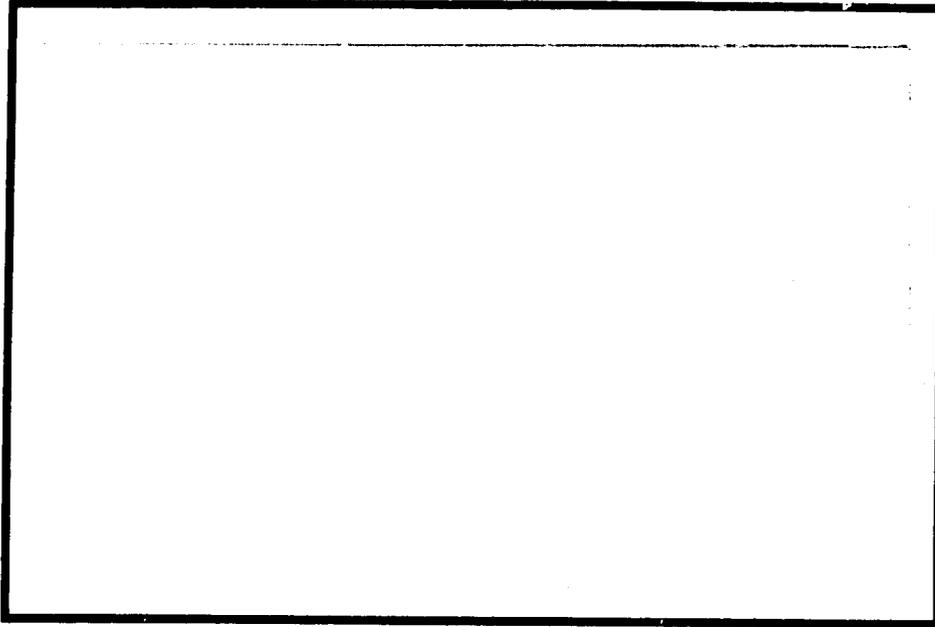


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PRITECH

Technologies for Primary Health Care

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**TRAINING NEEDS ASSESSMENT AND
PERFORMANCE ANALYSIS OF THE
UGANDAN HEALTH INSPECTORATE STAFF**

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TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	3
BACKGROUND.....	7
OBJECTIVES.....	8
METHODOLOGY.....	8
RESULTS.....	11
Community Awareness of and Contact with HI Staff.....	12
Community Perceptions of HI Roles and Responsibilities.....	12
Community Knowledge of and Practices Related to Basic Environmental Hygiene Principles.....	13
Self-Identified Strengths and Weaknesses of Health Inspectorate Staff.....	18
Allocation of Time by HI Staff.....	20
Obstacles to Implementing HI Activities....	21
Health Inspectorate Staff Knowledge of Environmental Hygiene Principles.....	22
Planning, Management and Supervision Among HI Staff.....	24
DISCUSSION AND RECOMMENDATIONS	24
ACKNOWLEDGEMENTS.....	29
Annex 1 Listing of results: Household Questionnaire	
Annex 2 Listing of results: Health Inspectorate Staff Questionnaire	
Annex 3 Key Indicators by Number of Children in the Household and by District	

EXECUTIVE SUMMARY

During the months of May through July 1991, the Ugandan National Diarrhoeal Disease Control Program and the National Health Inspectorate Division of the Ministry of Health, with technical assistance and support from PRITECH, collaborated in conducting a performance analysis and training needs assessment of Health Inspectorate staff. The assessment was conducted in 4 districts, and consisted of a survey of 480 households as well as interviews with 61 health inspectors and health assistants. The results of the assessment are intended to guide the planning of in-service training for health inspectors, and to provide information for the CDD program review scheduled in September 1991.

The study was designed to address two main questions:

- How effective has the training of the HI in diarrhoea case management been?
- What are the training and support needs of Health Inspectorate (HI) staff?

1. Results assessing the effectiveness of CDD case management training

There is evidence to support the effectiveness of CDD training for HI staff based on: a) high levels of self-assurance and reported activity; b) good levels of basic knowledge among HI staff; c) community reports of hearing HI staff talk about diarrhoea treatment or prevention; d) improved knowledge of community members who were taught about diarrhoea home management by HI staff. Specifically:

- * Forty-three (71%) of the 61 HI staff interviewed identified CDD case management as an area of strength, and 40 (66%) identified it as one of three activities occupying the greatest amount of their time.
- * All HI staff knew the volume of water to mix with a packet of ORS. Of the 37(66%) trained in CDD case management, 35(95%) could name 3 or more signs of dehydration and 22(59%) named 5 or more signs.
- * Thirty-five (60%) of 58 community leaders reported having been visited by someone from the health inspectorate, and 22(63%) of those reported that the HI either visited homes or distributed ORS.
- * One hundred eighty-three (44%) of 421 (non-leader) community members reported having "ever seen" Health Inspectorate staff. One third of those who had ever

seen a health inspectorate worker said that he/she had talked about preventing or treating diarrhoea.

- * When compared with people taught to prepare ORS in health centers, people taught to prepare ORS by HI staff were more likely to recommend giving ORS at home during diarrhoea (38% versus 18% p <.05)
- * When compared with people taught to prepare ORS in health centers, people taught to prepare ORS by HI staff showed:
 - Higher rates of correct mixing (55% versus 45%)
 - Greater knowledge of "germs" as a cause of diarrhoea (77% versus 66%)
 - Higher rates of recommending extra fluids during diarrhoea (23% versus 15%).¹

There is also evidence that there is room for improvement: a) in community use of extra fluids and ORS at the onset of diarrhoea; b) in the mixing of ORS; c) about hand-washing practices; and d) in community coverage by HI staff. Specifically:

- * When asked what should be done at home when a child gets diarrhoea, less than half (42%) of the total sample recommended any kind of fluids, (13% of people recommended giving extra fluids to drink, 18% recommended giving ORS, and 27% recommended SSS).
- * Less than half (47%) of people who reported having been shown how to mix ORS used an appropriate amount of water (between 90l and 1100cc.)
- * Only 18% of people interviewed reported that it is important to wash hands after defecating or using the latrine.
- * Of the 413 respondents having seen an ORS packet, 336(81%) saw it at the health center and 53(13%) were shown it by a Health Inspectorate staff person.² Of the 312 respondents who were taught to prepare ORS, 80%

¹ These differences are not statistically significant.

² These figures are somewhat difficult to interpret because community members do not always distinguish between different kinds of "doctors" or health workers. Health assistants who teach about CDD case management during immunizations at health facilities or at community meetings may not be identified as Health Inspectorate staff.

were reportedly taught by someone at a health unit, and 21% by a Health Inspectorate staff person.

These results are confirmed by data from the recent survey indicating that health education given at health facilities during illness visits for diarrhoea is generally poor. The current study suggests that individual health education delivered by Health Inspectorate staff is likely to be more effective. The appropriate amount of time for HI staff to spend on CDD case management teaching, however, needs to be discussed and considered. HI staff are already scheduled to allocate 12 out of 22 days (54%) per month to this activity.

2. Results assessing the training and support needs of Health Inspectorate staff

The greatest obstacles and problems reported by Health Inspectorate staff in carrying out their responsibilities include transport (inadequate numbers of vehicles, breakdown of bicycles, lack of money for fuel, poor roads, etc.), lack of personal support (accommodations, schools, access to health care), and finances (low salaries, late payments, no advances for expenses). Following these logistical issues, the most commonly reported problems relate to communication with and mobilization of communities and leaders.

Results indicate remarkably good levels of supervision with 41(67%) of respondents reporting a visit from their supervisor within the last month, and 56(92%) within the last 3 months.

The Health Inspectors and Health Assistants interviewed reported feeling most knowledgeable about diarrhoea case management, water source protection, latrine construction and maintenance, and health education/community health. They reported feeling weakest in meat inspection, malaria, control of communicable diseases, vector control and community participation/mobilization. Although nearly 50% of respondents report that they routinely talk to school students or teachers and at community meetings, this is not confirmed by the results of the household survey.

The most common recommendations to improve the diarrhoea case management component of the Health Inspectorate relate to transport and finances. Other common recommendations include training local leaders and teachers (41%), providing uniforms/protective clothing (34%), providing more visual aids/health education materials (28%), in-service training for HIs HAs (25%), increasing supplies of ORS (25%), and providing equipment such as thermometers, tape measures, office supplies, reference books, blackboards, etc., (25%).

3. Conclusions/Recommendations

In considering whether to decrease, continue or increase its efforts to train and support Health Inspectorate staff, the CDD programme should consider the results of this study in context. Although the rates of awareness of HI staff (44%) and contact with HI staff about preventing or treating diarrhoea (14%) among (non-leader) community members are less than optimal, these represent an improvement when compared with unofficial results from previous studies. Copies of these previous reports should be reviewed to assess comparability of samples and of questions.

Given the difficulties with assuring adequate supplies of ORS and in teaching correct recipes for SSS, the CDD programme should provide alternative recommendations for the initial home management of diarrhoea. The possibility should be entertained that Health Inspectorate Staff might achieve more by stressing the importance of administering extra fluids (including water) and food during diarrhoea and teaching early referral of severe cases, than by teaching about and distributing ORS packets.

Although every effort should be made to resolve the very real and significant logistical problems faced by HI staff, it should be recognized that this will take time. In the interim, both the CDD programme and the Health Inspectorate Division would do well to upgrade the staff members' ability to maximize their effectiveness in face of logistical difficulties. Skills development might include training in giving effective demonstrations to school students and to groups of adults, mobilizing existing community organizations to extend outreach, and training formal and informal community leaders to reinforce messages about diarrhoea case management.

The well-trained and well-supervised Health Inspectorate represents a unique and valuable resource in Uganda. Many programmes will seek the help of the division in reaching the community with messages and products. It is recommended that before the Health Inspectorate proceeds to develop an in-service training agenda, a workshop be held to carefully review and consider the results of this survey and of the community survey conducted by the Ministry of Health in January 1991. Participants in the workshop should develop priorities for training and support that are based not only on areas of identified weakness, but also on the Health Inspectorate's definition of its own role, its own performance standards and its own priorities. The costs and benefits of extending the HI staff's role to include case management of other communicable diseases and malaria (for example) should be critically examined.

BACKGROUND

The Health Inspectorate is that division of the Ugandan Ministry of Health charged with implementing and enforcing the Public Health Act. The responsibilities of the Health Inspectorate staff are broad and range from the inspection of restaurants and markets, to assisting communities with latrine construction and water supply protection. More recently, the Ugandan National CDD programme has enlisted the assistance of the Health Inspectorate staff in reaching communities and households with messages on diarrhoea case management. The CDD program provides training, bicycles for local transport, ORS packets and financial reimbursement.

There are three levels of Health Inspectorate staff: Health Inspectors who receive three years of pre-service training, Health Assistants who receive two years of pre-service training, and Health Orderlies who, to date, have only received on-the-job training.

In October 1990 PRITECH sponsored a team of 2 consultants to assist the Health Inspectorate Division to identify the training needs of the Health Inspectorate staff and the steps required to meet them. This training needs assessment was viewed as a prerequisite to revising the pre-service and in-service training of Health Inspectors and Health Assistants. The team of consultants recommended "a community survey/needs assessment to establish the environmental health needs of the community", and "the training and support needs of the Health Inspectorate staff." One member of the original team, and one of PRITECH's Technical officers returned in May 1991 to assist in designing and conducting the recommended community survey/needs assessment.

In view of the in-service training implemented by the Ugandan Diarrhoeal Disease Control Program for the Health Inspectorate on diarrhoea case management and on personal hygiene measures for the prevention of diarrhoeal illnesses, the study was also designed to analyze the performance of the health inspectors/health assistants in these areas. These results will be considered during a program review of National CDD activities, and will provide feedback that can be used in the design of additional in-service training for the health inspectorate.

In January 1991, a separate community environmental health needs assessment was conducted by the Ministry of Health. This consisted of interviews with a convenience sample of 252 community members and leaders conducted at markets. The results of this community environmental needs assessment are to be used in revising the health inspectorate pre-service training, whereas the training needs assessment described in this document focuses on in-service training needs.

OBJECTIVES

The objectives of the study are:

1. To assess the training and support needs of the health inspectorate staff by:
 - a) Asking the District and County Health Inspectors (DHIs and CHIs), Health Inspectors (HIs) and Health Assistants (HAs) to identify their areas of strength and the topics in which they are in greatest need of additional training.
 - b) Estimating how DHIs, CHIs, HIs and HAs allocate their time by asking what tasks require the major part of their time.
 - c) Reviewing the health inspectorate staff's knowledge of basic EH/CDD principles.
2. To determine the pattern and frequency of contact between the community and health inspectorate staff.
3. To determine the community's awareness of and contact with health inspectorate staff
4. To determine the community's understanding of the roles and responsibilities of the health inspectorate staff
5. To assess the effectiveness of the health inspectorate in informing the community about basic environmental health messages and principles, particularly those related to:
 - latrines
 - water protection
 - personal hygiene
 - solid waste
 - diarrhoeal disease case management

METHODS

The methodology was developed in coordination with the Central Health Inspectorate staff and the CDD Program. The overall study design and the initial drafts of both questionnaires were developed by the two consultants and counterparts from the Health Inspectorate (Mr. Willy Ongwen) and the CDD program (Mr. Paul Luyima), with review and feedback from the Chief Health Inspector (Mr. Peter Kankole) and the CDD Programme Manager (Dr. Musonge), and from representatives of UNICEF and USAID.

The draft questionnaires were reviewed and pilot tested in Mukono district by the study supervisors. Corrections and recommendations based on review and field testing were incorporated into the final draft. The questionnaires were pre-coded and the results entered and analyzed using the EPIINFO computer programme.

Study Design

The study consisted of 2 parts that were conducted simultaneously in the same districts:

- a. A household survey to determine the pattern and frequency of contact between the community and health inspectorate staff, the community's understanding of the roles and responsibilities of the health inspectorate staff, and the community's knowledge about basic environmental health messages and principles;
- b. Structured interviews with health inspectorate staff to assess training, supervision and support needs.

Study Sites and Sampling Procedure

In selecting the study sites, the northern districts were eliminated from consideration because of security concerns. The remaining districts were grouped into Eastern, Central, Western and Southwestern regions, and one was randomly selected from each region. The 4 districts chosen were Kamuli, Masaka, Kasese and Masindi.

Two counties per district, two sub-counties per county and one parish per sub-county were randomly selected for study using a cluster sampling technique with probability proportional to size.

Thirty households were selected for interview per parish. Parish leaders (RCs) determined the most central location for the starting point. For Masindi, Kasese, and Kamuli Districts the first house to be visited was randomly selected by spinning a bottle on the ground. Wherever the bottle pointed when it stopped was the direction for selecting the first household. A random number table was used to select a number less than or equal to 10. The randomly selected number was the first household to be visited along the directional line. Once the first household was visited, the second household visited was the one that was nearest to the first, and so on, until a total of 30 households were interviewed.

For Masaka District, the geographical central location of the Parish was also the starting point. However, the direction of the first household was selected by writing each of the

directions (East, West, North, South) on pieces of paper and then folding them. The RC leader was charged with the responsibility of choosing 3 directions by selecting three of the pieces of folded paper. Three directions were selected because 3 supervisors were available to monitor the interviewers. Again, a randomly selected number was the starting point for the first household. The survey teams moved in the direction of their assigned bearing until a total of 30 households were interviewed.

This sampling scheme yielded the following total sample size for the community survey:

<u>Sample Size per District</u>	<u>Total Sample</u>
2 Counties	8 Counties
4 Sub-counties	16 Sub-counties
4 Parishes	16 Parishes
120 Households	480 Households

Public health inspectorate personnel whose assignment area included the survey localities were asked to meet with the supervisors and PRITECH consultant at centrally designated locations in each district. A few sampling sites had a shortage of health assistants, therefore health assistants from nearby counties in the same district were interviewed for the survey. The total number of health inspectorate personnel interviewed included:

4 District Health Inspectors
8 County Health Inspectors
3 Health Inspectors
46 Health Assistants

Survey Personnel

Two counterparts were identified by Mr. Kankole and Dr. Musonge to assist the consultants during the length of the project: Mr. Den Willy Ongwen, Acting Deputy Chief Health Inspector, and Mr. Paul Luyima, CDD Training Officer. They 1) assisted in drafting and pre-testing the survey questionnaires, 2) made logistical arrangements with district health teams including hotel accommodations, and training facility arrangements, 3) mobilized the health inspectors to be interviewed, and 4) assisted in providing in-service training for the supervisors and interviewers.

Four research supervisors were recruited from the Mulago para-medical training schools. These included 3 Dental Tutors and 1 Public Health Nurse Tutor. Each supervisor had strong background skills in conducting surveys, communication, teaching and

supervision, which was a necessity given the short time-frame for conducting the interviewer training and doing the field study.

The supervisors contributed by assisting the consultants and local counterparts with reviewing, pretesting and revising the questionnaires, and training and supervising the interviewers during the field study.

The District Medical Officers (DMO) selected ten field interviewers per district to conduct the household interviews. In selecting the candidates it was required that they could speak and understand the local dialect, and had experience in teaching or in a health related occupation. In a few instances, supervisors disqualified candidates who did not meet the work experience criteria (except for a few who appeared to have good communication skills) and others were recruited through the DMO.

Training and Supervision of Survey Team

Supervisors were orientated to the study and trained in the implementation and supervision of data collection by the consultants and local counterparts. The training was conducted during 5 days in Kampala.

Orientation and training of the interviewers was conducted at the district level during a 2 day period by the supervisors, local counterparts, and one of the PRITECH consultants. This training included classroom exercises and conducting questionnaire pre-tests under supervision in non-study parishes.

In each district the household survey was implemented by 10 interviewers divided into 5 teams composed of 2 members. This method helped to strengthen each interview team to effectively communicate survey questions and accurately document the respondent's answers. Survey teams were supervised during the field research by 3 supervisors in two districts and 2 supervisors in the remaining two districts.

RESULTS

Detailed listings of the responses to all questions asked in the study are included in Annex 1 (Household Questionnaire Results) and Annex 2 (Health Inspectorate Staff Questionnaire Results). This section of the text will present selected results in a format that addresses the following questions:

1. What is the community's level of awareness of and contact with health inspectorate (HI) staff?

2. How do community members perceive the roles and responsibilities of the HI staff?
3. How effective has the HI been in informing the community about basic messages and principles related to:
 - latrine construction and maintenance,
 - water protection,
 - personal hygiene,
 - solid waste disposal,
 - and diarrhoeal disease case management?
4. What do the HI staff identify as their areas of strength; as areas in which they are most in need of additional training?
5. How do HI staff allocate their time?
6. How, from the perspective of the HI staff, can their effectiveness be increased?
7. Do HI staff possess adequate knowledge of environmental health principles?
8. What are current patterns of planning, management and supervision among HI staff? How do HI staff interact with the District Health Team?

Community Awareness of and Contact With HI Staff

Of the 480 individuals interviewed during the household survey, 58 identified themselves as "community leaders". Thirty-three were RC1 or RC2 leaders, 7 were elders, 1 was a chief, and 17 were "other" leaders including religious and women's group leaders. Thirty-five (60%) of these community leaders reported having been visited by someone from the health inspectorate, and 30 reported visits within the preceding 6 months.

One hundred eighty-three (44%) of the remaining 421 (non-leader) community members reported having "ever seen" someone from the health inspectorate. Forty-nine (27%) of the 183 saw a health inspectorate staff person within the preceding month; 53 (29%) saw one between 1 and 6 months prior to the interview; 27 (15%) between 6 months and a year prior to the interview; and 32 (18%) hadn't seen one for over a year.

Community Perceptions of HI Roles and Responsibilities

When asked in general terms about what the health inspectorate staff "do", community members noted that HI staff teach about health/hygiene (67%), inspect homes (57%), help to build latrines

(56%), advise on building construction (22%), keep sources of water clean (14%), and teach about diarrhoea (11%). Very few (3%) made reference to the inspection of restaurants, markets or meat.

Responses to open-ended questions about what the health inspectorate staff person actually did during the last or previous visits are listed in Table 1.

TABLE 1					
Activities of Health Inspectorate Staff As Reported By Community Leaders (N = 35) And Community Members (N = 183)					
INDICATORS	0%	25%	50%	75%	100%
Community Leaders					
Visited/inspected homes					57
Talked at a meeting		14			
Latrine work					63
Restaurant/market inspection	0				
Spring protection			29		
Investigated disease outbreak		9			
Gave immunizations			17		
Distributed ORS		6			
Other			17		
Community Members					
Spoke at meeting		10			
Inspected/visited home					66
Gave immunizations		5			
Latrine construction			33		
Spring protection		9			
Distributed ORS		7			
Other			14		

Community Knowledge of and Practices Related to Basic Environmental Hygiene Principles

The household survey questionnaire contained questions to determine existing practices and knowledge related to latrine use, water protection, personal hygiene, solid waste disposal, and diarrhoeal disease case management.

Knowledge of the advantages of using a latrine were quite high. When asked to list the health advantages of using a latrine, 287 (60%) community members named prevention of disease transmission, and 192 (40%) named control of flies or other insects. In response to an open-ended question about how human feces can be harmful, 391 (82%) noted that they transmit disease to other people, 234 (49%) that they attract flies, and 16 (8%) that they contaminate water or water sources. Seventy-three percent of interviewees reported disposing of baby's feces in a latrine.

Three hundred twenty-four (68%) of the household's visited actually had a latrine. This was confirmed by inspection by the interviewers. Most were simple pit latrines, and only 21% of the pits were covered.

Responses to questions about water source and water protection are summarized in Table 2. Interviewees were asked what is the source of their drinking water (not confirmed by observation), how to protect a water source, how to make water safe for drinking, and what to do to keep water clean and safe to drink in the home. The responses are probably better reflections of knowledge of recommended behavior rather than actual practice. Interviewers noted that although 69% of interviewees named covering water containers as a means of protecting water, they rarely saw covers on water containers in the households visited.

TABLE 2					
Responses to Questions About Water Source and Water Protection					
N = 480					
INDICATORS	0%	25%	50%	75%	100%
Water Source and Protection					
% with access to protected spring, well or borehole					33
% with access (N= 160) who describe how to protect source					
Fence		23			
Drainage			47		
Cut grass				59	
How to make water safe for drinking					
Boil			50		
Filter		19			
Nothing needed			44		
How to keep water clean at home					
Jerry cans			32		
Clean dippers		25			
Covers				69	
Keep hands out	3				
Keep off the ground		6			

Interviewees were asked open-ended questions regarding the important times to wash hands, why it is good to use soap when washing hands, how they dispose of rubbish, and why heaps of rubbish are dangerous to health. Responses are summarized in Table 3.

TABLE 3					
Responses to Questions About Personal Hygiene and Solid Waste Disposal N = 480					
INDICATORS	0%	25%	50%	75%	100%
<u>Personal Hygiene</u>					
Important times to wash hands:					
Before eating					86
After defecating	18				
Before food prep		39			
Why should soap be used?					
Removes dirt					82
Stops disease	9				
Kills germs		41			
<u>Solid Waste Disposal</u>					
Means of rubbish disposal					
Burn or bury	19				
Pit		25			
Pile	10				
Garden or bush				70	
Why is rubbish dangerous to health?					
Insects and pests			63		
Can cut or injure	5				
Can spread disease			59		

Because of the substantial effort expended to train health inspectorate staff in CDD case management and to support distribution of and teaching about ORS at the community level, the household questionnaire focused a number of questions on beliefs about diarrhoea, the home management of diarrhoea, and knowledge about ORS. Interviewees were asked about the causes of diarrhoea in children, what can be done at home for a child with diarrhoea, how diarrhoea can kill children, and indications for taking a child with diarrhoea to a health center. The responses to these questions are summarized in Table 4.

TABLE 4					
Knowledge of CDD Case Management					
N = 480					
INDICATORS	0%	25%	50%	75%	100%
% Who name as causes of diarrhoea:					
Teeth	___	13			
"Germs"					64
Food	___	16			
What to do at home if a child has diarrhoea:					
Give extra fluids	___	13			
Give ORS	___	18			
Give SSS	___	27			
Tablets/syrup	___	21			
Give Trad. Meds					42
How can diarrhoea kill children?					
Makes them weak					47
Loss of fluids					43
Indications for referral:					
Duration					56
Blood	___	5			
Stool number	___	31			
Fever	___	5			
Vomiting	___	6			
Weakness					44
Not eating	___	9			
Don't know	___	10			
% Who have seen ORS					86

Interviewees were also asked if they had ever seen a packet of ORS, and, if yes, if they had been taught how to prepare it. Those who claimed to know how to prepare it were asked to mix a packet provided by the interviewer. The amount of water used to mix the packet was measured by the interviewer, and the interviewee was asked additional questions about administration and storage. The results of this section of the questionnaire are summarized in Table 5.

TABLE 5					
Knowledge and Preparation of ORS					
N = 413					
INDICATORS	0%	25%	50%	75%	100%
<u>For those who have seen ORS</u>					
Where seen:					
At health center					81
Shown by HI/HA		13			
In a shop		10			
% Taught how to prepare ORS					76
<u>For those taught to prepare ORS (N =312)</u>					
Taught by whom:					
Health center					80
HI/HA		21			
Other		9			
% Using recommended containers					91
% Using an appropriate amount of water			47		
% Who know how much to give			37		
% Who know how long to keep ORS			33		

Differences among districts on basic knowledge of environmental hygiene messages are included in Annex 3.

Self-Identified Strengths and Weaknesses of Health Inspectorate Staff

The 61 health inspectorate staff members interviewed were asked to identify 3 areas of strength from a list of 9 areas read to them. They were also asked an open-ended question to identify areas of perceived weakness. The results are shown in Table 6

TABLE 6

Self-Reported Strengths and Weaknesses of HI Staff

N = 61 (Each respondent gave multiple answers)

INDICATORS	0%	25%	50%	75%	100%
<u>Strengths</u>					
Health education/ community health					56
Food hygiene		21			
Water source protection					57
Latrines					62
Malaria control	3				
Vector control	7				
Personal and domestic hygiene		25			
CDD					71
Solid Waste	2				
<u>Weaknesses</u>					
Communicable dis- ease control					31
Water protection		20			
Meat inspection					40
CDD	2				
Malaria					30
Community mobilization		23			
Treatment of common illnesses		16			
Building construction		18			
Food hygiene		16			
Vector control					30

Fifty-six (92%) of the staff interviewed reported having attended in-service training within the preceding three years; 48 (79%) within the preceding year. Topics taught in the in-service training included CDD (61%), water protection (51%), community participation/mobilization (33%), latrine sanitation (25%), community based health care (23%), and immunization/cold chain (15%).

Allocation of Time by HI Staff

The health inspectorate staff were asked to identify the three activities that occupy the greatest amount of their time, and to list other routine activities. Table 7 includes the responses to these open-ended questions.

TABLE 7					
Self-Reported Activities of HI Staff					
N = 61 (Multiple answers given)					
INDICATORS	0%	25%	50%	75%	100%
<u>3 Major Activities</u>					
Presentations at community meetings		15			
Protection of water sources				59	
Latrine construction/inspection		43			
CDD				66	
Home visits		27			
Health education		16			
Immunization		16			
<u>Other routine activities</u>					
Talk to students/teachers			48		
Talk at community meetings			46		
Inspect restaurants/markets				69	
Supervise staff		21			
Give immunizations			46		
Make household visits			39		
Latrine construction/inspections		28			
Water source protection			33		
Investigate disease outbreaks		12			
Distribute ORS			46		
Talk with leaders		21			
Write reports			34		
Programme planning			38		
Other			38		

Obstacles to Implementing HI Activities

When interviewing the health inspectorate staff, interviewers acknowledged that lack of transportation, equipment, and money are major problems, and asked about other obstacles in carrying out HI duties. In spite of this introduction, many staff again emphasized that lack of money for fuel and for vehicle and bicycle repairs, lack of basic office supplies (paper, notebooks and pens) and low salaries with no system to advance job related expenditures are major limiting problems. Other major obstacles include the availability of accommodations, schools and health care for their families at the assigned work post, and issues related to communication (such as lack of interest on the part of community members and leaders, language barriers, and difficulty in mobilizing community resources). The problems identified are listed in Table 8.

TABLE 8					
Obstacles and Problems In Performing Health Inspectorate Duties N = 61					
INDICATORS	0%	25%	50%	75%	100%
Obstacles					
Transport		21			
Personal support			39		
Lack of office supplies		14			
Lack of equipment		18			
Low socio-economic status of population	8				
Low or late salary or no advances		20			
Lack of health education materials	7				
Lack of professional references	2				
Geographic problem		15			
Language/communication			30		
Attitude of leaders		21			
Administrative problems or delays	10				
Personnel shortage	13				
Lack of power to enforce	3				
Difficulty mobilizing the community		25			

Recommendations for improving the CDD case management component of the health inspectorate reflected the list of identified obstacles. The most common recommendations of the 32 individuals responding to this question related to the maintenance and provision of bicycles and vehicles (72%), increasing the amount and timeliness of allowances (56%), providing uniforms or protective clothing (34%), providing more visual aids and health education materials (28%), providing in-service training for health inspectors and health assistants (25%), providing more ORS (25%), providing mugs and spoons for demonstration purposes (22%), and providing other equipment such as tape measures, thermometers, office supplies, reference books and blackboards (25%).

Health Inspectorate Staff Knowledge of Environmental Hygiene Principles

The assessment of health inspectorate staff knowledge was extremely limited for two reasons. First, the demands of conducting the household survey made it necessary to interview HI staff at a central location rather than at their place of work. This limited the time that could be spent with each individual and precluded a competency-based assessment through observation of work tasks. Second, without specific performance standards for HI staff, it was difficult to reach a consensus about key indicators to assess knowledge and skill. Therefore, the assessment phase of the interview focused on questions about CDD case management and on 4 very general questions relating to other areas of environmental hygiene.

All HI staff knew the volume of water to mix with a packet of ORS. Of the 37 (66%) trained in CDD case management, 35 (95%) could name 3 or more signs of dehydration and 22 (59%) named 5 or more signs. Although all the staff interviewed reported to know how to mix sugar-salt solution, 4 (7%) did not know the correct number of teaspoons of sugar and 3 (5%) did not know the correct number of teaspoons of salt to add to a liter of water.

Health inspectorate staff performance in CDD case management training of community members was also assessed by comparing individuals taught to prepare ORS at health centers with individuals taught by HI staff. People taught to prepare ORS by HI staff were more likely to recommend giving ORS at home during diarrhoea (38% versus 18%, $p < .05$), showed higher rates of correct mixing (55% versus 45%, $p > .05$), had greater knowledge of "germs" as a cause of diarrhoea (77% versus 66%, $p > .05$), and were more likely to recommend extra fluids during diarrhoea (23% versus 15%, $p > .05$).

Health inspectorate staff were also asked what can be done to increase community response to latrine construction, what can be done to protect a spring for drinking water, how they advise

people to protect drinking water from contamination in the home, and what advice they give on the prevention of worm infestation. Table 9 summarizes the responses to these open-ended questions.

TABLE 9					
Knowledge of Environmental Hygiene Principles By Health Inspectorate Staff N = 61					
INDICATORS	0%	25%	50%	75%	100%
How to increase latrine construction:					
Improve community approach			48		
Health education				89	
Subsidize material		30			
How to protect springs					
Fences			53		
Drainage system			48		
Cover the spring				59	
Cut grass				54	
Keep animals away				54	
Identify caretaker			34		
How to protect water in the home:					
Clean containers					89
Clean dippers				71	
Cover containers				75	
Keep hands out		28			
Keep containers off the ground			41		
Keep away from small children			31		
How to prevent worm infestation:					
food hygiene			64		
water protection		28			
personal hygiene			62		
domestic hygiene					85
treatment of cases		8			

Planning, Management and Supervision Among HI Staff

Forty-one (67%) of the 61 health inspectorate staff interviewed reported a visit from their supervisor at their place of work in the preceding month, and 56 (92%) within the preceding 3 months.

Fifty-three (87%) reported having ORS packets to distribute to families at risk, but only 38 of the 53 reported having a constant supply of ORS.

The 4 District Health Inspectors (DHIs) and the 8 County Health Inspectors (CHIs) were asked about their participation in District Health Team and County Health Team meetings. Ten reported attending, one does not attend, and one reported that there are no meetings. Of the 10 who attend meetings, 5 last attended one within a month of the interview, 3 between 1 and 2 months prior to the interview, and 2 between 2 and 6 months prior to the interview.

When asked to define their roles at the District or County Health Team Meetings, 6(50%) stated that they advise on environmental sanitation issues, 3(25%) said they listen to other reports, 2(17%) said they plan activities, 2(27%) act as treasurer or secretary, and 5 (42%) present reports.

DISCUSSION AND RECOMMENDATIONS

Effectiveness of HI Staff in CDD Case Management Activities

Results of both the health inspectorate survey and of the household survey support the effectiveness of CDD training for HI staff. The evidence of effectiveness includes: a) high levels of self-assurance and reported activity; b) good levels of basic knowledge among HI staff; c) community reports of hearing HI staff talk about diarrhoea treatment or prevention; d) improved knowledge of community members who were taught about diarrhoea home management by HI staff. There is also evidence that there is room for improvement: a) in community use of extra fluids and ORS at the onset of diarrhoea; b) in the mixing of ORS; c) about hand-washing practices; and d) in community coverage by HI staff.

It is reasonable to assume that providing continued or increased training in and support of diarrhoea case management activities for HI staff would bring about further improvements in home and community management of diarrhoea. The appropriate amount of time for HI staff to spend on CDD case management teaching, however, needs to be discussed and considered. HI staff are already scheduled to allocate 12 out of 22 days (54%) per month to this activity. Although teaching about diarrhoea case

management in the context of home visits is an effective way of imparting knowledge, it is also a slow and time-consuming process. Health inspectorate staff might increase their efficiency by working more through schools, women's organizations, religious groups, and possibly traditional healers.

Other important issues to address before proceeding with additional training of HI staff are the content of the training sessions and specific recommendations for home management. The training materials reviewed by the PRITECH consultants placed heavy emphasis on theoretical knowledge (for example, on the differences between water-borne and water-washed illnesses) and on specifics of case management (for example, on calculating the amount of ORS to administer to dehydrated children). Home management recommendations currently focus on the use of ORS packets.

Given that Health Inspectorate staff are intended to function as educators rather than as clinicians, it may be appropriate to shift some of the training emphasis from the theoretical and clinical aspects of diarrhoea treatment, to practicing teaching and communication skills such as how to give an effective presentation to a group of people, how to negotiate with community leaders, etc. The CDD program might also reconsider the advantages and disadvantages of continuing to base home management recommendations on the use of ORS packets. Even the HI staff who report a "constant" supply of ORS complain that the supply is not adequate to meet the needs of the communities they serve. There is a tendency to feel that case management training cannot occur if packets are not available. There is a need to identify an "approved" alternative to ORS for the initial home management of diarrhoea.

The Performance of Health Inspectorate Staff

The results of the study are quite encouraging regarding the current level of functioning and the potential of the Health Inspectorate, even in the face of severe shortages of supplies and equipment, and very limited resources. Prior to the study, questions were raised regarding what Health Inspectorate staff actually do. Do they make home visits? Are they involved in educational activities, or do they take advantage of their authority as market or restaurant inspectors to extract favors?

The data clearly show that hygiene and health education is a major activity of the health inspectorate. Sixty-seven percent of community respondents noted that HI staff teach about health and hygiene. Work on latrine construction/inspection and on water source protection are also major activities of health inspectors and health assistants, both by their own reports, and

as confirmed by the responses of community leaders and community members. Perhaps the clearest testimony to HI effectiveness is the finding that 68% of households visited had a latrine.

Although there have been a few troublesome reports of problems resulting from over-zealous attempts to enforce the public health law, most HI staff see their roles as educators, motivators and community mobilizers. Very few see stronger laws and stricter enforcement as solutions to public health problems.

Results indicate remarkably good levels of supervision with 41(67%) of respondents reporting a visit from their supervisor within the last month, and 56(92%) within the last 3 months.

The Health Inspectors and Health Assistants interviewed reported feeling most knowledgeable about diarrhoea case management, water source protection, latrine construction and maintenance, and health education/community health. These same topics were those most commonly taught during in-service training. They reported feeling weakest in meat inspection, malaria, control of communicable diseases, vector control and community participation/mobilization.

Addressing Training and Support Needs of HI Staff

Clearly, there is still much room for improvement in the performance of HI staff. Plans to upgrade performance, however, should not be limited to developing a training course agenda, but should also consider administrative changes, improved supplies and logistics, and upgrading the system of supervision and feedback.

Given the numerous and various tasks assigned to the health inspectorate there exists a great need to develop a system for prioritizing activities at all levels (national, district and local). There is also a need for performance standards, particularly for priority activities, so that progress can be assessed and monitored. The health inspectorate might also consider developing task-oriented performance assessment tools (such as the health facility survey developed by WHO for CDD programs) as part of a 5 year plan.

The problems with logistics and support that were confirmed by the study are very real and significant. The solution to many of these issues (the availability of schools and housing, adequate salary support through the Ministry of Health etc.), however, are outside the domain of the Health Inspectorate or the CDD programme. Resolution is dependent on economic growth and development over time. The health inspectorate should continue to seek resourceful ways to maximize its effectiveness in the

face of these limitations. For example, fuel shortages might be addressed by coordinating supervisory and community visits with other projects or programmes, or by making better use of community and group meetings. The need to provide incentives to HI staff might be partially addressed by providing more opportunities for advancement through merit. For example, health assistants who perform well might be eligible for additional training to become health inspectors.

The training needs identified by the HI staff include the treatment of common illnesses (especially malaria) and injuries, vector control, community participation/mobilization, and meat inspection. The community survey also suggests there are particular deficiencies in solid waste disposal, certain aspects of personal hygiene, and in access to protected water sources. The decision about which of these training areas are to be addressed first should be based, not only on the needs defined in the study, but on the potential for training to resolve the public health problems, and on the priorities as defined by the Health Inspectorate.

The question about whether to train HI staff in treatment of other diseases (in addition to diarrhoea) is an important one. Many programmes will seek the help of the division in reaching the community with messages and products. HI staff are eager to provide curative services to their communities. Expanding the HI staff's role to include dispensing condoms, family planning products or chloroquine, for example, many undermine the primary mission of the health inspectorate to prevent disease through the promotion of environmental hygiene.

After training priorities are defined, a range of training mechanisms should be considered in addition to HI-sponsored courses and workshops. The well-functioning system of supervision could be utilized as a way of upgrading and reinforcing skills. Staff in need of better management skills might be assigned as apprentices to exceptionally effective health inspectors or health assistants. The health inspectorate may be able to send participants to courses sponsored by other division or programmes, or by donors.

Immediate Next Steps

The well-trained and well-supervised Health Inspectorate represents a unique and valuable resource in Uganda. It is a logical "partner" for the CDD programme. Further support from and collaboration with the CDD programme should be encouraged. These need not be limited to support of training in case management but might also include other activities that relate directly or indirectly to the prevention of diarrhoea.

It is recommended that before the Health Inspectorate proceeds to develop an in-service training agenda, a workshop be held to carefully review and consider the results of this survey and of the community survey conducted by the Ministry of Health in January 1991. Participants in the workshop should develop priorities for training and support that are based not only on areas of identified weakness, but also on the Health Inspectorate's definition of its own role, its own performance standards and its own priorities.

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ANNEX 1

LISTING OF RESULTS

HOUSEHOLD QUESTIONNAIRE

17 JULY 1991

HEALTH INSPECTORATE TRAINING NEEDS ASSESSMENT
HOUSEHOLD QUESTIONNAIRE
MAY-JULY 1991

LISTING OF RESULTS
FOR THE TOTAL SAMPLE (N = 480)

Objectives of the Household Survey:

- 1) To determine the community's awareness of and contact with health inspectorate staff
- 2) To determine the community's understanding of the roles and responsibilities of the health inspectorate staff
- 3) To assess the effectiveness of the health inspectorate in informing the community about basic environmental health messages and principles, particularly those related to:
 - latrines
 - water protection
 - personal hygiene
 - solid waste
 - diarrheal disease case management

It should be noted that the questionnaire did not ask directly about the communities' perceived environmental health needs. This was done in the January 1991 community survey. It assessed the communities' informational needs indirectly by determining existing knowledge about environmental health issues.

Unless otherwise stated, the interviewers were trained to NOT read the response options listed, but to check the response closest to the respondent's spontaneous answer. (The response options were listed on the survey forms to make conducting the survey and doing the analysis easier.)

Instructions for the interviewers were written in **BOLD CAPITAL LETTERS** on the forms.

HOUSEHOLD SURVEY 17 JULY 1991

RESULTS OF THE HOUSEHOLD SURVEY COMPONENT
OF THE HEALTH INSPECTORATE TRAINING NEEDS ASSESSMENT
MAY-JULY 1991

(N = 480 HOUSEHOLDS)

A. IDENTIFYING INFORMATION

3. Number of Households per District

1) Kamuli 120
2) Masaka 120
3) Kasese 120
4) Masindi 120

4. How many children less than 5 years old live in the household?

0) None.....140 29.2%
1) One.....100 20.8%
2) Two.....132 27.5%
3) Three..... 67 14.0%
4) Four..... 28 5.8%
5) > Four.... 13 2.7%

5. Sex of primary respondent:

1) male.....121 25.2%
2) female.....359 74.8%

6. How many years of school have you attended?

1) none.....216 45%
2) less than 3 years..... 40 8%
3) 3 to 7 years.....186 39%
4) secondary school level (S1-6)... 32 7%
5) tertiary school level..... 6 1%

7. Respondents's age

1) 20 years or younger.... 59 12%
2) 21-30 years..... 146 30%
3) 31-40 years..... 97 20%
4) 41-50 years..... 66 14%
5) 51-60 years..... 37 8%
6) over 60 years..... 41 9%
9) don't know..... 34 7%

8. Are you a community leader?

1) yes..... 58
2) no..... 422

32'

HOUSEHOLD SURVEY 17 JULY 1991

B. QUESTIONS FOR COMMUNITY LEADERS ONLY (N = 58)

9. What is your title or role?
- | | | |
|--------------------------|----|-----|
| 1)RC1 or RC2 leader..... | 33 | 57% |
| 2)elder..... | 7 | 12% |
| 3)chief..... | 1 | 2% |
| 5)other..... | 17 | 29% |
10. Has anyone from the Health Inspectorate ever visited you in your role as the community leader?
- | | | |
|------------|----|-----|
| 1)Yes..... | 35 | 60% |
| 2)No..... | 23 | 40% |
11. When was the last time he visited?
- | | | |
|---|----|-----|
| 1)Within the last month..... | 18 | 31% |
| 2)More than a month but less than 6 months... | 12 | 21% |
| 3)Between 6 months and a year ago..... | 0 | |
| 4)Between 1 and 2 years ago..... | 2 | 3% |
| 5)More than 2 years ago..... | 3 | 5% |
| 8)Does not apply..... | 23 | 40% |
12. What did he do during the last visit or any other visit he may have made? (CIRCLE ALL THAT THE RESPONDENT NAMES)(N = 35)
- | | | |
|---|----|-----|
| a)Visited/inspected homes..... | 20 | 57% |
| b)Talk at a community meeting | 5 | 14% |
| c)Discuss or work on latrine construction.... | 22 | 63% |
| d)Inspect a restaurant..... | 0 | |
| e)Inspect a market..... | 0 | |
| f)Discuss or work on spring protection..... | 10 | 29% |
| g)Investigate a disease outbreak..... | 3 | 9% |
| h)Give immunizations..... | 6 | 17% |
| i)Distribute ORS..... | 2 | 6% |
| j)Talk to school students or teachers..... | 1 | 3% |
| k)Talk with religious leaders..... | 1 | 3% |
| l)Other..... | 4 | 11% |
| m)Don't know or don't remember..... | 1 | 3% |

C. QUESTIONS ON WATER PROTECTION (N = 480)

13. What is the source of your drinking water?
- | | | |
|---------------------------------|-----|-----|
| 1)a protected spring..... | 93 | 19% |
| 2)a protected well..... | 5 | 1% |
| 3)a borehole..... | 62 | 13% |
| 4)a waterhole or pond..... | 201 | 42% |
| 5)a river/lake..... | 71 | 15% |
| 6)other (rainwater or tap)..... | 48 | 10% |

33

HOUSEHOLD SURVEY 17 JULY 1991

14. (FOR RESPONDENTS USING A PROTECTED SPRING, A PROTECTED WELL OR A BOREHOLE N = 160) What do you do to keep that source clean and good for drinking? (CIRCLE ALL THAT THE RESPONDENT ANSWERS)

- a) build a fence around the source..... 41 26%
- b) build a system to drain water away 75 47%
- c) develop the spring or well..... 20 13%
- d) keep the grass cut around it..... 94 59%
- e) keep animals away..... 3 2%
- f) sweep or otherwise keep it clean..... 13 8%
- g) don't know..... 5 3%
- h) nothing is done..... 4 3%

15. What do you do to make water safe for drinking? (CIRCLE ALL THAT THE RESPONDENT ANSWERS) (N = 480)

- a) boil it..... 237 50%
- b) filter it..... 92 19%
- c) nothing needs to be done..... 211 44%
- d) other 13 3%
- e) don't know..... 1 <1%

16. What do you do to keep water clean and safe to drink in the home? (To protect it from contamination)(CIRCLE ALL THAT THE RESPONDENT ANSWERS)

- a) use jerry cans..... 154 32%
- b) use clean dippers..... 121 25%
- c) cover the containers..... 332 69%
- d) keep foreign matter out of the containers.. 42 9%
- e) keep hands out of the containers..... 14 3%
- f) store containers off the ground..... 29 6%
- g) keep containers away from small children... 19 4%
- keep it in a pot or kettle..... 145 30%
- h) other..... 6 1%
- i) don't know..... 4 1%

D. QUESTIONS ON PERSONAL HYGIENE (N = 480)

17. When are the important times to wash your hands? CIRCLE ALL THAT THE RESPONDENT ANSWERS

- a) before eating..... 413 86%
- b) after eating..... 234 49%
- c) when they are dirty..... 307 64%
- d) after defecating or using the latrine..... 86 18%
- e) before food preparation..... 187 39%
- f) after cleaning a baby..... 10 2%
- g) other 87 18%
- h) don't know..... 3 1%

34

HOUSEHOLD SURVEY 17 JULY 1991

18. Why is it good to use soap when washing your hands? **CIRCLE ALL THAT THE RESPONDENT ANSWERS**

a) it removes dirt.....	392	82%
b) it helps stop the spread of disease.....	41	9%
c) it kills germs (or cultural equivalent)...	198	41%
d) it prevents skin disease.....	22	5%
e) other.....	23	5%
f) don't know.....	18	4%

E. QUESTIONS ON SOLID WASTE (N = 480)

19. How do you dispose of rubbish?

CIRCLE ALL THAT THE RESPONDENT ANSWERS

a) burn it.....	78	16%
b) bury it.....	12	3%
c) throw it in a pit.....	121	25%
d) put it in a pile.....	47	10%
e) throw it in the garden.....	295	62%
throw it in the bush.....	42	9%
f) other.....	4	<1%

20. Why are heaps of rubbish dangerous to health?

CIRCLE ALL THAT THE RESPONDENT ANSWERS

a) they can contaminate water.....	14	3%
b) they can breed insects and other pests....	303	63%
c) they smell bad.....	87	18%
d) they can contain things that injure people (broken bottles and tins).....	22	5%
e) they spread disease.....	283	59%
f) they make the house look bad or dirty.....	117	24%
g) other.....	5	1%
h) don't know.....	32	7%

F. QUESTIONS ON DIARRHEA CASE MANAGEMENT (N = 480)

21. We know that children sometimes have diarrhea. What do you think are the causes of diarrhea in children? **CIRCLE ALL THAT THE RESPONDENT ANSWERS**

a) false teeth or teething.....	64	13%
b) dirty water.....	13	3%
c) spirits.....	2	<1%
d) germs or contamination.....	305	64%
e) related to food.....	79	16%
f) do not know.....	101	21%

OTHER responses included developmental stages (13), associated illnesses including malaria or measles (19), fever (12), worms (18), God's wish (3)

HOUSEHOLD SURVEY 17 JULY 1991

22. What should you do at home if your child gets diarrhea?

CIRCLE ALL THAT THE RESPONDENT ANSWERS. IF HE/SHE SAYS "TAKE THEM TO A DOCTOR OR HEALTH CENTER", ASK AGAIN EMPHASIZING THAT YOU WANT TO KNOW WHAT CAN BE DONE AT HOME..

- a) give extra fluids to drink..... 60 13%
- b) continue to breast feed/feed..... 17 4%
- c) stop/decrease breast feeding..... 1 0%
- d) stop/decrease feeding..... 1 0%
- e) give oral rehydration salts solution (ORS). 84 18%
- f) give sugar-salt solution (SSS).....130 27%
- g) give tablets or syrups..... 99 21%
- h) give traditional medicines.....207 42%
- i) give dry tea..... 8 2%
- k) don't know..... 48 10%

23. Do you know how diarrhea can kill children?

CIRCLE ALL THAT THE RESPONDENT ANSWERS

- a) it makes them very weak.....227 47%
- b) it makes them lose fluids or dry out205 43%
- c) it makes them refuse to eat or drink 48 10%
- d) all the food comes out..... 55 12%
- e) through fever..... 24 5%
- g) don't know.....110 23%

Other responses included sunken eyes (24), the diarrhea itself (14), anemia, and loss of blood, or bloody stools (12).

24. Many children with diarrhea can be safely taken care of at home, but some cases should be taken to a health center. Can you tell me under what circumstances a child should be taken to the health center? **CIRCLE ALL THAT THE RESPONDENT ANSWERS**

- a) when the diarrhea lasts more than
a certain number of days..... 271 56%
- b) if there is blood in the diarrhea..... 25 5%
- c) if there are many stools..... 150 31%
- d) if there is fever..... 25 5%
- e) if the child is vomiting..... 28 6%
- f) if the child is weak..... 210 44%
- g) if the child will not eat/drink..... 45 9%
- h) if the child shows certain other
signs or symptoms..... 28 6%
- i) if the home treatment fails..... 18 4%
- j) do not know..... 47 10%

25. **SHOW ORS PACKET** Have you ever seen this?

- 1) yes..... 413 86%
- 2) no..... 67 14%

36

HOUSEHOLD SURVEY 17 JULY 1991

QUESTIONS 26 THROUGH 33 REFER ONLY TO RESPONDENTS WHO HAD PREVIOUSLY SEEN A PACKET OF ORS (N = 413)

26. Where have you seen it? CIRCLE ALL THAT THE RESPONDENT ANSWERS

- a) at the health center..... 336 81%
- b) in a neighbor's/relative's house..... 23 6%
- c) a health worker (Health Inspector, Health Assistant or Health Orderly) showed it.... 53 13%
- d) the community leader showed it to me..... 0
- e) in a shop..... 40 10%
- f) a traditional healer showed it to me..... 1 <1%

27. Has anyone ever taught you how to prepare it?

- 1) yes..... 312 76%
- 2) no..... 100 24%

QUESTION 28 THROUGH 33 REFER ONLY TO RESPONDENTS WHO HAD BEEN TAUGHT HOW TO PREPARE ORS (N = 312)

28. Who taught you how to prepare it?

- 1) neighbor, friend or relative..... 13 4%
- 2) a medical worker or someone at the health unit..... 249 80%
- 3) a health worker (Health Inspector, Health Assistant or Health Orderly)..... 67 21%
- 4) a traditional healer..... 1 <1%
- 5) a shop owner..... 5 2%
- 6) other..... 10 3%
- 7) "I don't remember"..... 8 3%

INTERVIEWER ASKS: Please show me how much water should be mixed with this package.

29. INTERVIEWER OBSERVES THE MEASURING UTENSIL USED AND CIRCLES THE RESPONDENT'S ANSWER :

- 1) Tumpeco mugs..... 276 89%
- 2) cowboy or kimbo tins..... 2 1%
- 3) beer bottles..... 5 2%
- 4) other 6 2%
- 9) respondent doesn't know..... 15 5%

30. INTERVIEWER MEASURES THE AMOUNT OF WATER AND CIRCLES THE RESPONDENT'S ANSWER:

- 1) less than 700 cc. 107 34%
- 2) 701 to 900 cc. 31 10%
- 3) 901 to 1100 cc. 147 47%
- 4) 1101 to 1300 cc. 5 2%
- 5) more than 1300 cc. 4 1%
- 9) respondent doesn't know 18 6%

HOUSEHOLD SURVEY 17 JULY 1991

31. How often do you give the ORS when the child has diarrhea?
- 1) every time the child has a stool..... 137 44%
 - 2) less than 3 times in a 24 hour period..... 40 13%
 - 3) between 3 and 5 times in a 24 hour period. 56 18%
 - 4) more than 5 times in a 24 hour period..... 35 11%
 - 5) other 28 9%
 - 6) do not know..... 16 5%
32. How much should a small child receive at a time?
- 1) as much as he/she will drink..... 35 11%
 - 2) less than one quarter of a Tumpeco mug.... 118 38%
 - 3) about 1/4 of a Tumpeco mug..... 81 26%
 - 4) more than 1/4 of a Tumpeco mug..... 44 14%
 - 5) other..... 7 2%
 - 6) do not know..... 27 9%
33. What is the longest amount of time the solution should be kept before throwing is away?
- 1) less than 12 hours..... 38 12%
 - 2) more than 12 but less than 24 hours..... 35 11%
 - 3) 24 hours..... 104 33%
 - 4) more than 24 hours..... 60 19%
 - 5) other 6 2%
 - 9) do not know..... 69 22%

QUESTIONS RELATED TO THE HEALTH INSPECTORATE

QUESTIONS 34 THROUGH 39 WERE NOT ADDRESSED TO COMMUNITY LEADERS WHO RESPONDED TO QUESTIONS 10-12. (N = 421)

34. Have you ever seen health inspectors, health assistants, or health orderlies, that is health workers who work in the community?
- 1) yes..... 183 44%
 - 2) no 238 56%
35. (IF THE ANSWER TO 34 IS "YES" ASK) What do they do?
CIRCLE ALL THAT THE RESPONDENT ANSWERS (N = 183)
- a) inspect restaurants or markets..... 2 1%
 - b) inspect meat..... 3 2%
 - c) inspect homes..... 104 57%
 - d) help to dig wells or bore holes..... 4 2%
 - e) keep sources of water clean..... 26 14%
 - f) help to build latrines..... 102 56%
 - g) teach about health/hygiene..... 123 67%
 - h) visit schools..... 0
 - i) advise on building construction..... 40 22%
 - j) teach about diarrhea..... 20 11%

HOUSEHOLD SURVEY 17 JULY 1991

- k) give immunizations..... 14 8%
- l) distribute ORS..... 10 5%
- m) other 17 9%
- n) do not know..... 9 5%

36. When was the last time you saw the health inspectorate worker (HI/HA/HO) doing his work? (N = 183)

- 1) Within the last month..... 49 27%
- 2) More than a month but less than 6 months... 53 29%
- 3) Between 6 months and a year ago..... 27 15%
- 4) Between 1 and 2 years ago..... 27 15%
- 5) More than 2 years ago..... 6 3%
- 9) I don't remember..... 22 12%

37. The last time you saw him, what work was he doing?

CIRCLE ALL THAT THE RESPONDENT NAMES (N = 183)

- a) He spoke at a public meeting..... 18 10%
- b) Inspecting my home/visiting my home..... 121 66%
- c) Gave immunizations..... 9 5%
- d) Assisted with latrine construction..... 60 33%
- e) Demonstrated or worked on spring protection..... 17 9%
- f) Distributed ORS..... 13 7%
- g) Other 25 14%
- h) Don't know..... 12 7%

38. What did the HI/HA talk about the last time you saw him?

- a) Did not give any advice..... 6 3%
- b) Prevention of diarrhea..... 16 9%
- c) Treatment of diarrhea..... 17 9%
- d) Latrines..... 98 54%
- e) Water..... 29 16%
- f) Disposal of rubbish..... 51 28%
- g) Personal hygiene..... 114 62%
- h) Other 18 10%
- i) Don't remember..... 20 11%

39a. Has any health inspectorate worker (Health Inspector, Health Assistant or Health Orderly) ever talked to you about preventing or treating diarrhea? (N = 183)

- 1) Yes, place unspecified..... 2 1%
- 2) No..... 120 66%
- 3) Yes, in my home..... 24 13%
- 4) Yes, in the health unit..... 7 4%
- 5) Yes, at a community meeting..... 27 15%
- 6) Other..... 2 1%
- 9) Do not remember..... 2 1%

39

HOUSEHOLD SURVEY 17 JULY 1991

H. QUESTIONS ON LATRINES (N = 480)

40. How do you usually dispose of baby's feces?

1) in the bush.....	43	9%
2) in the rubbish.....	7	2%
3) in a latrine.....	350	73%
4) bury it.....	60	13%
5) in a small pit or hole.....	10	2%
other.....	2	<1%
8) "I don't take care of any children".....	10	2%
9) I don't know.....	3	<1%

41. What are the health advantages of using a latrine? (CIRCLE ALL THAT THE RESPONDENT ANSWERS)

a) Prevent disease transmission.....	287	60%
b) Controls flies or other insects.....	192	40%
c) Keeps the yard clean.....	146	30%
d) Keeps feces out of sight.....	259	54%
Keeps the bad smell away.....	10	2%
e) Other.....	17	4%
f) Don't know.....	14	3%

42. How can human feces be harmful? (CIRCLE ALL THAT THE RESPONDENT ANSWERS)

a) attracts flies.....	234	49%
b) transmits disease to other people.....	391	82%
c) transmits disease to animals.....	22	5%
d) contaminates the air.....	78	16%
e) attracts evil spirits.....	1	<1%
f) contaminates water or water source.....	16	3%
bad sight and or smell.....	36	8%
g) other.....	6	1%
h) don't know.....	12	3%

43. Do you have a latrine? (ANSWER VERIFIED)

1) yes.....	324	68%
2) no	156	33%

44. ASK TO SEE THE HOUSEHOLD LATRINE. OBSERVE THE FOLLOWING:
(N = 324)

a) Is it covered?	Yes.....	69	21%
b) Is it clean?	Yes.....	209	65%
c) Is there a superstructure?	Yes.....	223	69%

40

ANNEX 2

LISTING OF RESULTS

HEALTH INSPECTORATE STAFF QUESTIONNAIRE

HI

17 JULY 1991

**HEALTH INSPECTORATE TRAINING NEEDS ASSESSMENT
HEALTH INSPECTORATE STAFF QUESTIONNAIRE¹
MAY-JULY 1991**

**LISTING OF RESULTS
FOR THE TOTAL SAMPLE (N = 61)**

Objectives of the Health Inspectorate Staff Questionnaire

1. To assess the training and support needs of the health inspectorate staff. These needs will be determined by:
 - a) Asking the DHI, CHIS, HIS and HAs to identify their areas of strength and the topics in which they are in greatest need of additional training.
 - b) Determining how DHIs, CHIs, HIs and HAs allocate their time by asking what tasks require the major part of their time.
 - c) Identifying the most pressing EH needs in the district from the perspective of the health inspectorate staff.
 - d) Reviewing the health inspectorate staff's knowledge of basic EH/CDD principles.
2. To identify patterns of and problems with planning, supervision and management among the health inspectorate staff.

¹(For interviews with District Health Inspectors, County Health Inspectors, Health Inspectors and Health Assistants)

42

HEALTH INSPECTORATE QUESTIONNAIRE

FOR DISTRICT HEALTH INSPECTORS, COUNTY HEALTH INSPECTORS, HEALTH INSPECTORS, AND HEALTH ASSISTANTS DO SECTIONS A THROUGH D. SECTION E IS FOR DISTRICT HEALTH INSPECTORS AND COUNTY HEALTH INSPECTORS ONLY

SECTION A. GENERAL INFORMATION

3. Number of Interviewees per District

1) Kamuli	17
2) Masaka	15
3) Kasese	15
4) Masindi.....	14

4. Position of Interviewee

1) District Health Inspector.....	4
2) County Health Inspector.....	8
3) Health Inspector	3
4) Health Assistant	46

5. When did you qualify as a Health Inspector/Assistant?

1) 3 years ago or less.....	8	13%
2) more than 3 years to 5 years ..	4	7%
3) more than 5 years to 10 years .	10	16%
4) more than 10 years	39	64%

6. We know that the lack of transportation, equipment, and money are major problems. What are the other obstacles and problems you face in carrying out the responsibilities of your position?

a) Transport (fuel, vehicles, bicycles, roads).....	13	21%
b) Personal support (accommodations, health care, schools).....	24	39%
c) Lack of office supplies (paper, notebooks, pens).	9	14%
d) Lack of equipment (cement, ORS tape measure, protective clothing, lactometers).....	11	18%
e) Low socio-economic status of population.....	5	8%
f) Low salary, late payment, no advances.....	12	20%
g) Lack of health education materials.....	4	7%
h) Lack of professional books and references.....	1	2%
i) Geographic problems (rough terrain, lack of water).....	9	15%
j) Language and communication problems with community members.....	18	30%
k) Communication with or attitude of leaders.....	13	21%
l) Administrative delays, lack of supervision no opportunities for promotion.....	6	10%
m) Shortage of trained and capable personnel.....	8	13%
n) Lack of power to enforce.....	2	3%

HEALTH INSPECTORATE QUESTIONNAIRE

- o) Other..... 23 38%
- p) Difficulty with community mobilization..... 15 25%
- q) Multiple roles/demands..... 1 2%
- r) None..... 1 2%

7. When was the last time your supervisor visited you at your place of work?

- 1) within the month 41 67%
- 2) more than 1 month to 3 months..... 15 24%
- 3) more than 3 months to 6 months..... 3 5%
- 4) more than 6 months..... 2 3%
- 5) never..... 0

SECTION B. QUESTIONS ABOUT TRAINING NEEDS

8. Which 3 of the following topics do you feel most knowledgeable about? (READ THE FOLLOWING LIST TO THE RESPONDENT AND CIRCLE THE APPROPRIATE ANSWERS)

- a) health education/community health..... 34 56%
- b) food hygiene..... 13 21%
- c) water source protection..... 35 57%
- d) latrine construction/use/maintenance..... 38 62%
- e) malaria control..... 2 3%
- f) vector control..... 4 7%
- g) personal and domestic hygiene..... 15 25%
- h) diarrheal disease/ORS (also called CDD)..... 43 71%
- i) solid waste..... 1 2%

9. What environmental sanitation topics are you weak in? (CHECK ALL THAT THE RESPONDENT ANSWERS)

- a) control of communicable diseases..... 19 31%
- b) latrine hygiene..... 4 7%
- c) disease transmission..... 4 7%
- d) water protection..... 12 20%
- e) personal hygiene..... 3 5%
- f) meat inspection..... 24 40%
- g) diarrheal disease/ORS..... 1 2%
- h) malaria..... 18 30%
- i) community participation/mobilization..... 14 23%
- j) treatment of common illnesses..... 10 16%
- k) building construction..... 11 18%
- food hygiene..... 10 16%
- vector control..... 18 30%

14

HEALTH INSPECTORATE QUESTIONNAIRE

10. What 3 activities occupy the greatest amount of your time?
(ASK THE RESPONDENT TO NAME 3 ACTIVITIES, CIRCLE OR SPECIFY
APPROPRIATE ANSWER)

a) supervision.....	5	8%
b) monitoring the Inspectorate staff's activities..	3	5%
c) presentations at community meetings.....	9	15%
d) report writing.....	3	5%
e) protection of water sources.....	36	59%
f) latrine construction/use/maintenance.....	26	43%
g) CDD (Control of Diarrheal Disease).....	40	66%
h) home visits.....	27	44%
i) health education.....	10	16%
immunization.....	10	16%

11. Besides the activities mentioned above, what other activities
do you routinely do? (CIRCLE ALL THAT THE RESPONDENT ANSWERS)

a) talk to school students or teachers.....	29	48%
b) talk at community meetings.....	28	46%
c) inspect restaurants/markets.....	42	69%
d) supervise staff.....	13	21%
e) investigate complaints.....	2	3%
f) give immunizations.....	28	46%
g) make household visits.....	24	39%
h) discuss or work on latrine construction.....	17	28%
i) discuss or work on spring protection.....	20	33%
j) investigate disease outbreaks.....	7	12%
k) distribute ORS.....	28	46%
l) talk with leaders.....	13	21%
m) write reports.....	21	34%
n) program planning.....	23	38%
o) other.....	23	38%

12. Have you attended any seminars, workshops or other in-service
training in the last 3 years?

1) yes.....	56	92%
2) no.....	5	8%

13. How long ago did you attend the in-service training?

a) less than 3 months ago.....	25	41%
b) more than 3 months to 6 months ago.....	3	5%
c) more than 6 months to 1 year ago.....	20	33%
d) more than 1 year to 3 years ago.....	8	13%
f) not applicable.....	5	8%

HEALTH INSPECTORATE QUESTIONNAIRE

14. What topics were taught at the in-service training? CIRCLE ALL THAT THE RESPONDENT NAMES

- a) water protection..... 31 51%
- b) supervision skills..... 6 10%
- c) diarrheal case management (including ORS)/CDD... 37 61%
- d) latrine sanitation..... 15 25%
- e) community based health care..... 14 23%
- f) community participation/mobilization 20 33%
- h) immunizations/cold chain..... 9 15%
- primary health care..... 8 13%
- AIDS/STD'S..... 5 8%
- planning/administration..... 7 11%

15a. Do you have any health education materials to help you present information to the community?

- a) yes..... 56 92%
- b) no..... 5 8%

15.b If yes, what do you have? (N = 56)

- posters..... 33 59%
- pamphlets..... 42 75%
- kits..... 10 18%
- on AIDS..... 15 27%
- on CDD..... 40 71%
- on EPI..... 19 34%
- on Home Maintenance..... 1 <1%
- on Water and Sanitation..... 19 34%

15.c (IF THE RESPONDENT HAS SEEN THE CDD PAMPHLETS) Are the CDD pamphlets useful for educating the public?

- Yes..... 39 64%
- No..... 2 3%
- Mixed comments..... 14 23%
- Not applicable..... 6 10%

Comments offered regarding CDD pamphlets:

- Easy to understand..... 7 11%
- Available in many local languages..... 4 7%
- The pot should be covered..... 9 15%
- Language not appropriate for locality... 2 3%
- Should emphasize hand washing..... 2 3%
- Should have an alternative to ORS..... 3 5%
- Mugs do not look like usual Tumpeco mugs 2 3%

Other single comments include "insufficient supply", "lacks dosages", "should be enlarged", "should show how packet is opened", "should emphasize boiling water", "should show causes of diarrhea", "should stress that child recovers gradually, not immediately", "the child, the ORS and food are all on the ground".

HEALTH INSPECTORATE QUESTIONNAIRE

16a. Do you have any reference books that you can refer to in doing your work.

- a) yes..... 34 56%
- b) no..... 27 44%

16b. If yes, list them

CDD.....	23	38%
Primary Health Care.....	11	18%
Legal References.....	5	8%
Technical Environmental Health.....	11	18%
Community Health/Health Education.....	10	16%
Social Mobilization/Community Development....	2	3%
Jordan's Textbooks.....	5	8%
Basic Science/School Health.....	2	3%
Other.....	5	8%

SECTION C. QUESTIONS ABOUT DIARRHEA CASE MANAGEMENT

17a. Do you have any ORS packets to distribute to families at risk?

- 1) yes..... 53 87%
- 2) no..... 8 13%

17b. If yes, do you have a constant supply? (N = 53)

- 1) yes..... 38 72%
- 2) no..... 15 28%

18. How much water do you need to mix for one packet of ORS?

- 1) less than a liter..... 0
- 2) a liter..... 61
- 3) more than a liter..... 0

19a. Do you know how to mix sugar-salt solution?

- 1) yes..... 61

19b. If yes, how many teaspoons of sugar do you add to a liter of water?

- two..... 2
- four..... 1
- six..... 1
- seven..... 1
- eight..... 56

19c. If yes, how many teaspoons of salt do you add to a liter of water?

- one..... 58
- four..... 1
- five..... 1
- eight..... 1

47

HEALTH INSPECTORATE QUESTIONNAIRE

20. What are the signs of dehydration? **CIRCLE ANY THAT THE RESPONDENT ANSWERS**

a) thirst.....	32	53%
b) change in behavior (for example, irritability or sleepiness).....	12	20%
c) decreased urine.....	31	59%
d) sunken eyes.....	51	84%
e) dry mouth.....	27	44%
f) decreased or no tears.....	23	38%
g) sunken fontanelle.....	30	49%
h) vomiting.....	7	12%
i) skin pinch goes back slowly.....	52	85%
j) diarrhea or loose stools.....	22	36%
k) weakness.....	15	25%

21. Do you have a CDD handbook?

1) yes.....	48	79%
2) no.....	13	21%

SECTION D. ENVIRONMENTAL SANITATION QUESTIONS

22. What can be done to increase community response to latrine construction?

a. improve on community approach.....	29	48%
b. intensify health education efforts.....	54	89%
c. provide concrete slabs at subsidized rates..	17	30%
d. communities choose the types of latrines they prefer.....	2	3%
e. build demonstration latrines.....	5	8%
sponsor competitions.....	3	5%
provide tools or materials.....	4	7%
frequent home visits.....	4	7%

Other recommendations include establishing village health committees, generating greater cooperation between HIs and RCs, having a government policy on home construction, improving transport for HIs and HAs, more manpower, legal enforcement, and school health education.

23. What can be done to protect a spring for drinking water? **(CIRCLE ALL THAT THE RESPONDENT ANSWERS)**

a) build a fence around the spring.....	32	53%
b) build a system to drain water away	29	48%
c) cover the spring	36	59%
d) keep the grass cut around the spring.....	33	54%
e) keep animals away.....	33	54%
f) don't know.....	1	2%
g) identify caretaker or caretaker committee....	21	34%
other (keep children away, mobilize the community, prevent spring abuse, education)..	19	31%

48

HEALTH INSPECTORATE QUESTIONNAIRE

24. What advise do you give people to educate them on how to protect drinking water from contamination in the home? (CIRCLE ALL THAT THE RESPONDENT ANSWERS)

a)use clean containers.....	54	89%
b)use clean dippers.....	43	71%
c)cover the containers.....	46	75%
d)keep hands out of the containers.....	17	28%
e)put containers off the ground.....	25	41%
f)keep containers away from small children.....	19	31%
g)boiling.....	17	28%
use pots.....	6	10%

Other responses included encouraging the use of jerrycans, storing in a jug, teaching children how to draw water, and hand washing.

25. What advise do you give to a family to prevent worm infestation?

a)foods hygiene recommendations (washing raw fruits and vegetables, thoroughly cooking meat, etc).....	39	64%
b)water protection/treatment recommendations...	17	28%
c)personal hygiene recommendations (wearing shoes, hand washing, etc.).....	38	62%
d)domestic hygiene recommendations (latrine use, rubbish disposal, drying utensils).....	52	85%
e)treatment of infected cases.....	5	8%

Other responses included avoiding bathing in swamps, rivers and ponds, teaching about disease cycles, providing manure pits, not allowing domestic animals to eat from the family utensils, and guarding crawling children.

QUESTIONS 26 - 28 REFER TO DHIs AND CHIs ONLY

26. Do you attend District Health Team (DHT)/County Health Team (CHT) meetings?

a) yes.....	10	83%
b) no.....	1	8%
c) there are no meetings.....	1	8%

27. When was the last District Health Team (DHT)/County Health Team meeting (CHT) you attended? (N = 12)

a) less than a month ago.....	5	42%
b) 1-2 months ago.....	3	25%
c) more than 2 months to 6 months ago.....	2	17%
e) not applicable.....	2	17%

49

HEALTH INSPECTORATE QUESTIONNAIRE

28. What is your role at these DHT/CHT meetings? **CIRCLE ALL THAT THE RESPONDENT MENTIONS (N = 12)**

- a) advise on environmental sanitation issues.... 6 50%
- b) listen to other reports..... 3 25%
- c) plan activities..... 2 17%
- d) treasurer or secretary..... 2 17%
- e) present reports..... 5 42%

Other responses include chairman (1), and disease investigation (1).

THE FOLLOWING SECTION WAS ORIGINALLY INTENDED FOR DISTRICT HEALTH INSPECTORS OR COUNTY HEALTH INSPECTORS. SOME HEALTH INSPECTORS AND HEALTH ASSISTANCES, HOWEVER, WERE ALSO ASKED THE QUESTIONS.

29. In what ways (other than the DHT meetings), do you collaborate with the District Health Team? (N = 15)

- a) plan activities..... 10 67%
- b) share information..... 8 53%
- c) investigate diseases 2 13%
- d) supervision visits..... 5 33%

30. What problems do you encounter, if any, in getting and distributing ORS? (N = 26)

- a)obtaining adequate supplies..... 12 46%
- b)problems with local distribution..... 10 39%
- c)problems with acceptance or use..... 3 12%
- d)no bag or container to carry it..... 2 8%
- e)no problems..... 7 27%

31. Do you have any suggestions that would help us to improve the CDD case management component of the Health Inspectorate? (N = 32)

- a)increased or timely allowance..... 18 56%
- b)maintenance/provision of bicycles/vehicles 23 72%
- c)provide uniforms or protective clothing... 11 34%
- d)train health orderlies..... 4 13%
- e)inservice training for HIs and HAs..... 8 25%
- f)provide more visual aids/HE materials..... 9 28%
- g)train local leaders and/or teachers..... 13 41%
- h)provide more/better supervision..... 3 9%
- i)provide treatments for common problems... 1 3%
- j)provide more ORS..... 8 25%
- provide mugs and/or spoons..... 7 22%
- provide other equipment (tape measures, thermometers, office supplies,reference books, blackboards..... 8 25%

50

HEALTH INSPECTORATE QUESTIONNAIRE

Other recommendations include the use of radio or drama to teach messages, setting up a district CDD bank account, training more health workers, using volunteers to distribute ORS, providing regular and integrated seminars/training and integrating with other PHC programs.

32. What are the major constraints you find in implementing CDD activities? (N = 32)

a)insufficient ORS.....	9	28%
b)lack of appreciation for prevention.....	2	6%
c)ignorance or attitude of leaders.....	5	16%
d)ignorance or attitude of community.....	1	3%
e)lack of equipment (ORS, cups and spoons, blackboards, protective clothing.....	6	19%
f)insufficient allowance.....	16	50%
g)transportation.....	21	66%

Other constraints include cultural resistance to change, political instability in mountainous areas, too many and diverse responsibilities, and indirect access to funds (passed through the DMO)

ANNEX 3
KEY INDICATORS
BY NUMBER OF CHILDREN IN THE HOUSEHOLD
AND BY DISTRICT

ANNEX 3

HOUSEHOLD SURVEY RESULTS BY DISTRICT: GENERAL INFORMATION

<u>Indicator</u>	<u>Kamuli</u>	<u>Masaka</u>	<u>Kasese</u>	<u>Masindi</u>
Children <5 in household				
0	38%	21%	23%	34%
1	26%	15%	20%	22%
>=2	36%	64%	57%	43%
Sex of respondent female	80%	83%	72%	64%
Years of school of respondent				
none	65%	23%	61%	32%
<3 Years	5%	12%	8%	9%
3-7 Years	26%	57%	25%	48%
S1 - S6	4%	9%	6%	8%
teritiary	0%	0%	1%	4%
Respondet's age				
<=20 years	12%	9%	17%	12%
21 - 30	31%	33%	39%	19%
31 - 40	19%	22%	17%	23%
41 - 50	14%	11%	14%	16%
51 - 60	1%	15%	4%	11%
> 60 years	5%	9%	8%	13%
Percent of repondents who are leaders	8%	15%	12%	14%

ANNEX 3

**HOUSEHOLD RESULTS BY DISTRICT:
LEADERS' INTERACTION WITH HIS and HAs**

<u>Indicator</u>	<u>Kamuli</u>	<u>Masaka</u>	<u>Kasese</u>	<u>Masindi</u>
Total number of leaders interviewed	9	18	14	17
Received a visit from HI/HA	56%	33%	71%	83%
Time of last visit within 1 month	33%	17%	29%	47%
>1 but <6 months	0%	11%	36%	29%
Activities during visit (number)				
Visit/inspect homes	3	3	4	10
Talk at community meeting	0	1	2	2
Latrine construction	2	2	9	9
Spring protection	1	4	1	4
Immunizations	4	1	1	0
Distribute ORS	1	0	1	0
Talk at schools	0	0	0	1
Talk with religious leaders	0	0	1	0

ANNEX 3

**HOUSEHOLD SURVEY RESULTS BY DISTRICT:
BASIC ENVIRONMENTAL HYGIENE
(N = 120 per district)**

<u>Indicator</u>	<u>Kamuli</u>	<u>Masaka</u>	<u>Kasese</u>	<u>Masindi</u>
%With access to protected spring/well or borehole	8%	18%	44%	63%
% With access who describe how to protect source				
Fence	20%	14%	64%	3%
Drainage	40%	27%	60%	40%
Cut grass	20%	73%	32%	71%
How to make water safe for drinking				
Boil	34%	92%	40%	33%
Filter	37%	7%	14%	19%
Nothing Needed	55%	8%	54%	59%
How to keep water clean at home				
Jerry cans	19%	54%	41%	14%
Clean dippers	33%	0%	38%	30%
Covers	75%	43%	68%	91%
Important times to wash hands:				
Before eating	94%	83%	89%	82%
After defecating	20%	14%	18%	19%
Before food prep	60%	30%	43%	23%
Why should soap be used?				
Stop disease	9%	3%	18%	3%
Kills germs	45%	54%	37%	29%
Why are heaps of rubbish dangerous to health?				
Insects and pests	66%	68%	63%	55%
Spread disease	53%	48%	63%	71%
% Who know latrines prevent disease transmission	52%	61%		68%
% Who have a latrine	36%	83%	82%	68%
* data not available				

55

ANNEX 3

**HOUSEHOLD SURVEY RESULTS BY DISTRICT:
KNOWLEDGE ON CDD CASE MANAGEMENT
(N = 120 per district)**

<u>Indicator</u>	<u>Kamuli</u>	<u>Masaka</u>	<u>Kasese</u>	<u>Masindi</u>
% Who name as cause of diarrhea:				
Teeth	18%	3%	8%	24%
Germs	54%	67%	62%	72%
Food	8%	10%	21%	28%
What to do at home if child has diarrhea:				
Give extra fluids	13%	7%	25%	5%
Give ORS	17%	5%	32%	17%
Give SSS	17%	41%	25%	26%
Tablets/syrup	37%	13%	21%	13%
Give Trad. Meds.	33%	39%	42%	58%
How can diarrhea kill children?				
Makes them weak	46%	12%	71%	61%
Loss of fluids	28%	51%	47%	46%
% Who don't know any indications for referral	8%	15%	9%	7%
% Who have seen ORS	79%	85%	89%	91%
FOR THOSE WHO HAVE SEEN ORS				
Where seen:				
At health center	74%	82%	93%	76%
By HI/HA	19%	7%	9%	17%
% Taught how to prepare	77%	80%	72%	74%

ANNEX 3

**HOUSEHOLD SURVEY RESULTS BY DISTRICT:
KNOWLEDGE ON CDD CASE MANAGEMENT
(Continued)**

<u>Indicator</u>	<u>Kamuli</u>	<u>Masaka</u>	<u>Kasese</u>	<u>Masindi</u>
FOR THOSE TAUGHT HOW TO PREPARE:				
Taught by whom:				
Health center	71%	84%	87%	73%
HI/HA	18%	10%	7%	17%
% Using recommended containers	92%	89%	91%	91%
% Using an appropriate amount of water	52%	36%	55%	47%
% Who know how often to give	67%	47%	66%	42%
% Who know how much to give	52%	20%	51%	28%
% Who know how long to keep ORS	47%	27%	33%	28%

57

ANNEX 3

**HOUSEHOLD SURVEY RESULTS BY DISTRICT:
KNOWLEDGE OF AND CONTACT WITH HEALTH INSPECTORATE**

<u>Indicator</u>	<u>Kamuli</u>	<u>Masaka</u>	<u>Kasese</u>	<u>Masindi</u>
Have seen HI staff	36%	29%	58%	53%
Identified rules:				
Inspect homes	54%	34%	60%	61%
Water source protection	12%	26%	13%	12%
Build latrines	49%	31%	59%	74%
Health education	56%	46%	75%	77%
Teach about diarrhea	21%	23%	6%	*
Give immunizations	21%	6%	2%	5%
Distribute ORS	12%	0%	5%	4%
OF THOSE WHO HAVE SEEN HI:				
Last time seen within 1 month	21%	20%	*	33%
≥ 1 month < 6 months	35%	20%	*	12%
≥ 6 months < 1 year	16%	14%	*	23%
Have heard HI talk about diarrhea	44%	40%	*	32%

* data not available

ANNEX 3

**A COMPARISON OF KEY INDICATORS
BETWEEN HOUSEHOLDS WITH LESS THAN 2 CHILDREN (N = 240)
AND HOUSEHOLDS WITH 2 OR MORE CHILDREN UNDER 5 YEARS
(N = 240)**

<u>INDICATOR</u>	<u>% IN HH < 2 CHILDREN</u>	<u>% IN HH >= 2 CHILDREN</u>
Recommend extra fluids during diarrhea	9%	16%
Recommend ORS during diarrhea	13%	22%
Recommend SSS during diarrhea	18%	36%
Have seen HIs/HAs about diarrhea	41%	46%
Have heard HIs/HAs talk about diarrhea	13%	16%
Have seen an ORS packet	81%	91%
OF THOSE WHO HAVE SEEN A PACKET		
Were shown the packet by an HI or HA	12%	10%
Have been taught how to prepare ORS	54%	77%
OF THOSE WHO WERE TAUGHT HOW TO PREPARE		
Use the correct amount of water (>900 and <1100 ml.)	40%	52%
Know how long the solution should be kept	32%	34%