Percent of Tubewell Areas or Caretakers</u>
Sex	
Male	65%
Female	35%
Caretaker Selection	
WASH 3%	
DPHE	55%
Others 42%	
Caretaker Has Wrenches for Maintenance	47%
Caretaker Received Any Training	7%
Tubewell Has a Platform	82%
Tubewell surrounding area was clean	40%
Ash or Soap Available for Hand Washing	2%
Tubewell Functioning at the Time of the Survey	97%

5. FINDINGS FROM THE QUALITATIVE STUDIES

5.1 Observation on Latrine Use and Defecation Habit

- ☞ Latrines were dirty
- ☞ Soap/ash/mud was not used for washing hands after defecation
- ☞ Sanitation knowledge and practice was poor
- ☞ Children feces were left open and spreading
- ☞ Unsanitary feces disposal
- ☞ Mothers did not look after their children during/after defecation
- ☞ Latrines were connected with pond

5.2 Observation on Pond Water Use

- ☞ Washed rice with the pond water
- ☞ Washed clothes in the pond
- ☞ Children washed their bottom in the pond
- ☞ Cattle heads were bathed/cleaned up in the pond
- ☞ People gurgled with the pond water

5.3 Kitchen Observation

- ☞ Kitchen inside was dirty
- ☞ Bad smell (odor) was coming out
- ☞ Did not add water at the end of cooking
- ☞ Wiped up hands with sari
- ☞ Rubbed beetle leaf with sari
- ☞ Insufficient light inside the kitchen
- ☞ Used tubewell water to wash vegetables
- ☞ Used dirty (unwashed) Lid
- ☞ Some kolshies were without lid (uncovered)
- ☞ Plates not washed before serving food
- ☞ Chickens coming inside the kitchen

5.4 Tubewell observation

- ☞ Tubewell was adjacent to the dirty pond
- ☞ Water was blocked near the tubewell
- ☞ Tubewell drain was connected with the ponds
- ☞ Kolshi was not covered by lid during moving with water
- ☞ Inside the kolshi was not washed
- ☞ Some women washed utensils
- ☞ Children drank water from the tubewell without washing their pot
- ☞ Did not wash hands before drinking water from the tubewell
- ☞ Did not wash hands after cleaning children's bottom

5.5 Focus Group Discussion and Case Study on Pit Latrine Design

Objective :

- ✿ To identify the appropriate design for pit latrine for the community people
- ✿ To identify the ways of teaching the community people about technique of making pit latrine designed & made by some individuals of the same community.
- ✿ To identify the way of long term use of pit latrine

Findings : A total 12 women of two unions participated in the focus group discussion and case study. The detail was as follows :

Observations :

- ☞ No assistance or knowledge was received from any organization regarding how to build up a pit latrine.
- ☞ The master (husband) of the house decided to build up the pit latrine. He made the latrine by himself with the assistance of his son.
- ☞ The latrine was not built out of the realization of environmental and/or physical safety, rather due to scarcity of land in compared to the number of family members in a single household, pit latrine was built out of common sense.
- ☞ Before using pit latrine for defecation, the members of the household used to defecate any where convenient (e.g. the men used to defecate in the place they used to work and women used to make small hole near their house for this purpose and this hole used to be uncovered). As a result bad odor used to come out from the nearby hole.
- ☞ The latrine design was "a 4/5 hands deep hole and 4 hands in diameter, Bamboo slab being covered by polithin paper, Soil was stored like Plinth over the bamboo slab, Two bricks were placed on the two sides of the hole (crouching), bamboo was used for fencing, Latrine door was made of gunny bag and Roof was made of bamboo and plastic.
- ☞ Rain water used to drip down inside the hole, sometime rain water could not pass through the covered hole (mouth)
- ☞ It took 2/3 days and an amount of Tk. 280/- to Tk. 500/- to construct such latrine.
- ☞ The built latrine lasts for one year or more.
- ☞ There was only one such latrine within and around the community
- ☞ Those who were living in the hilly area used to defecate on the hill side
- ☞ Never disseminated information to other community people on how and/or why to make pit latrine
- ☞ Despite of such pit latrine faced problem in rainy season
- ☞ Latrine hole got filled up in the rainy season

Recommendations : Based on the observations the following recommendations were made:

- It is good to defecate in one place rather than in different places
- Using pit latrine prevents spreading bad smell

- Latrine should be shifted after being filled up by feces
- Latrine should not be in high place
- Using open latrine causes bad smell and disease.
- Disseminate information on the process of making pit latrine to others in the community

5.7 Observation on Open Well :

Objective : To identify how community people use open well water

Findings through observation without asking:

- ☞ Inside and outside of the open well was made of concrete
- ☞ 60 women (most of them were at their mid 30s) carried out water with kolshi from the open well
- ☞ 17 women did not have lid on their kolshi while women had lid over their kolshi
- ☞ 25 women had clean lid for their kolshi
- ☞ All lid made of coconut shell (aicha)
- ☞ No woman was seen to wash kolshi
- ☞ Nobody washed their hands, legs or mouth
- ☞ Both (Inside and outside) ten kolshis were clean
- ☞ They took water by dipping down the kolshi into the well
- ☞ Open well water was used only for household task and for no other reasons

Findings through asking questions after observation:

- ☞ The open well water was used for cooking and drinking purposes
- ☞ Many families used to come from distant areas to take well water for drinking and cooking purposes
- ☞ The tubewell water was not used for drinking or cooking because of getting smell of iron in the water
- ☞ The open well water was being used for drinking & cooking by generations
- ☞ Every one (Hindu and Muslim) held their respective religious belief with that open well as holy water and that no disease could attack if use that well water

6. COMPARATIVE ANALYSIS OF FINDINGS OF THE SAFE AND THE SAFER BASELINE SURVEY

INDICATOR	Percentage of Households			
	SAFE Model Sites (May, 93)		SAFER Model Sites (November, 95)	
	Anowara	Sitakunda	Cox' Bazar	Mirsharai
KNOWLEDGE OF DIARRHEA PREVENTION				
No means of prevention known	53%	38%	58%	41%
One correct mean known	20%	11%	27%	29%
Two or more means known	21%	8%	16%	30%
Food hygiene means known	36%	17%	37%	50%
Clean water means known	6%	2%	3%	9%
Hand washing means known	12%	6%	8%	14%
Sanitation means known	0%	1%	7%	8%
REPORTED DIARRHEA TREATMENT				
Gave LGS or ORS	88%	61%	57%	63%
Traditional treatment	21%	4%	7%	35%
Medicine/pharmacy/homeopath	49%	64%	63%	53%
No treatment given	1%	4%	11%	1%
Continued breastfeeding	74%	93%	55%	52%
Continued normal food	68%	75%	76%	72%
REPORTED HAND WASHING TIMES				
Before food serving/handling	13%	7%	5%	4%
Before eating	40%	41%	41%	32%
Before feeding children	9%	4%	2%	2%
After defecation	47%	23%	23%	35%
After cleaning the child's bottom	26%	9%	9%	7%
After disposal of child's feces	24%	10%	3%	6%

INDICATOR	Percentage of Households			
	SAFE Model Sites (May, 93)		SAFER Model Sites (November, 95)	
	Anowara	Sitakunda	Cox' Bazar	Mirsharai
HAND WASHING TECHNIQUE				
Used water	100%	97%	100%	99%
Washed both hands	92%	95%	97%	94%
Rubbed hands at least 3 times	80%	61%	74%	84%
Used ash/soap/mud	27%	14%	24%	31%
Used clean rag	10%	2%	3%	3%
ASH/SOAP AVAILABLE IN HOUSEHOLD	2%	3%	12%	23%
WATER SOURCE SELECTION				
Tubewell water used for drinking	99%	99%	100%	99%
Tubewell water used for cooking	19%	54%	98%	19%
Pond water used for drinking	2%	2%	0	<1%
Pond water used for cooking	82%	51%	3%	85%
OBSERVED LATRINE ACCESS				
None	11%	31%	40%	8%
Any type of latrine	89%	69%	60%	92%
Hygienic latrine	14%	21%	8%	19%
Unhygienic latrine	75%	48%	52%	73%
OBSERVED LATRINE TYPE				
Hanging Latrine	75%	48%	80%	69%
Unhygienic Waterseal Latrine	-	-	7%	10%
Hygienic Waterseal Latrine	9%	15%	9%	18%
"Sanitary" Latrine	4%	5%	2%	1%
Pit Latrine	1%	1%	2%	2%

INDICATOR	Percentage of Households			
	SAFE Model Sites (May, 93)		SAFER Model Sites (November, 95)	
	Anowara	Sitakunda	Cox' Bazar	Mirsharai
REPORTED LATRINE USE				
Mother (respondent) usually defecates in a latrine	86%	89%	75%	97%
Man usually defecates in a latrine	69%	78%	53%	88%
Children > 5 years usually use a latrine	48%	55%	48%	70%
Child 3 - 5 years of age usually defecates in a <u>latrine</u>	15%	9%	4%	13%
Child 3 - 5 years of age usually defecates in a <u>fixed place</u>	1%	3%	0	8%
OBSERVED ENVIRONMENTAL CLEANLINESS				
Feces lying inside latrine structure	56%	63%	50%	30%
Feces about outside latrine structure	76%	63%	65%	40%
Garbage in the yard	62%	92%	47%	15%
OBSERVED FOOD HYGIENE BEHAVIORS				
Food is kept covered in household	92%	93%	87%	96%
Drinking water is kept covered in household	94%	95%	92%	94%
DIARRHEA RATE				
Diarrhea in a child in the HH with in the <u>previous 2 weeks</u>	50%	44%	40%	31%
Diarrhea in a child in the HH with in the <u>previous 24 hours</u>	23%	19%	25%	17%

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 Characteristics of the Study Households:

- The study area and study households were sufficiently representative of Bangladesh based on the general lessons learned in SAFER that might be useful in other areas of the country. The SAFER emphasised on key behaviors for intervention rather than on locality and time (season). However, the interventions were prioritized based on geographical locations.

The following recommendations were made based on the findings :

7.2 Diarrhea Prevalence :

- The rate of Diarrhoea prevalence among children under 5 years is 36%. The reason for such a low rate of prevalence might have been that the survey was conducted in November, 1995 during the winter season. While the diarrhea prevalence rate is higher during summer (hot season) at the peak season of diarrhea .

Recommendations for intervention and message development:

- The survey should be conducted during both summer and winter and then a comparison may be made to see the effect of intervention. Stress should also be given on the possibility of the prevention of diarrhea.

7.3 Water Source, Storage and the Pattern of Water Usage :

- Pond water is commonly used for all purposes including cooking, washing utensils and bathing except drinking,
- Almost all households used tubewell water for drinking.

From the qualitative assessments it was found that :

- Children used to wash their bottom in the pond after defecation.
- In one area in Cox's Bazar the community people used open well water for drinking and cooking.
- Not habituated to wash inside the kolshi before storing water
- Not habituated to use lid to cover pot/kolshi when carrying water

Recommendations for intervention development

- Reinforce on using tubewell water for drinking
- Stress and focus on intervention that disseminates information on the increased risks of diarrhea due to using pond water especially for drinking purpose
- Target those people who are using a particular open well water that is treated as holy water and make them realize that water of that particular well should be treated as highly contaminated, like pond water. Get diarrheal cases as supportive to that statement in that particular community.

7.4 Sanitation: Access to sanitation facilities & use and disposal of children's feces

- Access to latrines was high, but most of the latrines were unhygienic
- Latrine access was poor among under five children
- Using a fixed place for defecation by Children of 3-5 years was very poor
- Disposal of children's feces in unsanitary fashion was quite high
- Children feces were left open

Recommendation for intervention development

- Use hygienic latrine
- Promote local hygienic latrine (pit latrine)
- Practice latrine use by the children of 3-5 years
- Practice fixed place for defecation by children under five
- Dispose feces in a sanitary fashion

7.5 Environment Cleanliness and Contamination

- The households environment was not clean
- Inside and outside of the latrine was not clean

Recommendation for intervention development

- Keep environment clean and free from contamination
- Keep latrine (inside and outside) clean

7.6 Knowledge on Diarrheal Prevention

- Knowledge on diarrheal prevention was poor

Recommendation for intervention development

- Get an idea about the community people's existing knowledge on diarrheal prevention through Focus Group Discussion
- Enhance knowledge on diarrheal prevention

7.7 Hand washing knowledge and behavior

- Knowledge on hand washing time was poor
- Hand washing technique was weak in the areas of using a cleaning substance (ash/soap/mud)

Recommendation for intervention development

- Improve knowledge on "when hand washing is important for health"
- Focus on hand washing behavior

7.8 Food Hygiene

- Food hygiene was good but there was also scope for improvement

Recommendation for intervention development

- Keep food and stored water covered

7.9 Diarrhea Treatment

- Knowledge on LGS/ORS, continued breastfeeding, continued normal food was generally good. However, there is room for improvement
- Knowledge about LGS preparation was very poor

Recommendation for intervention development

- Give ORS/LGS during diarrhea
- Continue breastfeeding during diarrhea
- Continue normal food during diarrhea
- Focus on LGS preparation

7.10 Evaluation Indicators

- Evaluation indicators should be further reviewed and revised based on the results of the baseline survey. Indicators should be revised to reflect intervention priorities.

7.11 Final Words

- The same methodology used in the baseline study in SAFE pilot was used in the SAFER baseline survey as well. Some adjustments were made to accommodate the local situation. One of the primary underlying assumptions of the SAFER approach is that hygiene behaviors, the cultural determinants of behaviors, the priority behavioral targets for diarrhea reduction, and behaviors change opportunities, all vary considerably from culture to culture. The SAFER project by collecting key information (both quantitative & qualitative) pieces to intervention design has produced a locally appropriate set of intervention. This approach appears to be valuable and provides an example of how to develop and focus objectives using baseline information.
- The integration of quantitative and qualitative data collection techniques is necessary to maximize the value of such information collection exercises. A multi-disciplinary team approach is the key to designing and implementing this integrated data collection strategy.
- The qualitative component was useful to SAFER because the design was flexible. When necessary a number of different methods were used instead of conducting dozens of focus groups who did not understand the purpose and got bored. Each session addressed specific and clearly defined questions.

The other reason was that all the field workers were partners in the entire process. Also important is the involvement of senior staff in the qualitative data gathering process. The qualitative part of the study was not seen as the "soft" part of the study that could be delegated to the junior staff. This meant that field workers and beneficiaries attached importance to it.

These results suggest that these kinds of methodologies may have an important part to play in the monitoring and evaluation of the SAFER project and in the final evaluation.

- Observations of behavior around tubewells, ponds and latrines might be conducted some weeks after courtyard sessions or other message dissemination. This could be followed by focus group discussions in the same location, not only to investigate whether people recall messages, but to try and evaluate **how** messages have been understood and to get some feedback from the audience on the quality of the sessions. Some follow up questions could be:
 - How useful were the messages?
 - How easy to implement?
 - How acceptable were they?
 - What changes have there been in behavior?
 - What constraints were faced?

Areas that are found to be problematic in the observation sessions, such as use of pond water, should be probed to get behind the superficial "correct" response. It is important that these sessions not be conducted by the same FTs who worked in the area to promote the messages. But it is also important that the FTs give each other feedback on these results.

- The qualitative approaches described above are not good at measuring changes, but they may indicate whether changes are perceived to be happening by beneficiaries, and they may tell us how people respond to the changes. It might be interesting to repeat some of the mapping exercises with a sub-sample of the same communities and try to "map" changes and then compare the maps. Some areas for further investigation may include:
 - Are people aware of more pit latrines being made and used?
 - Are there changes in the use of water?
 - Which households are now experiencing diarrhoea?
 - Do people feel that the interventions they have taken have helped to reduce diarrhoea in their community?

This kind of information would not be used to assess diarrhoea prevalence, but the community's perception of the effectiveness of diarrhoea prevention strategies.

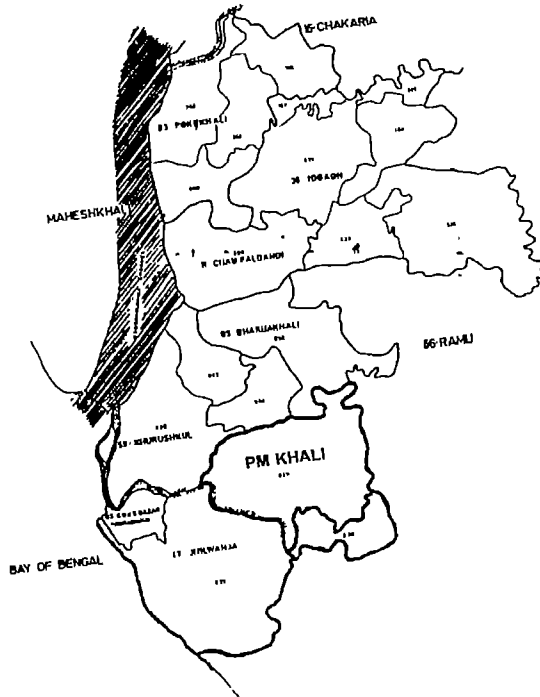
- The role of the "key community person" should be evaluated. FTs should be carefully debriefed on this and the "key community person" should be interviewed individually and in groups. If some are felt to have been particularly effective, small case studies could be prepared. Some basic information on "key community persons" needs to be listed. Their role and activities should be described and documented, we need to identify the problems and strengths of this approach.
- The resources necessary to undertake such a baseline information gathering exercise are modest. No outside technical assistance was necessary in addition to the usual level of project implementation staffing. It took almost a month for such survey including preparing a draft report of the findings.
- In considering CARE's role, it is important that SAFER has acquired unique experience in innovative and well designed hygiene education program that can be replicated by other NGOs in the country. SAFER will continue to play a positive role in this area.

However, the replication of SAFER like project in every thana or local area will not be practical unless and until an intermediate approach of taking an umbrella technical assistance role is shouldered by CARE.

MAP OF THE STUDY AREA

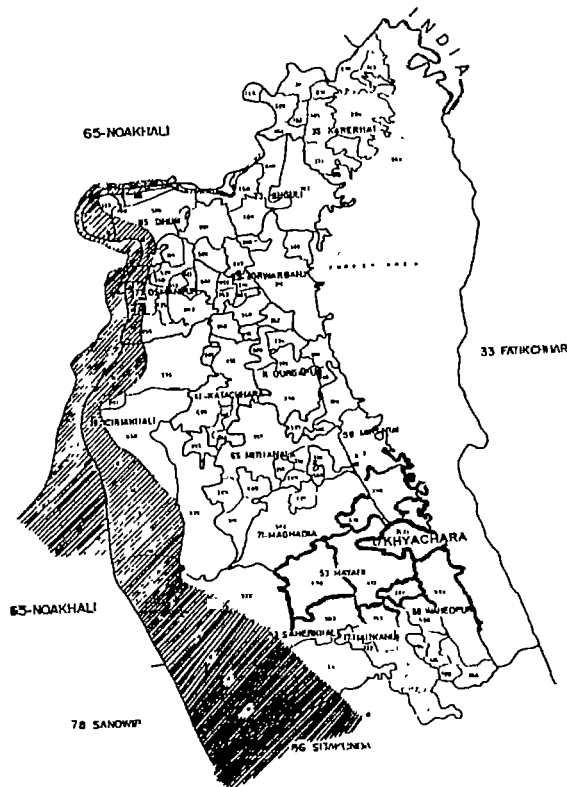
Thana : Cox's Bazar Sadar
Union : PM Khali

Population	23,335
Households	3326
No of Village	14
Tubewells	662
Primary School	12
High School	1
Madrasha	4



Thana : Mirsharai
Union : Khyachara

Population	20,016
Households	3413
No of Village	16
Tubewells	803
Primary School	10
High School	2
Madrasha	1



**Sanitation & Family Education Resource Project
BASELINE SURVEY-HOUSEHOLD STUDY**

(1)

Date of Interview : / /
(DD / MM / YY)

A. IdentificationNameCode

Thana / Union : _____

Caretaker / Spouse : _____ BL Code: _____

Head of the family : _____ Family # . _____

Respondent : _____ Sex : 1 - Male 2 - Female

Religion . 1 - Muslim 2 - Hindu 3 - Buddhist 4 - Christian

Years of schooling : _____

Respondent's relation to head of the family

1 - Wife 2 - Self 7 - Others _____
[Specify]

Interviewer: _____ Designation: _____ Code _____

B. Demographic

- | | Yes | No |
|---------------------------------------------------------------------------------------------------|-----|-------|
| 1. Is there any children between 0-5 years in this family?
[If (2) No, then go to Question 10] | 1 | 2 |
| 2. How many children between 0 to 3 years
of age live with the family? | | _____ |
| 3. How many children between 3 to 5 years
of age live with the family? | | _____ |
| 4. How many children of these are breast fed ? | | _____ |

C. Morbidity

(Health Impact)

- | | <u>Yes</u> | <u>No</u> |
|--------------------------------------------------------------------------|------------|-----------|
| 5. Does any children of this house from 0-5 years
have diarrhoea now? | 1 | 2 |
| If (1)Yes 5.a) How many from 0 - 3 years ? | | _____ |
| 5 b) How many from 3 - 5 years ? | | _____ |

		<u>Yes</u>	<u>No</u>
6.	Did any children of this house (0-5) had diarrhea during the last two weeks ?	1	2

If (1)Yes	6.a) How many from 0 - 3 years ?	_____	
-----------	----------------------------------	-------	--

	6.b) How many from 3 - 5 years ?	_____	
--	----------------------------------	-------	--

		<u>Yes</u>	<u>No</u>
7	What did you/mother give the child last time, when S/he had diarrhea ?		

1	Nothing	1	2
2	Packet ORS	1	2
3	Home made lobon gur solution	1	2
4	Herbal remedy	1	2
5	Medicine/Pharmacy	1	2
6	Did not feed meat/fish	1	2
7	Stopped Breastfeeding	1	2
8	Feed green banana curry/smash	1	2
9	Stopped feeding	1	2
10	Fed Chilly with curry	1	2
11	Fed tinned burly	1	2
12	Fed wet flattened rice	1	2
13	Homeopath	1	2
14	Continued breastfeeding	1	2
15	Continued feeding normal food	1	2

	Don't know	9	
Specify, why ? _____	N/A	8	

Specify : _____	Others	7	
-----------------	--------	---	--

8.	When the child had diarrhea last time did you/mother continue breast feeding?	Yes	1
		No	2
		Already weaned	3
	Specify, why? _____	N/A	8
	Specify : _____	Others	7

9.	When the child had diarrhea last time did you/mother continue to offer normal food?	Yes	1
		No	2
	Specify, why? _____	N/A	8
	Ask, Specify _____	Others	7

D. Health Knowledge

		<u>Yes</u>	<u>No</u>
10	What can be done to prevent diarrhea ?		
1.	Eating covered food	1	2
2.	Not eating food with bad smell	1	2
3.	Breast feeding	1	2
4.	Drinking/Using tubewell water	1	2
5.	Not mixing pond water with tubewell water	1	2

6. Drinking covered stored water	1	2
7 Store drinking water in a kolshi	1	2
8. Keep clean the kolshi	1	2
9. Washing hands before food preparation/cooking	1	2
10 Washing hands before food serving/handling	1	2
11. Washing hands before feeding	1	2
12. Washing hands before eating	1	2
13 Washing hands after defecation	1	2
14. Washing hands after cleaning children's bottom	1	2
15 Washing hands after disposing children's feces	1	2
16 Keep yard free of feces	1	2
17 Using latrine	1	2
18. Keep latrine clean	1	2
19 Children use fixed place	1	2
20 Stay clean _____	1	2
[Specify]		
21. Take limited food	1	2
22. Not to eat mango	1	2
23 Not drinking with unwashed hands	1	2
24 Not drinking from uncleaned kolshi	1	2
25 Not mixing pond water at the end of cooking	1	2
26. Not priming tubewell with pond water	1	2
27 Not carrying water in open bucket	1	2

Don't Know 9

Specify : _____ Others 7

11. Have you ever used home made LGS ?	<u>Yes</u>	<u>No</u>
[If (2) No, then go to question 13]	1	2

12. Name the ingredients and quantities of LGS ?	Correct	1
Water _____ Salt _____	Incorrect	2
Sugar/Molasses _____	(If no in question 11) N/A	8

[Criteria for judging are mentioned in manual] Don't Know 9

Specify: _____ Others 7

E. WATER SOURCE and USE

13 Where do you get your water for <u>drinking</u> ?	<u>Yes</u>	<u>No</u>
1. Tubewell	1	2
2. Open well	1	2
3. Pond	1	2
4. Other _____	1	2
(Specify)		
Don't Know	9	

		<u>Yes</u>	<u>No</u>
14	Where do you get your water for cooking ?		
	1. Tubewell	1	2
	2. Open well	1	2
	3. Pond	1	2
	4. Other _____ (Specify)	1	2
	Don't Know	9	

		<u>Yes</u>	<u>No</u>
15.	Where do you get your water for bathing ?		
	1. Tubewell	1	2
	2. Open well	1	2
	3. Pond	1	2
	4. Other _____ (Specify)	1	2
	Don't Know	9	

		<u>Yes</u>	<u>No</u>
16	Where do you get your water for washing utensils ?		
	1. Tubewell	1	2
	2. Open well	1	2
	3. Pond	1	2
	4. Other _____ (Specify)	1	2
	Don't Know	9	

		<u>Yes</u>	<u>No</u>
17.	Do you ever prime tubewell with water ?	1	2
17 a)	If Yes, what type of water do you pour ?		
	Tubewell	1	
	Pond	2	
	(If No in Q.17 then) N/A	8	
	Specify : _____ Others	7	

		<u>Yes</u>	<u>No</u>
18.	Do you ever add water at the end of cooking ?	1	2
18.a)	If Yes, what type of water do you add ?		
	Tubewell	1	
	Pond	2	
	(If No in Q.18 then) N/A	8	
	Specify : _____ Others	7	

F. DEFECATION PLACE & FECES DISPOSAL

19. Where do you usually defecate ?	Latrine	1
	No fixed place	2
	Woods/Bushes/Field	3
	Pond/River/Canal	4
	Fixed place	6
20. Where does the man of this family usually defecate ?	Latrine	1
	No fixed place	2
	Woods/Bushes/Field	3
	Pond/River/Canal	4
	Fixed place	6
	Don't Know	9
21. Where do the children >5 years of this family usually defecate?	Latrine	1
	No fixed place	2
	Woods/Bushes/Field	3
	Pond/River/Canal	4
	Yard	5
	Fixed place	6
	Don't Know	9
(If no children of > 5 years)	N/A	8
22. Where do your/family's children between 3 to 5 usually defecate?	Latrine	1
	No fixed place	2
	Woods/Bushes/Field	3
	Pond/River/Canal	4
	Yard	5
	Fixed place	6
	Don't Know	9
(If no child of 3-5 years)	N/A	8
23. What happens with the stool of Children under 5, who are not using any latrine? [Criteria for these terms are explained in the Manual]	Disposed in a sanitary fashion	1
	Disposed in an unsanitary fashion	2
	Left open	3
	(If no child <5) N/A	8
[Verbatim]		

G. DEMONSTRATION

Asking & Observing

	<u>Yes</u>	<u>No</u>
24. When do you wash your hands ?		
1. Before food preparation/cooking	1	2
2. Before food serving/handling	1	2
3. Before feeding children	1	2
4. Before eating	1	2
5. Before praying	1	2
6. After eating	1	2
7. After defecation	1	2
8. After cleaning child's bottom	1	2
9. After disposal of child's feces	1	2
10. After handling any kind of feces	1	2
Specify : _____ Others	7	

	<u>Yes</u>	<u>No</u>
25. Could you please show me how you usually wash your hands ? (Ask clearly to demonstrate)	1	2

if (1)Yes,

<p>[Observe] Does there appear to be a fixed place for hand washing in home?</p>

25.a) Uses water ?	1	2
25.b) Washes both hands ?	1	2
25.c) Uses soap/ash/mud ? [if Yes, which one circle]	1	2
25.d) Rubs hands at least three times when cleaning ?	1	2
25.e) Uses a clean rag or air dries her hands ?	1	2
25.f) Uses sari/uncleaned rag for hand dry	1	2
25.g) Is there any rag for exclusive use to hand dry?	1	2

Observation : House

26.	Is food covered ?	Yes		1
		No		2
		Not Observed		9
		(If No food in house)	N/A	8
27.	Is drinking water covered ?	Yes		1
		No		2
		Not Observed		9
		(If Not stored)	N/A	8
27.a)	If yes, What type of container?	Surai/Kolshi		1
		Jug		2
		Bucket		3
	Specify: _____	Other		7
		(If not stored water)	N/A	8
28.	How many human feces in the yard?	None		0
		1 to 2		1
		3 to 4		2
		5 to 6		3
		7 & above		4
29.	Is the ground in the house & yard clean and free of garbage? [Definition of yard is given in manual]	Yes		1
		No		2

Observation and Asking :

30	Does the house have a tubewell (in the compound of the house)	Yes		1
		No		2
31.	Does the house have a latrine ?	Yes		1
		No		2
		Not Observed		9
if yes	31 a) <u>Ownership of latrine:</u>	Own		1
		Shared		3
if own or shared:	31.b) What kind of latrine ?	Sanitary (with safety tank)		1
		Hygienic Waterseal		2
		Unhygienic Waterseal		3
		Hanging		4
		Pit		5
		(If no latrine in the house)	N/A	8
	Describe: _____			

32.	How many feces on way to latrine ?	None	0
		1 to 2	1
		3 to 4	2
		5 to 6	3
		7 and above	4
	(If no latrine in the house)	N/A	8
33.	How many feces in the latrine structure (except hole)?	None	0
		1 to 2	1
		3 to 4	2
		5 to 6	3
		7 to above	4
	(If no latrine in the house)	N/A	8
34.	Does the latrine show signs of use ?	Yes	1
		No	2
	(If no latrine)	N/A	8
35.	Is there any fixed place for 3-5 years children of this family ?	Yes	1
		No	2
	(If no children of 3-5 yrs and/or children using latrine)	N/A	8

Description : _____

		<u>Yes</u>	<u>No</u>
36	Is ash/soap available for hand washing in the house ? [If yes circle what is available]	1	2
	If yes, where ?		
	1. Near kitchen	1	2
	2. Near latrine	1	2
	3. Other where	1	2

	[Specify where]		

Other Observations :

Type of House :

	Roof -	Tin	1
		Bamboo	2
		Straw	3
		Concrete	4
	Specify : _____	Others	7
	Wall -	Tin	1
		Bamboo	2
		Straw	3
		Brick/Concrete	4
		Mud	5
	Specify : _____	Others	7

If any thing else observed :

Name of the supervisor : _____ **Code :** _____

Checking Date : _____ **Entry date :** _____

BASELINE SURVEY - 2 (FOR CARETAKERS ONLY)

Date of Interview : / /
(DD / MM / YY)

A. IDENTIFICATION :

Thana & Union Name : _____ Code : ____

Caretaker's Name : _____ Code: ____

Spouse's Name : _____ Sex : 1- Male; 2- Female

Address : _____

Who selected : 1->WASH 2->DPHE 3->CODEC 7->Others _____

Name, Interviewer : _____ Code : ____

B. ASKING AND OBSERVATION :

	<u>Yes</u>	<u>No</u>
1. Are wrenches available with this caretaker ?	1	2
if (2) No, Why ? Specify . _____		
2 Did S/he get training ?	<u>Yes</u>	<u>No</u>
	1	2
if (2) No, Why ? Specify : _____		
if (1) Yes, What kind ?	<u>Yes</u>	<u>No</u>
2.a) Tubewell Maintenance :	1	2
2.b) Tubewell Repair :	1	2
2.c) Hygiene Education .	1	2
If (2) No in Q.2	N/A	8
Specify : _____ Others	7	
If (1) Yes in Q.2	<u>Yes</u>	<u>No</u>
2.d) By whom :		
1. CARE-Staff	1	2
2. Other Organization	1	2
If (2) No in Q.2	N/A	8

3.	Observe, does the house have a Tubewell ?	In the Yard		1
			Out side the house	2
4.	Observe, is the Tubewell functioning at this time ?	Yes		1
			No	2
	Specify : _____	Others		7
5.	Observe, does the Tubewell have a platform ?	Yes		1
			No	2
	Specify : _____	Others		7
			<u>Yes</u>	<u>No</u>
6.	Observe the Tubewell surrounding area: Is it clean (free of feces, dirt, garbage, standing water) ?			1 2
	if (2) No, 6 a) Feces ?			1 2
	6.b) Dirt ?			1 2
	6 c) Garbage ?			1 2
	6.d) Standing water ?			1 2
	6.e) Algae ?			1 2
		If (1) Yes in Q.6	N/A	8
			<u>Yes</u>	<u>No</u>
7	Observe, Is ash/soap/mud available for hand washing near the Tubewell ?			1 2
	if (1) Yes, 7.a) Ash ?			1 2
	7.b) Soap ?			1 2
	7.c) Mud ?			1 2
		If (2) No in Q.7	N/A	8

Field Data Collection Team**Supervisors Name**

Mr. Sirajul Hoque	Project Manager, SAFER Project
Mr. Alok Majumder	Training Officer, SAFER Project
Mr. A. M. M. Moniruzzaman	Program Development Officer, SAFER Project
Mr. Md. Sharifuzzaman	Technical Officer, SAFER Project
Mr. A.K.M. Mahmud Hasan	Project Officer, SAFER Project
Mr. A.K.M. Zahidul Islam	Project Officer, SAFER Project
Mr. Mahatab Uddin	Field Trainer, SAFER Project

Surveyors Name

Ms. Anjana Chakrabarty	Field Trainer, SAFER Project
Ms. Archana Das	Field Trainer, SAFER Project
Ms. Chinu Prova Debi	Field Trainer, SAFER Project
Ms. Mita Barua	Field Trainer, SAFER Project
Ms. Monika Shom	Field Trainer, SAFER Project
Ms. Rinku Bhattacharjee	Field Trainer, SAFER Project
Ms. Sarwar Jahan	Field Trainer, SAFER Project
Ms. Shamima Akhter	Field Trainer, SAFER Project
Ms. Shelley Das	Field Trainer, SAFER Project
Ms. Shahin Parvin	Field Trainer, SAFER Project
Ms. Shahin Jahan Chowdhury	Field Trainer, SAFER Project

REFERENCES

- Armitage P, Berry G. 1987. *Statistical Methods in Medical Research*. Second Edition, Blackwell Scientific Publications:109-112.
- APHA Technical Report: Criteria for the Development of Health Promotion and Education Programs. 1987. *American Journal of Public Health*,77(1):89-92.
- Bateman OM, Smith S. 1991 A Comparison of the Health Effects of Water Supply and Sanitation in Urban and Rural Guatemala. Arlington (VA): Water and Sanitation for Health (WASH) Project, WASH Field Report Number 352.
- Bateman, OM. 1992. Diarrhea Transmission and Hygiene Behavior: Personal and Domestic Hygiene. Paper presented at an Informal Consultation on Interventions to Improve Hygiene Behaviors, WHO, Geneva, May 18-20, 1992.
- Bateman OM, Smith S, Roark P. 1993a A Comparison on the Health Effects of Water Supply and Sanitation in Urban and Rural Areas of Five African Countries. Arlington (VA): Water and Sanitation for Health (WASH) Project, WASH Field Report Number 398.
- Bateman OM, Zeitlyn S, Jahan RA, Brahman S. 1994. Latrine Coverage Statistics: What the Numbers Mean for Health paper presented at "Environmental Health and Policy Perspectives," Third Annual Scientific Conference, ICDDR,B, Dhaka, Bangladesh. Abstract number 17
- Bateman OM, Zeitlyn S, Jahan RA, Brahman S. 1993b. Sanitation and Family Education Pilot Project (SAFE): Report on the Baseline Survey Dhaka (Bangladesh): CARE International; September 1993.
- Esrey SA, Potash JB, Roberts L, Shiff C. 1991 Effects of Improved Water Supply and Sanitation on Ascariasis, Diarrhea, Dracunculiasis, Hookworm infection, Schistosomiasis, and Trachoma. *Bulletin of WHO*;69(5):609-621.
- Kleinbaum DG, Kupper LL, Morgenstern H. 1982. *Epidemiologic Research: Principles and Quantitative Methods*. New York: Lifetime Learning Publications, Van Nostrand Reinhold Company:147-149
- Laston SL, Brahman S, Zeitlyn S, Jahan RA, Bateman OM. 1995. Sanitation and Family Education Pilot Project (SAFE) Final Report on Qualitative Assessments. Dhaka (Bangladesh): CARE International
- Meittinen OS 1976. Estimability and Estimation in Case-Referent Studies. *American Journal of Epidemiology*,103(2):226-235.
- Stanton BF, Clemens JD. 1987 An educational intervention for altering water-sanitation behaviors to reduce childhood diarrhea in urban Bangladesh. II. A randomized trial to assess the impact of the intervention on hygienic behaviors and rates of diarrhea. *American Journal of Epidemiology*;125:292-301.
- World Health Organization 1993. Improving Water and Sanitation Hygiene Behaviors for the Reduction of Diarrheal Disease: The Report of An Informal Consultation WHO/CWS/90.7,WHO/CDD/93.6.
- Bateman OM, Jahan RA, Brahman S, Zeitlyn S, Laston SL. 1995. Sanitation and Family Education Pilot Project (SAFE). Report on the Final Surveys. Dhaka (Bangladesh): CARE International
- Zeitlyn S, Brahman S, Jahan RA, Bateman OM. 1994 Sanitation and Family Education Pilot Project (SAFE): Report on Qualitative Assessments. Dhaka (Bangladesh): CARE International



Contact Person:

Afroza Ahmed

Coordinator, SAFER Project

CARE Bangladesh

House 60, Road 7A

Dhanmondi Residential Area

Dhaka-1209

Phone : 880-2-814195-8

880-2-814207-9

Fax : 880-2-814183

E-mail : carebang@bangla.net

carenp@bangla.net