

ETHICAL REVIEW COMMITTEE, ICDDR,B.

Principal Investigator Dr. M.U. Khan

Trainee Investigator (if any) Dr. Emdadul Hoque

Application No. B3-032(P)

Supporting Agency (if Non-ICDDR,B) _____

Title of Study Intervention of Transmission

Project status:

f cholera in family contacts by hand

- New Study
- Continuation with change
- No change (do not fill out rest of form)

ashing.

Circle the appropriate answer to each of the following (If Not Applicable write NA).

- Source of Population:
- (a) Ill subjects Yes No
 - (b) Non-ill subjects Yes No
 - (c) Minors or persons under guardianship Yes No
- Does the study involve:
- (a) Physical risks to the subjects Yes No
 - (b) Social Risks Yes No
 - (c) Psychological risks to subjects Yes No
 - (d) Discomfort to subjects Yes No
 - (e) Invasion of privacy Yes No
 - (f) Disclosure of information damaging to subject or others Yes No
- Does the study involve:
- (a) Use of records, (hospital, medical, death, birth or other) Yes No
 - (b) Use of fetal tissue or abortus Yes No
 - (c) Use of organs or body fluids Yes No
- Are subjects clearly informed about:
- (a) Nature and purposes of study Yes No
 - (b) Procedures to be followed including alternatives used Yes No
 - (c) Physical risks Yes No
 - (d) Sensitive questions Yes No
 - (e) Benefits to be derived Yes No
 - (f) Right to refuse to participate or to withdraw from study Yes No
 - (g) Confidential handling of data Yes No
 - (h) Compensation &/or treatment where there are risks or privacy is involved in any particular procedure Yes No

- 5. Will signed consent form be required:
 - (a) From subjects Yes No
 - (b) From parent or guardian (if subjects are minors) Yes No
- 6. Will precautions be taken to protect anonymity of subjects Yes No
- 7. Check documents being submitted herewith to Committee:

- Umbrella proposal - Initially submit overview (all other requirements will be submitted with individual studies)
- Protocol (Required)
- Abstract Summary (Required)
- Statement given or read to subjects on nature of study, risks, types of questions to be asked, and right to refuse to participate or withdraw (Required)
- Informed consent form for subjects
- Informed consent form for parent or guardian
- Procedure for maintaining confidentiality
- Questionnaire or interview schedule

* If the final instrument is not completed prior to review, the following information should be included in the abstract summary

1. A description of the areas to be covered in the questionnaire or interview which could be considered either sensitive or which would constitute an invasion of privacy.
2. Examples of the type of specific questions to be asked in the sensitive areas.
3. An indication as to when the questionnaire will be presented to the Office for review.

I agree to obtain approval of the Ethical Review Committee for any changes involving the rights and welfare of subjects before making such change.

M U Khan
Principal Investigator

Trainee

REF
WC 262.JB2
K 45n
1983

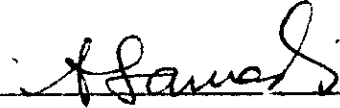
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SECTION I - RESEARCH PROTOCOL

- 1. Title : Intervention of transmission of cholera in family contacts by hand washing
- 3. Principal Investigator : Dr. Moslem Uddin Khan
- 3. Starting Date : September, 1983
- 4. Completion Date : DECEMBER, 1983
- 5. Total Direct Cost : \$ 2895.00
- 6. Scientific Program Head :

This protocol has been approved by the Disease Transmission Working Group

Signature of Scientific Program Head : 

Date : 31/7/1982

7. Abstract Summary :

Cholera remains a serious problem in Bangladesh. The secondary infection and case rates are high in families and in affected neighbourhood. Most case can be saved by oral and selected intravenous therapy. But deaths still occur due to lack of therapy and knowledge of prevention. We plan to interven intrafamilial spread by education. The cholera cases would be identified and the family will be visited on the same day of admission. The selected families will be censused and rectal swabs obtained and cultured from family members for 10 days. Domestic water samples will be obtained for culture. The study families will be grouped into (1) Handwashing with provision of soap group and (2) non-intervention control group. Contacts will be

educated to use soap before eating anything and after using the latrine. Soap and earthen pitchers will be provided for this group. In control group nothing will be changed. The groups will be matched for important variables. Diarrhoea cases will be treated with ORS at home. At least 30 families from each group will be considered as minimum. This study will document the effectiveness of handwashing with soap and water in reducing the secondary cholera infection and other diarrhoea cases. If found effective it may be advocated during epidemics of cholera and diarrhoea.

8. Review :

- a. Ethical Review Committee : _____
- b. Research Review Committee : _____
- c. Director . _____
- d. BMRC : _____

SECTION II - RESEARCH PLAN

A. INTRODUCTION

1. Objective : Mortality from cholera in untreated cases is one of the most important public health problems now in Bangladesh. The morbidity and mortality are worse in remote areas. The intrafamilial and neighbourhood spread of infection is very common. Easy ways of protection against shigellosis and nosocomial infection have been demonstrated by washing hands. This study will examine whether intrafamilial infection and disease can be reduced significantly by simple washing hands with soap and water in rural areas.

2. Background : In most developing countries of the tropical and subtropical zones of the world diarrhoeal diseases still cause a great deal of morbidity and mortality(1). Of all the diarrhoeal disease cholera is the most dreaded one. Over 100 years ago John Snow proved that the agent was carried by water(2). Morgan et al in Thailand(3) and Dozon et al(4) in Philippines reported that multiple cholera cases in cholera affected families are not very common. Soon it was found by the Pak-SEATO CRL(5) that over 11% family contacts contracted the infection. A.Q. Khan et al(6) found that the secondary infection rate may be much higher in some cases. Martin found 17.7%(7) and Mosley found

16.7% of the contacts to be affected with secondary infection. Bart observed that when both classical and El Tor cholera occur in the same socioeconomic groups the secondary infection rate for classical was 24.6% and for El Tor 20.6%(8). In 1973 Khan et al found that the secondary infection rate for El Tor in Dhaka was 31% of which over 24% developed symptoms(9). Hughes et al found much higher incidence rate in affected neighbourhood than the non-affected neighbourhood. It is therefore, established that the family contacts and neighbourhoods are at greatest risk of developing cholera. McKay has stated that cholera cases spread fast and kill people quickly(10). How cholera is transmitted from one to another have been studied by many workers after John Snow. Irrigation canal(11), shrimps(12), boatman boatman(13), sea foods(14,15), bottled water(16), charitable meals(17), canal water(18,19), different food staff(20) are the usual vehicle of transmission. The knowledge of all these vehicles however, could not adequately prevent the transmission of cholera during epidemics. In addition to other things, Wissman et al suggested separation of infected ones from the non-infected ones and practice of health education for shigellosis(21) which is transmitted from person to person. Ketharine found routine handwashing effective in removing bacteria(22). Allen advocated washing hand with soap and water for removing nosocomial infection(23). Hand washing has been found useful in India(24) USA(25) and Bangladesh(26) for diseases which spread from person to person. We have isolated Shigellae from hand(26) and Samadi has isolated Rotavirus from hand(27). More recently scientists

have found in Africa that cholera also is transmitted from person to person(28). Our present studies on classical and El Tor cholera supports that V. cholerae can also be isolated from hand. This may explain why cholera could not be prevented in a camp with Central Water Supply and Sewarage-connected latrine facilities(29). Spira et al found that stored water contained vibrio and the secondary infection rates were higher in families with infected stored water(30).

Therefore, in a situation where people dies in thousands (as in Bangladesh, 1982) during cholera/diarrhoea epidemics and when vaccination is neither effective nor economic, safe water supply remains a remote possibility and scope of sanitary latrine is poor some sort of preventive measures are desirable and obligatory for every people's government. Our hypothesis is that washing of hands of contacts of cholera cases with soap and water will be effective in reducing subsequent infections. During epidemic time this may save many people. Therefore, we want to test the ideas in the field. We are aware that people do not change their habit so easily. We have to make an all out effort to enforce hand washing in people threatned with cholera. Otherwise, in remote areas a very high rate of mortality during epidemic cycles may prevail unchecked.

Intervention is particularly necessary considering the reappearance of classical Vibrio cholerae in Bangladesh which is claimed to be more severe in causing disease and deaths than the El Tor cholera.

3. Rationale: Cholera causes a high degree of morbidity, mortality and a considerable dislocation of affected families and the Public Health Department. About 15,000 people died of diarrhoea in Bangladesh in about Six-months' time (32). Sometimes cholera causes panic and kills large number of people in a short time. Multiple cases from a family or a community are frequently reported. Large number of inapparent, mild and severe cases can transmit the disease to others. For poor families or low socioeconomic communities (as in Bangladesh), cholera is a cause of great concern; but there is no known effective and workable preventive weapon within the economic feasibility of the country. It has been seen that by handwash nosocomial infection, indigenous infection and shigellosis could be considerably reduced. If found successful, can be easily enforced keeping other factors unchanged even in village situations.

SPECIFIC AIMS OF STUDY

1. Does washing hand with water and soap reduce the secondary cholera attack rates significantly?

C. METHODOLOGY

The studies will be done in rural Matlab. The confirmation of cholera is not obtained until the second day of admission. If we wait until the 2nd day we may miss many subsequent infections. Therefore, family study will be begun on the same day on receipt of DF results from the outdoor.

The criteria for selection of cases will be as follows:

The first cholera case admitted in the Hospital/Treatment Centre for treatment of diarrhoea will be considered as an index study case. Families having less than four members will not be studied. The patient should be the first case in the family, has not used antibiotic for the present illness, lives within a short distance of Matlab area, has a family living with him, is cooperative. He may be of any age (0-4, 5-9, 10-14, 15-19, 20-39, 40-59, 60+) sex and religion. His/her family contacts will be studied and handwash intervention will be applied.

The field teams will meet the patients to scrutinize the above criteria every morning and select probable cholera cases for DF examination if culture result is not already available.

A laboratory technician will do dark field examination of rectal swabs/stool of probable cholera cases not yet cultured. If recruited in study, then the cases should be confirmed by culture DF+Ve, but culture negative cases will be dropped from the study.

Depending on availability of cases two to three cholera cases will be selected daily. The patients thus selected will be assigned alternately into 2 groups. The first available one (A) will be selected for handwashing intervention study and second one (B) for control after matching the variables. Their detailed addresses will be obtained and if possible the attendants will be taken with the teams for identifying the homes of the cases for the first time.

A control case will be matched with a study case by comparing the following criterias :

- A. Socio-economic conditions as indicated by :
 1. Types of housing (semi-pucca, tin-shed, thatched).
 2. Economic status: a) Sales excess food grains after family consumption, b) food grain production is between 50%-80% of the requirement and c) food production is between 0-20% of the requirement.
- B. Age and Sex Group

0-4, 5-9, 10-14, 15-19, 20-39, 40-59, 60 and over. (a) Male (b) Female.
- C. Duration of purging of index cases.
 1. 0-12 hours
 2. 13-14 hours
 3. 25 hours or over
- D. Sources of domestic water
 1. Tubewell only
 2. Surface water (pond, canal, river, ditch)
 3. Mixed (1 and 2)

For follow up of families a team (one trained male and one female assistant) will visit each family on the day of hospitalization with forms, plates, tubes, and water sampling bottles. The family census and the socioeconomic forms will be filled in their premises. After filling in the forms RS/SS will be obtained and streaked on Monsur's plates and then put the swab in B.P. tubes for culture from all members. A 50 ml of water will be collected in bottles containing 25 ml triple strength bile pepton media, from the family water sources used as well as from the storage pitchers/jars. They will wash the left hand, nail beds and fingers of the patients and contacts on a sterile dish/petridish with 20 ml of B.P. media from universal containers and then pour it back to the same containers. The culturing will be done using a standard method in the laboratory(33).

In case of severe diarrhoea of contacts of any group, they should be hospitalized as usual through the OPD. In the cases of mild to moderate diarrhoea the contacts will receive ORS at home.

On the first day, the teams will supply to group A one bath soap, and 2 earthen pitchers for storing water. A second piece of soap will be supplied on the 6th day of visit or earlier. All pitcher should be filled with water in the morning and evening espeically once in the presence of field teams. In cases of large families (over 6 members) one additional pitcher and a piece of soap will be supplied. One tin 'mug' will also be supplied to index families(A) for taking water for use and for covering the pitcher when not used.

Before supply the soaps will be divided into two pieces to ensure use. Members will be advised to wash hands ^{/only} with soap and water after defecation and before eating anything. The teams will ask and verify every morning whether the soap and water had been used adequately. For five days they will instruct the members to use soap and water after defecation and before taking any food. Every morning the workers will note down whether the soap had been used on the previous day and night and physically see whether they wash hands with soap and water.

They will also ensure that the pitchers are filled in their presence. The teams will visit very early in the morning from the 2nd day during the first 5 days and stay for some time to watch compliance of instructions. They will tick against 12 points on form no. 4 every day for first five days and one of them will put his signature.

In the cases of control group (B) nothing should be influenced. Their ways of taking care of their sick, food, water and environment should not be interfered. No soap or pitcher should be supplied for any family of control group (B). Serious cases should however be brought to the ICDDR,B Hospital for treatment and other cases be treated with ORS at home. Diarrhoea of contacts will be noted. Rectal swab/stool and water samples will be collected as for group A families for culture. The forms should be filled in daily with the replies of all questions and the result of culture (use red ink for +ve culture result and presence of diarrhoea).

Five families will be assigned to each team. They will complete the new families first. Each team will visit the family daily for 10 days or until 3 daily RS become negative beyond 10 days.

Assuming that there will be 5-6 members in each family and there will be some non-cooperation and dropping out, at least 30 families in each group will have to be studied to show a significant difference of about 50% in the subsequent attack rates between case and control families.

Data analysis: The effectiveness of the intervention will be compared: Plan of data analysis are as follows:

1. Secondary infection rate in each group by age/sex
2. Secondary case rate in each group by age and sex
3. Infection to case-ratio by age and sex.
4. Isolation rate from sources of water in 2 groups
5. Isolation of V. cholerae from pitchers.
6. Incidence of other diarrhoeas in the groups.
7. Isolation of V. cholerae from handwashing in two years.

The data will be coded, punched, tabulated and analyzed using either the IBM machine or the computer. Significance test will be done by using the X^2 test. Some dummy tables are shown.

SIGNIFICANCE

This study will establish how many of the secondary cases can be averted by intervention with handwashing practices only. If found effective the intervention can be applied easily during epidemic of cholera where

no other intervention is feasible. This can be recommended for the diarrhoea affected areas.

E. FACILITIES REQUIRED

1. Office space : As the study would be conducted in the field no outside office space (other than ICDDR,B) will be needed.
2. Laboratory space : Laboratory work will be done in the ICDDR,B Microbiology Branches and as such no separate laboratory space is needed.
3. Hospital resources : The severe cases from the study families will be admitted as usual outside cases. The mild cases will be treated in their home with ORS.
4. Animal resources : Animals will not be needed for conducting any test for the purpose of this study.
5. Logistical support : The location of the study will be in Matlab. In Matlab two speed boats with driver will be needed daily. Sometimes the ambulance or rickshaw may substitute speed boats. These are already available.
6. Major items of Equipment : No major equipment is needed. Minor equipments like field bag, spirit lamps, umbrella, gumshoe, media antisera, swab sticks, paper pencils, candy, balloons, aspirin, oralyte, vitamins, etc. will be needed. Some of these are available,

7. Other specialized requirements : Soap, earthen pitcher, tin mug, stool cups, computer tapes and IBM cards etc. are the important special items needed for this study.

SECTION III - BUDGETA. DETAILED BUDGETDHAKA AND MATLAB

1. <u>PERSONNEL SERVICES</u>	<u>Name</u>	<u>Position</u>	<u>% time used</u>	<u>Project requirement</u>	
				<u>Taka</u>	<u>Dollar</u>
	Dr. M.U. Khan	Scientist	20%		
	Dr. Emdadul Hoque	Physician	15%		
	Dr. A.R. Samadi	Consultant			
	Dr. M. Yunus	Consultant			
	Mr. B. Hossain	(Microb. Matlab)	10%		
	Mr. M.R. Khan	Sr.F.R.O. (I)	40%		
	To be named	Health Asstt-3	100%		
	To be named	Female F.W.-2	100%(including overtime)		\$ 300
		Sub total		Tk. -	\$ 300
				=====	=====

2. SUPPLIES

<u>Name</u>	<u>Unit cost</u>	<u>Quantity</u>	<u>Dollar</u>
R.S. Culture for V.C.	Tk. 11.00	2,500	1,100
Water culture for V.C.	Tk. 7.5	1,000	300
Multivitamin tablet	Tk. 110.00	2 tins	9
Aspirin tablet	Tk. 120.00	2 tins	10
Oralyte/ORS	Tk. 2.00	180 pkt.	15
Candy	Tk. 110.00	23 tins	13
Balloons	Tk. 27.5	4 box	5
Stationeries (paper, pencil, stencils, pens, etc.)			30
Earthen pitcher	Tk. 5.00	60	12
Tin/Aluminium mug	Tk. 5.00	30	6
Soap (bath)	Tk. 5.00	70	14

Sub total \$ 1,514.00

3. EQUIPMENT

Nil

4. PATIENT HOSPITALIZATION

Nil

5. OUTPATIENT CARE

Nil

6. ICDDR, B TRANSPORT

Bausia Transport (M 40x D 10 x Tk.4.5)/2(parties)* \$ 36

Bausia Matlab trip: (@Tk.300x10)/3 (parties)* \$ 40

Speed boat 2 hoursx300 Tkx35 days \$ 840

Jeep at Matlab M 20x30DxTk.4.5 \$ 108

Country boat/rickshaw Tk.40x 20D \$ 32

Sub-Total

\$1056.00

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7. TRAVEL AND TRANSPORTATION OF PERSONS

Local travel - Nil

8. TRANSPORTATION OF THINGS

Transport of cards and tape - Nil

9. RENT, COMMUNICATION AND UTILITIES

Postage - Nil

* For visit of Principal Investigator

10. PRINTING AND PUBLICATION

Printing forms (appx. 1) \$ 25

Sub total \$ 25
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11. OTHER CONTRACTUAL SERVICE

Nil

12. CONSTRUCTION, RENOVATION, ALTERATION

nil

B. BUDGET SUMMARY

<u>Category</u>	<u>Taka</u>	<u>Dollar</u>
1. Personnel	-	300
2. Supplies	-	1514
3. Equipment	-	-
4. Hospitalization	-	-
5. Out patient care	-	-
6. ICDDR,B Transport	-	1056
7. Travel persons	-	-
8. Transportation of things	-	-
9. Rent, Communication & Utilities	-	-
10. Printing	-	25
11. Contractual service	-	-
12. Construction	-	-
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Total	Tk. -	\$ 2895.00
		=====

Total incremental cost \$ 2895.00

ABSTRACT SUMMARYINTERVENTION OF TRANSMISSION OF CHOLERA IN FAMILY CONTACTS BY
HANDWASHING

The incidences of cholera both in urban and rural areas have increased many folds within a short period of time. The case fatality in untreated cases and the subsequent infection rates are high. Transmission of cholera is one of the most important problems in Bangladesh at present. We propose to interrupt this problem of interfamilial spread by washing hands with soap and water of the members of cholera affected families.

The cases will be selected for a 10 day follow up and the study will be initiated on the 1st day of admission of the index cases and Rectal swab and hand wash will be cultured for 10 days, illness and socio-economic history obtained from the contacts and the index cases. Water samples will be cultured. The families will be grouped into 2 groups (1) Health Education and provision of soap group and (2) Control group. About 50 families in each group will be studied in Matlab.

1. The population will be from all ages, sex and religions from the Matlab area.
2. No major risk is involved in this study. The obtaining of Rectal Swab is without any risk.
3. For minimising the difficulty in obtaining R.S. the Swab Sticks will be soaked in sterile saline. The children will be eased by giving them candy and balloons.
4. The purpose of the study will be explained to the subjects or guardians of the subjects right in their own premises. A consent form will be signed by them for every case family. They will be

at liberty to withdraw at any time from the study. Their refusal or withdrawal will not bar them from obtaining hospital treatment in any way.

5. The interview will be initially with the patient and then with the attendant of the patient. He will be taken to the family by the team and our purpose will be explained to them. If he agrees to cooperate with the ICDDR,B then the final forms will be filled up and consent obtained from them. This interview may take about 15-30 minutes.
6. The diarrhoea cases of the study families will receive treatment in ICDDR,B hospital. The milder cases, not admitted will also receive ORS treatment. The health education group will learn the hygienic practices and also get soap and pitcher during the period of study. If the spread can be prevented the members will be saved from the disease. This will outweigh the minor inconvenience.
7. The study needs to record the age, sex and number of the members of the family and some information about the water use pattern. None of these are confidential in nature.

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সন্মতি পত্র
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আপনি/আপনার পরিবারের একজন সদস্য কসেরা/উদরামন্ডে আক্রমণ হইয়াছেন। এই রোগ আপনার পরিবারের অন্যান্য সদস্য, প্রতিবেশী অথবা আপনার আত্মীয়দের মাঝেও বিস্তারিত হইতে পারে। এই রোগ ছড়ানোকে কি ভাবে রোধ করা যায় তার উপর আমরা পরীক্ষা করছি। আপনার মনদুয়ারের মন/মন ও ব্যবহারের পানি আমরা পরীক্ষা করতে চাই। আমরা আপনার হাত ধোয়া পানি এবং ১ ফোটা আংগুলের রক্তও ২বার পরীক্ষা করিতে চাই। আপনার অসুখের বিবরণ বা মল পরীক্ষার ফলাফল কাহারো কাছে প্রকাশ করা হইবে না। কাহারো পেটের অসুখ হইলে আমরা চিকিৎসার ব্যবস্থা করিব।

আপনি আমাদের অনুসন্ধানের অংশগ্রহণ না করিলেও আপনাকে চিকিৎসা হইতে বঞ্চিত করা হইবে না। আপনি আমাদের প্রসূবে রাজী থাকিলে আপনার শূকর/বাম হাতের রক্তাংগুলির ছাপ দিন।

আমি আমার/পোষ্যদের পক্ষে এই পবেষণায় সহযোগীতা করিতে সন্মত হইলাম।

শূকর/টিপ গই-----

জনাব/জনাবা-----

রোগীর বয়স-----

তারিখ-----

CONSENT FORM

You are affected with/a member of your family is affected with cholera/diarrhoea. This disease can spread to other members of your family, to your neighbours or amongst your relatives. We have been studying how transmission of this disease can be prevented. We would like to examine your stool/rectal swab and domestic water. We want to examine your hand-wash water and one drop of finger tip blood on two occasions as well. The history of your illness and stool examination results will not be disclosed to other people. We will arrange treatment of diarrhoea if any member of your family is affected.

Treatment will not be denied to you even if you do not participate in our study. Please put your L.T.I. or signature if you agree to our proposal.

I/I on behalf of my dependents hereby accord my consent to cooperate with this study.

Signature/LTI of

Mr/Mrs. _____

Patient no. _____

Date _____

TABLE I - Subsequent isolation rates of V. cholerae from RS /
of contacts

Groups	No. Contacts	No. infected	No. with symptoms
Hand wash(A)			
Control(B)			

Significance A vs B, P =

Table 2 - Isolation of vibrio from hand wash by age

Groups	No. Cultured	A G E S						
		0-1	1-4	5-9	10-14	15-44M	15-44F	45+
A	No. + VC							
B	No. cultured							
	No. + VC							

Table 3 - Isolation of Vibrio from different domestic water sources

Groups	Sources		
	City Supply(a)	Hand pump(b) tubewell	Ponds/canal/river(c)
A	No. cultured		
	No. + VC		
B	No. cultured		
	No. + VC		

Significant tests

A vs B P =

FORM I

Cholera intervention study.:

Family no. _____ Groups A/B/C Address _____

Hospital no. _____ Diagnosis DF _____ Culture _____

Dates of : Onset _____ Hospitalization _____ Study _____

	Names	Age	Sex	Relation with head	Occupation	Blood	
						1st	2nd
Index(1)							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

FORM 2

Cholera intervention study : RS culture and result form

Family No. _____ Group A/B/C

	1 day			2 days			3 days			4 days			5 days			6 days			7 days			8 days			9 days			10 days		
Dates																														
Sl. nos.	RS	DR	CR	RS	DR	CR	RS	DR	CR	RS	DR	CR	RS	DR	CR	RS	DR	CR	RS	DR	CR	RS	DR	CR	RS	DR	CR	RS	DR	CR
1(index)																														
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

RS=Rectal swab; =taken, R=refused, A=absent, DR=Diarrhoea; 0=no diarrhoea
1=mild, 2=moderate, 3=severe, 4=hospitalized

CR=Culture result; None=0, IN-0=Inaba classical, IN-+,
Inaba El Tor, Og-0=Ogawa classical, Og-+
Ogawa El Tor, NAG=Non-Agglutination vibrio

FORM 3

Cholera intervention study : Water collection and result form

Family No. _____ Group A/B/C _____

Dates of collection/ Result	Samples of domestic water storage					Open sources		
	Supply	Tubewell	Pond	Canal	River	Pond	Canal	River
Result								
Result								
Result								
Result								
Result								
Result								
Result								
Result								
Result								
Result								

NB. As in RS culture scheme

FORM 4

Cholera intervention study :

Guideline for Field Staff

Family No. _____ Staff assigned _____

Items	Days/Signature					Remarks
	1	2	3	4	5	
1. I have advised them thoroughly to wash hands with soap						
2. The members understood and willing to cooperate						
3. Si... washed hands in my presence						
4. I asked all members present whether they washed hands with soap after using latrine and explained them again						
5. I have asked all members to wash hands with soap every time before taking food						
6. The pitchers have been filled with water in my presence						
7. Soap and storage jars are adequate						
8. The soap has been used for washing hands only						

N.B. To be signed by Health Assistant daily against 12 points for 5 days.