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BASICS **TRIP REPORT**

An Evaluation of Community Oral Rehydration Units in Honduras



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Academy for Educational Development (AED)

John Snow, Inc. (JSI)

Management Sciences for Health (MSH)

1600 Wilson Boulevard, Suite 300; Arlington, VA, 22209; USA

**AN EVALUATION OF COMMUNITY
ORAL REHYDRATION UNITS IN HONDURAS**

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Patricio Barriga

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ACRONYMS

AIN	Integrated Child Care (Atencion Integral del Nino)
BASICS	Basic Support for Institutionalizing Child Survival
CDD	Control of Diarrheal Diseases
COLVOL	Vector Control
CORU	Community Oral Rehydration Unit
EPCDDC	Extended Program for Control of Diarrhea Diseases/Cholera
EFHS	Epidemiology and Family Health Survey
HC	Health Center
HG	Health Guardians
HR	Human Resources
MCHD	Mother-Child Health Division
MOH	Ministry of Health
NGO	Non-governmental Organization
NCCP	National Cholera Control Program
NMD	Nutritional Management of Diarrhea
ORS	Oral Rehydration Salts
ORT	Oral Rehydration Therapy
PAHO	Pan American Health Organization
RHC	(CESAR) Rural Health Center
SCM	Standardized Case Management

TBA	Traditional Birth Attendant
TVMDD	Trained Volunteer for Managing Diarrheal Diseases
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development

I. EXECUTIVE SUMMARY

The purpose of this mainly qualitative study was to determine the degree of success of the Community Oral Rehydration Unit (CORU), as well as its scope, projection and potential. For this purpose, focus groups and in-depth interviews were held with:

- those responsible for the CORU;
- people afflicted by cholera in 1994;
- people whose relatives suffered cholera; and
- institutional personnel.

The team consulted regional directors and epidemiologists, and reviewed programming and evaluation documents, educational materials, and statistical data.

Originally designed as a cholera control strategy, the CORUs in Honduras were developed to fill the gap between health establishments and the homes of infected people living in marginal or practically inaccessible areas. However, research showed that, according to official statements, the CORUs are non-existent and moreover, health volunteers who were selected to attend the CORUs are not willing to treat adult patients with vomiting and diarrhea in their homes (i.e., the volunteers' homes).

On the other hand, something highly satisfactory was discovered through the team's research: practically all the health volunteers and their partners show an excellent attitude of service towards the community. This attitude saved the lives of countless cholera patients. The volunteers, although unwilling to treat cholera cases in their own homes, offered a series of free services during the most difficult times of a cholera outbreak.

The services provided by these volunteers in an epidemic outbreak were diverse and crucial at all times. Some took their role so seriously to the point of traveling on foot for many hours to notify the MOH personnel of a cholera outbreak. The team witnessed this personal devotion, as well as the moral and financial support, physical effort, and enormous capacity for correct decision-making during the most critical times of the cholera epidemic.

The volunteers' most frequent and generalized tasks, as stated during interviews, are as follows:

1. notifying the nearest health center of a possible cholera outbreak;
2. delivering ORS at any time of the day or night;
3. preparing or showing how to prepare the ORS solution to be taken on the way to the health center/shelter;
4. deciding whether the patient should be referred to a health facility or treated at home;
5. organizing transport for the patient (by hammock, mule, or car) to the health center/shelter;
6. monitoring the well-being of patients treated at home using oral hydration;

7. participating in the water committee;
8. participating in the latrine committee; and
9. developing learning activities for preventing and handling diarrhea.

The lack of training and formal education of this volunteer personnel is counterbalanced by an ardent desire to serve, a good degree of creativity, and an outstanding common sense.

The MOH, particularly the health center personnel, deserves credit for selecting these volunteers who were generally chosen with direct community participation. The very fact of being selected as a volunteer is, in itself, considered a distinction.

Certain generalized beliefs and harmful practices were also found among the population covered by the research, and these especially affect the health of children. Sucking the sunken crown of the head, and purging and massaging in case of diarrhea, among others, still seem to be very common behaviors. Self-medicating with antibiotics, especially during an epidemic, is a common practice. As far as suspending many foods during diarrhea, the origins of this practice were found both among nutritional traditions and through health personnel (doctors and nurses) recommendations.

The team recommends that new sustainable ways of encouragement be developed through consultation with the communities, especially those that recognize the work of the volunteers and stress the prestige of being a volunteer.

In Honduras, there is a good system of community hydration and referral that can be improved. It is good precisely because it has appeared as a result of the efforts of the MOH, the distress and the necessities of the communities, and the conditions of isolation (in remote areas) and extreme poverty (in urban marginal areas).

It is essential to respect what the system has achieved as far as its organization and functioning. Any innovation or attempt to improve the system for managing and controlling cholera at the community level should take place through consultation with the communities that have already been afflicted by cholera.

At the same time, the opinions of the women and men volunteers — who have shown an almost heroic effort to save the lives of their neighbors — should be taken into account.

More extensive recommendations are to

1. Replace the CORU with the operative concept of the Trained Volunteer for Managing Diarrheal Diseases (TVMDD)

This very promising activity is based on the experience of many villages and hamlets, areas and health centers, and their search for better and more efficient actions. It requires

consolidation of the TVMDD profile, a profile that needs to be flexible and adaptable to the circumstances of the diverse idiosyncrasies in the communities of Honduras.

2. **Revise and revive the social communication strategy for cholera control.**

This includes prescribing a new “behavioral strategy” founded on the valuable experience of the Educational, the RRHH and Mother-Child Health divisions. This strategy, geared towards changing behaviors and not only towards providing information, should be based on existing behavioral studies, and recommendable and feasible practices using the technique known as “Behavioral Analysis.”

3. **Define the role of the TVMDD in light of experience.**

During the first phase, the TVMDD would concentrate on diarrheal diseases, in general, and on cholera, in particular. In the following stages, and always in consultation with the community, the TVMDD’s functions would be extended towards other critical interventions. In the case of child health, such interventions could be immunizations, respiratory infections and, in a wider sphere, integrated child care (AIN).

4. **Find more effective methods of training/monitoring.**

Face-to-face and distance training (to a lesser degree) would seem to guarantee the quality of services, and also prove to be the best methods for encouraging and rewarding efforts. Monitoring is another area that requires special attention because, as well as a form of encouragement, it also offers countless opportunities to introduce modifications in the management process.

The following are specific recommendations to be implemented as part of those mentioned above:

1. **publicize the importance of the volunteer’s role in managing diarrheal diseases, particularly in a cholera epidemic;**
2. **avoid alarming promotions and any others that have not been adequately pretested, for example, “Cholera is a deadly disease;”**
3. **prepare training sessions and educational messages using behavioral achievements, (i.e., not considering each activity an achievement but rather as a means to model behaviors, skills and attitudes); and**
4. **decide about the publication of some well-designed and well-distributed aids that can be of great impact such as the module for training on diarrhea, radio spots, the CDD manual for volunteers, the “Liter-bag,” and others.**

The group of TVMDD visited and interviewed during this study was approximately as follows:

- 20 percent were Litrosol distributors in the past;
- 40 percent were and continue to be health volunteers (such as a COLVOL, Guardian, Trained Birth Attendant, or Health Representative); and
- 40 percent had not worked with the Ministry of Health in the past.

For obvious reasons, this last group has a more urgent need for training, although at the moment any lack of information or formal education is counterbalanced by an enormous enthusiasm and common sense.

Similarly, evidence shows that a greater part of the primary attention personnel (doctors, nurses, and aids) require up-to-date training on standardized case management (SCM) of diarrhea/cholera.

II. INTRODUCTION/BACKGROUND

Behavioral Study for Decision-Making

This is a human behavior study. The study's purpose is to try to contribute to the knowledge and behavior of the poorest and most marginal communities of Honduras that are confronted with cholera.

This report has been prepared with the aim of using its findings and recommendations to contribute to improving cholera control strategies.

Although the study was designed to evaluate how the CORU functioned, it soon turned its attention to the volunteers who supposedly were in charge of the CORU. From that point, the data collection became a sequence of surprises confirming the creative capacity, the desire to serve, and evidence of a practical intelligence in the community. The study also confirmed that extreme poverty and a low-level of schooling provided an excellent ground for sowing the cholera epidemic.

The analysis resulted from the data collected in three sanitary regions, with the objectives and critical issues stated by the Ministry of Health as a reference. The first question was, "How does the CORU really work?" Research uncovered that the CORU, as such, was not functioning, however, a series of processes and mechanisms were discovered that are perhaps even more important than the CORU as it was originally conceived by the official sector. It is vital to stress that these processes and mechanisms would not exist had it not been for the effort displayed by the majority of the MOH personnel, several NGOs, and families stricken by cholera.

An indigenous and self-sustaining strategy

The only explanation for this joyful discovery is that those people who have experienced cholera in flesh and blood developed their own mechanisms and procedures to confront the epidemic. This study positively confirms that what exists in place of the CORU actually surpasses the institutional definition of the CORU.

As an indigenous strategy, created by the very victims and built to fit the circumstances, its permanence and sustainability are assured. For the reader's better understanding, when those responsible for the CORU are mentioned, they are referred to as trained health volunteers for managing diarrheal diseases (TVMDD).

The origin of the CORU

The MOH in Honduras developed the initiative to create the community oral rehydration unit (CORU) before cholera broke out in 1991. This strategy was developed for several purposes as described in the "Basic Document for Structuring and Function of Community Oral Rehydration Unit (CORU)," February 1992, Jorge Melendez and Denia Almendarez. In this document, the CORU's specific objectives are summarized as follows:

For prevention:

- treat patients with ORS and home-made fluids;
- manage the nutrition of infants with diarrhea;
- provide the timely referral of patients;
- participate in basic drainage means; and
- promote "not recurring to self-medication with antibiotics, antemetics, purges, etc."

This initiative proved to be decisive for cholera cases in the most remote areas of the country, where transport and communication are more difficult and health centers scarce.

Purpose of the CORU

This same document states its main objective as follows:

"Improve access to health services in neglected areas, to decrease disease and mortality caused by diarrheal diseases, especially in population at risk (children under five years); through active participation and compromise on behalf of the people for improving sanitary conditions which in the community; health education and effective management of cases."

Location of the CORU

Referring to the location of the CORU, the document adds that the:

“CORU should be principally located in:

- the most remote and neglected villages and hamlets;
- urban-marginal neighborhoods in cities of dense population;
- communities with incidents of diarrhea; and
- locations where a considerable number of people gather due to work or tourism (beaches, sugar and coffee plantations).”

Several efforts have been made at a central and regional level to organize the CORU in isolated places far from health establishments to enable adequate functioning, with trained local volunteers and institutional personnel from the sector, and in some cases, providing certain utensils such as pots, spoons, cups, and mugs. When the epidemic began in Honduras, this strategy was used as part of the epidemic blockade in an endeavor to decrease the number of losses and create an educational field for prevention, mainly by promoting environmental sanitation, and family and personal hygiene.

Definition of the CORU

The CORU is understood as “the place within the community where people with diarrhea are rehydrated” and has been mentioned in many documents, reports on programming, and budgets. This study was requested by the MOH and aims to clarify the characteristics of the CORU, or what exists in its place. The purpose of this study is to investigate the existing processes and the range of services provided, as well as its operation and the impact it has had.

III. JUSTIFICATION

The present investigation came about through the initiative of high officials in the MOH with the purpose of obtaining an impartial judgement on the location, operation, range, and potential of the CORU in Honduras.

Since there were new cholera outbreaks in several areas of Honduras in 1994, and considering the rise in cases of the epidemic, and more worrying, the rise in the mortality rate, the community's response is considered to be essential. This research aims to unveil the behavior of the people that live in areas where cholera outbreaks occurred in 1994. The concept of the CORU contemplates community participation in all aspects of early hydration to avoid death by dehydration.

In the preliminary meetings for the design of this investigation, the working team prepared the following list of “critical issues” to be answered by the study.

Critical Issues

1. How does the CORU really work?
2. Is the CORU well located?
3. Are the CORU volunteers well trained in SCM of diarrhea cholera?
4. Do they receive adequate support as far as supplies, supervision, etc.?
5. Does the community use the CORU?
6. Is the CORU the best answer to the problem?
7. What is the CORU's role in cholera outbreaks in each community?

IV. OBJECTIVES

The study's **general objectives** were to:

- evaluate the CORU's role in the management and referral of critical diarrhea cases, with an emphasis on the village population the farthest from health centers; and
- offer useful recommendations based on the findings.

The study's **specific objectives** were to:

1. determine whether the CORU is operating and how successfully;
2. identify critical aspects so as to give timely attention to diarrhea cases in communities far away from health centers;
3. define the ability of the CORU volunteers to manage diarrhea cases and identify their lack of skills and educational needs;
4. discover the behavior and beliefs of the people who have suffered cholera concerning management of diarrhea cholera and drainage; and
5. propose alternative solutions to the problems discovered.

V. METHODOLOGY

A Mainly Qualitative Study

Through the issues stated in the Justification section, the team proposed to interpret the questions expressed verbally by the officials of the Mother-Child Health Division, the National Cholera Program, the USAID Health Office, and by the PAHO Representative in Honduras. Each of

these officials was consulted before and after the design was made, once the data collection instruments were finished.

Based on the issues to be studied, it was decided that the study would be mainly qualitative because of the need to explore the problem before deciding on a number of issues. As a result, the study emphasizes unraveling the nature of the facts that were discovered and their interrelationship, rather than their scope and repetition.

Thus, for example, while closely studying behavior in relation to diarrhea management, the description of the practices of volunteers and the community was stressed.

Sample and Process of Data Collection

Three health regions were selected using the following criteria:

1. they had confronted at least one cholera outbreak during the present calendar year; and
2. their directives stated that several CORU units were operating in several areas affected by the epidemic outbreak.

To determine these conditions, the team consulted and sought confirmation from the offices of the health regions and the technical personnel of the Extended Program for Control of Diarrheal Diseases and Cholera at the Mother-Child Health Division.

The team chose regions #2, #3 and # 4. Other regions with similar epidemic characteristics were not chosen because of the time needed to transport the researchers to the regional headquarters and into the region. Time was limited.

Region #1 was not chosen because the directors as well as the Regional Epidemiologist explained to the team that the CORU, as originally conceived, did not exist in that region; they said, "We have trained volunteers that are capable of hydrating a patient, but we haven't promoted CORU as such..."

When and where

The data collection took place from November 14 to December 6, 1994, in the three health regions mentioned above.

First week: Region #4, Villages of the Municipality of Concepcion de Maria and Corpus, Department of Choluteca.

Second week: Region #4, Villages of the Municipality of Marcala, Department of La Paz; Municipality La Libertad, Department of Comayagua; Suyapa neighborhood, Betancourt neighborhood, city of Comayagua.

Third week: Region #2, Villages of the Municipality of San Marcos, San Nicolas San Vicente Centenario, Department of Santa Barbara urban Villanueva, San Pedro and Lima Department of Cortes.

Interviews and focus groups were held in Choluteca, Cortes and Santa Barbara departments. Testing of the three instruments was done in Region #1, in the Department of El Paraiso and Francisco Morazan, and in selected hamlets with access to health centers.

Instruments

The instruments were developed based on the specific objectives and the issues presented at the beginning of the design. These instruments were modified in two important ways: first, changes took place after pretesting in remote villages in the Municipality of El Paraiso and Ojojona; second, in the data collection in Choluteca, Santa Barbara, Cortes, and Comayagua. The main change was made when confirmation was reached concerning the fact that volunteers do not rehydrate within their own homes, as was originally supposed. All questions concerning the CORU were immediately replaced by questions about the trained volunteer who was managing diarrhea in the community.

1. Intense interviews with sector nurses and Health Centers (13 nurses interviewed)

For this purpose, an Interviewing Guide was prepared and explained to each area and sector nurse, as well as to the assistant CESAR nurse under whose jurisdiction the CORU volunteers are found.

2. Intense interviews with CORU volunteers (63 TVMDD interviewed)

The criteria for selecting volunteers was that they should be selected from at least two of the three selected regions. The areas selected were limited to those that had suffered at least one cholera outbreak in the present calendar year and that had an "active CORU."

3. Intense interviews and focus groups (118 people stricken by cholera with relatives who had suffered cholera in their homes)

This group included people that had suffered from cholera in 1994 and had severe symptoms, and close relatives of patients or persons who had died because of cholera in 1994.

These people were interviewed in their homes especially in those homes where deaths had occurred. In these cases the interview was more in line with a verbal autopsy. The volunteers called together the focus groups using the instructions given by the research team.

V. FINDINGS

The CORU does not exist, however, there is something better.

First of all, the CORU, as originally conceived as a place where hydration takes place, does not exist in the regions that were investigated, and the team has further evidence that they do not exist elsewhere in Honduras. The team consistently observed that hydration was not offered in the volunteers' homes. These people do not have the will and they do not have the physical conditions in their homes for managing adult patients with cholera. Moreover, a defensive attitude was found towards the possibility of treating patients with cholera in the volunteer's home. One of them characteristically exclaimed, "I couldn't expose my family to a deadly disease like cholera." Another said: "Impossible! My children surrounded by all that shit, excuse the word, and that vomiting that never stops...."

Certainly, the CORU does not exist as such, but the team found something perhaps even better in the rural society. Dr. J. C. Arita, Director of Sanitary Region #1, where the data collection instruments were pre-tested, anticipated that in this region the policy was "to consider that where there is a trained volunteer for managing diarrhea, there is a CORU...." Dr. Arita does not share the idea of promoting the CORU, but believes that more resources should be invested for training volunteers who administer the ORS (Litrosol) and provide timely referrals. In region #1, no CORU was found either for the same reasons mentioned above.

Trained volunteers are managing diarrhea cases.

Definitively, the research found that the volunteers' strong desire to serve the community took the place of any need, including the lack of training on standardized case management (SCM) of diarrhea. In some cases, the volunteers were selected by the community and in others, by the MOH. The volunteers have been almost heroic in their management of cholera outbreaks.

RHC nurses told the team of many cases when the volunteer, sometimes only with his/her spouse, performed tasks from preparing ORS to transporting the same patient to the hospital. In 75 percent of the cholera cases with a great loss of body fluids, the volunteer proved to be the central figure in the situation and, as a result, instrumental in preventing many deaths.

Conventional dehydration signs are not recognized but danger is detected.

Frequently during interviews, volunteers were unable to state conventional dehydration signs, however, through practice, they had learned to recognize the seriousness of a case when a patient requires immediate hydration and referral to a hospital, health center or shelter.

The danger signs used as criteria by the volunteers for referring adults with diarrhea to a hospital are:

- leg cramps;
- diarrhea “like egg juice;”
- diarrhea “like rice water;”
- diarrhea “in great quantity” (volume),
- uncontrollable diarrhea (loss of control of the frequent diarrhea);
- diarrhea with vomiting; and
- the person is weak and pale.

Less frequently mentioned signs are:

- large rings under the eyes (“tremendously sunken eyes”);
- “becoming skinny;”
- “they’re delirious;”
- “drunkenness” (dizziness);
- “they’re not there any more;” and
- trembling.

Using this criterion, the TVMDD performs referrals that have proven to be appropriate. In all the cases studied, the patients recovered.

Trained volunteers for managing diarrhea (TVMDD)

There are two types of volunteers:

1. Among the first type are people without previous experience in the health sector. The team found that 20 percent of the TVMDD are new, in other words, they were selected because of the cholera epidemic and, in many cases, after the outbreak had taken place in the community. The vast majority of this group are married women who live with their spouse and have given birth between three and 16 times. Their ages range from 23 to 60 years, with an average of 36 years. Their social and economic position in the community tends to be above average.
2. The second group has no previous experience with work relating to the health sector. However, the lack of knowledge and formal training is balanced by a great desire to serve.

The enthusiasm displayed while working during cholera outbreaks this year gave them a valuable learning experience, which should be maintained for the community's well-being.

Health guardians (HG) are another large group, as are traditional birth attendants (TBA), vector control volunteers (COLVOL), and health representatives (with an average age of 41). The team found many that are already grandparents and have enormous working experience with the MOH. They feel like part of the health sector and remember the good old days, "when we used to receive frequent training and medicine." A smaller group consists of "Litrosol" ex-distributors who have one to six years of experience offering ORS and re-hydrating children under five years old.

How does the TVMDD selection take place?

There are two ways of selecting the TVMDD:

- 1) by direct selection through the nurse or the health promoter (sometimes in consultation with the leaders); or
- 2) through the organized community or its representatives where they assume the responsibility for its operation.

The official criteria and the practice

In both selection methods, the RHC and CESAMO personnel follow these requisites suggested by the MCHD (to a greater or lesser degree). The TVMDD should:

- be living in the location where the CORU will be set up;
- be community leaders;
- be selected and accepted by the community;
- show a spirit of service towards the community;
- be eager to cooperate with the health personnel and the community;
- preferably know how to read and write;
- be in good moral standing as well as responsible people;
- preferably be females;
- preferably have had experience in the health sector (i.e., Health Guardian, TBA, Litrosol distributor); and
- be willing to provide physical space in their homes for the CORU.

These criteria have proven to be extremely useful. Only the last one needs to be reevaluated, as previously mentioned. Although the volunteers greatly desire to help their community, they are not willing to take care of adult patients with cholera in their own homes. Therefore, this criterion need not be mentioned to the community during the promotion held before the selection.

Furthermore, it seems that insisting on providing physical space in homes for treatment is a cause for resistance of potential volunteers.

Illiteracy is not a setback for providing ORS delivery, preparing the solution, and referring patients with cholera to the hospital. Some illiterate volunteers interviewed in Choluteca and Santa Bárbara proved to be very smart and dedicated. Also, there are hard-to-reach hamlets where it is difficult to find adults that can read or write.

The team found that the most important criteria for fulfilling the tasks of the TVMDD are:

- a) acceptance on behalf of the neighbors;
- b) possessing a spirit of service; and
- c) being available.

On early hydration: “learning from experience”

The fact that Honduras is “running behind the epidemic” (cholera), as a regional nurse stated, should not be considered as a weakness in the system. Rather, it is brought about by the characteristics of the epidemic and the country. What is important is to learn from each experience and try to transform these into solutions. In this regard, the team found that before suffering cholera, the community “does not admit that Litrosol can be good for adults.” This can be explained by the nationwide promotion that continued for over a decade and emphasized ORT as being good for preventing child dehydration, but did not mention diarrhea in adults.

The team had these findings on early hydration:

- “The first die...”

The first person, and sometimes the two first people infected in a community lose their lives. It seems to be a pattern that occurs with each outbreak. However, the alarm caused by these deaths shakes up the community in such a way that later there are few, and in many places, no further deaths.

- So, the community learns...

Timely hydration is the solution for arriving alive at the health center or the hospital. Paraphrasing an old radio spot from Honduras, “The solution is the solution.”

- “I’m alive thanks to the ‘sueril’ (diminutive for solution).”

In the focus groups, people gave dramatic testimonies on their appreciation for the ORS. Among many others, the team heard the following statements: “It’s miraculous,” “I’m alive thanks to the

'sueril' (oral solution),” “One feels dry and Litrosol is like April showers...,” “I drank at least 10 liters and I was still terribly thirsty...but here I am, alive.”

- Then there are no more deaths because of a lack of ORS.

After the casualties at the initial outbreak, the team was unable to find evidence of even one more casualty because of the lack of early hydration. All the patients with severe symptoms in the rural area received Litrosol solution in their community before arriving at the hospital. If not all, the majority of cases of early hydration were related to the TVMDD.

- “One’s life depends on other people’s lives.”

Rural communities are provided with a large amount of ORS. The bags become “limited goods” of great value that, as expected, generate a series of dynamics to acquire them. The RHC nurse intercedes to try to bring some order to the ORS location. Most important, the ORS is almost always available for whoever may need it at any time of the day or night. A collective sense of responsibility develops. “One’s life — a leader told us — depends on other people’s lives.”

- It is different in the city.

The statements above do not apply to the marginal areas of San Pedro Sula and Comayagua. There have been few educational activities in the epidemiologic framework in La Lima and Villa Nueva, or in the neighborhoods of Suyapa and Betancourt in Comayagua. Support among neighbors is noticeable, although the organizational enthusiasm found in rural areas was missing. There is not much ORS in the community, probably because people are sure that they can arrive quickly at the hospital. In these urban areas, the team was pleasantly surprised by the fact that ambulances were available, although there are other means of transport, such as by bicycle or on foot. Environmental sanitation and drainage system conditions were deplorable.

- An active search for ORS.

When the outbreak is at its highest point, the relatives of a cholera victim, and occasionally the diseased person himself, go to find the neighbors, the volunteer and the health center, if there is one, to get the ORS and prepare the solution. Once the community has accepted that Litrosol is also good for adults, an active search for this product begins to administer early hydration.

There are a few cases, mainly in cities, where the team found adult men who, out of shame, lock themselves up trying to hide away. The team interprets this attitude as a result of cholera being stigmatized as a disease of people that do not possess healthy habits. It could also be that the loss of dignity caused by diarrhea and uncontrollable vomiting is associated with the belief that cholera is a deadly disease and, “If it is deadly, there’s nothing we can do.”

The cases that were referred during this study fortunately were rescued by relatives and neighbors who gave them the ORS solution before taking them to the hospital.

Abuse of antibiotics

If oral solution is seen as the “miraculous drink to avoid death” by dehydration, antibiotics are also becoming the miraculous pills that “prevent cholera infection.”

Inasmuch as the MOH, through collective treatment, has medicated whole villages with Doxycycline, Teramicin and sulfa drugs, the belief has spread that antibiotics have the effect of “vaccines,” and prevent cholera. As a result, people, mainly men, have begun to self-medicate themselves in an uncontrolled manner.

During interviews with relatives of people with cholera and those who were transporting patients in hammocks, it was not uncommon to find those who would show the team pocketfuls of antibiotics. “When I carry (in a hammock) a patient to the (health) center, I take some of these, just in case, and so far I haven’t gotten sick,” says Don Enrique, a campesino (countryman), proudly showing a handful of antibiotics made in El Salvador.

Some local organizations, in their concern for the well-being of their members, purchase oral antibiotics (250-500 mg) in large quantities (boxes containing 750 and 1000 units) and sell them to their neighbors and/or members at cost. Antibiotics are also sold in grocery stores, medicine stands and, of course, in pharmacies, without a medical prescription.

Many mothers self-prescribe antibiotics to their children. Some mothers who participated in a focus group in the city of Comayagua told the team that they melted a variety of antibiotic tablets, for a better result, and gave them to the child in water. One of them said that she disagreed with that treatment, and that what she usually does is give her child a Teramicine tablet in the morning, if in two hours there was no (visible) result, then she gave her child a Sumetrin tablet and waited two more hours to give her child an Enteroguanil(!).

It seems that the self-medication of antibiotics is becoming an increasing problem which is very worrisome. There are indications to the effect that institutional health personnel are connected to this behavior. It may be necessary to direct an investigation on this particular topic to endeavor to find a feasible solution.

The TVMDD's role

The TVMDD says and does the right thing. In the event of cholera, the volunteer consulted evaluates the patient, prepares the ORS solution (or shows someone how to prepare it), and decides whether the patient should be hospitalized or treated at home. In the case of immediate referral, he/she warns them that they must take the solution on the way to the health center or shelter. In the majority of interviews, the team found that the volunteer had a “Liter-bag” to

measure the liter of water and followed the preparation instructions. This article has also become a limited good, although not to the extent of the ORS. In the event of cholera, the TVMDD insists that the patient should “drink as much solution as he/she wants, even if they have sickness and vomiting.”

The TVMDD has authority and inspires trust.

People who had cholera reported that the TVMDD was sympathetic towards those who consulted him/her about diarrhea, but, at the same time, showed a firm and determined attitude. This attitude has saved many lives.

This year no patients died in the places visited where the TVMDD had been consulted before traveling to the health center. Without exception, the people interviewed who reached the TVMDD always received early hydration. This contrasts with those villages where cholera strikes suddenly and there still is no TVMDD.

The motivation behind the TVMDD

From the beginning of the data collection, it was clear that the TVMDD was the main factor in the control of the potentially devastating effects of cholera. This person who had been recently selected to manage what is known as the CORU, had become a crucial point for people suffering diarrhea.

Taking into account the selection criteria, the team thought about the differences between the TVMDD and other people. The following characteristics provide some tentative answers.

True characteristics of the TVMDD

The TVMDD:

- lives a stable family life and the majority have a permanent relationship with their spouse;
- most are female;
- can count on his/her spouse for support and help to fulfil their tasks;
- has several children, and, in some cases, grandchildren;
- has homes that appear to be cleaner and firmer than the rest of the homes in the neighborhood or hamlet;
- usually belongs to a religious group, generally evangelist;
- has a great need for acknowledgment and self-assertion;
- has a generous spirit and states a desire to be useful to others;
- is financially better off than the rest of the people; and
- is liked in the neighborhood.

The community organization around cholera

Apart from the volunteer's role as the main person in the early administration of oral hydration, valuable organizational mechanisms have been found, as well as a series of processes, that spontaneously occur as soon as cholera breaks out in a community.

By spontaneous, the team refers to the processes that have not been caused by any external entity, but have organically appeared through the people's needs, experiences and way of life. The MOH also offered important suggestions.

The organizational mechanisms found in all rural communities that suffered cholera are:

- **An information network for locating ORS packets in the community:** In times of cholera, neighbors are aware of where to find Litrosol in the community. Whether in a formal manner, through a TVMDD, or informally, through private conversations, the majority of community members have a clear idea of how to obtain ORS in an emergency. Mothers are generally those who are informed about this issue.
- **A community system of vigilance and search in the case of acute diarrhea:** Everybody feels obliged to report to the TVMDD any case of diarrhea in their own family or neighborhood. This is stressed in cases of acute diarrhea in adults. However, there is a visible tendency to report infant diarrhea as well, which in the past was overlooked.
- **Close observation of environmental sanitation among neighbors:** Although still not a completely legitimate activity, the team found that mutual observation is developing among neighbors on environmental sanitation. This includes the usage and maintenance of latrines for the elimination of human excrement, cleanliness of patios, and state of the drinking water.

Some communities have water committees, latrine committees, and/or cholera committees and some cooperatives were in charge of purchasing antibiotics to "prevent" cholera and organizing the transport of patients to hospitals.

Do people that have suffered cholera change their habits and beliefs?

"We, cholera? No, sir. What we had was 'little cholera.'"

The great majority of people that had cholera, as well as their relatives, never admit to having had this disease. "What we had was 'little cholera,'" some say, "That was only a very strong infection," say others. Almost everybody agrees that had it been cholera, they would all be dead because "Cholera is a deadly disease," (as the Ministry of Health states), "and we are alive..." People that suffered from cholera with lesser symptoms are even more convinced of this fact.

They will never accept this fact unless a tremendous educational effort is made. A common statement in some areas of Santa Barbara is, "I only had the symptoms of cholera."

The memory of Old Celilac

Even more dramatic were the team's encounters with the collective reminiscences of inhabitants from the Municipality of San Nicolas where they stated, "Barely three people survived in Old Celilac when cholera struck, (toward the turn of the last century), but hardly anyone has died of it here."

Promotions to scare people do not work.

This skeptical attitude is explained by the threatening radio announcements and other media promotions. Signs were seen in several of the places visited that read "CHOLERA IS DEADLY." This method of "negative reinforcement" of behavior has hardly ever given flattering results. Also, this attitude of evoking the memory of Old Celilac shows a touch of ingenuity when trying to compare a situation from almost 100 years ago to the present. It would seem that there is a tendency towards a magical way of thinking among people affected by cholera, that is to say, that they do not easily relate the causes of a phenomenon to its effects.

Chlorinating water, washing hands, boiling water, and building and using latrines are still rather weak customs. Even those people that have had cholera and been given advice about personal hygiene, tired of it after a few weeks and returned to their previous customs. Occasionally, the reason is that the ingredients for this behavior are not available, such as clorox, the means for boiling the water, and the water itself. Obviously, there is no visible or tangible reinforcement to ensure the continuation of this new behavior. It is clear that there is a need for research on the customs concerning water intake, nutrition, and management of excretion.

Almost all are illiterate.

On the other hand, the aphorism that "cholera is the disease of poverty" is a confirmed fact, and the team can add that it is the consequence of a lack of education. Among those interviewed, almost all who had been infected and their close relatives are illiterate. For these people, the only risk greater than being illiterate themselves seems to be the illiteracy of those people closest to them.

It has indeed been observed that people who are illiterate react in a more shy and passive way before a sudden appearance of the symptoms in any family member. Their lack of confidence and a fatalistic attitude are major factors to wasting valuable time before obtaining ORT and seeking help at the HC. Without having learned how to read and write, changing the behavior of these people will prove extremely difficult. A sustained and systematic effort is probably required, such as was made in Honduras during the 1980s when Litrosol for infants and children was introduced.

VII. RECOMMENDATIONS

This section contains suggestions of greater potential impact. Some have already proven their feasibility through existing practice in the communities covered by this study. Others are based on the author's experience, in consultation with the team from EPCDDC and the BASICS project. These recommendations stem from the people interviewed/observed during their work, the experiences of cholera patients, and the relatives of people who perished from cholera.

The behavior observation and notes taken by those responsible for this investigation process have been important basic issues for presenting the recommendations. Due to the qualitative nature of the investigation, it was both a consultation with volunteers and with lower income Hondurans with almost no schooling or none at all.

The team believes that quite an honest vision was reached as to what actually happened in the different phases of the cholera epidemic. A description of the "doings, beliefs and feelings" was attained concerning oral rehydration in the community. At the same time, the team completed a feasibility study, with some questions posed at the beginning and others added in the investigation process.

Recommendation # 1: Replace the concept of the Oral Rehydration Unit with the "Trained Volunteer for Managing Diarrhea" (TVMDD).

First, a decision must be made as to whether to insist on the original concept of the CORU or to replace it. If the decision is to retain the original concept, then significant efforts will be needed to create the physical conditions in the volunteers' homes so that they can rehydrate cholera patients. Even more important, volunteers will have to be persuaded that assisting cholera patients is in no way a threat to the health of their family.

Second, if what is working in practice is officially recognized, support mechanisms are needed to aid in efficiency and improve the process. Technical, educational and logistical aspects need to be considered.

Technical implications

From a technical point of view, it will be necessary to:

- 1) recognize that the volunteer is not obliged to rehydrate patients at home, but should make all efforts to rehydrate them within the community;
- 2) systematically instruct the TVMDD on how to best evaluate the patient and decide if he/she should receive treatment within the community or be immediately referred to the health center/hospital/shelter;

- 3) ensure that the TVMDD makes all possible efforts to save the life of the person suffering from acute diarrhea, including emphasizing the critical need for preparing the ORS solution for the journey; and
- 4) determine the minimum skills and knowledge that the volunteer must learn to fulfill his/her responsibilities.

Educational implications

From the educational point of view, the following aspects must be included in the volunteer training:

- 1) management of Plan A and Plan B, emphasizing ORS preparation and administration for oral rehydration;
- 2) being able to recognize danger signals (signs and symptoms of dehydration); and
- 3) nutritional management of diarrhea (NMD).

Logistical implications

ORS availability

For timely rehydration to take place within the community, no utensils are required (no cups, no jugs, no pots). The only indispensable element is Litrosol which is presently available through an agreement between UNICEF and the MOH. UNIPAC, the purchasing department of UNICEF, acquires this product at a very reasonable price for Honduras. However, it is suggested that contingency plans be considered in cases where circumstances require them.

It is necessary to make sure that there are enough ORS packets in places that are hard to reach. Research shows that, in general, city cholera patients arrive at the hospital without having received the ORS solution. There seems to be greater awareness of both the danger of dehydration in remote rural areas and that ORS is essential before arrival at the HC where treatment with Plan C will be received.

An option is to make ORS available in grocery stores and pharmacies.

The MOH already proved its ability to stimulate ORS production in the commercial sector, when a national laboratory (Quimifar) developed, with MOH support, a new product known as Hydrosol. This product came into the market in 1991 and is made with the WHO formula. It still has the potential to reach the remote areas of the country through the common system of grocery stores, medicine stands, and pharmacies.

The team recommends studying the possibility of distributing ORS through grocery stores, as the MOH had planned several years ago, before cholera came to Honduras. This marketing mechanism is most likely to be sustainable and will make ORS available to the inhabitants of marginal areas in cities, villages and remote hamlets.

This option is feasible for several reasons:

1. the MOH succeeded, as stated above, in having a local laboratory produce ORS with quality control, market investigation, and the development of a promotional strategy;
2. the wide range of existing grocery stores with their supply systems; and
3. the financial motivation of the middlemen who are part of this commerce.

ORS could be offered also through pharmacies and medicine stands.

Information to Institutional Personnel

Perhaps the most obvious advantage is that it will reinforce something genuinely Honduran, that is already working in a large part of the country, and make it legitimate. It must be mentioned, however, that the process can be improved to become more efficient. The improved strategy for managing child and adult diarrhea offers additional advantages, such as:

1. the possibility of implementing standardized case management at the community level;
2. timely referral of acute diarrhea cases, and
3. strengthening the concept of the health volunteer, a concept developed successfully in Honduras more than 20 years ago.

Recommendation #2: Clearly determine the MOH expectations for the TVMDD's role in the community

A consensus is needed between the MOH's main institutional units: Cholera Control Program; Mother-Child Health Division, Educational Division, Human Resources Division; and the Regional Health Directives. This consensus will help to ensure that these recommendations will be put into practice.

Accepting this recommendation implies training each regional team with specific skills to be able to put the TVMDD concept into greater practice

The TVMDD's roles: Once the motivation for a volunteer is understood, the next task is to examine the tasks of this important figure in the Honduran health system. As an agent of change, the volunteer has the potential to fulfill the following roles:

- *Link between the internal needs of his/her community and external resources.*
- *Supplier of technical solutions*, for example, of technology that is not yet handled by the community such as water chlorination for human intake. This requires certain skills that can be developed by the volunteer or another person he/she may help identify.
- *Informer/reporter* to broadcast new technologies, such as oral rehydration. By being elected by his/her own community, the volunteer is accepted and trusted, and any informative material they distribute will be readily accepted.
- *As a catalyst* to develop adequate conditions for behavioral change among community members concerning environmental sanitation, and the management of infant and adult diarrhea.

Problem-solving and sustainability

In sum, the four roles described above concentrate on two aspects of community life:

1. The need for an immediate solution to urgent community problems. Such is the case of infected people needing rehydration, some in the community, others at the health center, the shelter for cholera, and the hospital.
2. Developing a community's ability to prevent diseases in an organized and self-sustaining way, and create appropriate health infrastructure. This is the case of latrines, the water-pipe system, and the water tanks for human usage.

Behavior Acquisition: In both cases, the key to success rests on acquiring new behaviors, abilities and attitudes concerning the environmental sanitation and diarrhea management technology. However, new behaviors are not acquired automatically. Behavior acquisition and developing new abilities take place through a process that the volunteer must learn through MOH-provided training.

Referring only to the oral rehydration therapy, in brief, this process would be as follows:

Exposure: The technology must be explained to the user so she/he can know and understand it. For example, the TVMDD must learn about Litrosol's attributes and recognize that it is useful for avoiding dehydration.

Comprehension: To know how Litrosol works and understand its advantages and the results of its usage so as to be able to use the formula “if...then...” For example, to understand that if the body loses mineral salts because of diarrhea, they need to be replaced and Litrosol can replace water and mineral salts lost because of diarrhea.

Testing: “To test the technology, practice the behavior.” For example, the TVMDD can try the oral solution, experience the oral rehydration effects, and observe the results.

Acquisition: By transforming the behavior into common practice, a new behavior is acquired. For example, each time a family member has diarrhea, the oral solution should be considered as the primary option.

Recommendation #3: Create an incentive and support system for TVMDD in the community.

This recommendation implies that the preliminary condition for a workable TVMDD incentive system is to understand the TVMDD’s motivations and draw a relationship between the behavioral background, the behavior and its consequences.

This study has allowed the team to explore the volunteers’ lives and customs. Entering his/her life, the team found, with great satisfaction, that what primarily encourages the volunteer is the need to be acknowledged by his own family nucleus, his/her family at large and community, (i.e., the neighborhood, people in the village, hamlet or suburb). The volunteers need to be acknowledged and have a high degree of generosity towards others in the community.

Understanding the TVMDD’s motivations will help to create the appropriate incentives for an excellent performance. The team suggests exploring the possibility of improving the volunteer’s skills and, if technically feasible, increasing his/her responsibilities. What may appear, at first sight, to be a heavier work load will prove to show how much the health system trusts the volunteer.

With new skills, moreover, the opportunity will arise for the volunteer to be even more useful to district dwellers and feel more fulfilled and, therefore, encouraged.

Recommendation # 4: Revise the strategy used for transferring technology for cholera control.

This recommendation implies improving the following features, based on the experience gathered from the MOH:

- TVMDD education and training on the management of oral rehydration technology, including technical and administrative aspects of the SCM of diarrhea; and

- assistant instructional training of primary attention personnel, (doctors and nurses), on the SCM of diarrhea.

The first feature is related to the purpose of this research, while the second transcends its scope and will not be discussed in this document.

Educational and training strategy for health volunteers in diarrheal management

Previous consultation with the community and the TVMDD

The team suggests establishing the following strategy through a process of consultation with volunteers and the community. This consultation should include the following:

- preparing consultation guidelines with the input of the community and health volunteers;
- listening carefully and patiently to what the volunteer and the people in the community have to say;
- taking written notes of the concerns, goals and traditional customs mentioned, and discussing them with the community to find a solution to the problems together;
- talking with colleagues from the regional and area teams to analyze any information gathered and, whenever possible, reach conclusions about possible steps to take;
- preparing, in advance, a list of aspects for investigation and preparing discussion questions for neighbors in the locality and health volunteers;
- making decisions about supportive activities that appear feasible and putting them into practice; and
- evaluating achievements weekly and reinforcing the strategy when necessary.

Critical training issues

The following topics require establishing norms within the volunteer educational and training strategy:

- **Standardized criteria for selecting volunteers:** The successful volunteer's main goals are a great desire to serve the community and an inner need to feel useful to neighbors and family.

Any other selection criteria, although important, can always be overcome. For example, being illiterate, as mentioned above, is no impediment for an enthusiastic volunteer to perform the job with excellence, although a literate person will always be preferable.

Another important selection criteria for the volunteer is to have the support of his/her spouse. It is almost impossible for a person with small children to be a volunteer without the help of another person. Teamwork between spouses is ideal. In this manner, they can share responsibilities according to their family needs, gender and personal inclinations.

For example, the husband can organize transport by hammock for cholera patients, while the wife supplies the ORS during the day. He can visit the more distant houses to check sanitary conditions, while she visits those near by.

The fact that the organized community chooses its own volunteers is another criteria that seems to guarantee the quality of the volunteer's work. In this way, the people selected feel committed to their own neighborhood. When a problem arises, the community searches for a solution on its own.

- The technical training should be clear and precise.

There is no logical reason for volunteers, for example, and least of all trained MOH institutional personnel, to recommend suspending nutritional intake, from meat to even beans and rice, as mentioned in the chapter on Findings. Nor is it acceptable for certain health personnel to still be prescribing anti-vomiting and antidiarrheal medication as treatment for cholera.

The team tentatively states that the contents of the technical training could become the "minimum prospectus" and include:

- an evaluation of the person with diarrhea;
 - diagnosis/prognosis;
 - treatment decision;
 - ORS preparation for the nutritional management of diarrhea;
 - how to solve breastfeeding problems;
 - exclusive breastfeeding until six months of age; and
 - environmental sanitation standards and individual habits for avoiding diarrhea.
- For the trained volunteer, the logistic and administrative contents for managing diarrhea cases should include, although not be limited to, the following:
 - written registration of each diarrhea case including the patient's name, address, age, and condition;
 - notifying the nearest HC of any possible cholera cases;
 - organizing or looking for someone to organize transport for patients with severe diarrhea to the health center or hospital;
 - examining the different possibilities for transporting a patient (i.e., beast of burden, hammock, car, etc.);
 - visiting patients with diarrhea who are being treated at home; and
 - ensuring that people who have consulted the volunteer are getting better.

- The educational training contents should include, but not be limited to, the following:
 - organizing and presenting a learning session in the community;
 - effectively reaching people who are at risk because of poor health habits;
 - obtaining a behavioral change by understanding the motivations and customs of the people;
 - discovering the community's educational needs;
 - using audio/written/visual materials;
 - techniques for actively listening;
 - motivating people;
 - how and when to offer information; and
 - supporting the existing learning processes in the community.

Recommendation #5: With the joint participation of the main institutional agents and the community, develop a coherent educational communication strategy with a systematic focus.

Using a systematic point of view, the following should be included in the strategy:

- (a) a qualitative diagnosis (hopefully, this research will contribute to that diagnosis);
- (b) segmentation of space-population;
- (c) a behavioral selection that is based on the "behavioral analysis;"
- (d) a strategy for delivering the (ORS) product;
- (e) positioning the ORT;
- (f) a training plan for the MOH, NGO and the trained volunteers for CDD; and
- (g) a plan for promotion including the communication means to be used.

There are several steps to determining behaviors related to diarrhea management in the community.

First, the diagnosis of "doings, beliefs and feelings" in relation to infant and adult diarrhea needs to be updated. The MOH and its Educational Division have a planning and implementing technology for this purpose that is applicable to this situation. On the other hand, the MOH has qualitative research and surveys that offer valuable information on knowledge, attitudes and customs relating to diarrhea.

Based on this information and data generated from this research as well as new studies in Honduras, a diagnosis can be made of the present situation and summarized as a list of behaviors, attitudes, myths, and prejudices. This, in turn, will lead to the next step: the "behavioral analysis."

Next, proceed with the “behavioral analysis” to restate an effective broadcasting strategy. Above all, form an inter-disciplinary team that includes personnel from several sectors such as the areas of health education, mother-child health, human resources, primary care, and supervision personnel at a local level. Using the instrument known as the “Behavioral Scale,” the team will then proceed to select the variables that are quantified in this instrument and qualify each one of the “doings, beliefs and feelings” so that, by contrast, the ones that deserve to become behavioral objectives of the Communication Plan will be selected.

Strategy to transfer Oral Rehydration Technology to the community

According to the EFHS, Honduras has reached an unprecedented — close to 50 percent — rate of ORS usage for infant diarrhea. This rate is calculated based on the (infant) diarrhea cases presented in the three days prior to the interview that were treated with Litrosol (ORS).

This common practice is found throughout Honduras and is, without doubt, the main explanation for the low infant and adult mortality during cholera outbreaks. This study established that there is a sub-registration of morbidity of great proportion, and the previous statement is based on that observation.

This high usage rate was confirmed by this study. However, some educational contents that are crucial for managing this technology still need to be reinforced. The following are the selected contents to be included within the suggested restatement:

- valuing oral rehydration as the “best option for all the community in case of diarrhea;”
- introducing the fact that “oral rehydration is as good for adults as it is for children” in an educational promotional campaign;
- educating consumers as to the dangers of self-medication, “Self medication, using antibiotics, can be dangerous for your health;”
- emphasizing nutrition during and after diarrhea, “The person who has diarrhea, whether it be cholera or other, should continue with normal meals, and sometimes more than usual, always according to appetite;”
- the danger signs of dehydration in children: a sunken crown of the head; dry mouth; wrinkled skin; etc.;
- introducing the signs and symptoms of adult dehydration; and
- the danger of certain misleading customs that are still present in dehydration management. Among others: “Sucking the sunken crown of the head,” “lifting the palate,” “purging for indigestion,” the belief of “aito” or indigestion caused by hunger, etc.

APPENDICES

APPENDIX A

APPENDIX A

(INSTRUMENT # 1)

**COMMUNITY/ REHYDRATION UNITS EVALUATION (CORU) GUIDE (*) FOR
LEADING INTERVIEWS AND FOCUS GROUPS WITH PEOPLE THAT HAVE BEEN
AFFLICTED BY CHOLERA (AND THEIR CLOSE RELATIVES)**

Region: _____ **Area:** _____ **Municipality:** _____ **Village:** _____

Interviewee's Name: _____ **Level of Schooling:** _____

Nearest Health Center: _____

Interviewer: _____ **Date:** _____

Introduction:

"I'm from the Ministry of Health my name is _____
I heard that you had cholera. I'm very sorry, but I'm glad your life was saved.....Please tell me
what happened. I need your help to improve health services.

At this point the interviewee starts talking while the interviewer guides him/her taking notes of
his/her comments. After each interview or focus group, the interviewer (facilitator) and the
consultant (editor in the case of GF) will write the report.

The experience

....Please tell me how it began. Did you feel pain, vomit, have diarrhea, cramps? What did you
feel first? Were you afraid? What did you do? Who helped you at first? Family members, a friend,
companions? how was the help? Were you scared? Very important: What were you given to
drink? Where were you taken?

Tell me, how was your life saved? What do you think saved you? In case of death: Why do you
think he/she died? When was he/she buried? Where?

Learning experience

..... What have you learned from this experience? How would you take care of a victim with diarrhea similar to yours or your family members? Do you know what dehydration is? how do you know when somebody is dehydrated? How would you care for a person suffering dehydration? How does this community take care of people with diarrhea? What do they give them? What food is suspended? Why do you think people get cholera? How does cholera spread? When do you think it should be decided to take a victim to the CORU, health center or hospital?

(*) This pre-testing version is rather redundant, precisely to be able to make the necessary amendments, as result of a field-test.

About LITROSOL/Reference

What is dehydration? How would you know if a person is in critical condition, dehydrated? Did you know about Litrosol before you had cholera? What was your opinion of Litrosol? What do you think of it now? How is it prepared? Can you show me here? Have you seen other cholera victims? Please tell me about your experience with the most serious cases you have known about (neighbors, relatives) What would you have done in those cases? Have there been deaths caused by diarrhea in this community? Had they consulted anyone from the community? Important: Were they given Litrosol? Who took care of them? How do you think the attention towards them was?

Knowledge/opinion of CORU

Have you heard about CORU? Do you know the meaning of that word? What is offered there? Do you know about their responsibilities? What is your opinion about the service offered at CORU? Do you feel that CORU works well in this community? Do you know whether they receive support from the Nursing Assistant, the Promoter or other MOH personnel or organizations?

Does the community trust CORU? How do people in the community see CORU? Does the community participate in CORU activities? In its formation and operation? How has CORU helped cholera cases in this community? Where else can people suffering diarrhea go in this community? Does the climate have any relationship with increase in cases of child and adult diarrhea?

Other ideas for taking care of diarrhea victims. You have personally suffered cholera (or your son, brother, etc.) You could help me find a better way to save people from dying from dehydration. Tell me, what can the community do to prevent people from dying incase cholera returns?

Was there anything that failed in the management of the last cholera outbreak in this area? What problems do the community face while treating cholera cases?

ACHIEVEMENTS/PROBLEMS

What are the achievements you have noticed? Please tell me what things have helped the community to take care of cholera/diarrhea patients? Which are the main problems, in your opinion, faced by the volunteers responsible for CORU? How could the service offered improve? Why do the volunteers perform this task? How can they be rewarded for their sacrifice and dedication?

Insisting on certain aspects

--- Does the community understand the word CORU? What is this place called? Please tell me what are the main things you think the CORU volunteers should know and which skills should they learn so as to prevent death by dehydration?

--- Do you think that the volunteer enjoys his/her work? Why? Why not? Would you like to be a volunteer responsible for a CORU in this community? Do you have time to offer to help at a CORU? Which would be the best way to take care of diarrhea in this community?

--- Is there space in your house to rehydrate (give Litrosol) to the patient? Have you housed (cholera) diarrhea patients? What would your family think if you had to house someone with cholera? What would your husband (wife) children say?

The role of the community

How does the community participate in the CORU? How do you feel the community should participate? What does the community contribute to CORU? What is your opinion about what your community does for CORU, and for your neighbors, etc.? What other community health needs could be taken care of through CORU?

Local Organization

Are there any local organizations that operate in the community (patronage, churches, non-governmental organizations, and others)? What features would you say move the community towards action and organization?

Would you like to add anything that would help us with this study?

EVALUACION DE LAS UNIDADES DE REHIDRATACION COMUNITARIA (UROC)

GUIA PARA LA ENTREVISTA DEL VOLUNTARIO UROC(*)

REGION: _____ **AREA:** _____ **MUNICIPIO:** _____
ALDEA: _____
NOMBRE DEL (LA) _____
ENTREVISTADO(A): _____ **Ult.gdo.aprobado** _____
CENTRO DE SALUD MAS _____
CERCANO _____
ENTREVISTADOR(A): _____ **Fecha:** _____

Introducción: "Quiero platicar con usted y pedirle su ayuda para saber más sobre las UROC, las Unidades de Rehidratación Oral, sabe a lo que me refiero, ¿no? En el Ministerio de Salud nos hallamos interesados en mejorar la capacidad de la comunidad para el manejo de casos de diarrea. Su experiencia, como responsable de la UROC, será muy valiosa para nosotros. La intención es ayudar a disminuir el peligro de deshidratación tanto en infantes como en adultos, especialmente en casos de cólera. Para comenzar, le ruego que me cuente cuál es su experiencia con la UROC". (Aquí el entrevistado[a] comienza a hablar y el [la] entrevistador(a) va guiando al entrevistado y tomando nota de sus comentarios. Después de cada entrevista, el entrevistador y el asesor redactarán el contenido en su totalidad.

Aspectos Generales-- Manejo Estandarizado de Casos (MEC)

Cuénteme cuántos pacientes ve usted cada semana (día, mes) aproximadamente. ¿Ha habido brote de cólera recientemente? ¿Cuándo? ¿Cómo fue el brote, cómo se inició? # de pacientes deshidratados; # de referencias; criterio para referir pacientes; hacia dónde fueron referidos; # de niños, # adultos, # mujeres, # hombres. ¿Cómo evalúa usted a un enfermo con diarrea? ¿Cómo sabe que está deshidratado? ¿Cómo lo trata? ¿Cuándo decide usted referirlo al centro de salud o al hospital?

Litrosol/Deshidratación--¿Le ha faltado Litrosol alguna vez? ¿Cuándo? ¿Razones de la escasez? ¿Qué problemas ha tenido en el Manejo de Casos? ¿Han llegado pacientes deshidratados? ¿Ha visto pacientes con cólera? Cuénteme, por favor, sus experiencia con los casos más graves o sea en que el paciente ha estado en peligro. ¿Qué ha hecho usted en esos casos? ¿Han ocurrido muertes en la comunidad por diarrea? ¿Habían ellos consultado la UROC?

¿De qué materiales dispone para la atención? ¿Qué cree que le hace falta para el mejor funcionamiento de la UROC? ¿Recibe apoyo de la Auxiliar de Enfermería, del Promotor o de otras personas del MSP u otras organizaciones?

¿Cree usted que la comunidad confía en la UROC? ¿Cómo es vista por la comunidad? ¿Participa la comunidad en las actividades de la UROC? ¿En su creación, en su funcionamiento? ¿Cómo ha ayudado la UROC a esta comunidad en casos de cólera? ¿A dónde más pueden llegar las personas de este lugar cuando tienen diarrea? ¿En qué época del año hay más casos de diarrea? ¿Influye el clima o el sector?

Funcionamiento de las UROC --¿Cuándo fue usted capacitado(a) en el MEC? ¿Quién lo capacitó, dónde, cómo, con qué materiales? ¿Qué es lo que más recuerda de esa capacitación? ¿Por qué?-- ¿Hubo algo que usted reconoce que falló en el manejo del último brote de cólera? ¿Qué problemas y dificultades han afrontado para mantener la UROC en funcionamiento? ¿Cuáles son los éxitos que ha alcanzado? Por favor dígame qué cosas le han ayudado para el funcionamiento de la UROC. ¿Cuáles han sido los principales problemas que usted ha tenido que afrontar desde que se inició con la UROC? ¿Qué cualidades, cree, que debe tener el personal seleccionado para manejar la UROC?

-- ¿La comunidad entiende la palabra UROC? ¿Cómo le llaman a este lugar? Por favor dígame cuáles son los principales conocimientos y habilidades que debe aprender el voluntario UROC para evitar las muertes por deshidratación? -- ¿Le gusta su trabajo? ¿Por qué sí? ¿Por qué no? ¿Tiene tiempo disponible para atender la UROCs? ¿Cuál sería la mejor manera de tratar las diarreas en esta comunidad? ¿Tiene espacio en su casa para hidratar al paciente? ¿Ha tenido pacientes con diarrea (cólera) alojados en su casa? ¿Qué piensa su familia cuando tiene pacientes alojados? ¿Su esposo(a) e hijos?

Papel de la Comunidad -- ¿Cómo participa la comunidad en la UROC? ¿Cómo cree usted que debe participar la comunidad en la UROC? ¿En qué contribuye la comunidad a la UROC? ¿Qué opinión tiene usted acerca de su comunidad, sus vecinos, etc? ¿Qué otras necesidades de salud de la comunidad pueden ser atendidas a través de la UROC?

¿Existen organizaciones locales que funcionan en la comunidad? (patronatos, iglesias, organizaciones no gubernamentales, y otras). ¿Qué aspectos -diría usted- mueven a la comunidad hacia la acción y la organización?

Papel del MSP --¿Cómo se puede lograr que la UROC se valga por sí sola? ¿Qué es lo indispensable para que la UROC siga adelante? ¿Cómo puede, el MSP, lograr que la UROC cumpla con la norma del MEC? ¿Qué personal comunitario existe en esta aldea, además de usted? Por ejemplo representantes de salud, guardián de salud, partera, evaluador de vectores. ¿Qué otro personal comunitario existe en esta aldea? ¿Qué grado de aceptación tienen los voluntarios y a qué se debe que los estimen (o lo opuesto)?

¿Recibe visitas de la enfermera del centro, enfermera de sector, etc? (¿Frecuencia de visitas, de qué se habla con ella, se solucionan problemas, qué problemas?) ¿Qué otras ayudas del MSP ha recibido usted? ¿Se reconoce el trabajo que usted realiza por su comunidad? ¿Qué le mueve a usted a hacer este trabajo?

¿Qué material educativo ha recibido? (Tipo de material, cantidad recibida, fecha de recepción) ¿Cómo lo ha utilizado? ¿Qué material ha sido más útil en su trabajo? ¿Qué materiales que usted conoce le gustaría tener? ¿Qué otro material sugiere que se produzca?

¿Qué cantidad de SRO recibe para la UROC, con qué frecuencia? ¿Varía la cantidad y frecuencia cuando ha tenido que afrontar brote de cólera? ¿Qué otras cosas ha recibido? ¿De quién? ¿Qué otro apoyo le ofrece el personal institucional de sector, área y regional a las o de otras instituciones? Por ejemplo ONG.

(Instrumento # 3)

**EVALUACION DE LAS UNIDADES DE REHIDRATACION COMUNITARIA Y
SANEAMIENTO (UROC)**

PROGRAMA DE CONTROL DE ENFERMEDADES DIARREICAS/COLERA

GUIA PARA LA ENTREVISTA DE ENFERMERA DE SECTOR Y DE AREA

REGION: _____ AREA: _____ SECTOR: _____ SEDE: _____
NOMBRE DE LA
ENTREVISTADA: _____ SUPERVISOR(A) _____
ENTREVISTADOR(A): _____ LUGAR: _____

Introducción: “Quiero invitarla a platicar por unos minutos y pedirle su ayuda para aclarar algunos conceptos sobre las UROCs. En el Programa Ampliado de Control de Enfermedades Diarreicas/Cólera nos hallamos interesados en mejorar las posibilidades de la comunidad en el Manejo Estandarizado de Casos (MEC). Así pensamos disminuir el peligro de deshidratación tanto en infantes como en adultos, particularmente en casos de cólera. Para comenzar, le ruego que me cuente cuál es su experiencia con la UROCs...”

(Aquí la entrevistada comienza a hablar y el (la) entrevistador(a) va guiando a la entrevistada y tomando nota de sus comentarios. Después de cada entrevista, el entrevistador y el asesor redactarán el contenido en su totalidad).

Aspectos Generales

Cuénteme, ¿cuántas UROCs, aproximadamente, se han abierto en esta área (sector). ¿Cuántas están en funcionamiento actualmente? ¿Dónde están ubicadas? ¿Son utilizadas por la comunidad? ¿Reciben su apoyo? ¿Cómo son vistas por la comunidad? ¿Cómo participa la comunidad, tanto en su creación como en su funcionamiento? ¿Cree usted que las UROCs han contribuido a reducir la mortalidad, especialmente en casos de cólera? ¿Tiene datos disponibles sobre la incidencia de diarrea por estación (clima) y por área geográfica? ¿Qué apoyo les presta el MSP a las UROCs? Por favor enumere esos apoyos.

Funcionamiento de las UROC

¿Qué papel jugaron las UROCs durante los últimos brotes de cólera? Detalle los aspectos positivos y negativos. ¿Hubo algo que falló en el manejo del último brote de cólera? ¿Qué problemas y dificultades han afrontado para la creación y funcionamiento de las UROC? ¿Qué éxitos se han alcanzado? Por favor señale los factores favorables para el funcionamiento de las

UROCs. ¿Qué factores impiden su funcionamiento? ¿Qué características previas debe tener el personal seleccionado para manejar la UROCs?

Situándose en las UROCs más eficaces, dígame cuáles cree que son los factores que hacen que esas UROCs sean tan exitosas. Por favor describa cuales son las actitudes, conocimientos y destrezas que debe aprender el voluntario UROCs para alcanzar ese éxito.

Papel de la Comunidad

¿Cómo participa la comunidad en la UROCs? ¿Cómo cree usted que debe participar la comunidad en las UROCs? ¿En que contribuye la comunidad a las UROCs? ¿Qué opinión tienen los miembros de la comunidad acerca de su respectiva UROCs? ¿Qué otras necesidades de salud de la comunidad pueden ser solucionadas a través de las UROCs?

¿Existen organizaciones locales que funcionan en la comunidad? (Patronatos, iglesias, organizaciones no gubernamentales, y otras). ¿Qué aspectos -diría usted- estimulan a la comunidad hacia la acción y la organización comunitarias?

Papel del MSP

¿Cómo se puede lograr que la UROCs sea autosostenible? ¿De qué manera mínima debe apoyar el MSP a la UROCs? ¿Cómo puede, el MSP, lograr que la UROCs cumpla con la norma del MEC?

¿Qué personal comunitario existe en esta área (sector)? Por ejemplo representantes de salud, guardián de salud, partera, evaluador de vectores. ¿Qué otro personal comunitario existe en esta área (sector)? ¿Qué grado de aceptación tienen esos voluntarios y a qué atribuye usted esa aceptación (o rechazo)? ¿Qué aceptación tiene el personal comunitario de salud y el responsable de la UROCs en particular?

¿Cómo se seleccionan los voluntarios de las UROCs y cuáles son los principales problemas que se afrontan, por qué? ¿Qué criterios se utilizan para la selección de voluntarios UROCs? ¿Cómo se lleva a efecto la capacitación? (contenidos, número de horas, metodología, materiales utilizados, lugares donde se efectúan las reuniones.

¿Como se realiza la supervisión y el monitoreo de las UROC? (Frecuencia de visitas, instrumentos usados, criterios de evaluación) ¿Qué estímulos de parte del MSP se han creado para el voluntario UROC? ¿Qué estímulos provienen de la comunidad?

En base a su experiencia ¿Qué material educativo se entrega a las UROC? ¿Qué cantidad de SRO se entrega a la UROC, con qué frecuencia? ¿Varía la cantidad y frecuencia en casos de brote de cólera? ¿Qué otro suministro se entrega? ¿Qué otro apoyo ofrece el personal institucional de sector, área y regional a las UROC?

APPENDIX B

Anexo 2

BALANZA DE EVALUACION DEL COMPORTAMIENTO

A. APROXIMACIONES DE PRACTICAS ACTUALES

0. No se está haciendo nada parecido
1. Una práctica existente es algo parecida
2. Una práctica existente es bastante parecida
3. Una práctica existente es similar
4. Varias prácticas existentes son similares
5. Varias prácticas existentes son muy similares

B. COMPLEJIDAD DEL COMPORTAMIENTO

0. Demasiado complejo
1. Involucra gran cantidad de elementos
2. Involucra muchos elementos
3. Involucra varios elementos
4. Involucra pocos elementos
5. Involucra un elemento

C. APOYO MEDICO

0. Las normas oficiales se oponen
1. No se practica y no se entiende
2. No se practica pero se conoce y se comprende
3. Práctica limitada, pero no muy bien comprendida
4. Práctica limitada, pero ampliamente aceptada
5. Práctica común y ampliamente aceptada

D. SENSIBILIDAD A LOS MEDIOS MASIVOS

0. No puede ser discutido a través de los medios masivos
1. Puede ser mencionado indirectamente por los medios masivos
2. Puede ser mencionado, pero normalmente no se hace a través de los medios masivos
3. Puede ser discutido por los medios masivos, pero sólo dentro de ciertos límites
4. En la actualidad ya se menciona y se discute en los medios masivos, pero limitadamente

5. Se discute abiertamente en los medios masivos

E. REQUERIMIENTOS DE RECURSOS

0. Requiere recursos externos amplios y costosos
1. Requiere recursos que están disponibles sólo para una minoría de la población
2. Requiere recursos disponibles a un costo moderado
3. Puede ser adquirido a bajo costo
4. Requiere sólo recursos disponibles
5. No requiere de recursos externos

F. IMPACTO DEL COMPORTAMIENTO EN LA SALUD

0. Ningún impacto en el problema (identificado) de salud
1. Poco impacto
2. Algún impacto
3. Impacto significativo
4. Impacto muy significativo
5. Elimina el problema (identificado) de salud

G. CONSECUENCIAS POSITIVAS DEL COMPORTAMIENTO

0. Ninguna que la madre pueda percibir
1. Escasas consecuencias perceptibles
2. Algunas consecuencias
3. Consecuencias significativas
4. Consecuencias muy significativas
5. Consecuencias perceptibles en alto grado

H. COSTO PARA ADOPTAR EL COMPORTAMIENTO

0. Requiere de recursos que no están disponibles o requiere de un esfuerzo irrealizable.
1. Requiere de recursos considerables o de un alto nivel financiero.
2. Recursos o esfuerzos significativos.
3. Algún recurso y esfuerzo.
4. **Pocos recursos y poco esfuerzo**
5. Requiere sólo de recursos existentes

I. COMPATIBILIDAD CON PRACTICAS EXISTENTES

0. Totalmente incompatible
1. Incompatibilidad muy significativa

2. Incompatibilidad significativa
3. Alguna incompatibilidad
4. Poca incompatibilidad
5. Ninguna incompatibilidad

J. FRECUENCIA DEL COMPORTAMIENTO

0. Debe realizarse con una frecuencia demasiado alta para obtener algún beneficio
1. Debe hacerse cada hora
2. Debe hacerse varias veces al día
3. Debe hacerse a diario
4. Debe hacerse cada cierto número de días
5. Debe hacerse ocasionalmente y aún así obtener un resultado significativo

K. PERSISTENCIA

0. Requiere cumplimiento a lo largo de períodos demasiado extensos (irrealizable)
1. Requiere cumplimiento a lo largo de un período bastante sustancial (un mes)
2. Requiere cumplimiento a lo largo de una semana
3. Requiere cumplimiento por varios días
4. Requiere cumplimiento por un día
5. Puede lograrse en un breve período

L. OBSERVACION

0. No puede ser observado por un extraño
1. Es muy difícil de observar
2. Es difícil de observar
3. Es observable
4. Es fácil de observar
5. No puede pasar desapercibido

APPENDIX C

CONTACTS IN HONDURAS

MINISTRY OF HEALTH OFFICIALS

Dr. Enrique Samayoa, Minister of Public Health
Dr. Virginia de Espinoza, Vice-Minister of Population Risks
Dr. Juan de Dios Paredes, Vice-Minister of Service Network
Lic. Luis Alonso Lopez Benitez, Vice-Minister of Sector Policy
Dr. Enrique Zelaya, General Director of Population Risks
Dr. Alejandro Melara, General Director of Environmental Attention
Dr. Anibal Funez, General Director of Hospitals

TECHNICAL/DIRECTIVE PERSONNEL

Dr. Alvaro Gonzalez, Chief of Mother-Child-Health Division
Dr. Rosa Kafati, Responsible for the Extended Program of Control of Diarrheal/Cholera Diseases
Dr. Julio Cesar Arita, Director of Region #1
Dr. Francisco Rodriguez, Director of Region # 2
Dr. Carlos Alfonso Benneton Gonzalez, Director of Region # 3
Dr. Anibal Villatoro, Director of Region # 4

PAHO REPRESENTATIVE

Dr. Cesar Hermida

USAID OFFICIALS

Dr. David Losk, Health Office Chief
Dr. Stanley Terrell, Technical Advisor

RESEARCHERS

Lic. Leticia Castillo
Dr. Leonel Guillen
Dr. Jacobo Arguello
Lic. Carmen de Paz
Dr. Luis Irias

DRIVERS

Salvador Molina
Amilcar Lobo
Angel Andino