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# TOOLKIT FOR THE COLLECTION OF SURVEY DATA ON THE CORRECT USE OF PEDIATRIC ZINC AS A TREATMENT FOR DIARRHEA

October 2010

This publication was produced for review by the United States Agency for International Development. It was prepared by Vicki MacDonald and Kathryn Banke, Abt Associates Inc., for the Social Marketing Plus for Diarrheal Disease Control: Point-of-Use Water Disinfection and Zinc Treatment (POUZN) project.



## **POUZN Research Tool - Zinc**

This document is intended to be used by program managers implementing field programs to introduce zinc, along with ORS, for the treatment of uncomplicated pediatric diarrheas. Included herein are a number of research tools: a questionnaire to be used to collect data from household respondents (caregivers of children under five years of age); focus group guides to be used in discussions with caregivers, community health workers or community-based distribution/sales agents; as well as sample questions to be posed in individual interviews with pharmacy personnel and/or formal and informal sector health care providers to gather more in-depth information on motivators and barriers to use of zinc for the treatment of diarrhea and or the prescription of zinc products for treatment of pediatric diarrheas. These research instruments are meant to be a guide and to be adapted to local conditions of the program being implemented.

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| Population Services International

# TOOLKIT FOR THE COLLECTION OF SURVEY DATA ON THE CORRECT USE OF PEDIATRIC ZINC AS A TREATMENT FOR DIARRHEA

## **DISCLAIMER**

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development (USAID) or the United States Government



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# ACRONYMS

<b>DHS</b>	Demographic and Health Survey
<b>DTK</b>	Diarrhea treatment kit
<b>HMIS</b>	Health Management Information System
<b>IMCI</b>	Integrated Management of Childhood Illness
<b>IMCI-C</b>	Integrated Management of Childhood Illness – Community component
<b>IQC</b>	Indefinite Quantity Contract
<b>IPC</b>	Interpersonal communications
<b>MOH</b>	Ministry of Health
<b>NGO</b>	Non-governmental organization
<b>ORS</b>	Oral rehydration solution/salts
<b>ORT</b>	Oral rehydration therapy
<b>POS</b>	Point-of-sale
<b>POUZN</b>	Social Marketing Plus for Diarrheal Disease Control: Point-of-Use Disinfection and Zinc Treatment Project
<b>PSP</b>	Private Sector Partnerships Project
<b>SCM</b>	Standard case management
<b>SSS</b>	Sugar-salt solution
<b>UNICEF</b>	United Nations Children’s Emergency Fund
<b>USAID</b>	U.S. Agency for International Development
<b>USG</b>	U.S. Government
<b>WHO</b>	World Health Organization



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# INTRODUCTION

## OBJECTIVES

1. Present objectives, concepts, and tools for conducting household research on the use of pediatric zinc along with oral rehydration solution/salts (ORS) or recommended home-prepared fluids, such as the sugar-salt solution, commonly referred to as oral rehydration therapy (ORT), for the treatment of uncomplicated diarrhea.
2. Present objectives, concepts and tools related to conducting focus group discussions and/or individual interviews to gather more in-depth information on motivators and barriers to the use of zinc for the treatment of diarrhea and/or the prescription of zinc products for treatment of pediatric diarrheas.
3. Provide a set of survey research tools that can be adapted to specific country environments to collect data on the use of zinc for household diarrhea management.

## BACKGROUND

Approximately 1.3 million children die as a result of diarrhea every year<sup>1</sup>. In the majority of cases, diarrhea is preventable through exclusive breastfeeding, improved hygiene and sanitation, and access to clean water, yet it is still one of the leading causes of death among children under five in the developing world. The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) now recommend the use of a new low-osmolarity ORS for the correction and prevention of dehydration and 10–20 mg of zinc for 10–14 days as treatment for all episodes of diarrhea for children under five.<sup>2</sup> With the widespread use of this effective treatment combination, 50% of diarrhea deaths can be prevented<sup>3</sup>. The recommended regimen of zinc and ORS/ORT, along with continued feeding, is a safe, effective, and inexpensive treatment for children. Introducing a new treatment, such as zinc, creates an opportunity to improve standard diarrhea case management practices, enhance caregiver knowledge and provider skills, and increase ORS use rates that are vital to preventing death from dehydration associated with diarrhea.

To date, given limitations in both staff and financial resources, only a few countries have implemented zinc treatment programs as part of standard diarrhea case management. Therefore, there is much to be learned about both the programmatic and behavioral aspects of this new protocol. There are several known challenges that must be overcome. We hope to identify other challenges through both research and program implementation experience and to subsequently address them through appropriate programming approaches. Known challenges include:

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<sup>1</sup> Black RE, Cousens S, Johnson HL, Lawn JE, Rudan I, Bassani DG, et al., for the Child Health Epidemiology Reference Group of WHO and UNICEF (2010). Global, regional, and national causes of child mortality in 2008: a systematic analysis. *Lancet* 375 (9730): 1969 - 1987.

<sup>2</sup> World Health Organization (WHO) and UNICEF. Joint Statement on the Clinical Management of Acute Diarrhoea. WHO/UNICEF. Geneva: WHO, 2004.

<sup>3</sup> Walker CF and Black RE. Zinc and the risk for infectious disease (2004). *Annu Rev Nutr* 24:255-75.

*National- and local-level product endorsement/availability/coverage:* Ensuring zinc treatments reach local-level health clinics, pharmacies, public and private sector health care providers, and community health workers/sales agents, requires the endorsement and commitment of national ministries of health (MOHs) and local-level government health officials. Partnerships with local health agencies and community-based organizations and/or arrangements with the pharmaceutical industry and its distribution systems may also be necessary to achieve higher zinc coverage rates in all areas of a country. Zinc is an essential micronutrient and not a drug, per se, although it is provided in pharmaceutical strength for treatment of pediatric diarrhea. MOHs have taken differing stances on registering pediatric zinc as a pharmaceutical versus a nutritional supplement, which affects where zinc is available and who is permitted to sell or give zinc treatments to patients. MOHs also play a key role in determining whether or not zinc products may be sold over-the-counter. This affects the ability of private sector providers, particularly pharmacies or chemist shops, to sell without a prescription from a medical professional.

*Health worker/physician training and endorsement:* Health care worker (including community outreach/education agent), physician, and pharmacist endorsement and promotion are crucial if zinc is to be used for every childhood diarrhea episode. Physicians giving higher-level medical care need to understand and support zinc treatment to add the needed validity and support as the country's child health experts. Introducing zinc in training courses and/or sensitization or continuing medical education sessions for both private and public health sector providers presents an excellent opportunity to review the basic diarrhea case management strategies including diarrhea prevention, dehydration treatment with ORS/ORT and increased fluids, and continued feeding during illness.

*Home-based treatment compliance:* Health care workers at both clinic and community levels have a unique one-on-one opportunity to influence the compliance to treatment recommendations by informing and teaching mothers home-based diarrhea therapy including zinc and either ORS or home-produced/government-recommended ORT. Zinc and ORS/ORT must be used together; zinc should never be promoted as a substitute for ORS/ORT. Ideally, zinc and ORS products would always be provided or sold in the same location. Additionally, to have a protective effect, zinc needs to be taken for 10-14 days. Compliance with this treatment regimen is often hard to achieve, particularly when a child's condition improves over the treatment period – in this situation, caregivers may stop giving zinc before the recommended 10-14 days. Additional emphasis needs to be placed on full compliance with the WHO/UNICEF-recommended protocol.

This toolkit was developed by the Social Marketing Plus for Diarrheal Disease Control: Point-of-Use Water Disinfection and Zinc Treatment (POUZN) Project. POUZN is a USAID-funded task order under the Private Sector Partnerships (PSP) indefinite quantity contract (IQC). POUZN works globally to mobilize the private sector (commercial and nongovernmental sectors) for the prevention and treatment of diarrhea among children under five years of age through health product marketing and communications to promote behavior change and correct product usage.

## **PURPOSE OF THE RESEARCH**

The purpose of the research to be conducted using this toolkit is to measure use of zinc for the treatment of diarrhea (use of the appropriate dosage, completion of the full 10-14-day regime, use of zinc with ORS/ORT); to measure other treatments used (including antibiotics and antidiarrheals) and sources of treatments and advice; to determine the level of awareness by both caregivers and providers that zinc is an appropriate and effective treatment for diarrhea; and to measure physical access of the population to the promoted products. The research tools can provide data to better understand the

enabling environment, including changes in policy, protocols, or guidelines that facilitate access to and knowledge and use of zinc for diarrheal treatment; to determine the most effective channels of distribution and promotion and behavioral barriers to correct and consistent use; and to identify opportunities to improve program implementation.

Given that zinc is a new treatment protocol, health professionals around the world are interested in better understanding the most effective channels of distribution and promotion and behavioral motivators/barriers that influence correct and consistent use. The tools provided may be used to assist programs to obtain information on the following topics:

- Identification of key drivers of behavior change among both caregivers and providers: What are the most effective communication channels? What role do providers play in motivating caregivers to use zinc in place of other diarrhea treatments? How do care seeking behaviors influence program design? How can a program effectively change entrenched provider practices?
- Improving caregiver use of zinc through increased availability and accessibility: What are effective channels of distribution? How does product pricing relate to sustainability, subsidy and supply? How do care-seeking behaviors influence distribution?
- Enabling environments: What policy and regulatory environment enables private sector involvement?
- Public-private collaboration and coordination: How can/do public and private sector programs complement each other and how can synergies be realized? What are the limitations of the private commercial and NGO approaches?
- Scale-up and sustainability: What are effective approaches to achieving national scale?

The POUZN project developed a two-pronged approach to monitoring and evaluation of its zinc programs that included quantitative research (national household surveys) supplemented by qualitative research (focus groups and individual interviews with caregivers, community outreach workers, community sales agents, MOH officials and clinic staff, pharmacists, private providers, pharmaceutical manufacturers, and other stakeholders) and mystery client surveys. These data may be used to measure the progress of zinc programs in achieving objectives based upon a set of indicators outlined in the Performance Monitoring Plan, which is presented in Table I.

**TABLE I. PERFORMANCE MONITORING PLAN**

Indicator Table	Purpose	HH Survey Question # or alternative source of data*
<ul style="list-style-type: none"> <li>• % children under five who had diarrhea in the preceding 2 weeks who were treated with zinc</li> </ul>	To determine overall zinc usage by caregivers whose children had diarrhea in the previous two weeks	Q33, Q40
<ul style="list-style-type: none"> <li>• % children under five who had diarrhea in the preceding 2 weeks who were given the correct amount of zinc for age for a full 10 days</li> </ul>	To determine if zinc and ORS/ORT are being used correctly to address childhood diarrhea – zinc daily for a full 10 days in conjunction with ORS/ORT	Q49, Q50
<ul style="list-style-type: none"> <li>• % of children under five who had diarrhea in the preceding 2 weeks who were given ORS/ORT in conjunction with zinc</li> </ul>		Q 14-17, Q21, Q47
<ul style="list-style-type: none"> <li>• % children under five who had diarrhea in the preceding 2 weeks who were treated with zinc by source of supply</li> </ul>	To determine source of supply; public or private sector	Q40 x Q43

Indicator Table	Purpose	HH Survey Question # or alternative source of data*
<ul style="list-style-type: none"> <li>% of drug sellers who recommend zinc treatment along with ORS/ORT as the first line treatment for diarrhea before antibiotics or anti-diarrheals</li> </ul>	To track the change in behavior of drug sellers and private providers: from recommending antibiotics and anti-diarrheals to recommending zinc with ORS as the first-line treatment for diarrhea	Mystery client survey
<ul style="list-style-type: none"> <li>% of caregivers of children under five who know that zinc needs to be administered along with ORS/ORT</li> </ul>	To track consumer/caregiver knowledge that zinc needs to be administered along with ORS/ORT; to ensure that zinc is not replacing ORS/ORT as a diarrhea treatment	Q572, SQ577
<ul style="list-style-type: none"> <li>% of caregivers of children under five who are aware that zinc is an appropriate treatment for diarrhea</li> </ul>	To determine if caregivers know that zinc is an appropriate treatment for diarrheal disease	Q561-566
<ul style="list-style-type: none"> <li>% of caregivers of children under five who know where to obtain zinc</li> </ul>	To determine knowledge of access to diarrhea treatment products	Q551 - 554, 557
<ul style="list-style-type: none"> <li>%/# of consumers residing within a specified distance of a zinc treatment product</li> </ul>	To determine improved access to diarrhea treatment products	Q557
<p>USAID Indicators:</p> <ul style="list-style-type: none"> <li># cases of childhood diarrhea treated with ORS</li> <li># cases of childhood diarrhea treated with zinc in USG programs</li> </ul>	To determine range and effectiveness of USG-funded programs	Data gathered through both sales and HMIS records
<ul style="list-style-type: none"> <li># of zinc products/brands registered at appropriate dosage and indication</li> <li>Zinc legally permitted to be sold over-the-counter</li> <li>Quality control standards established and regulated through appropriate government entity</li> <li>Incorporation of zinc into national protocols and programs for the treatment of diarrheal disease</li> </ul>	To track the enabling environment for use and/or sale of zinc/ORS through both public and private sector channels	Qualitative – interviews with key stakeholders

Note: USG=U.S. government; HMIS=health management information system

\* Refers to specific household survey question number in attached Questionnaire (Q) and Scaled Questionnaire (SQ) in Annex A.

## HOW TO USE THIS TOOLKIT

The survey questionnaires and focus group discussion guides in this toolkit (see Annexes A and B) were prepared under the auspices of the POUZN project. However, it is hoped that other zinc-related programs will find the tools provided herein useful and will adapt them to their local circumstances and use them to gather both quantitative data and qualitative information. This will allow program managers to draw lessons learned on the introduction of zinc into household diarrhea management practices through public or private sector channels or public/private partnerships.

Before implementing the surveys in this toolkit, the protocol and instruments should be reviewed and approved by an appropriate institutional review board. Care should be taken to ensure that an appropriate sampling strategy is designed for the household survey (allowing weighting down to the household and individual level, as necessary), and that the analysis is conducted using appropriate weights.

If the Household Survey questionnaire is adapted for use, it is recommended that an Identification Form, Informed Consent Form, and Background Information Section (to collect basic demographic and socioeconomic data from each household) be included to fit program needs. This questionnaire is currently formatted to allow data collection for the two youngest children in the household. However, it is reasonable to assume that in most cases, the survey can be designed so that data can be collected for only one child per household (and the questionnaire form can be modified to only have one column for responses). In situations where it will not be possible to obtain an adequate sample size using only one child per household, the survey protocol may be modified to collect data on up to two children per household.

The following tools use normal text as script for the interviewer or focus group discussion moderator. ***Bolded italicized*** text contains instructions for the interviewer or moderator to use during the session. ***Bolded italicized text that is highlighted in yellow*** is addressed to the Research Director; the highlighted text suggests actions that the Research Director should carry out before the questionnaire is pre-tested and finalized.

The qualitative tools (individual in-depth interviews and focus group discussion guides) contain an exhaustive set of questions. These questionnaires and discussion guides should be carefully adapted to each project's need for formative information to design communications campaign messages or IEC materials and to verify or collaborate the findings of the quantitative research. They need not be used in their present form but are designed to cover the range of questions that could be taken into consideration. Programs should decide on relevant subsets of questions from these tools and use these subsets for data collection relevant to their needs.

## ANNEXES

### Annex A: Structured Questionnaires

These questionnaires are intended for individual interviews. Questionnaires 2 and 3 (for pharmacy and MOH/facility personnel, respectively) can also be used in focus group discussions.

1. Sample interview questions for household survey (Parts I and II)
2. Sample questions for interviews with individual pharmacy personnel

3. Sample questions for interviews with individual MOH and/or health facility personnel

### **Annex B: Focus Group Discussion Guides**

The guides also can be used for individual interviews.

1. Sample questions on general diarrhea treatment practices during the formative research phase
2. Sample questions for caregivers after introduction of zinc/ORS for standard case management of diarrhea
3. Sample questions for community-based distributors or community health workers who treat childhood diarrheas

### **Annex C: Mystery Client Survey Format**

### **Annex D: Bibliography of background readings**

# **ANNEX A. SAMPLE QUESTIONNAIRES FOR INDIVIDUAL INTERVIEWS**

## I. HOUSEHOLD SURVEY QUESTIONNAIRE

The household questionnaire is to be used to interview caregivers of children under five years of age. It has two parts: a Diarrhea Module and a Likert Scale Questionnaire.

### HOUSEHOLD SURVEY QUESTIONNAIRE, PART I – DIARRHEA MODULE

No	Questions and Filters	Codes	
1	<p>How many children under five years of age do you have living with you in this household for whom you are directly responsible?</p> <p><b>Interviewer: Probe not only for biological children but also other children typically living in this household for whom the woman is the primary caretaker.</b></p>	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> <div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block; margin-left: 10px;"></div>	
<p><b>Interviewer: List the two youngest children (Research Director: You may choose to only collect data on one child per household; if so, black out second column.) under the age of five years in the top of the following columns. If there is only one child under five years, you will use only the first column. Ask the following questions for each of the children listed in the columns below.</b></p>			
2.		Last birth (youngest)	Next-to-last birth (next youngest)
		Name: _____	Name _____
3.	Please circle the sex of (NAME).	Male 1 Female 2	Male 1 Female 2
4.	Please list the age of (NAME) in months.	Age ____ months	Age ____ months
5.	What is your relationship with (NAME) ?	Mother 1 Father 2 Grand mother 3 Grand father 4 Auntie 5 Sister/brother 6 Other 99 (specify) _____	Mother 1 Father 2 Grand mother 3 Grand father 4 Auntie 5 Sister/brother 6 Other 99 (specify) _____
6.	Has (NAME) had diarrhea in the last 2 weeks? Diarrhea is defined as 3 or more loose or watery stools in one day.	Yes 1 No 2 → <b>Q65</b>	Yes 1 No 2 → <b>Q65</b>
7.	How many days ago did the diarrhea start? <b>Interviewer: If the same day, record '00.'</b>	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>
8.	How many days has the child had diarrhea/How many days did the child have diarrhea?	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>
9.	Has (NAME) also had a fever in the last 2 weeks?	Yes 1 No 2	Yes 1 No 2
10.	Did (NAME) have any blood in the stools when he or she had diarrhea in the last 2 weeks?	Yes 1 No 2 Don't know 88	Yes 1 No 2 Don't know 88

11.	How much was (NAME) given to drink during the recent episode of diarrhea? Was he or she given less than usual to drink, about the same amount, more than usual to drink, or nothing to drink?  <i>Interviewer: If “less,” probe: Was (NAME) given much less than usual to drink or somewhat less?</i>	Much less 1 Somewhat less 2 About the same 3 More 4 Nothing to drink 5 Don’t know 88	Much less 1 Somewhat less 2 About the same 3 More 4 Nothing to drink 5 Don’t know 88
12.	Did (NAME) breastfeed during the recent episode of diarrhea? <i>Interviewer: Probe: More? Less?</i>	Breastfed more 1 Breastfed less 2 Breastfed about the same 3 Not breastfed (too old) 4	Breastfed more 1 Breastfed less 2 Breastfed about the same 3 Not breastfed (too old) 4
13.	When (NAME) last had diarrhea, was he or she given less than usual to eat, about the same amount, more than usual, or nothing? <i>Interviewer: If “less,” probe: Was child given much less than usual to eat or somewhat less?</i>	Much less 1 Somewhat less 2 About the same 3 More 4 Nothing to eat 5 Don’t know 88	Much less 1 Somewhat less 2 About the same 3 More 4 Nothing to eat 5 Don’t know 88
14.	Was (NAME) given a fluid made from a special ORS packet called _____ to drink at any time since he or she started having diarrhea?  <b>Research Director: Insert local name for ORS product or products in space above. You may have to adapt this question further if a diarrhea treatment kit (DTK) is marketed.</b>	Yes 1 No 2→Q21 Don’t know 88 →Q21	Yes 1 No 2→Q21 Don’t know 88 →Q21
15.	Which ORS product was given to (NAME)?  <i>Interviewer: Multiple responses allowed. If “yes” or “don’t know,” show poster with samples of all local products (ORS packets) and ask respondent to select any/all used during the recent episode of diarrhea.</i>	<b>Adapt to include the country-specific brand(s) used for the ORS packet or the DTK. List all locally available ORS products plus a “don’t know” response category.</b>	<b>Adapt to include the country-specific brand(s) used for the ORS packet or the DTK. List all locally available ORS products plus a “don’t know” response category.</b>
16.	How many packets of ORS did you prepare for (NAME) during the episode of diarrhea?	Less than 1 1 1 packet 2 2 packets 3 3 packets 4 More than 3 packets 5	Less than 1 1 1 packet 2 2 packets 3 3 packets 4 More than 3 packets 5
17.	How many days did you give the child the ORS?	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>
18.	From where was the ORS obtained?	Health center 1 Community health worker 2 Private pharmacy 3 Community distributor 4 Traditional healer 5 <b>(Insert other local sources.)</b> Don’t know 88 Other 99 (specify) _____	Health center 1 Community health worker 2 Private pharmacy 3 Community distributor 4 Traditional healer 5 <b>(Insert other local sources.)</b> Don’t know 88 Other 99 (specify) _____

19.	How often did you give the ORS to (NAME)?  <b>Interviewer: Read the list and ask respondent to select one response.</b>	Frequently 1 After each liquid stool 2 Morning, mid-day, and night 3 Whenever the child wanted it 4 Don't know 88 Other 99 (specify) _____	Frequently 1 After each liquid stool 2 Morning, mid-day, and night 3 Whenever the child wanted it 4 Don't know 88 Other 99 (specify) _____
20.	Did you use ordinary water or did you use treated water when you prepared the ORS?	Ordinary (Non Purified) Water 1 Treated Water 2 Other 99 (specify) _____	Ordinary (Non Purified) Water 1 Treated Water 2 Other 99 (specify) _____
21.	Was (NAME) given a <u>home-prepared sugar-salt solution (SSS)</u> during his/her recent episode of diarrhea?  <b>Insert above the local term(s) for the sugar-salt solution (as distinguished from purchased ORS packets).</b>	Yes 1 No 2 → Q22a Don't know 88 → Q22a	Yes 1 No 2 → Q22a Don't know 88 → Q22a
22.	How often did you give the home-prepared sugar-salt solution to (NAME)?  <i>Interviewer: Read the list and ask the respondent to select one response.</i>	Frequently 1 After each liquid stool 2 Morning, mid-day, and night 3 Whenever the child wanted it 4 Don't know 88 Other 99 (specify) _____	Frequently 1 After each liquid stool 2 Morning, mid-day, and night 3 Whenever the child wanted it 4 Don't know 88 Other 99 (specify) _____
22a	<b>Interviewer: check responses to Q14 and Q21. If Q14=2 (NO) AND Q21=2 (NO) then go to Q 23. Otherwise, go to Q24.</b>		
23.	<b>If the caregiver did not provide either ORS or SSS to the child, ask why not?</b>  <b>Interviewer: Do not read list. Multiple responses allowed.</b>	Child not seriously ill 1 Could not find ORS/SSS to buy 2 Products too costly 3 Child/Mother does not like 4 Didn't know about ORS/SSS 5 <b>Add other relevant responses</b> Other 99 (specify) _____	Child not seriously ill 1 Could not find ORS/SSS to buy 2 Products too costly 3 Child/Mother does not like 4 Didn't know about ORS/SSS 5 <b>Add other relevant responses</b> Other 99 (specify) _____
24.	Did you give any of the following other home-prepared fluids or traditional remedies to (NAME)?  <b>Interviewer: Multiple responses allowed. Read all possible responses and note Yes/No/Don't Know for each response.</b>	<b>Adapt locally to include the country-specific recommended home fluid, for example:</b> Rice water Y N DK Herbal drinks Y N DK Others _____ (specify) _____	<b>Adapt locally to include the country-specific recommended home fluid, for example:</b> Rice water Y N DK Herbal drinks Y N DK Others _____ (specify) _____
25.	Did you seek advice from someone outside the home for the diarrhea?	Yes 1 No 2 → Q29	Yes 1 No 2 → Q29

26.	How many days after the diarrhea began did you first seek advice? <b>Interviewer: If the same day, record '00.'</b>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>
27.	Where did you <u>receive</u> the primary advice for (NAME)? <b>Interviewer: Do not read list. Mark only one answer.</b>	Health clinic 1 Pharmacy 2 Community health worker 3 Neighbor/friend/relative 4 Traditional healer 5 Other 99 (specify) _____	Health clinic 1 Pharmacy 2 Community health worker 3 Neighbor/friend/relative 4 Traditional healer 5 Other 99 (specify) _____
28.	What advice did you receive? <b>Interviewer: Multiple responses allowed. Do not read list.</b> <b>Probe: Any other advice?</b>	Give fluids 1 Give ORS 2 Give zinc 3 Give antibiotic 4 Give antidiarrheal 5 Give more than usual amount of fluid 6 Give more than usual to eat 7 Continue breastfeeding 8 Take to clinic or hospital 9 Information on prevention of diarrhea 10 Don't know 88 Other 99 (specify) _____	Give fluids 1 Give ORS 2 Give zinc 3 Give antibiotic 4 Give antidiarrheal 5 Give more than usual amount of fluid 6 Give more than usual to eat 7 Continue breastfeeding 8 Take to clinic or hospital 9 Information on prevention of diarrhea 10 Don't know 88 Other 99 (specify) _____
<b>Now I'd like to ask a few questions about diarrhea treatments.</b>			
29.	Did you seek treatment from someone outside the home for the diarrhea?	Yes 1 No 2 → <b>Q32</b>	Yes 1 No 2 → <b>Q32</b>
30.	How many days after the diarrhea began did you first seek treatment? <b>Interviewer: If the same day, record '00.'</b>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>
31.	Where did you <u>receive</u> the primary treatment for (NAME)? <b>Interviewer: Mark only one answer.</b>	Health clinic 1 Pharmacy 2 Community health worker 3 Neighbor/friend/relative 4 Traditional healer 5 Other 99 (specify) _____	Health clinic 1 Pharmacy 2 Community health worker 3 Neighbor/friend/relative 4 Traditional healer 5 Other 99 (specify) _____
32.	Did you give (NAME) anything other than ORS or a home-prepared treatment to treat the diarrhea?	Yes 1 No 2 → <b>Q64</b> Don't know 88 → <b>Q64</b>	Yes 1 No 2 → <b>Q64</b> Don't know 88 → <b>Q64</b>

33.	<p>Can you tell me or show me what treatments you gave (NAME)?</p> <p><b>Interviewer: Show poster with local options if the respondent is not sure which products were given. Multiple responses allowed; circle all that apply.</b></p> <p><b>DHS surveyors have found it useful to carry samples of commonly used antibiotics/anti-diarrheals. The research director in country should prepare a poster with samples of commonly used drugs affixed for each interviewer and include the zinc/DTK packets.</b></p>	<table border="0"> <tr><td>Diarrhea treatment kit</td><td>1</td></tr> <tr><td>Zinc</td><td>2</td></tr> <tr><td>ORS</td><td>3</td></tr> <tr><td>Antibiotic</td><td>4</td></tr> <tr><td>Anti-diarrheal</td><td>5</td></tr> <tr><td>Anti-malarial</td><td>6</td></tr> <tr><td>Other pill/syrup</td><td>7</td></tr> <tr><td>Intravenous fluid</td><td>8</td></tr> <tr><td>Vitamins</td><td>9</td></tr> <tr><td>Don't know</td><td>88</td></tr> <tr><td>Other (specify) _____</td><td>99</td></tr> </table>	Diarrhea treatment kit	1	Zinc	2	ORS	3	Antibiotic	4	Anti-diarrheal	5	Anti-malarial	6	Other pill/syrup	7	Intravenous fluid	8	Vitamins	9	Don't know	88	Other (specify) _____	99	<table border="0"> <tr><td>Diarrhea treatment kit</td><td>1</td></tr> <tr><td>Zinc</td><td>2</td></tr> <tr><td>ORS</td><td>3</td></tr> <tr><td>Antibiotic</td><td>4</td></tr> <tr><td>Anti-diarrheal</td><td>5</td></tr> <tr><td>Anti-malarial</td><td>6</td></tr> <tr><td>Other pill/syrup</td><td>7</td></tr> <tr><td>Intravenous fluid</td><td>8</td></tr> <tr><td>Vitamins</td><td>9</td></tr> <tr><td>Don't know</td><td>88</td></tr> <tr><td>Other (specify) _____</td><td>99</td></tr> </table>	Diarrhea treatment kit	1	Zinc	2	ORS	3	Antibiotic	4	Anti-diarrheal	5	Anti-malarial	6	Other pill/syrup	7	Intravenous fluid	8	Vitamins	9	Don't know	88	Other (specify) _____	99
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34.	<p><b>If respondent mentioned #4 (antibiotic) in Q33 above:</b> You mentioned that you have given (NAME) an antibiotic. Which antibiotic did you give the child?</p> <p><b>Interviewer: Verify which antibiotic by showing poster or samples.</b></p>	<table border="0"> <tr><td>Name/# _____</td><td></td></tr> <tr><td>Don't know</td><td>88</td></tr> </table>	Name/# _____		Don't know	88	<table border="0"> <tr><td>Name/# _____</td><td></td></tr> <tr><td>Don't know</td><td>88</td></tr> </table>	Name/# _____		Don't know	88																																				
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35.	<p>Where did you obtain this antibiotic?</p> <p><b>Interviewer: Mark only one answer.</b></p>	<p><b>Public sector:</b></p> <table border="0"> <tr><td>Health center</td><td>1</td></tr> <tr><td>Community health worker</td><td>2</td></tr> <tr><td>Other public sector</td><td>3</td></tr> </table> <p><b>Private sector</b></p> <table border="0"> <tr><td>Private clinic/provider</td><td>4</td></tr> <tr><td>Private pharmacy</td><td>5</td></tr> <tr><td>Community distributor</td><td>6</td></tr> <tr><td>Faith-based/NGO/CBO</td><td>7</td></tr> </table> <p><b>List all appropriate options.</b></p> <table border="0"> <tr><td>Don't know</td><td>88</td></tr> <tr><td>Other (specify) _____</td><td>99</td></tr> </table>	Health center	1	Community health worker	2	Other public sector	3	Private clinic/provider	4	Private pharmacy	5	Community distributor	6	Faith-based/NGO/CBO	7	Don't know	88	Other (specify) _____	99	<p><b>Public sector:</b></p> <table border="0"> <tr><td>Health center</td><td>1</td></tr> <tr><td>Community health worker</td><td>2</td></tr> <tr><td>Other public sector</td><td>3</td></tr> </table> <p><b>Private sector</b></p> <table border="0"> <tr><td>Private clinic/provider</td><td>4</td></tr> <tr><td>Private pharmacy</td><td>5</td></tr> <tr><td>Community distributor</td><td>6</td></tr> <tr><td>Faith-based/NGO/CBO</td><td>7</td></tr> </table> <p><b>List all appropriate options.</b></p> <table border="0"> <tr><td>Don't know</td><td>88</td></tr> <tr><td>Other (specify) _____</td><td>99</td></tr> </table>	Health center	1	Community health worker	2	Other public sector	3	Private clinic/provider	4	Private pharmacy	5	Community distributor	6	Faith-based/NGO/CBO	7	Don't know	88	Other (specify) _____	99								
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36.	<p><b>Interviewer: If respondent mentioned #5 in Q33, ask:</b> You mentioned that you gave (NAME) an anti-diarrheal. Did you give him or her any of these anti-diarrheals?</p> <p><b>Interviewer: Show poster with local options.</b></p>	<table border="0"> <tr><td>Yes</td><td>1</td></tr> <tr><td>Name/# _____</td><td></td></tr> <tr><td>No</td><td>2 →Q38</td></tr> <tr><td>Don't know</td><td>88 →Q38</td></tr> </table>	Yes	1	Name/# _____		No	2 →Q38	Don't know	88 →Q38	<table border="0"> <tr><td>Yes</td><td>1</td></tr> <tr><td>Name/# _____</td><td></td></tr> <tr><td>No</td><td>2 →Q38</td></tr> <tr><td>Don't know</td><td>88 →Q38</td></tr> </table>	Yes	1	Name/# _____		No	2 →Q38	Don't know	88 →Q38																												
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37.	Where did you obtain this anti-diarrheal?	<p><b>Public sector:</b></p> Health center 1 Community health worker 2 Other public sector 3 <b>Private sector</b> Private clinic/provider 4 Private pharmacy 5 Community distributor 6 Faith-based/NGO/CBO 7 <b>List all appropriate options.</b> Don't know 88 Other 99 (specify) _____	<p><b>Public sector:</b></p> Health center 1 Community health worker 2 Other public sector 3 <b>Private sector</b> Private clinic/provider 4 Private pharmacy 5 Community distributor 6 Faith-based/NGO/CBO 7 <b>List all appropriate options.</b> Don't know 88 Other 99 (specify) _____
38.	Did (NAME) receive an intravenous treatment?	Yes 1 No 2 →Q40 Don't know 88→Q40	Yes 1 No 2 →Q40 Don't know 88→Q40
39.	Where did you obtain this intravenous treatment?	<p><b>Public sector:</b></p> Health center 1 Community health worker 2 Other public sector 3 <b>Private sector</b> Private clinic/provider 4 Private pharmacy 5 Community distributor 6 Faith-based/NGO/CBO 7 <b>List all appropriate options.</b> Don't know 88 Other 99 (specify) _____	<p><b>Public sector:</b></p> Health center 1 Community health worker 2 Other public sector 3 <b>Private sector</b> Private clinic/provider 4 Private pharmacy 5 Community distributor 6 Faith-based/NGO/CBO 7 <b>List all appropriate options.</b> Don't know 88 Other 99 (specify) _____
40.	Did you give (NAME) a zinc product?	Yes 1→Q42 No 2 Don't know 88	Yes 1→Q42 No 2 Don't know 88
41.	If NO, can you tell me why you did not give your child zinc to treat the diarrhea?	Never heard of zinc 1 Did not know where to buy 2 Zinc is too expensive 3 Used a product I had confidence in 4 Other 99 (specify) _____	Never heard of zinc 1 Did not know where to buy 2 Zinc is too expensive 3 Used a product I had confidence in 4 Other 99 (specify) _____
<b>Interviewer: After Q41 (non-zinc users) skip to Q61. For zinc users (Yes to Q40), continue with Q42.</b>			
42.	Which type of zinc product did you give (NAME)?	Name/# _____ Pill 1 Syrup 2 Diarrhea treatment kit 3 Don't know 88	Name/# _____ Pill 1 Syrup 2 Diarrhea treatment kit 3 Don't know 88
<b>Interviewer: Show poster with local options.</b>			

43.	<p>Where did you obtain the zinc product?</p> <p><b>Interviewer: Mark only one answer.</b></p>	<p><b>Public sector:</b>  Health center 1  Community health worker 2  Other public sector 3  <b>Private sector</b>  Private clinic/provider 4  Private pharmacy 5  Community distributor 6  Faith-based/NGO/CBO 7  <b>List all appropriate options.</b>  Don't know 88  Other 99  (specify) _____</p>	<p><b>Public sector:</b>  Health center 1  Community health worker 2  Other public sector 3  <b>Private sector</b>  Private clinic/provider 4  Private pharmacy 5  Community distributor 6  Faith-based/NGO/CBO 7  <b>List all appropriate options.</b>  Don't know 88  Other 99  (specify) _____</p>
44.	<p>What was your main reason for choosing this source of supply?</p> <p><b>Interviewer; Mark only one answer. Do not read list.</b></p>	<p>Price 1  Easily accessible 2  Quality of care 3  Most knowledgeable source 4  <b>List all appropriate options.</b></p>	<p>Price 1  Easily accessible 2  Quality of care 3  Most knowledgeable source 4  <b>List all appropriate options.</b></p>
45.	<p>Did anyone recommend to you to use zinc to treat the diarrhea?</p>	<p>Yes 1  No 2 → <b>Q47</b>  Don't know 88 → <b>Q47</b></p>	<p>Yes 1  No 2 → <b>Q47</b>  Don't know 88 → <b>Q47</b></p>
46.	<p>If yes, who recommended zinc?</p> <p><b>Interviewer: Do not read list. Mark only one answer. Probe to determine whether public or private sector if necessary.</b></p>	<p><b>Public sector:</b>  Health center 1  Community health worker 2  Other public sector 3  <b>Private sector</b>  Private clinic/provider 4  Private pharmacy 5  Community distributor 6  Faith-based/NGO/CBO 7  <b>List all appropriate options.</b>  Don't know 88  Other 99  (specify) _____</p>	<p><b>Public sector:</b>  Health center 1  Community health worker 2  Other public sector 3  <b>Private sector</b>  Private clinic/provider 4  Private pharmacy 5  Community distributor 6  Faith-based/NGO/CBO 7  <b>List all appropriate options.</b>  Don't know 88  Other 99  (specify) _____</p>
47.	<p>Did you give (NAME) ORS or SSS along with (zinc product name)?</p> <p><b>In countries with DTK you may need to replace above question with:</b> Did you give (NAME) the ORS that was in the kit?</p>	<p>Yes 1 → <b>Q49</b>  No 2</p>	<p>Yes 1 → <b>Q49</b>  No 2</p>
48.	<p>What was the primary reason you did not give ORS or SSS along with zinc?</p> <p><b>Interviewer: Do not read list. Mark only one response.</b></p> <p><b>Add other responses that show up frequently during pre-testing.</b></p>	<p>Did not know it should be given together 1  Did not have ORS 2  Don't think ORS is effective 3  Didn't have ingredients for ORT 4  Other 99  (specify) _____</p>	<p>Did not know it should be given together 1  Did not have ORS 2  Don't think ORS is effective 3  Didn't have ingredients for ORT 4  Other 99  (specify) _____</p>

49.	What dose of zinc per day was given to (NAME)?  <b>Response will depend upon type of product (tablet, syrup/suspension).</b>	Half tablet 1 Whole tablet 2 Half spoonful 3 Whole spoonful 4 Two spoonfuls 5 Other (specify) 99 _____ _____	Half tablet 1 Whole tablet 2 Half spoonful 3 Whole spoonful 4 Two spoonfuls 5 Other (specify) 99 _____ _____
50.	For how many days did you give zinc to (NAME)?  Does (NAME) still have diarrhea?  <b>Interviewer: Fill in number of days and also circle if the child still has diarrhea.</b>	Number of day/s: [ ] [ ]  Child still has diarrhea 99	Number of day/s: [ ] [ ]  Child still has diarrhea 99
51.	<b>Interviewer: If full course was not administered (any response in Q50 less than 10 days), ask:</b>  Was there a reason (NAME) only took X doses rather than all 10 doses?  <b>Interviewer: Do not read list. Multiple responses allowed.</b>	Child was cured 1 Child would not take zinc treatment 2 Child vomited treatment 3 Needed treatment for another person 4 Wanted to save remaining treatment for future illness 5 Did not purchase full course of zinc 6 Did not know child needed to take entire treatment 7 No one told me to give all the treatment 8 Thought I needed to give zinc only along with ORS 9 Child still taking the treatment 10 Other (specify) 99 _____	Child was cured 1 Child would not take zinc treatment 2 Child vomited treatment 3 Needed treatment for another person 4 Wanted to save remaining treatment for future illness 5 Did not purchase full course of zinc 6 Did not know child needed to take entire treatment 7 No one told me to give all the treatment 8 Thought I needed to give zinc only along with ORS 9 Child still taking the treatment 10 Other (specify) 99 _____
52.	Did you think this zinc treatment was effective in treating (NAME)?	Yes 1 No 2 Don't know 88	Yes 1 No 2 Don't know 88
53.	Why or why not?	Diarrhea stopped quickly 1 Child recovered quickly 2 Child regained appetite 3 Diarrhea did not stop soon 4 Child didn't like the taste 5 Too hard to administer 6 Don't know 88 Other (specify) 99 _____ <b>Add other responses based on pre-testing of the survey instrument.</b>	Diarrhea stopped quickly 1 Child recovered quickly 2 Child regained appetite 3 Diarrhea did not stop soon 4 Child didn't like the taste 5 Too hard to administer 6 Don't know 88 Other (specify) 99 _____ <b>Add other responses based on pre-testing of the survey instrument.</b>

54.	Do you plan on using zinc/the DTK the next time (NAME) has diarrhea?	Yes 1 No 2 Don't know 88	Yes 1 No 2 Don't know 88
55.	Did you purchase the zinc or obtain it free from the health center?	Purchased 1 Free 2 → Q60	Purchased 1 Free 2 → Q60
56.	What price did you pay?	Price _____ <b>Include categories for easier coding and analysis.</b> Don't know 88	Price _____ <b>Include categories for easier coding and analysis.</b> Don't know 88
57.	What do you think of the price of zinc?  <i>Interviewer: Read options and ask respondent to select one response.</i>	Not expensive 1 Affordable 2 Expensive 3 Too expensive 4 No opinion 5 Don't know 88	
58.	What is the maximum price you would be willing to pay for a zinc treatment or the DTK?	Local currency	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
59.	If the price of zinc or DTK exceeds what you would be willing or able to pay, what would you do?	Find cheaper brand 1 Stop using them 2 Other 99 (specify) _____	
60.	Before zinc was available for diarrhea treatment, what did you do to treat (NAME) when he or she had diarrhea?	Antibiotic 1 Anti-diarrheal 2 Intravenous/injection 3 Home/traditional remedy 4 ORS 5 Nothing 6 Don't know 88 Other 99 (specify) _____	Antibiotic 1 Anti-diarrheal 2 Intravenous/injection 3 Home/traditional remedy 4 ORS 5 Nothing 6 Don't know 88 Other 99 (specify) _____
61.	Did you give (NAME) any other medication (pill or syrup) during this episode of diarrhea?	Yes 1 No 2 → Q65 DK 88 → Q65	Yes 1 No 2 → Q65 DK 88 → Q65
62.	Which type?  <i>Interviewer: Make sure product was different than those already asked about (antibiotics, anti-diarrheals, etc.) and get some indication of it (such as positive identification from the poster with local samples). Note the specific product if possible.</i>	Pill (unknown) 1 Syrup (unknown) 2 Don't know 88 Other 99  Specific name or type of product _____	Pill (unknown) 1 Syrup (unknown) 2 Don't know 88 Other 99  Specific name or type of product _____
63.	Where did you obtain this product?  <b>Interviewer: Mark only one answer.</b>	<b>Public sector:</b> Health center 1 Community health worker 2 Other public sector 3 <b>Private sector</b> Private clinic/provider 4 Private pharmacy 5 Community distributor 6 Faith-based/NGO/CBO 7 <b>List all appropriate options.</b> Don't know 88 Other 99 (specify) _____	<b>Public sector:</b> Health center 1 Community health worker 2 Other public sector 3 <b>Private sector</b> Private clinic/provider 4 Private pharmacy 5 Community distributor 6 Faith-based/NGO/CBO 7 <b>List all appropriate options.</b> Don't know 88 Other 99 (specify) _____

	<b>Interviewer: Skip to Question 65 after asking Question 63.</b>		
64.	<b>Interviewer: If negative responses given in Q14 AND Q21 AND Q32, indicating that they gave no treatments (including no ORS/SSS or home remedies), ask the following. Multiple responses allowed.</b>  Can you tell me why you did not provide any treatment to (NAME) during this recent episode of diarrhea?	Child not very sick 1 Could not afford 2 Did not know where to purchase treatment 3 Child too young for drugs 4 Don't know 88 <b>Add other responses based on pre-testing of the survey instrument.</b>	Child not very sick 1 Could not afford 2 Did not know where to purchase treatment 3 Child too young for drugs 4 Don't know 88 <b>Add other responses based on pre-testing of the survey instrument.</b>

<b>Section 4: Exposure to Interventions and Knowledge of Zinc – For all caregivers of children under age 5 years regardless of whether they cared for a child with diarrhea within last two weeks.</b>			
	<b>Questions &amp; Filters</b>	<b>Codes</b>	<b>Skip to</b>
65.	Thinking back over the past 3 months, have you seen or heard any messages about treatment for diarrhea?	Yes No	1 2 → <b>Q68</b>
66.	Where did you hear/see the message(s) about treatment for diarrhea?  <i>Interviewer: Multiple responses allowed.</i>	Radio Television Education session/health talk Community health worker Clinic nurse/doctor Neighbor/friend Newspaper Banner/poster/etc Other (specify) _____	1 2 3 4 5 6 7 8 99
67.	What were the main messages that you heard/saw?  <i>Interviewer: Probe. Multiple responses allowed.</i>	<b>List options based on your country's media/BCC messages as well as any standard diarrhea treatment messages.</b>	
68.	Have you ever heard any messages about ORS?	Yes No	1 2 → <b>Q70</b>
69.	What were the main messages that you heard/saw?  <i>Interviewer: Multiple responses allowed.</i>	<b>List options based on your country's media/BCC messages as well as any standard diarrhea treatment messages.</b>	
70.	Please tell me if you agree or disagree with each of these statements.  <i>Interviewer: Read this list.</i>		<b>Ag Dis DK</b>
		ORS is medicine that gives good health	1 2 99
		ORS stops diarrhea	1 2 99
		My child does not like the taste of ORS	1 2 99
		ORS prevents dehydration	1 2 99
71.	Have you ever used a purchased ORS product to treat a child with diarrhea?	Yes No Don't know	1 2 88 → <b>Q75</b> → <b>Q75</b>
<b>The following 3 questions should be eliminated if there is only a DTK in country and no other source of ORS.</b>			
72.	How much does one packet of ORS cost at the local health center?	Price _____ Don't know	<b>Insert appropriate price categories.</b> 88
73.	How much does one packet of ORS cost at the local private outlet ( shop, pharmacy, provider)?	Price _____ Don't know	<b>Insert appropriate price categories.</b> 88
74.	What do you think of the price of ORS?  <i>Interviewer: Read list and ask respondent to select one.</i>	Not expensive Affordable Expensive Too expensive No opinion Don't know	1 2 3 4 5 88

75.	Can you tell me what you know about zinc?  <b>Interviewer: Multiple responses allowed. Do not read list.</b>  <b>Probe: anything else?</b>	Treatment for diarrhea 1 Needs to be taken with ORS/ORT 2 Makes child stronger 3 Helps prevent future episodes of diarrhea 4 Reduces duration and severity of diarrhea 5 Nothing 6 <b>Add others indicated through pre-testing.</b>	
76.	Thinking back over the last 3 months, have you heard a message/received information about zinc/DTK for diarrhea?	Yes 1 No 2	
77.	Thinking back over the last 3 months, have you ever heard of (specific zinc or zinc/ORS product name)?  <b>Interviewer: Show the zinc or DTK (zinc/ORS) product(s) to the respondent.</b>	Yes 1 No 2	→Q79
78.	Where did you hear or see a message about (zinc/ORS product name)?  <i>Interviewer: Multiple responses allowed.</i>  <b>Probe: anywhere else?</b>  <b>List options here based on communications media used by your program (or the Ministry of Health).</b>	Radio 1 Television 2 Education session 3 Community sales agent 4 Village health talk 5 Clinic health talk/nurse 6 Newspaper 7 Banner/poster/etc 8 Doctor 9 Friend or neighbor 10 Relative 11 Hospital 12 Health post/sub-health post 13 Community health worker 14 Local pharmacist 15 Other 99 (specify) _____	
79.	Has anyone spoken to you in person about zinc in the last 6 months?	Yes 1 No 2	→Q81, if no to both Q77 and Q79 skip to Q521
80.	Who has spoken with you in person about zinc?  <b>Multiple responses allowed.</b>  <b>Probe: anyone else?</b>	Community animateur 1 Community health worker 2 Community distributor 3 Neighbor/Friend/Relative 4 Health facility worker/staff 5 Pharmacist/Drug counter salesman 6 Other 99 (specify) _____	
81.	What was the main message that you heard/saw from any source (community health worker or mass media)?  <b>Interviewer: Multiple responses allowed.</b> <b>Probe: anything else?</b>	<b>List options based on your country's media/behavior change communication (BCC) messages as well as any standard diarrhea treatment messages</b>	

82.	<p>What information did you get from the message(s) that you heard?</p> <p><b>Interviewer: Multiple responses allowed.</b> <b>Probe: anything else?</b></p>	<p>Zinc reduces the duration of the diarrheal episode 1</p> <p>Zinc reduces the severity of diarrhea 2</p> <p>The risk of new episode in the future is reduced 3</p> <p>Zinc is available in pharmacy and health centers 4</p> <p>Zinc should be taken with ORS/ORT 5</p> <p>A complete 10-14-day dose should be administered 6</p> <p>Zinc is an appropriate treatment for diarrhea 7</p> <p>Don't know 88</p> <p>Other 99</p> <p>(specify) _____</p>	
83.	<p>If your child had diarrhea, can you tell me all the places you could get zinc?</p> <p><b>Interviewer: Multiple responses allowed.</b> <b>Probe: anywhere else?</b></p>	<p>Hospital 1</p> <p>Health post/sub-health post 2</p> <p>Private clinic 3</p> <p>Local pharmacy/drug store 4</p> <p>Community distributor 5</p> <p>Don't know 88</p> <p>Other 99</p> <p>(specify) _____</p>	
84.	<p>Have you ever used zinc/DTK to treat your child with diarrhea?</p>	<p>Yes 1</p> <p>No 2</p>	→ Q52I
85.	<p>Have you ever purchased (zinc/ORS product name)?</p>	<p>Yes 1</p> <p>No 2</p>	→ Q52I
86.	<p>Where did you obtain (zinc/ORS product name)?</p> <p><b>Interviewer: Multiple responses allowed.</b> <b>Probe: anywhere else?</b></p>	<p>Public (govt) pharmacy 1</p> <p>Private pharmacy 2</p> <p>Community distributor 3</p> <p>Commercial outlet/depot 4</p> <p>Don't remember 88</p> <p>Other 99</p> <p>(specify) _____</p>	
87.	<p>How much does one packet of zinc/DTK cost at the local health center?</p>	<p>Price _____</p> <p><b>Insert appropriate price categories</b></p> <p>Don't know 88</p>	
88.	<p>How much does one packet of zinc/DTK cost from a community-based distributor/community health worker?</p> <p><b>Research director: This question can be eliminated if there are no community-based sales.</b></p>	<p>Price _____</p> <p><b>Insert appropriate price categories</b></p> <p>Don't know 88</p>	
89.	<p>How much does one packet of zinc/DTK cost at the local private shop/pharmacy/provider?</p>	<p>Price _____</p> <p><b>Insert appropriate price categories</b></p> <p>Don't know 88</p>	
90.	<p>What do you think of the price of zinc?</p> <p><b>Interviewer: Read list of options and select one.</b></p>	<p>Not expensive 1</p> <p>Affordable 2</p> <p>Expensive 3</p> <p>Too expensive 4</p> <p>No opinion 5</p> <p>Don't know 88</p>	

## HOUSEHOLD SURVEY QUESTIONNAIRE, PART II – LIKERT SCALE QUESTIONNAIRE: DETERMINANTS OF USE

This section asks your opinion on certain issues. Please tell me if you “agree strongly,” “agree somewhat,” “disagree strongly,” or “disagree somewhat” with the statements.

### Ability: Knowledge

		True	False
Q521	Diarrhea can be associated with lack of cleanliness	1	0
Q522	Diarrhea can be caused by drinking unsafe water	1	0
Q523	Diarrhea can be caused by eating unhygienic food	1	0
Q524	Only those diarrheal episodes that have blood in the stool require antibiotics	1	0
Q525	Most diarrhea can be managed at home without any drugs	1	0
Q526	Giving food-based fluids is equally as effective as giving ORS	1	0

### Motivation: Threat Severity

		Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree
Q531	Children can die from diarrhea	4	3	2	1
Q532	My family will experience hardship if a family member gets diarrhea	4	3	2	1
Q533	It does not seem like anyone around here has a problem because of diarrhea	4	3	2	1
Q534	Diarrhea is a major health problem in my community	4	3	2	1
Q535	Diarrhea is a problem in the poorer segment of the community only	4	3	2	1

### Motivation: Threat Susceptibility (Children Under Five)

		Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree
Q541	If my child gets diarrhea it is best just to do nothing and it will pass in time	4	3	2	1
Q542	The children (child) under five in my household are (is) healthy so their (his/her) bodies could fight off diarrhea without doing anything	4	3	2	1
Q543	Children under five are too young to experience serious medical problems from getting diarrhea	4	3	2	1
Q544	I am not worried about the children (child) under five in my household getting diarrhea	4	3	2	1
Q545	Children are more likely to get diarrhea than adults	4	3	2	1

**Opportunity: Availability**  
Skip if have not heard about zinc or DTK in Question 71.

		Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree
Q551	Shops near here always have zinc for sale	4	3	2	1
Q552	Zinc treatments are difficult to get around here	4	3	2	1
Q553	There is a place nearby where I can get zinc when my child needs it	4	3	2	1
Q554	I don't know where to get zinc	4	3	2	1
Q555	Zinc treatments are too expensive	4	3	2	1
Q556	I am willing to pay the current price for zinc <b>Add price of zinc</b>	4	3	2	1
Q557	Zinc treatment products are available within walking distance from my home	4	3	2	1

**Motivation: Outcome Expectations**

		Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree
Q561	Zinc is effective for treatment of diarrhea	4	3	2	1
Q562	Zinc reduces the duration of a diarrheal episode	4	3	2	1
Q563	Zinc does not help in reducing the severity of a diarrheal episode	4	3	2	1
Q564	Use of zinc reduces the risk of dehydration in children	4	3	2	1
Q565	Zinc reduces the risk of a new diarrheal episode in the following 2 to 3 months	4	3	2	1
Q566	Zinc helps to strengthen the immune system of children	4	3	2	1

**Capacity/Ability: Use of Products**  
Skip if have not heard about zinc or DTK in Question 71.

		Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree
Q571	Zinc is an appropriate treatment for pediatric diarrhea	4	3	2	1
Q572	Zinc with ORS/ORT should be used for every type of pediatric diarrhea	4	3	2	1
Q573	Pediatric diarrhea should be treated with an antibiotic	4	3	2	1
Q574	Zinc has too many side effects, so I don't feel safe giving zinc to my small child	4	3	2	1
Q575	Zinc tastes bad so my child won't take it.	4	3	2	1
Q576	Zinc is only a nutritional supplement, not an effective treatment for pediatric diarrhea.	4	3	2	1
Q577	Zinc should be given along with ORS/ORT to be most effective.	4	3	2	1
Q578	It is difficult to remember to give a child zinc when the diarrhea has stopped	4	3	2	1
Q579	I would purchase and use zinc/DTK the next time my child has diarrhea	4	3	2	1

**Is there anything I did not ask that you think I should know? Is there anything you want to go back to?**

**Is there anything you would like to ask me about the topics we have discussed today?**

**Thank you for your participation in this study!**

## 2. SAMPLE INTERVIEW QUESTIONS: PHARMACISTS AND DRUG SELLERS<sup>4</sup>

### Background information:

Location of pharmacy (address, district):

Hours of operation:

Position of respondent:

### Questions:

1. How many people come to the pharmacy daily?
2. What are the common products that you sell?
3. How do you learn about new medicines? What types of communication do you receive when a new product is introduced on the market?
4. Where do you get your stock? Country and supplier name.
5. Do you distribute generic drugs, brand-name drugs from major pharmaceutical firms, or both?
6. What common child health/treatment problems are brought to you as a pharmacist? Do you provide advice as well as medications?
7. What is the standard treatment given to the children who are brought to the pharmacies with acute diarrhea? And for children with chronic diarrhea?
8. Do you look for any special signs in children presenting with diarrhea?
9. When a client comes into the pharmacy with a child who has diarrhea, do they ask for a specific medication or do they ask for advice?
10. What kinds of questions do they ask? What advice/counseling do you usually provide?
11. How do they typically describe diarrhea? Do they differentiate between different types of diarrhea? Do you provide different treatments for each?
12. How often do caregivers ask for oral rehydration solution/salts (ORS)?
13. What are the common medicines or combinations of medicines sold for diarrhea? What medications do you usually recommend and why? How much do they sell for?
14. Note the cost of each type of ORS, antibiotic, and antidiarrheal (minimum, maximum, and the most sold).
15. How much medicine does a caregiver usually buy at a time?
16. How often do caregivers come into the pharmacy to purchase diarrhea treatments? (weekly, monthly, seasonally?)

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<sup>4</sup> Adapted from Adeya et al. (2006).

17. Do caregivers come back to the pharmacy if the diarrhea continues?
18. Is there another provider on the premises? What type? In what types of cases (of diarrhea) do you refer a customer to that provider? What other child health services do you refer to the provider?

### **Sample Questions – Pre-Launch Phase**

Introduce zinc product: We have a new zinc product, recommended by the World Health Organization, that treats diarrhea. It is recommended that it be sold with ORS. A child with any type of diarrhea should take zinc daily for 10 to 14 days, along with ORS or ORT.

1. Are any of your current products promoted as having zinc in them? What are these products? How are they promoted?
2. Are zinc tablets or syrups or suspensions sold? If so, what are they used for? What are they and for how long are they taken?
3. Do you ever sell dispersible tablets? Do they sell well? Do you provide instructions? Do people use them? Any complaints?
4. What about pricing? Do you think the zinc diarrhea treatment should be priced to match other diarrhea products?
5. We are planning on developing point-of-sale (POS) materials to assist in marketing this new zinc treatment. What POS materials would be most convenient and/or useful? Where would you put POS materials? Where do you stock POS materials? Would you use a reference sheet or other handout? Would a diarrhea treatment wall chart be useful?

### **Sample Questions – Post-Launch Phase**

If the respondent has not mentioned the promoted zinc product or diarrhea treatment kit (DTK), show respondent the box and ask: Have you seen and do you carry this product?

If yes, ask respondent: Do caregivers come in and ask for this product? Do you have many return customers?

1. Do you recommend this product to your clients? Why or why not?
2. How do sales of this product compare to sales of other diarrhea treatment products?
3. How does the price of this product compare with the price of other diarrhea treatment products? Do you receive what you consider to be an adequate sales margin? Do you consider this product as affordable for your clients?
4. Do you have (zinc product) POS materials? Who provided these materials? What do you think about these materials? Are they attractive and adequately promote product use or appropriately indicate product availability?
5. Have you received any complaints about the product or questions on its use?
6. What are caregivers' most frequently asked questions?

### 3. SAMPLE INTERVIEW QUESTIONS: HEALTH FACILITY PERSONNEL<sup>5</sup>

#### Introduction

We'd like to talk with you today about diarrhea standard case management and this health center's experience with and approach to treating children under five with uncomplicated diarrhea.

First, a few questions about Integrated Management of Childhood Illness (IMCI) and Community-based IMCI Training:

- What training exists related to diarrhea treatment?
- Who is trained and by whom?
- What types of activities are implemented to educate the population about the treatment of diarrhea?
- What proportion of health workers have been trained in IMCI procedures? Does this proportion vary across different regions of the country?
- What plans are there for refresher training of health workers (facility and community) that will provide an opportunity to introduce zinc treatment?

#### Questions for Regional and District Ministry of Health Managers and Other Local Partners

- Approximately how many children under five years of age are treated per month for diarrhea? What is the under-five mortality due to diarrheal disease?
- What is the availability of oral rehydration solution/salts (ORS) and/or zinc and/or diarrhea treatment kits in health centers, the private sector (pharmacies, private clinics, kiosks, etc) and elsewhere in the communities? How often do ORS or zinc stock-outs occur? What are the reasons for the stock-outs?
- What is the standard treatment given to the children who are brought to the health center with acute diarrhea? And for children with chronic diarrhea?
- What is the management protocol for children with serious cases of dehydration at the health centre?
- Which oral rehydration therapy methods are used (ORS packets, oral rehydration therapy [ORT], i.e., home-prepared sugar-salt solution, others)?
- What is the availability and use of chlorine or other products for disinfection of water – either at the health facility or at the market?
- With what frequency did you recommend ORS and/or zinc for diarrhea during the last year?
- How much do different types of diarrhea treatment currently cost (include both consultation fees and drug costs)?
  - acute diarrhea at home

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<sup>5</sup> Adapted from Adeya, et. al. 2006.

- acute diarrhea in community
- acute diarrhea in facility
- severe diarrhea in facility
- diarrhea with blood in stools in facility
- How are drug and service prices determined?
- Is there an ORT corner in the health center? How does it function?

### **Questions for Facility Health Workers**

- Approximately how many children under five years of age are treated per month for diarrhea and dehydration ? What is the under-five mortality due to diarrheal disease?
- How do health personnel manage diarrhea cases? When do you refer cases to the next level of care?
- How would you advise a caregiver who has a child with diarrhea?
- Do caregivers follow your advice on the treatment for diarrhea? If so, how? If not, why?
- What diarrhea treatment practices are common in your community?
- What is the perception of the population on the best treatment for diarrhea?
- What are the primary difficulties in the prevention and the treatment of diarrhea?
- What new approaches to the treatment of diarrhea are you aware of?
- Do caregivers use ORS for diarrhea treatment? If not, why not?
- Have you heard about zinc in the treatment of diarrhea? If yes, what do you know about zinc?
- Have there been issues/complications with malaria and diarrhea diagnosis and prescribing practices?
- What is the availability of ORS and/or zinc in the health centers?
- What is the availability and use of chlorine or other products for disinfection of water – either at the health center or in the community?
- What is the cost of ORS and/or zinc and a consultation? Are there mechanisms to address the needs of those who cannot pay?
- Is there an ORT corner in the health center? How does it function?
- Are there health education sessions? How much time is spent? How many people participate? What are the principal materials, messages, and monitoring methods used?
- Are visits made to households? How much time is spent? What are the principal messages and monitoring methods used?
- What are the principal messages and materials used for interpersonal consultations?



**ANNEX B. SAMPLE FOCUS GROUP  
DISCUSSION GUIDES**



1.1 All of you said you had a young child. Could you tell me what are the main illnesses of young children in your community/neighborhood?

1.2

- **If diarrhea mentioned:** You mentioned diarrhea. What causes diarrhea in young children?
- **If diarrhea not mentioned:** How about diarrhea – is it common also? What causes diarrhea in young children?

**Probe** for list of different causes

1.3 Are there different types of diarrhea that young children get? What are the different types and what are they called? (**Note-taker should write different types on a flip chart for reference, unless this would intimidate low-literacy participants.**)

**Probe:** Which type of diarrhea usually starts first? Which type is more dangerous? Are there different types for babies and for older children?

1.4 What happens when a child gets diarrhea? What other symptoms do they have? What are your concerns when your child has diarrhea?

- **If dehydration mentioned:** I'd like to know more about dehydration.
- **If dehydration not mentioned:** What about dehydration – can that be a result of diarrhea?
- How do caregivers know if a child is dehydrated? What happens when a child gets dehydrated?
- What do women in your community do when a child is dehydrated?

## 2. Treatment process during diarrhea (10 minutes)

- Now we'd like to talk about what caregivers do when a young child gets diarrhea.
  - Are there participants who do not treat diarrhea? **If so, ask why not.**
- As we discussed earlier, there may be different types of diarrhea.

2.1 Do you treat these types of diarrhea differently?

- If yes, ask the following questions for each type of diarrhea mentioned in section 1.3.
- If no, ask the questions once for general diarrhea.

**Probe:** What is the first thing that you do? What is the next thing you do?

**Probe:** Do you give the child more fluids? Why or why not? What do you give them?

**Probe:** Do you give the child more food? Why or why not? What do you give them?

**Probe:** How about medicine; do you give the child any kind of medicine? Why or why not? What do you give them? Where do you get the medicine? Do caregivers take the child to the doctor if they have diarrhea?

**Probe:** How do caregivers treat their child if they only have a mild case of diarrhea? How about if the child is very ill or has repeated episodes of diarrhea – do they do anything differently?

- 2.2 When do caregivers seek treatment outside the home if their child has diarrhea? Where do caregivers seek treatment when their child has diarrhea: Their relatives? Pharmacist/drug seller? Community health worker? Doctor? Nurse/paramedic?
- 2.3 What are examples of medicines for diarrhea? Are there medicines for different kinds of diarrhea or different severity of diarrhea? Do you still give oral rehydration solution/salts (ORS) and/or increased fluids if these medicines are being given?
- 2.4 What do health professionals/pharmacists that you visit usually give or prescribe for the different types of diarrhea?

**Probe:** *If participants mention antibiotics or anti-diarrheals, ask* what type.

*If participants don't mention antibiotics or anti-diarrheals, ask* if these are prescribed, for what type of diarrhea? What types of antibiotics or anti-diarrheals are they?

- 2.5 How long do you give medicines for? How do you give them – in tablets, in syrup, mixed with food or fluids?
- 2.6 Is there anything you don't like about giving your child medicines?

**After a general discussion, the following issues should be covered. They may arise naturally and so can be covered in any order.**

### **3. Perception on pricing for treating diarrhea (2 minutes)**

- 3.1 Is it costly to treat diarrhea? What are the costs to treat a child for diarrhea?

**Probe:** Do you think that price is affordable for you? What price would you think is affordable for you?

### **4. Oral rehydration solution/therapy (5 minutes)**

- 4.1 When a child has diarrhea, do caregivers in this community use a recommended home-prepared fluid (ORT)? (**Use local terms for recommended home-prepared fluids (sugar-salt solution, rice water, etc.)** How is that given? What about pre-packaged ORS – do caregivers that you know give ORS for diarrhea? (**Name the brands that are available locally and show packages/poster of the various ORS products available.**) How do they give ORS to the child?
- 4.2 When do caregivers in your community give ORS/ORT for diarrhea? Where do they get it? How long do they give it?
- 4.3 Do they find that the ORS/ORT helps the child? Why or why not?

4.4 Does the ORS/ORT stop the diarrhea?

4.5 Are there cases when children who have diarrhea don't need ORS/ORT? Explain.

4.6 Is there anything that caregivers don't like about giving their child ORS/ORT?

4.7 When they are giving ORS, do they give other fluids as well? Do they give food as well? Do they give medicine as well? Why or why not?

### **5. Treatment practices after diarrhea (10 minutes)**

- We have talked a lot about what we do when our child has diarrhea. Now, I want to talk about what we do after the diarrhea stops.

5.1 How do we know when the child is getting better? What are the first signs that show that the child is getting better?

5.2 What do caregivers do after the diarrhea stops?

**Probe:** Do they give more fluids than usual, less, or the same? What types of fluid do they give? What about ORS, do they keep giving it after the diarrhea stops?

**Probe:** Do they give more food than usual, less, or the same? Are there any special types of food that they give?

**Probe:** How about medicine; do they keep giving medicine after the diarrhea stops? What medicine do they give? When do they stop giving medicine?

### **6. Introduction of zinc treatments (10 minutes)**

6.1 What else is important for children when they have diarrhea?

6.2 Have you ever heard of zinc? **If yes:** Why is zinc important?

6.3 Some of you said that caregivers give their children medicine when they have diarrhea. How do they usually give their child medicine?

**Probe:** Do caregivers ever give tablets to young children? Are there any problems in giving tablets to young children? How about syrups or suspensions?

**Probe:** Do caregivers ever give dissolving tablets to young children? Are there any problems in giving dissolvable tablets to young children?

- Now we have something to show you. (*Pass out zinc treatment samples.*) This is a new product that we are introducing in this country. Zinc is a very important mineral for children when they have diarrhea.

**Probe:** If I told you this medicine (zinc) would reduce the number of days a child had diarrhea and help to prevent diarrhea for 2-3 months, what do you think caregivers in your community would you say? Is this important?

6.4 Would they believe this is possible?

6.5 Would they give such a medicine to their child? Why or why not?

6.6 What concerns would they have about giving their child this medicine?

**Probe:** Zinc needs to be taken along with ORS/ORT. Zinc does not replace ORS or ORT. Would it be difficult to remember to do both? Why or why not? What would make it easier to remember?

**Probe:** If I told you that this treatment would boost the child's strength and resistance to disease, what reaction would caregivers in the community have to this treatment? Is that important?

**If using dispersible tablets<sup>6</sup>, explain and demonstrate how to disperse the tablets. Have each participant taste the solution. Ask the following questions:**

6.9 Now that you've seen how the tablets can be mixed with liquid, do you think this is a good way to give medicine to a young child? Why or why not?

6.10 Would children take medicine like this?

6.11 Would children like the taste?

6.12 Would it be difficult to remember to give the child the treatment for the full 10 days recommended? Why or why not?

6.13 What would help you remember to give the child the treatment for the full 10 days?

6.14 Any other comments about the treatment?

- We'd like your opinion about pricing the zinc OR diarrhea treatment kit (which contains two packets of ORS and zinc).

6.15 How much would caregivers pay for these treatments if they knew they would help treat their child's diarrhea?

6.16 If the zinc/kit were priced at \_\_\_\_\_, would you think that was a reasonable price?

6.17 What do you think might be a reasonable, affordable price?

## **7. Wrap-up (5 minutes)**

We have discussed a lot of issues about diarrhea in young children today and we want to thank you for your participation. This information will help us to plan treatment programs for young children in your community. Before we close, do you have any questions for us?

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<sup>6</sup> Pediatric zinc treatments currently are manufactured in syrup, suspension and dispersible tablet form. This focus group guide should be adapted to obtain information on the specific products that are or will be available in your country.



1.5 Are there different types of diarrhea that young children get? What are the different types and what are they called?

**Probe:** Which type of diarrhea usually starts first? Which type is more dangerous? Are there different types for babies and for older children?

1.6 What happens when a child gets diarrhea? What other symptoms do they have?

1.7 What are your concerns when your child has diarrhea?

1.8 Where do you receive information on the treatment of diarrhea?

### **B. Standard home management/treatment of diarrhea (30 minutes)**

- Now we'd like to talk about what caregivers do when a young child gets diarrhea.

2.1 Are there participants who do not treat diarrhea? **If so, ask why not.**

2.2 When a child suffers from diarrhea, what do you give him or her to eat?

**Probe:** What food? In what quantity? Frequency? Duration?

2.3 Apart from food, what else do you give children with diarrhea?

**Probe:** Home-prepared solutions? How are they prepared? Do you give herbal teas? **For each food/liquid mentioned probe: Why do you give this food/liquid?**

2.4 Is there anything that is forbidden for a child with diarrhea to eat/drink? What? Why?

2.5 Have you heard of oral rehydration solution/salts (ORS) or home-prepared oral rehydration therapy (ORT)? From where? What is it used for?

2.6 When your child has diarrhea do you give ORT or a solution made from ORS packets?

**Probe:** Which do you prefer? Is there a time when you would chose one over the other? Which is easier to prepare? How do you decide whether or not to give ORS or ORT?

2.7 If caregivers do not give ORS or ORT, ask, "Why do you not use it?"

2.8 Do you seek advice/care outside the home from a health professional or pharmacy when your child has diarrhea? Why or why not?

**Probe:** At what point/degree of severity do you seek care or treatment?

2.9 Did you provide any other treatment to your child during their last episode of diarrhea—either traditional or modern medicines? What medicines did you give your child? Do you think those medicines are good? **(If antibiotics or anti-diarrheals are mentioned, ask "why?")**

2.10 What treatments do you usually/have you traditionally purchased or obtained from a pharmacy or health care facility when your child has diarrhea? Which ones do you think work best? Why? Have you tried anything else?

2.11 Have you ever heard of or seen one of these zinc products? (**Show packages/poster of the various zinc products available.**)

2.12 Do you know where to obtain this/these product(s)?

2.13 Who buys medicine in your families? From where?

2.14 Have any of you ever given this product to your child to treat diarrhea?

**Probe:** Why or why not?

2.15 Who suggested that you use this product? or How did you hear about the product?

2.16 **If respondents have used zinc, ask:** From whom did you obtain the zinc or the zinc/ORS diarrhea treatment kit (DTK)?

**Probe:** From a public sector clinic/pharmacy? From a private sector doctor or pharmacy or drug counter? From a community-based distributor?

2.17 Did you have to pay for the product? What did you pay for the product?

**Probe:** Do you consider that an affordable price? If no, what would you consider a reasonable price?

2.18 Can you describe how you administered this product to your child?

**Probe for number of tablets or spoonfuls per day, how many days, what else was given to the child.**

2.19 When you used (**PRODUCT NAME**) did you give both zinc and ORS to your child? If not, why not? **Or for countries marketing zinc only:** When you used zinc, what else did you use to treat the child? (**Answer may be ORS/ORT or antibiotic/antidiarrheal, etc.**)

2.20 **If tablets used:** Did you find the zinc tablets easy to use? Did you have any problems dissolving the tablet and giving it to your child?

2.21 How many days did you give zinc to the child? [**If the majority did not give the tablet/syrup for 10-14 days, ask** “why not?”] If the child’s diarrhea stops in two days, what do you do with the rest of the zinc?

2.22 Did you encounter any problems or side effects when using the (zinc/ORS product)? Please tell us what problems you encountered when using the product(s).

2.23 Did you feel this was an effective treatment for your child’s diarrhea? Did you notice any change in the child’s behavior after the treatment?

### **C. Messages on prevention or treatment of diarrhea with zinc (15 minutes)**

- Thinking back over the past 3 months, I’d like to talk to you about what you have heard from media sources or friends or health care workers about diarrhea treatment.

- 3.1 Have you seen or heard any messages about treatment for diarrhea?
- 3.2 Where did you hear or see these messages?
- 3.3 Do you recall any of the messages – either from individuals or media sources?
- 3.4 Have you seen or heard any messages about zinc?
- 3.5 Where did you hear or see these messages?
- 3.6 What was the main message that you heard/saw?
- 3.7 What did you think about these messages?

**Probe:** Did it make you want to buy/obtain zinc the next time your child had diarrhea? Do you think you might want to use zinc when your child has diarrhea?

#### **VI. Wrap-up (5 minutes)**

We have discussed a lot of issues about diarrhea in young children today and we want to thank you for your participation. This information will help us to improve our diarrhea treatment programs for young children in your community. Before we close, do you have any questions for us?



**B. Diarrhea case management:** We are very interested in how families act when their small children have diarrhea and how you assist them with counseling and treatment advice.

1. Is diarrhea a major problem in this community?
2. What do most families do when their child has diarrhea?
3. What are the primary difficulties/challenges that you face in dealing with local families on the prevention and the treatment of diarrhea? Have you been able to successfully deal with these challenges?
4. How do you manage diarrhea cases?
5. What counseling do you provide to caregivers of children with diarrhea?
6. Do caregivers follow your advice on the treatment for diarrhea? If so, how? If not, why not?
7. Have there been issues/complications with malaria and diarrhea diagnosis and prescribing practices?
8. Is oral rehydration solution/salts (ORS) available in your community?
9. What do people do to treat drinking water in this community? Are there disinfection products available?
10. Do caregivers use ORS for diarrhea treatment? If not, why not?
11. Do you have a technique for teaching caregivers how to make the “sugar-salt solution” at home?
12. Have you been suggesting that caregivers use zinc/ORS or the diarrhea treatment kit (DTK) to treat diarrhea?
13. What has been the reaction of caregivers to using zinc with ORS? Have there been any complaints or problems? Have you had any positive feedback?
14. When and how do you refer serious cases to health facilities? What portion (or percentage) of cases have you seen that you felt needed to be referred to a clinic or hospital?

**C. Communication messages and materials:** Now we’d like to talk about any messages you have heard and communication materials that you have used:

1. Have you personally seen/heard any media messages on using the DTK to treat diarrhea?
2. Do you think that these messages are effective in getting people to think about and use the DTK or zinc plus ORS?
3. What communication materials are used during counseling sessions? Do you feel that these are effective? How could they be improved? Would other materials help in your efforts to educate members of your community?

**D. Community-based product sales and data collection activities:** Now we'd like to talk about your experience as a community sales agent:

1. Are you selling many DTKs?
2. Who is most likely to buy/use the kit or zinc plus ORS?
3. Have you had any comments/reaction to the price of the product? Do families consider \_\_\_\_\_ an affordable price? (**Fill in current local price.**)
4. Where do you get your stock of child health products (zinc/ORS)?
5. What quantities do you sell?
6. How do you keep track of their stock?
7. Do you collect data on diarrheal diseases, number of counseling sessions or quantities of products sold?
8. Where do you send this information? How do you use this information in your work?
9. What type of support/feedback do you receive from (NGO or the health center, district or regional level)? What is the frequency and content of feedback? Has it been useful?

**VI. Wrap-up (5 minutes)**

We have discussed a lot of issues about diarrhea in young children today and we want to thank you for your participation. This information will help us to improve our diarrhea treatment programs for young children in your community. Before we close, do you have any questions for us?



# ANNEX C. MYSTERY CLIENT SURVEY

## Mystery Client Survey Protocol and Checklist

### **Research objectives:**

The overall objective of a mystery client survey is to determine the quality of service and specific recommendations of diarrhea advice and treatments offered to caregivers of children under five who are suffering from diarrhea as they seek care at a health facility (public or private sector clinic, provider, or pharmacist/chemist). Research team members pose as actual clients (“mystery clients”) and observe and record the provider’s responses to a given scenario.

Specific research objectives are to:

- determine product availability
- determine whether each provider is asking the client appropriate questions to assure that appropriate treatment recommendations are subsequently provided to the client on care
- determine what specific treatments are recommended and/or sold to mystery clients posing as caregivers.

### **Suggested methodology:**

The sample should be selected from a list of providers and pharmacists who have been trained by the project (provided by the implementing organization). Specific providers to be visited/surveyed can be selected by simple random sampling from this list (or other sampling methods as desired) and assigned a numeric identification code. Only this code will be used to identify each provider.

The research team members (posing as mystery clients) visit the selected health clinics, private providers or pharmacy outlets and, acting as a caregiver with a child under five with diarrhea, ask for the provider’s recommendation on care and treatment. The following introductory question is to be asked of all sampled providers: “My child has diarrhea, what should I do?” The basic symptoms to be conveyed are that the child has had diarrhea for two days, with 3 or more watery stools per day. Based on provider responses, the mystery clients continue to engage with the provider until they have received advice or a prescription or product. The mystery clients are instructed to state (if asked) that their child does NOT have blood in the stool (i.e., antibiotics are not recommended) and that the child does NOT have a fever. If the provider does not mention zinc, the mystery client should ask the provider for his/her opinion or recommendation about zinc as a treatment for the child’s diarrhea. Immediately after leaving the provider, the mystery clients use the following form to record how the provider responded.

**MYSTERY CLIENT RECORD FORM**

Health Outlet ID: \_\_\_\_\_

District: \_\_\_\_\_

Commune: \_\_\_\_\_

Instructions: After you leave the outlet, circle 1 for Yes or 0 for No.

Question	Yes	No
When you asked for diarrheal disease control/treatment remedy, did s/he just give you something without counseling you?	1	0
Did the health provider ask you about details of the child with diarrhea?	1	0
Which of the following information was discussed?		
• Age of Child	1	0
• Duration of diarrhea	1	0
• Type of stool/ substance present in stool	1	0
• Presence of blood in diarrhea	1	0
• Any signs of dehydration in the child	1	0
Did the health provider ask you if you have given anything to the child?	1	0
Did the health provider prescribe anything for the child?	1	0
What did the health provider prescribe for your child?		
A. Given or prescribed Antibiotic Pill/Syrup	1	0
B. Given or prescribed Anti diarrheal Pill/Syrup	1	0
C. Given or prescribed ORS	1	0
D. Given or prescribed Zinc	1	0
E. Given or prescribed other Pill/Syrup	1	0
F. Prescribed other method (write) _____		
Other outcome (describe) _____	1	0
Did the health provider briefly explain to you how to use the product?	1	0
Did the health provider explain the importance of completing the prescribed dosage?	1	0
Did the health provider ask you to bring the child to the pharmacy or take the child to the hospital if diarrhea does not stop?	1	0

How much did the consultation cost?	Cost	
If you received the product,		
How many Zinc tablets?	No.	_____
ORS packs?	No.	_____
What was the cost?	Cost	_____
If you received other please state product name _____ and cost	Cost	

If the provider does not mention zinc, ask the provider for his/her opinion or recommendation about zinc as a treatment for your child's diarrhea and record his/her answer below:

Please record any other pertinent information below about your visit to the provider or pharmacy outlet:

## ANNEX D. BIBLIOGRAPHY

- Adeya G, Harvey P, Nturu M, Swedberg E, Wansi E. 2006. Country Assessment Tool for the Introduction of Zinc in the Clinical Management of Diarrhea. Rational Pharmaceutical Management Plus (RPM Plus), A2Z Micronutrient and Child Blindness Project (A2Z), Helen Keller International, and Basic Support for Institutionalizing Child Survival (BASICS) for the United States Agency for International Development (USAID).
- Baqui AH, Black RE, Shams EA, et al. Nov 2002. Effect of zinc supplementation started during diarrhoea on morbidity and mortality in Bangladeshi children: community randomized trial, *British Medical Journal* (325):1059-1066.
- Baqui AH, Black, RE, et. al. Dec 2004. Zinc therapy for diarrhoea increased the use of oral rehydration therapy and reduced the use of antibiotics in Bangladeshi children, *Journal of Health Population and Nutrition* 22(4):440-442.
- Bhutta ZA, Black RE, Brown KH, et.al. 1999. Prevention of diarrhea and pneumonia by zinc supplementation in children in developing countries: pooled analysis of randomized controlled trials, *Journal of Pediatrics* 135;689-97.
- Fischer-Walker CL, Bhutta ZA, Bhandari N, Teka T, Shahid F, Taneja S, Black RE. Sep 2006. Zinc supplementation for the treatment of diarrhea in infants in Pakistan, India and Ethiopia. *Journal of Pediatric Gastroenterology and Nutrition* 43(3):357-63.
- Gilroy K, Kuzmerski N, Winch PJ. Apr 2005. Lessons learned in a pilot introduction of zinc treatment for childhood diarrhea in Bougouni District, Mali (study supported by the Office of Health, Infectious Diseases and Nutrition, Global Health Bureau, United States Agency for International Development (USAID) (award HRN-A-00-96-90006-00)).
- Larson CP, Saha UR, Nazrul H. 2009. Impact monitoring of the national scale up of zinc treatment for childhood diarrhea in Bangladesh: repeat ecological surveys. *PLoS Med* 6(11): e1000175. doi:10.1371/journal.p.med.1000175.
- Robberstad B, Strand T, Black RE, Sommerfelt H. Jul 2004. Cost-effectiveness of zinc as adjunct therapy for acute childhood diarrhoea in developing countries, *Bulletin of the World Health Organization* 82 (7).
- Roy SK, Tomkins AM, Akramuzzaman SM, Chakraborty B, Ara G. Mar 2007. Impact of zinc supplementation on subsequent morbidity and growth, *Journal of Health, Population, and Nutrition* 25(1):67-74.

- Sazawal S, Black RE, Ramsan M, Chwaya HM, Dutta A, Dhingra U, Stoltzfus RJ, Othman MK, Kabole FM. 2007. Effect of zinc supplementation on mortality in children aged 1–48 months: a community-based randomised placebo controlled trial, *Lancet* 369: 927–34.
- Shrimpton R, Gross R, Darnton-Hill I, Young M. 2005. Zinc deficiency: what are the most appropriate interventions? *British Medical Journal* 330: 347-9.
- World Health Organization (WHO)/UNICEF. Joint Statement on the Clinical Management of Acute Diarrhoea. May 2004. WHO/UNICEF, Geneva.
- Winch PJ, Gilroy KE, Doumbia S, Patterson AE, Daou Z, Coulibaly S, Swedberg E, Black RE, Fontaine O. 2006. Prescription and Administration of a 14-Day Regimen of Zinc Treatment for Childhood Diarrhea in Mali, *American Journal of Tropical Medicine and Hygiene* 74(5): 880-883.
- Winch PJ, Doumbia S, Kanté M, Malé AD, Swedberg E, Gilroy KE, Ellis AA, Cissé G, Sidibé B. 2008. Differential Community Response to Introduction of Zinc for Childhood Diarrhea and Combination Therapy for Malaria in Southern Mali. *Journal of Nutrition*, Supplement, Symposium: From Efficacy Trial to Public Health Impact: Improving Delivery and Utilization of Nutrition Programs, April 29, 2007.
- Zinc Investigators' Collaborative Group. 2000. Therapeutic effects of oral zinc in acute and persistent diarrhea in children in developing countries: pooled analysis of randomized controlled trials. *American Journal of Clinical Nutrition* 72:1516-1522.