

PD-Atta-838

non-5332

AN ASSESSMENT OF
DIARRHEA TRAINING UNITS (DTU)
IN PAKISTAN

936-5927

A Report Prepared by PRITECH Consultant:
ROBERT S. NORTHRUP, M.D.

During the Period:
APRIL 11 - 24, 1987

TECHNOLOGIES FOR PRIMARY HEALTH CARE (PRITECH) PROJECT
Supported By The:
U.S. Agency For International Development
AID/DPE-5927-C-00-3083-00

AUTHORIZATION:
AID/S&T/HEA: OCT 14 1987
ASSGN. NO: DC 290

PAKISTAN
APRIL 11 - 24, 1987
ROBERT S. NORTHRUP, M.D.

SUMMARY OF ACTIVITIES:

- visited Basic Health Unit, Rural Health Center, District hospital, 2 teaching hospitals and a special diarrhea treatment hospital/ oral rehydration unit regarding diarrhea treatment procedures and training;
- carried out 1 day workshop for academic pediatricians on DTU development;
- reviewed CDD program progress, especially communications;
- reviewed USAID child survival strategy;
- planned USAID/CDD training strategy;
- planned scope of work for future logistics, MIS, and management consultants;
- planned PRITECH general country program plan;
- reviewed with UNICEF and USAID future manpower and funding activities.

MAJOR ACHIEVEMENTS:

- agreement to have standard defined ORS packet design for future GOP ORS purchases;
- strategy for DTU development and medical education strengthening;
- draft PRITECH plan and workplan for Pakistan;
- draft agreement for continued active PRITECH involvement in CDD communications materials development and testing;
- clarification of work scopes of future PRITECH short-term consultants Olsen, Spain, Roberts, and Northrup.

TRAINING

The following observations and recommendations are derived from visits to Jhelum District, including the District hospital, RHC Sohawa and BHU Saghai; Khyber Medical College Hospital and Lady Reading Hospital, also the Children's Infectious Disease Hospital (Haji Camp Hospital) in Peshawar; the workshop on diarrhea training units and medical education conducted on April 19th in Islamabad (Attachments 1 and 2); a visit to Rawalpindi General Hospital for the commencement ceremonies after a diarrhea training course conducted by Professor Waheed, including discussion with the trainees; previous field visits in November 1986; and discussion with Col. Rashid (CDD Program Manager), and Dr. Mushtaq Khan (Head, Pediatric Medical Center).

Observation:

ORT/CDD Training Courses lack activities to prepare trainees for implementation of training after returning home.

Training courses do not include linkage of Diarrhea Management with the effects of diarrhea on growth as seen in growth monitoring.

Curricula generally are based on the lecture method as means of conveying information.

Training courses are almost completely lacking in attention to the demands of effective communication between doctor and patient.

Recommendations:

Develop activity (use pattern in WHO DTU Manual) to assist trainees for plan after returning home.

Implement regular follow up by trainers as part of training course plans. Encourage support for implementation by ADHO and DHO by pre-training orientation.

Include in training review of anthropometry and growth monitoring techniques, and expanded role of weighing as means for assessing nutritional status.

Include training and interpretation of growth curves during diarrhea course.

Provide training for course trainers in alternative teaching methods.

Include activity modules in training courses dealing with effective doctor/mother interaction.

Medical schools have widely varying facilities for management of diarrhea cases. Rehydration may be carried out in the emergency room, the outdoor clinic, a separate room off the ward, or on the diarrhea ward.

One hospital (Khyber Medical College) did not admit any diarrhea patients. All were referred to a non-teaching unit, the Children's Infectious Disease Hospital.

Large hospitals in some cases did not carry out effective teaching of mothers with diarrhea. For diarrhea cases with other accompanying illnesses teaching was not uniform in quality due to different patient flow channels.

Interest in improving medical education for diarrhea for medical students, and becoming involved in training of medical officers and paramedics in diarrhea case management was high in medical schools.

Each medical college and teaching hospital must prepare an individual plan so that its facilities allow for effective management of diarrhea patients in all clinical settings. These plans should ensure that effective oral rehydration and mother teaching will occur for patients managed in the emergency room and ambulatory clinic as well as those admitted to the ward.

All teaching hospitals should be required to admit diarrhea patients. Where a significant number of patients are being seen in a peripheral unit, efforts should be made to include that unit in the rotation for medical students, including adequate time for students to get direct personal clinical experience in those units.

Establish minimum standards for teaching in diarrhea unit. Through monitoring and supervisory visits, ensure that effective mother teaching is taking place in all units.

Seek Government of Pakistan and donor support for development of diarrhea training units in each teaching hospital. This support should include both support for training of medical officers already in the system, and undergraduate medical students.

The number of students assigned to pediatrics at a time may be as high as 70 on a given rotation.

Medical students do not pay adequate attention to pediatrics because it is not adequately represented on the final examination except in a few places (Abbottabad Medical College).

The high number of admitted patients in busy academic hospitals leads to over concentration and training on complicated cases and cases requiring intravenous treatment.

New graduates joining the MCH as medical officers have poor skills in child survival areas, particularly diarrhea case management. There is a high turn over among medical officers, meaning that training courses provided to a medical officer may not be utilized in the desired location after the medical officer is transferred to another site.

Provincial training has been active but varies in intensity and effectiveness. Provinces at present have little ability to track the skills or previous training experience of their medical officers.

Timing will have to be carefully managed to allow adequate clinical experience for each student. Assignment of students to busy non-academic clinical locations may be necessary and should be studied at each location.

Seek support through Pakistan Medical and Dental Council for giving pediatrics as a full fledged subject on the final examinations.

Ensure adequate medical student exposure to cases treatable by oral rehydration through assignment and responsibility in ambulatory clinical units.

An initial orientation course should be provided in each Province reviewing basic child survival skills in addition to management areas.

The establishment of in-service training units for each major Province will assist in providing skilled training, manpower, improved curricula, and more complete in-service training for medical officers.

Plans for implementation of ORT and diarrhea case management activities should be kept at the clinical facility when a trainee is transferred to subsequent location.

To develop an overall national CDD plan, it will be necessary to develop a specific training plan for each Province.

The training capability of current medical officers should be inventoried and a system developed to track and target the capabilities of each medical officer.

Private practitioners tend not to participate in 3 or 4 day courses due to potential loss of income. They do gather for meetings of the Pakistan Medical Association and are approached in their offices by pharmaceutical representatives with pamphlets, posters and free samples. They also will attend evening or holiday meetings, particularly if food and entertainment are provided.

Special efforts to reach private practitioners are critical, due to the large percentage of private practitioners providing care for diarrhea in Pakistan. Funding for special meetings, preparation of videos or other training materials for such meetings, and a strategy for approaching physicians in their offices should be developed.

On April 19th a workshop was conducted with pediatricians from various medical centers. The agenda and list of persons attending the workshop is attached as Appendix 1 and 2. In addition a form used to assess current diarrhea training unit activities at the centers of these pediatricians is attached as Attachment 2.

Overall, the training aspects of the CDD program should be a major thrust of its activities in the next five years. At the center of these would be the development of diarrhea training units in each teaching hospital and in the 8 divisions that have no medical teaching hospital. The efforts to develop these DTU's as well as other aspects of training are incorporated in a proposed plan of activities provided as Attachment 3. These activities may be funded by USAID and other donors in addition to support from the GOP. A document describing the characteristics of a diarrhea training unit (Attachment 4), and an additional document describing important considerations in medical education for diarrhea is also attached (Attachment 5).

ORT/DIARRHEA CASE MANAGEMENT

Central to the control of diarrhea in Pakistan must be the development of effective rehydration and case management centers in each clinical facility. At the level of the basic health unit and rural health center these would form a "ORT corner". In such a corner ORT is provided as an ambulatory activity, including both provision of fluid and provision of effective education of the parent bringing the child with diarrhea. In more sophisticated

units the case management would be provided in a diarrhea management unit consisting of ambulatory locations as well as in patient ward facilities.

During the field visits described above, observations were made in both types of locations. The following observations and recommendations result from those field visits.

Related to Oral Rehydration:

Observation:

ORS is not frequently mixed in demonstration for the mother, and no fluids are administered to the patient in the health center or ambulatory treatment unit. The mother is given packets to take home with nothing but verbal instructions.

Facilities in centers, basic health units and ambulatory areas had no visual aids to give the mother, or posters to assist demonstrating the messages.

One physician recommended use of a portion of the packet to the mother in order to fit the contents into a glass rather than a liter.

Teaching by medical technicians in one unit used three ceramic cups of water to make up one liter. The comparison with four glasses of water from the National Program messages may confuse the mother.

Recommendations:

A standard criterion should be that all patients should have the mixing of ORS demonstrated, and patients should receive fluid in the treatment unit.

It should be targeted that each mother receiving a packet of ORS will also receive a flyer with illustrations showing how to mix the packet how to feed and when to return to a medical unit for further medical attention if the child becomes dehydrated or fails to recover. In addition, posters should be on the wall in every ORT corner or treatment unit.

Teaching messages should emphasize the use of the whole packet. Field studies aim specifically to document the extent of this practice in the community. If this practice is widespread, consideration to use of a 200 ml packet size should be given.

Each ORT corner should have glasses, ceramic cups and containers showing the range of possible containers in the location according to the culture. The demonstration should be done with glasses

Mothers giving ORS were often seated close to each other on benches with no place to put the glass holding the ORS or the spoon. This resulted in confusion and inconvenience for the mother, and spilled ORS.

Weighing of patients was rarely, if ever done, except in certain academic centers. Where weighing was carried out, it was used primarily to calculate percentage of fluid loss and therefore fluid dose required. No attempt was made to determine the nutritional status of the child coming with diarrhea. The result of weighing when done was plotted on an individual growth chart for each child.

Use of antidiarrheals (Kaolin and other) and antibiotics, (both absorbable and non absorbable), was wide spread

alone (or the plastic bag or ORT mug as selected later). However, the other containers may be used to show the mothers the correct approach if they have no glasses of that size at home

The ORT corner should be provided with ORT chairs modeled on the Egyptian program type of chair, with the right arm consisting of a table with a hole in it to hold a glass. These ORT chairs will help to define the ORT corners and make the activities there more special.

All children coming to a clinical unit for diarrhea should be weighed.

These weights should be plotted on a standard growth chart, and the nutritional status of the patient determined and recorded in the patient's chart. Special clinical attention should be paid to the children with malnutrition as well as diarrhea.

An individual growth chart card with immunization and growth records should be given to the mother at that visit and an opportunity to return to assess nutritional recovery from the diarrhea episode should be made. The diarrhea encounter should be the start of a continuing growth monitoring program.

Increased efforts to achieve deregistration of dangerous and totally ineffective drugs should be made.

in the clinical units visited. A number of severe cases of post diarrheal abdominal distention were seen on the clinical wards.

Drug use by clinical facilities should be monitored, and assistance provided to physicians from their supervisors in dealing with mother requests for medicines.

The essential drug list provided MOH health facilities should be reviewed, and inappropriate drugs, in particular, antidiarrheals be removed from the list. Special attention should be targeted toward liquid preparations of antidiarrheals and antispasmodics

Discussions with physicians in the field, Col. Rashid, General Burney, and Dr. A.J. Khan, the new Director General for Health for the country revealed that some success had already been achieved in some of these areas. Deregistration of antibiotics combined with antidiarrheals has already taken place, these drugs are being removed from the market. Also the Director General is anxious to pursue this further and requested a letter from PRITECH as well as from the World Health Organization to assist him in moving actively in this area.

The recommendations for training included as Attachment 3 include funding for containers and other supplies for ORT corners. A description of the process of establishing an ORT corner, taken from the WHO supervisory skills course, is attached as Attachment 6. A supervisory check list incorporating the recommendations noted above and other accepted recommendations for oral rehydration therapy and other diarrhea case management principles is also attached (Attachment 7).

During the visit, the results of the March 1987 EPI CDD coverage survey were reviewed. They showed a remarkable level of ORS and ORT use in particularly the Punjab. For diarrhea occurring during the last two weeks, ORS has been used in urban Punjab locations by 62 percent of parents, and in rural locations by 72 percent. NWFP was lower, with 38 percent users in urban settings and 39 percent in rural settings. Only 20 to 30 percent of parents had used home remedies, and the prevalence of harmful practices was extremely low, three to four percent stopping breast feeding, two to seven percent stopping feeding, and four to seven percent withholding liquids in various locations around the country. Awareness of ORS was extremely high: In the Punjab 86 percent of urban respondents were aware of ORS, 77 percent of rural respondents, and in NWFP 80 to 81 percent of respondents were aware of ORS. Even in Baluchistan, where actual ORS use

was only 27 percent, awareness was 58 percent in respondents. According to the respondents, 69 to 84 percent of them had heard of ORS from health workers in NWFP and Punjab and 46 percent in Baluchistan and AJK. Television had only reached only 30 percent in Punjab and 18 percent in NWFP. Access to ORS, defined broadly as having ORS in the home or available otherwise, is extremely high. This is related to the decision of the government to distribute ORS through the multi purpose health worker visits at the home level. In rural Punjab 85 percent of the respondents have ORS in their homes and 85 percent have also used it at some time. In urban Punjab, 65 percent have it at home, and of those 70 percent have used it at some time. Knowledge of preparation methods is 70 to 78 percent correct. Ability to measure one liter correctly is present in 70 percent of respondents in the Punjab. NWFP is somewhat lower but still quite high.

These results indicate that Pakistan has indeed achieved a high level of accessibility to ORS, which should be resulting in a reduction in the severity of dehydration in diarrhea patients coming to clinical centers. The next round of assessments should be aimed at determining whether the use of ORS by respondents in the field has been correct with adequate volumes being provided. The implications of a Sentinel Information System which will document the degree of dehydration of patients coming to clinical centers, will also help to assess the extent to which the impact of this wide spread availability and knowledge is being felt.

COMMUNICATIONS

Substantial progress has been made in communication activities, due in large part to the efforts of Lucia Ferraz-Tabor. Anticipated completion dates for major products are as follows:

1. Leaflet pre-tests with 75 people in each of three provinces. May 8, 1987.
2. Selection of a printer by USAID. May 15, 1987.
3. Delivery of one million leaflets to NIH. June 19, 1987.
4. Delivery of guidelines or materials to enable health workers to properly utilize leaflets. June 15, 1987.
5. Mugs and plastic bags and equal number of leaflets distributed for field test. June 26, 1987.
6. One million leaflets delivered to health workers. To be decided pending discussion with NIH.
7. Evaluation and selection of measuring container. End of September 1987.

D.J.:

The D.J. Keymer contract has been extended without additional funding, to allow them to complete the work. Their leaflet as well as other materials are due to be delivered shortly: final NIH approval of the leaflet was given shortly before my arrival.

General Burney decided to ask Luccia Tabor to include Keymer outputs in plans for field evaluation, so as to know their effectiveness.

Alternative Leaflet:

Tabor has made substantial progress in the design and testing of various stages of the development of an alternative ORT leaflet which has three versions. The first version uses four glasses, and represents the standard approach at present. The two additional versions use a plastic bag as suggested by William Smith, and also the ORS mug which is planned to be tested beginning in May. The photographs have been tested substantially with mothers in the field, in order to determine their ability to comprehend the instructions from the picture. This has resulted in a highly attractive set of photographs which should make up an excellent leaflet.

After discussion with various persons, it was decided to print a large number of copies of the standard leaflet, but also a substantial (perhaps 50,000 each) of the plastic bag and mug versions of the leaflet, in order to be able to distribute them for testing with the mug and bag.

ORT Mug/Plastic Bag:

The mugs and plastic bags should be ready for distribution by regional UNICEF officers in early May, with the mug and plastic bag leaflets ready for distribution in late June. The consultation by Terry Elliott was well received, and an attached letter from USAID to UNICEF (attachment 8) specifies the interventions and testing which will be carried out under the auspices of UNICEF regional offices. The commodities should be delivered to UNICEF regional offices by the end of April 1987.

Because the leaflet will not be available at the same time as the mugs for distribution, it was decided to add an additional category to the testing protocol, in order allow for the testing of the usefulness of the leaflet in promoting increased accurate use. This will be supported by Lucia Ferraz-Tabor.

KAP Studies:

Peter Spain at PRITECH has reviewed the instruments and analysis plans for the KAP studies. His visit in June is planned to provide assistance in further analysis of the results from these KAP studies.

The results from the CCD/EPI field survey in March (see above) indicate a high awareness of ORT and ORS packets. Of interest is the fact that much of this awareness was derived from health workers, rather than the public media messages.

Concerns and Recommendations:

Observations:

Training about mother education is inadequate everywhere, and there is no expectation that leaflets will be used effectively by health workers without special training.

The radio message prepared by DJ Keymer does not correlate specifically either with the DJ Keymer leaflet or the new leaflet.

All the leaflets use a packet which does not correspond to any actual packet currently being distributed. While the CDD logo has been tested by DJ Kamar, no other packet components have been tested.

The two leaflets being produced will be tested for their ability to induce understanding, but further testing has not been planned

Recommendations:

Training modules and instructions for health workers need to be developed for use of the leaflets and presented to Multi-Purpose Purpose Health Workers (MPHWs) and medics and paramedics formally through the CDD program. These instructions need to be distributed along with the leaflets.

A special radio script should be prepared and tested and then finally broadcast widely to correspond precisely with the new leaflet being prepared by Tabor.

A design for future packet labels to be produced by the NIH as well as bought on tender from private pharmaceutical firms should be developed and tested well in advance, so that specifications can be written into the tender.

Leaflets should be tested and evaluated in order to determine not only their effectiveness in inducing understanding of the

messages, but also with regard to retention and preference by the public. Testing should include observations of health workers using the leaflets to explain ORT to the mothers.

CDD PROGRAM MANAGEMENT

Colonel Rashid has been given an office, and has one assistant. An updating of the plans for the program prepared by Colonel Rashid following the January meetings is attached (Attachment 9). A useful breakdown of the administrative structure of the country, allowing for useful planning is also attached (Attachment 10).

A number of concerns became evident during the visit. These are listed below with recommendations:

Observations:

The CDD program manager has no means of transportation. This limits severely his ability to go to the field for supervision and direct observation.

Major demands will be made on the CDD program as described in the updated plan and the other aspects related to this consultation particularly with regard to training. WHO has so far failed to provide its promised support in terms of a senior level technical expert.

The Secretary of Health's request to EMRO for reversal of its decision regarding EPI provincial operations officers has been rejected. UNICEF's regional office

Recommendations:

All efforts to be made by the NIH/MOH and the donors to make sure that the CDD program manager has a vehicle for field use.

WHO should be encouraged to make stronger efforts to identify a suitable candidate for the senior technical expert position in CDD.

Until such technical expert arrives, efforts should be made by USAID and others to provide short-term technical assistance. Richard Roberts, management expert with MSH, will be available for support of the CDD program manager between June 7 and the end of August, to fulfill this purpose.

Opportunities afforded by visits by General Burney to UNICEF-New York and by A.J. Kahn to The World Health Assembly in Geneva may be

has also refused to allow UNICEF to hire either EPI or CDD provincial operations officers within their administrative structure.

useful as opportunities to attempt to convince organizational heads to reverse some of these regional office decisions.

If WHO and UNICEF cannot provide a bureaucratic home for these officers, efforts should be made to find an alternative location for contracting for such services as this is extremely important to the success of the program. AID may wish to make administrative arrangements through PRITECH to provide these slots and necessary supervision of their activities.

ORS LOGISTICS AND DISTRIBUTION

Only minimal attention was paid during this visit to ORS distribution logistics. This was primarily in the form of planning for the upcoming visit by Chris Olsen in June, to follow up on the Olsen-Bates report of August-September 1986. Discussions with Bates and with Heather Goldman at USAID resulted in a proposed scope of work for Olsen's visit (Attachment 11), emphasizing three areas:

- Review of Storage Capacity and Inventory Management Practice
- Logistics Information System Development
- ORS Quality Control Procedures Review

Other observations and recommendations follow.

Observations:

The NIH has decided to require future private ORS producers to prepare packets using a standardized NIH designed label.

A private manufacturer has requested permission to produce packets with up to six different

Recommendations:

The NIHS decision should be commended. Efforts should be made (see above) to prepare and study prospective packet designs well in advance of the need to release a tender for future purchases.

Strengthening the sales from the private sector will allow for shifting of long-term

flavors using the standard WHO formulation.

The Ministry/NIH is concerned that allowing private manufacturers to use flavoring may reflect poorly on the quality and usefulness of the NIH product.

expenses from government budget to consumers. Permission to use flavoring may allow for some desired segmentation of the market and encouragement of private manufacturers to increase promotional efforts.

Action by NIH to add flavor to its own ORS product would be against current WHO precautions, which are awaiting the results of pending research. In view of the lack of evidence against flavoring, however, the NIH should not feel compelled to resist the use of flavoring by private manufacturers.

The March 1987 survey showed a high degree of awareness of ORT in homes, particularly in Punjab, and the presence of ORS packets in a high percentage of houses. (See above)

The distribution of ORS packets at the household level appears to be effective at spreading knowledge and use and should be assisted substantially by addition of the leaflet and instruction of MPHWS in effective mother education techniques.

CDD MANAGEMENT INFORMATION SYSTEM

During the November 1987 assessment it was noted that the lack of an adequate information system has made it impossible for CDD national or provincial program managers to track ORS movement effectively, to determine the extent to which training was being implemented as appropriate diarrhea case management in peripheral facilities, or to determine the effect of public education and increasing ORS use on the degree of severity of dehydration of patients coming to clinical facilities with diarrhea. Because of this MIS has been given high priority by the program, and three consultants (Mitchell, Roberts, and Olsen) are expected in June to work on different aspects of this area (for logistics MIS see attachment 11).

During the visit it was noted that Col. Rashid was receiving directly from various facilities monthly reports of ORS stocks and use. While this provides some useful information, the small number and variety of types of locations sending reports makes it

difficult to draw general conclusions from these reports. Olsen's assistance in developing a more systematic logistics information system should help in overcoming this problem.

Mitchell in November 1986 proposed a series of treatment protocols and reporting indicators for child survival clinical activities and communication. These had been recently approved by the government, and implementation of these procedures should improve both the quality and consistency of care, and the quality of data reported. For purposes of monitoring implementation of more complex aspects of CDD, however, the single data point recommended by Mitchell is insufficient.

Discussion of reporting and its role in monitoring implementation of CDD led to agreement by General Burney to develop a special CDD clinical reporting form and system which will motivate recent trainees to provide better care for diarrhea, and allow their supervisors to monitor the care provided. Such a system proved very effective in Egypt. Running parallel to the routine recording and reporting system during early implementation of ORT treatment procedures, it was phased out when ORT became the norm of treatment.

A few diarrhea training units are currently designated as units in a sentinel reporting system, but reports are sporadic and incomplete, with only minimal information. Increased support for units, and expansion to include all of the new DTUs is desirable.

Recommendations:

1. The CDD program should develop a special clinical reporting system for use by all clinical ORT trainees on returning to their clinical units. This information system should be used as the focus for supervisory monitoring of diarrhea case management.

Action: Mitchell-Roberts-Olsen consultation in June to initiate support and planning.

2. The CDD program should revive and expand its sentinel reporting system.

Action: Plan and tentative budget for sentinel system attached. (Attachment 12) Feasibility and specific planning to be examined in June consultation, and pursued subsequently by Roberts.

3. ORS packet utilization at the facility level can provide a useful indicator of ORT implementation in case management. The ORS logistics information system should be developed in conjunction with the development of a CDD clinical reporting system, so that the two are complementary.

Action: Special efforts by the CDD program and external consultants

should be taken to ensure close integration of clinical and logistics reporting systems.

PRITECH PROGRAM FOR PAKISTAN

While WHO has agreed to play the leading role in the provision of technical support to the CDD program, USAID and the government have request PRITECH to provide assistance in a variety of areas. A suggested plan for PRITECH assistance and local support is attached (Attachment 13), along with an overall schedule estimate developed with USAID (Attachment 14).

Recommendations:

1. Roberts to review plans for PRITECH involvement, and finalize agreement during his June-August consultation.

should be taken to ensure close integration of clinical and logistics reporting systems.

PRITECH PROGRAM FOR PAKISTAN

While WHO has agreed to play the leading role in the provision of technical support to the CDD program, USAID and the government have request PRITECH to provide assistance in a variety of areas. A suggested plan for PRITECH assistance and local support is attached (Attachment 13), along with an overall schedule estimate developed with USAID (Attachment 14).

Recommendations:

1. Roberts to review plans for PRITECH involvement, and finalize agreement during his June-August consultation.

DIARRHEA TRAINING UNIT
DEVELOPMENT WORKSHOP

19th April 1987
Islamabad

- 10:30 Charge to the workshop General Burney
- 10:45 Introduction and agenda Dr. Northrup
- PRITECH
 - WHO-PRITECH Medical Education in Diarrhea Control Project (MEDIAC)
 - USAID-Pakistan CDD
- 10:50 Purposes and objectives of DTU training
- Who are the trainees?
 - What are their responsibilities in diarrhea control
 - Current inappropriate behaviors
 - New desired behaviors
 - Educational objectives
- 11:20 What is a DTU?
- WHO description
 - participants complete assessment form
 - participants present current facilities and activities
- 12:00 Teaching methods: "Active Learning:"
- Cognitive objectives: Can we avoid lectures?
 - readings with questions
 - group discussion
 - debate
 - simulated cases
 - Skill objectives
 - demonstration - role play
 - direct experience
 - Methods for specific topics
 - Assess and refer
 - Fluid treatment
 - Feeding treatment
 - Education treatment
 - Supervision and monitoring
 - Improving current practice
 - Establishing a DTU
 - Training: How to teach
- 12:45 Lunch and video of ICORT II

- 13:30 Training course agenda
- WHO prototype
 - Lahore agenda
 - duration
 - evening and night call
 - homework
 - follow-up support after training
- Small group discussion
- How to include new modules in course agendas
 - How to provide follow-up support
- 14:30 Medical school diarrhea teaching
- WHO-PRITECH MEDIAC Project
 - assessing the current situation
 - support for methodology and curriculum development
- 14:35 Reaching the private practitioner
- 14:40 Equipment, supplies, budget
- setting up ORT corner
 - participants rank items G.O,1,2,3
 - participants brainstorm budget items
 - training courses
 - medical school teaching development.
 - private practitioner activities
- 15:15 Improving diarrhea treatment nationally
- ORT unit/corner in every health facility
 - recording and reporting forms
 - monitoring and supervision
 - sentinel reporting system
- 15:20 Individual unit planning
- 15:30 Presentation
- 15:50 Summary and next steps
- 16:00 Adjourn

LIST OF PARTICIPANTS IN CDD MEETING
Held ON 19th APRIL, 1987 at NIH, ISLAMABAD

<u>S.No.</u>	<u>FULL NAME</u>	<u>ADDRESS</u>	<u>TELEPHONE No.</u>
1.	Maj. Gen(Retd) M. I. Burney.	Executive Director, N.I.H., Islamabad.	Off. 820797
2.	Prof. Abdul Waheed.	Prof. of Paediatric Rawalpindi General Hospital, Rawalpindi.	off. 847761 Res. 845450 845805
3.	Prof. Abdul Tawab Khan.	Associate Professor Paediatrics, K.E. Medical College & Mayo Hosp. Lahore.	Off. 304861-46: Res. 372985
4.	Mr. Richard K. Osmani.	M C O Advisor/NBHS Core.	852651
5.	Heather Goldman.	Project Officer, PHC, USAID, Islamabad.	824071-79
6.	Dr. Col. A. Rashid Qureshi.	National Project Manager, (CDD), N.I.H., Islamabad.	Off. 826807 Res. 856247
7.	Dr. Zeenat Isani.	Prof. Paediatrics, National Institute of Child Health, Karachi.	Res. 435446
8.	Dr. Mehr Raj Roghani.	Associate Prof. Khyber Hospital, Peshawar.	Res. 41684
9.	Dr. Mohammad Imran.	Prof. Paediatrics, PGMI/LRI, Peshawar.	-
10.	M. Mubashir Ahmed Khan.	Microbiologist, PMRC, CRC, N.I.H., Islamabad.	Off. 826326

4/87

ASSESSMENT FORM
DIARRHEA TRAINING UNIT

TRUE YES	NO

1. Proper therapy for diarrhea is given:

- All mild and moderately dehydrated cases receive ORT (not intravenous)
- All patients are given fluid before being sent home
- Antidiarrheal drugs are not given
- Antibiotics are given only for dysentery, high fever, severe malnutrition, and cholera
- All diarrhea patient mothers, even mild cases, get full teaching about ORT
- Mother teaching always includes ORS preparation by mother
- Teaching always covers the following four aspects of effective home diarrhea treatment:
 - correct ORS preparation
 - correct fluid/ORS administration
 - correct feeding during and after diarrhea
 - correct self-referral, recognition of signs of dehydration
- All patients are weighed, nutritional status determined, and receive a growth card and return appointment

2. Facilities and functions: the hospital has:

- special diarrhea reception-triage area
 - in casualty
 - in OPD
- special ORT area
 - in casualty
 - in OPD
 - on ward
- special diarrhea inpatient ward

3. Courses conducted/planned 1985 - 1987:

- number of diarrhea courses: _____
- duration: _____ days per course
 _____ total hours per course
- proportion of lecture hours to total hours: _____ percent lecture
- number of patients managed personally by each trainee:
 - assessment: _____ patients
 - oral fluid administration: _____ patients
 - feeding _____ patients
- agenda included: (rate as follows: 0=not included, 1=included, could be improved; 2=included and adequate)
 - how to teach mothers: _____
 - patient assessment: _____
 - oral fluid administration _____
 - supervision skills _____
 - how to implement training _____
 - how to develop DTU _____
- Total trainees 1985 - 1987:
 - DHO/ADHO _____
 - MO _____
 - pediatricians _____
 - medical students _____
 - paramedics _____
 - others (describe) _____

22

APRIL 1987
NORTHRUP

TRAINING PLAN

Pakistan CDD Program

1. DIARRHEA TRAINING UNIT DEVELOPMENT - MEDICAL SCHOOLS AND POST GRADUATE CENTERS

The key to the training plans for the national program is the development of DTU's at each of the medical college hospitals, (16), two army hospitals, one private medical college hospital (Aga Khan University), three post graduate hospitals and one national pediatric center. These 23 DTU's will provide facilities for training both medical officers and paramedic staff from the Ministry of Health Clinic Units as well as private medical practitioners, and also for educating medical students and nurses in correct diarrhea case management. At present there are two medical colleges in the country which are conducting on a regular basis courses for medical officers in diarrhea case management (Lahore and Rawalpindi). Other medical schools have conducted courses in the past, but without substantial support from the national CDD program. The curriculum has varied from school to school and trainees have received varying amounts of hands-on clinical experience. In some courses, budgets have been so low that no handouts were made available to the trainees.

The development effort would standardize curricula to some extent, at least providing minimum standards. It would in addition aim at ensuring a standard of medical treatment which would be similar in each diarrhea training unit.

With trainees receiving standard experiences the results would hopefully be more dependable.

In addition, these diarrhea training units would be developed to carry out and improve education of medical students during their clinical rotations through pediatrics. In collaboration with the WHO-PRITECH medical education curriculum development project, improved standardized curricula would be introduced at each of the training units, so as to insure effective education of undergraduate medical students and house physicians and registrars.

To initiate the process, DTU development workshops will be held. Two physicians from each location will attend. A further workshop will be conducted for key paramedic staff (chief nurse, etc.) from each unit.

Medical curriculum workshops will be held at the national level. A initial workshop will introduce DTU directors to updated curricula and initiate the process of curricular modification through planning carried out during that workshop. A follow up national workshop approximately 12 months later will allow attendees of the first workshop to report on their progress in initiating the improved curricular. A third workshop will be held to initiate a process improving community oriented medical education carried out in most cases by preventive and social Medicine (Community Medicine) faculty members and units outside the DTU.

To provide direct experience to decision makers in each DTU, training visits to Egypt, the Philippines, ICCDRB, and Indonesia will be supported.

Technical assistance will be provided both at the national level and at each medical school at some point during the development process.

Local DTU Staff Workshops to initiate the new clinical and teaching/training activities will be held at each unit. Training to conduct these workshops will be provided during the DTU development workshop.

Donor and GOP funds will be provided for basic teaching equipment and supplies (projectors, xerox, typewriter, paper, reference materials, etc.) for each DTU. Efforts will be made to provide in addition on an honorarium for the DTU director and support (to be shared with sentinel reporting functions) for a competent secretary for each DTU.

To stimulate change both about training and about diarrhea case management an annual national diarrhea meeting (PANCORT = Pakistan National Conference on ORT) will be held annually. This would emphasize scientific aspects and research related to diarrhea both in the community and in the hospital. Invited to attend this meeting will be both DTU members and key persons form the diarrhea disease control program throughout the country. These annual PANCORTs will provide an opportunity for worthwhile inter-change and cooperation between the academic and operational units of the government.

Six months later, also on an annual basis, a monitoring meeting at the national level of directors and staff of the DTU's with the CDD program manager will provide an opportunity for review of sentinel reporting data, and training activities and feedback from national level staff to these operational units.

To stimulate the development of research activities, donor funds will be sought to provide support for individual research projects. Two research design workshops will be held with outside technical assistance to provide help in preparing research protocols

aiming at various aspects of diarrhea particularly related to education of mothers, changing the behavior of providers, and educational topics related to diarrhea.

Support will be sought to provide funds for approximately six courses per year for each diarrhea training unit. An estimated \$4,500 to cover housing, transportation, food, and other expenses related to the course itself will be sought. This will cover in addition honorarium for registrars and junior faculty members required to spend afternoons and evenings working with trainees during the course. Courses will include between 15 and 20 students per course, in order to allow for adequate hands-on clinical experience. Gradual phasing in of diarrhea training units and total number of courses per year will be built into the development plan, so as to take into account the greater difficulty in initiating training in those units which have not so far conducted such training courses.

To insure adequate follow-up support of trainees, funds will be sought to provide travel support for trainers to visit trainees in their clinical locations, and review the oral rehydration and other diarrhea case management case activities and record keeping which have been established by the trainees. To also ensure implementation of the training, funds of approximately \$100 per ORT trainee will be provided to each trainee, to provide for purchase of furniture, containers, utensils, and other supplies needed to ensure a highly functional ORT corner. Special ORT chairs with attached table having a special hole for a cup containing oral rehydration solution will be emphasized as the most appropriate. These chairs have been found very successful in Egypt in assisting mothers to rehydrate children efficiently.

To provide for adequate medical student teaching, a sum of money will be sought to provide medical student handouts on diarrhea case management and community activities for each graduating medical student (approximately 4,000 per year). These will allow each DTU to provide every medical student and registrar with adequate instructional materials for retention after leaving the unit.

For initiation of community medicine education, funds will be sought to provide support for each medical school conducting such training out in the community. Recognizing that transportation may be the most critical problem in moving students from the medical school campus to a peripheral location, larger amounts of funds both for vehicles and for travel costs and the costs of being away from private practices will be provided to medical schools. Recognizing that many medical schools will not choose to implement such a program, these funds will not be sought for all 16 medical schools but rather an increasing number during the next five year period. Technical assistance and workshops to help initiate these activities will be provided.

2. DIARRHEA TRAINING UNITS IN DIVISION HOSPITALS

There are currently 8 divisions which have no medical school or training hospital. In these divisions, DTU's will be established in divisionsl hospitals. Recognizing the priority of training units in medical teaching hospitals, initial training efforts for these diarrhea training units will be initiated during the second of the five year program. Four of the eight units will be invited to participate in a workshop, each bringing two medical staff and two nursing staff to the workshop. A second workshop to cover the subsequent four divisions will be held two years later.

Funds will be provided for training equipment and other necessary teaching supplies for each diarrhea training unit.

The frequency of courses will be less for each of these centers, due to the lack of dedicated teaching staff in these units and also the lack of registrars to participate in the teaching. Accordingly, approximately three courses per year per center will be anticipated as a target. Funds for support for these courses will be provided as in the medical school DTU's.

Support here again for post training visits to each trainee will be provided; DTU personnel will be expected to carry out such follow-up visits to support the implementation of the lessons learned. In this case, relative to the fact that these MOH personnel may not have any vehicle available, support will be sought for a vehicle, driver, and operating costs for these vehicles to carry out these follow-up visits.

New funding will also be sought again for honorarium for the DTU director and key teaching staff, and to support a secretary and data reporting functions for each DTU.

3. PRIVATE PRACTITIONER TRAINING

Recognizing the increased difficulty of reaching private practitioners, three approaches will be used. These will be: meetings held to promote appropriate diarrhea case management and the use of ORT, the use of detail men or representatives to approach practitioners in their offices; and a CDD newsletter.

Private practitioners indicate that they frequently attend meetings sponsored by Pakistan Medical Association or by drug companies. This seems to be the major type of meeting or forum during which one can reach private practitioners as a group. To ensure a common set of messages reaching the physicians who attend these meetings, a video will be prepared which will include motivational and supportive speeches by key pediatricians and medical-political figures (Minister, Secretary, Director General, other important medical personalities) indicating their support for a shift to appropriate ORT-based diarrhea case management. The

video will also include detailed descriptions of pathophysiology, and will show the specific medical signs and symptoms and treatment methods which should be emphasized. The video will be accompanied by a list of potential questions and answers so that the person running the meeting, perhaps a member of the DTU faculty locally, will give relatively standard replies. The meetings will include some food or other refreshments, and will include a speaker as well as the video. A promotional effort through the mail and through telephone calls will be carried out as appropriate to ensure good attendance.

To approach physicians in their offices, a social marketing effort using trained representatives to visit physicians and pharmaceutical dispensers in their shops or practices will be used. Specific materials in the form of brochures and patient education materials will be provided to physicians along with free ORS packet samples, in a manner similar to that done by local pharmaceutical companies. The effort will include support for the group of representatives and training efforts for them. I believe both the training workshops and these individual visits to practice should be carried out through contract rather than by MOH staff themselves.

The CDD Newsletter will be prepared by knowledgeable medical and paramedical writers. Editorial content will be reviewed and agreed to by CDD staff. The newsletter will include material from Diarrhea Dialogue as well as news from the implementation of the National Diarrhea Disease Control Program. It will be sent to all private physicians as well as MOH physicians and other important figures.

4. SUPERVISORY SKILLS COURSES

In addition to clinical training, there is a need for continuation of supervisory skills courses, related to both incomplete current coverage and also high turn over rates among staff in this critical area. It would be approximately two courses per year to be planned at the national level, using the WHO curriculum.

5. NURSE/PARAMEDIC EDUCATION

To insure appropriate basic curriculum for nursing and paramedic preservice education as well as for traditional sector hakims/tibbs, efforts will be made to review and improve the diarrhea related curricular in nursing/paramedic and hakim schools. Technical assistance will be provided to review curricula, visit schools, and develop in collaboration with key figures in the nursing and paramedic education appropriate revised curricula for Pakistan. These will emphasize both clinical and community CDD. Subsequently workshops at the

national level will be held with faculty members to introduce them to the new curricular and develop specific plans for implementing the revised curricula teaching units. A subsequent workshop 12 to 18 months later will be held to review progress and problems in implementing the new curricula.

6. IN-SERVICE TRAINING CENTERS

At the present time, at the provincial level there is no physical facility or dedicated staff devoted to in-service training. Most such training is done by actual program personnel themselves, being diverted from their regular service tasks to carry out these courses. The result is often a haphazard approach to developing curricula, training methods which are traditional lecture oriented and not participatory, and perhaps training activities of lower ultimate quality.

To overcome these problems, efforts will be made to develop in the the three major Provinces (Punjab, NWFP, Sind) in-service training centers. These centers would provide teaching facilities, conference and meeting rooms, and also living facilities for trainees during training courses. In addition, staff specializing in training methodologies and curriculum development would be attached to these training centers to work with the program personnel in developing effective courses in each program area.

7. PROVINCIAL TRAINING PLANS

Due to the variety of staff in each Province, their varied experience in the past, and the frequent moves of staff from one unit or even one province to another, it is desirable to develop specific training plans for each province. To ensure the timely development of these plans, technical assistance will be sought to collaborate with provincial leadership in developing specific diarrhea training plans for each province during 1987. Approximately one week would be required for each provincial visit.

8. INVENTORY OF TRAINING

At present, there is no mechanism for keeping track of who has been trained and who has not been trained. Also, there is no requirement for continuing education of practitioners to retain their licenses.

To allow for realistic planning of training, as well as special targeting of untrained individuals for CDD and other child survival efforts, an inventory of MOH staff and later of private sector practitioners will be developed and carried out. This will initially consist of survey instrument and procedures to obtain current up-to-date information about previous training experiences

of staff, a system for recording and updating this information (probably computerized), and a system for recording and entering into the basic data records participation in new training courses as they occur.

Using such an approach can eventually lead to a system whereby practitioners could be required to have continuing education in order to maintain their license to practice medicine. While this should not be an immediate target this may be a long-term goal of these activities.

INTRODUCTION

Acute diarrhoeal diseases are a leading cause of childhood mortality and morbidity in the developing world. Dehydration from acute diarrhoeas of all etiologies and in all age groups can be treated safely and effectively by the simple method of oral rehydration therapy (ORT). ORT has made it possible to undertake a global effort to reduce deaths from acute diarrhoeas and diarrhoea-associated malnutrition.

Physicians and health staff around the world must be introduced to and trained in proper diarrhoea treatment which includes use of ORT. Many have already learned proper treatment procedures at diarrhoea training units. In the future many more will be trained at these units. It is essential that training in proper diarrhoea case management be done in every country.

DTU Characteristics

→ WHAT IS A DIARRHOEA TRAINING UNIT?

A unit in a hospital which routinely treats many cases of acute childhood diarrhoea and conducts training in diarrhoea treatment.

In a large hospital where treatment of diarrhoea cases is a major activity, the unit may be assigned a permanent area in the facility. In other hospitals, a diarrhoea training unit may be set up or expanded as the need occurs, particularly during the high season for diarrhoea.

WHAT DOES A DIARRHOEA TRAINING UNIT DO?

A diarrhoea training unit develops the skill and confidence of physicians and other health workers so they can give proper therapy to cases of diarrhoea. When participants attend clinical training, they develop skills in management of diarrhoea, especially use of ORT. They learn to treat cases, manage complicated cases, and teach others how to do it. They learn the effectiveness of ORT as a therapeutic tool. They become confident and knowledgeable enough to overcome resistance to the modern methods from other health professionals or from patients and their families.

Participants from hospitals throughout the country are trained at the diarrhoea training unit to support the national programme for control of diarrhoeal diseases. Some countries may have several diarrhoea training units. The number of participants being trained in a unit at a time may range from one to fifteen.

Diarrhoea training units with adequate facilities and accommodations for a large number of participants also may train participants from other countries.

Some diarrhoea training units may conduct clinical research on various aspects of diarrhoea management. But the primary purpose of a diarrhoea training unit is always to teach participants to treat diarrhoea properly and to give them experience doing it.

WHY WAS THIS GUIDE DEVELOPED?

WHO realizes that diarrhoea training units face many problems in trying to provide training that is certain to give participants this level of skill and the essential technical knowledge. Hands-on training, which requires each participant to treat several patients with guidance and support from the staff, can be very effective. However, hands-on training places considerable demands on the staff and, if not organized well, can be disruptive to the normal operation of a facility. It is also difficult to select and provide the most important technical knowledge in the limited time available for training.

Effective training requires substantial time and effort to plan well. There are many decisions to be made about the skills to be taught, the

information to be covered, the activities of the participants, instructors, schedules, operational arrangements, supplies . . . These decisions and arrangements are assigned to the director of training (the individual may or may not have this title), who often has many important and demanding responsibilities.

This guide was written to help the director of a diarrhoea training unit plan and conduct effective training. It describes a range of ways that training could be done and the most important things to include. It outlines decisions that need to be made and makes some suggestions. It contains lists of steps for planning and conducting the training. It contains information that will be helpful to anyone who is setting up or running a diarrhoea training unit.

HOW IS A DIARRHOEA TRAINING UNIT ESTABLISHED?

If a facility shows interest in hosting training for physicians and nurses in diarrhoea case management, it may be possible to set up a diarrhoea training unit there.

There should be many patients, especially infants and young children, who come to the facility to be treated for acute diarrhoea and dehydration, so that each participant will be able to be trained by actually treating patients. It is not necessary to conduct large courses for many participants at a time, however. A diarrhoea training unit could host just one or two participants at a time.

Dedication to the practice of proper diarrhoea case management including the use of ORT, and a high level of skill among the staff are other prerequisites. The unit should be in a geographic location which will be accessible for the participants who come for training.

If the facility meets these basic criteria, it is advisable that the person who will be responsible for the training attend a training session at a well-run diarrhoea training unit. That individual will see how a training unit operates and receive information on the support available from WHO.

By learning from the experience of other diarrhoea training units and by following this guide, the training director can plan and conduct this important training for health professionals.

WHO IS TRAINED AT A DIARRHOEA TRAINING UNIT?

The following types of people will come to diarrhoea training units:

1. Senior pediatricians from central or provincial hospitals who are interested in treatment of diarrhoea.
2. Other senior medical staff from national or provincial hospitals where diarrhoea cases of any age are treated.
3. Senior nurses and other medical and nursing staff from national or provincial hospitals where diarrhoea cases of any age are treated.
4. Teaching staff of medical schools, and schools of nursing or of other health workers.
5. House staff (e.g., interns and residents) and medical and nursing students from an associated medical training facility which treats patients, such as a university teaching hospital.
6. In addition, the unit may train similar staff of neighboring countries.

Senior staff who are considering establishing a diarrhoea training unit in their hospital may come to learn how to set one up.

A diarrhoea training unit may also provide one day of practical training to participants in WHO Supervisory Skills courses.

Chapter 1: PURPOSES OF A DIARRHOEA TRAINING UNIT

TO TRAIN PHYSICIANS AND OTHER HEALTH WORKERS TO TREAT CASES OF DIARRHOEA PROPERLY

This purpose is accomplished by having participants observe proper case management and gain first hand experience treating patients. Participants also obtain relevant technical information through lectures, case presentations and discussions with experienced staff and other participants, and review of reference articles.

TO PREPARE PARTICIPANTS TO IMPROVE CASE MANAGEMENT IN THEIR OWN HOSPITALS OR PRIVATE PRACTICES

This purpose is just as important as the first, but is easy to overlook.

Participants may know how to treat cases properly at the diarrhoea training unit, but may not be able to use these procedures when they return to their own hospital. Unless there is support for the procedures, participants will find it too difficult or even impossible to use them. Support is needed in terms of attitudes of senior administrators, policies, physical facilities, supplies, and skilled staff.

Participants will need to convince others that a different way of treating diarrhoea will be better. They will need to be able to describe the facilities, arrangement and supplies needed. They may need to try to change certain policies. And they will need to train others to treat cases properly.

The diarrhoea training unit helps participants prepare for this challenge. It is a model for the physical arrangements and operating procedures of a health facility that treats diarrhoea cases properly. During the training participants identify changes that will need to be made at their hospitals so that the procedures they are learning can be applied. Advice from instructors and the exchange of ideas among participants helps each participant plan how specific changes can be accomplished.

TO PREPARE PARTICIPANTS TO ESTABLISH A DIARRHOEA TRAINING UNIT

Some participants who come to the diarrhoea training unit will come to learn how to establish one in their own hospital.

It is very impressive to see participants working alongside the staff, treating patients and getting the experience they need without disrupting the facility. An individual who has participated in training at a well-run diarrhoea training unit will remember the different activities that were effective and will have a clear understanding of what a diarrhoea training unit should accomplish.

By observing carefully how the diarrhoea training unit is set up, and how the training is conducted, participants get specific ideas for their training units. When trying to solve problems in preparing or conducting the training, they can think back to operational arrangements and training procedures that worked well.

These participants are given this guide and other materials to help them. In addition, the director of the diarrhoea training unit meets with them to discuss their questions and give practical advice.

Chapter 2: DESCRIPTION OF A DIARRHOEA TRAINING UNIT

Each diarrhoea training unit will be arranged and will operate somewhat differently from others, but certain characteristics are essential for any diarrhoea training unit.

1. Proper therapy for diarrhoea is practiced on a routine basis, so participants can see the therapy and be a part of it.
 - a) Mothers stay with their children to give ORT and continue breastfeeding.
 - b) Mothers are taught how to give ORT, continue ORT at home, recognize three or more signs of dehydration, and feed during and after diarrhoea. They are given other relevant health education messages on prevention of diarrhoea.
 - c) ORT is used appropriately; IV therapy is not used when ORT would be effective.
 - d) Antibiotics are used only as needed; antidiarrhoeal drugs are never used.
2. There are adequate numbers of child diarrhoea cases coming to the unit for treatment so that each participant may treat several patients during the training. (See page 19.)
3. Physicians, nurses and other staff members have compatible ideas on diarrhoea treatment and work together well.

4. Space is arranged so that there are 3 areas for management of diarrhoea cases. These areas may or may not be next to one another. The diarrhoea ward is often part of a general ward.

Reception and Triage Area, where:

- * Cases are assessed and classified for treatment,
- * Mothers of cases without signs of dehydration are educated on management of diarrhoea at home and prevention of diarrhoea. They practice mixing and administering ORS. They learn to recognize 3 or more signs of dehydration and to return if they appear.

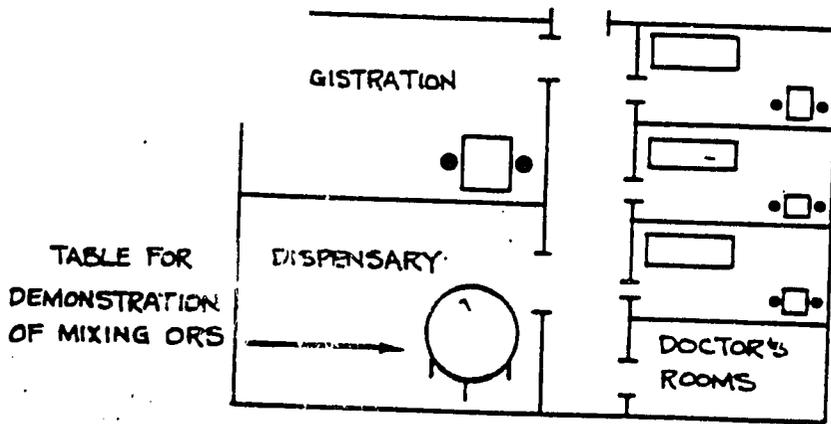
ORT Area, where:

- * Benches with side tables (or other seats like chairs or mats) are provided, with space for movement of physicians, other staff, participants and mothers,
- * Cases are given ORS by their mothers or relatives, with supervision,
- * There is adequate ventilation (e.g., fans) and access to toilet and washing facilities,
- * ORS is mixed from packets or in bulk volumes (or this might be done in the pharmacy).

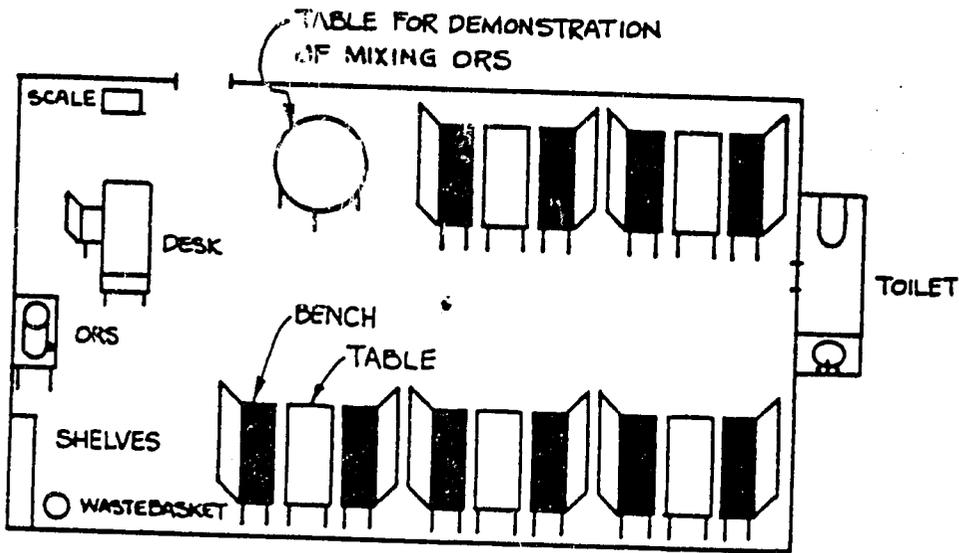
Diarrhoea Ward, where:

- * Cases of severe dehydration and diarrhoea cases with complications are partitioned off from cases of other illnesses,
- * Cases receive treatment with IV or nasogastric fluid initially, begin ORS as soon as appropriate, receive other necessary therapy,
- * The mother or other relative can stay next to the patient's bed.

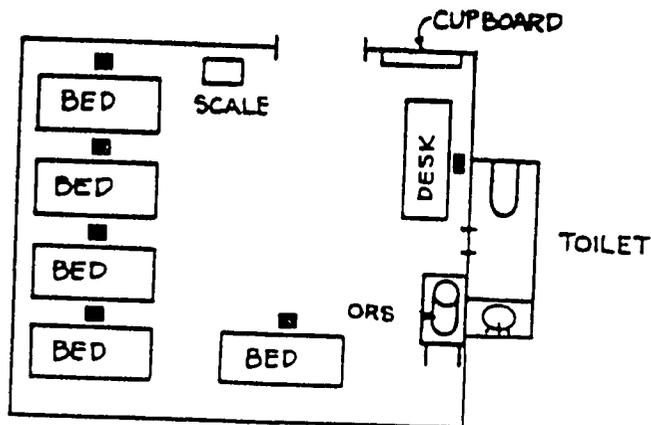
EXAMPLE



RECEPTION AND TRIAGE AREA



ORT AREA



DIARRHOEA WARD

5. The diarrhoea treatment areas of the unit are reasonably characteristic of the hospital settings where participants will work, in terms of the physical characteristics, staffing, range of patient care needs, and equipment.

This is important so that participants get the impression that the procedures they learn will be possible to do in their own facilities.

6. Physicians, nurses and other staff members have compatible ideas on diarrhoea treatment and work together well.
7. At night, continued care is provided for inpatients and new emergency cases. A staff member with experience in ORT is on call at all times.
8. Appropriate supplies are available in adequate quantities. (A list of supplies needed in each of the three treatment areas is in Annex A.) The supplies should be taken out of the storage area and arranged each morning so that they will be convenient to use.
9. The unit has access to a conference/lecture room nearby which can comfortably seat all the participants and instructors.
10. A director for the diarrhoea training unit is appointed and supported by the hospital administration. This director should be:
 - a) A physician with at least one year of experience in clinical management of acute diarrhoea, using ORT.
 - b) Assigned responsibility for the training program.
 - c) Given authority to obtain the necessary staff and resources to conduct training successfully.
 - d) Trained to run the unit and conduct training using the WHO materials.
 - e) Able to devote the time necessary to do it well.

by

Robert S. Northrup

and

Roberto F. Unda

Medical Education in Diarrhea Control (MEDIAC) Project
PRITECH/Management Sciences for Health

The Problem

Why do so many physicians resist using ORT, even new graduates from medical school?

This is a problem which challenges the diarrheal disease control programs of many countries, industrial as well as developing. And it is a critical one, as physician behavior strongly influences the behavior of other health workers and mothers.

The problem is broader than just the choice of intravenous or oral rehydration. Physicians often use unnecessary antidiarrheal drugs and antibiotics to treat acute watery diarrhea. They often recommend "resting the gut" during diarrhea, rather than continuing feeding. They often communicate poorly with mothers, so that mothers leave the clinic without a clear understanding of how to prepare and administer oral rehydration solution, or how to detect signs of dehydration. And they often direct and supervise health center and community diarrhea programs but do so poorly.

No doubt multiple factors in the environment of medical practice influence physician behavior regarding diarrhea. These range from drug promotion by pharmaceutical companies to ministry drug buying policies, from the greater profitability of drugs over ORS packets to pressure from patients to use intravenous treatment.

But all agree that the doctor's basic medical education about diarrhea is a critical influence on his subsequent behavior. Does his medical school experience - curriculum, teaching methods, faculty, environment - push the student toward correct management of diarrhea patients with oral fluids and continued feeding, toward actively educating mothers, toward becoming a skillful manager and community motivator of diarrhea control and ORT activities? Or does it discourage these outcomes?

1985 Geneva Meeting

In August 1985 a group of concerned medical educators met in Geneva at the invitation of the WHO Control of Diarrheal Diseases Program. (1) Their task was to look more closely at current medical education about diarrhea, and to seek areas where it might be improved.

On the basis of their conclusions WHO/CDD and USAID through the PRITECH Project established the Medical Education for Diarrhea Control Project (MEDIAC). MEDIAC is currently preparing curricular materials to support improved medical school teaching about diarrhea. This article presents observations and recommendations from the 1985 meeting as well as those of MEDIAC.

Deficiencies in Medical Teaching about Diarrhea

A number of aspects of medical teaching support or discourage ORT and appropriate CDD behaviors in the graduate physician. These are presented as a kind of checklist for medical schools about their diarrhea teaching (Fig.1)

Where in the curriculum are good learning experiences about diarrhea and ORT most critical in affecting future behavior? The final clinical rotations, where the students see their pediatric professors treating patients correctly or incorrectly, and where they treat diarrhea cases themselves, are doubtless much more important than the lectures or labs of earlier years, which usually are quickly forgotten.

The Diarrhea Training Unit

To make the clinical teaching most effective, the 1985 group recommended that:

**every medical school should have
a diarrhea training unit (DTU)**

As described by WHO (2), a DTU is primarily a set of clinical and teaching activities rather than a particular clinic room or ward. It involves the student in both ambulatory and inpatient care.

Rotating through the oral rehydration area, students learn from direct experience how to assess dehydration. They rehydrate mild or moderately dehydrated patients there, giving oral fluid to the child themselves, and learning effective methods to teach mothers ORT for home use.

In the emergency room, the ambulatory pediatric clinic, and the inpatient ward the DTU functions to establish treatment policies and monitor care given. As the student passes through each of these areas in completing his diarrhea curriculum, he learns from direct experience the skills of inserting IVs and nasogastric tubes for severely dehydrated patients, of managing dysentery and chronic diarrhea, and of linking feeding and nutrition to diarrhea management.

In a well-run DTU the student's professors become role models practicing correct diarrhea care emphasizing ORT. Their example becomes powerful motivation for the student to manage diarrhea patients the same way.

Ten Diarrhea Patients Before Graduation

Getting enough experience was essential, the group agreed. One case is not enough to teach the necessary skills in diarrhea management. They suggested a minimum requirement of 10 cases of pediatric diarrhea which must be managed properly by every medical student before he can graduate. The need for a supervisor's signature in the student's logbook, and the use of an objective supervisor's checklist and mother interview will help to ensure that treatment methods and mother education are done properly and effectively. Like the requirement of handling 10 obstetrical deliveries, this required minimum will attract the student's attention and ensure adequate direct experience with ORT.

Skills in Management, Supervision, and Community Diarrhea Control

Physicians are more than diarrhea clinicians. The 1985 Consultative Group accordingly recommended that medical school education prepare students for their broader future responsibilities also.

Even new graduates are often made responsible for planning, implementing, and evaluating community diarrhea programs. They become trainers of other health workers and community groups. They supervise other health workers in diarrhea treatment and community control and prevention activities.

Adequate direct student experience in these activities, often in the community and health center, is important to give students the skills needed to carry out these responsibilities also. Focusing on diarrhea can make these experiences more measurable and more meaningful to the students.

Emphasis on Skills and Problem-Solving

Knowledge is certainly needed as a foundation for most of these skills. Yet overemphasis in medical school curricula on knowledge-oriented activities like lectures is an important cause of the inability of graduates to behave as desired.

First priority should thus be given to activities and skills in medical curricula. Faced by a clinical or community problem to solve, and by instructors who direct and manage student self-learning rather than merely giving out facts in lectures and replies to questions, medical students will be motivated to seek the necessary knowledge themselves.

Clinical Learning Modules

MEDIAC has concentrated initially on materials related to clinical teaching in the DTU. It will start with community teaching in July 1987. The project will produce a series of teaching-learning modules. Each module includes detailed educational objectives, a guide for the instructor for carrying out each of the activities in the module, special attachments and readings for the instructor, and student handouts and readings. A bank of examination questions will provide pretests, post-tests and working tests for each module as well as final examinations. Special supervisory checklists have been prepared to improve clinical supervision and assure that skills have been acquired by the student. A general instructor's manual will give sample schedules for the activities, provide general instruction on how to run the different types of learning activities, and describe how to use the exam bank.

The materials emphasize active student participation and avoid lectures. The types of learning activities used are:

- readings - simulated cases - group discussion
- debates - role playing - demonstration
- clinical rounds - direct patient care

Modules in preparation for the clinical component along with topics covered are:

- **Introductory Module** - prepares student for emphasis on GRT, mother interaction, nutrition in diarrhea

- **Effective Doctor-Mother Interaction** - exercises in specific micro-skills (using checking questions, examples and visual aids, catch her doing it right, demonstration of mixing, getting agreement, validation and reinforcement for delegated teaching)

- Clinical Management of Diarrhea Cases with No or Some Dehydration - assessment of dehydration, giving oral fluids, giving food, record keeping, maintenance treatment

- Clinical Management of Diarrhea with Severe Dehydration and Complications - inserting IV and nasogastric tube, managing complications

- Clinical Management of Dysentery, Chronic Diarrhea, and Diarrhea Accompanying Other Diseases - diagnosis and management, measles, severe malnutrition, vitamin A deficiency, pneumonia and ascariasis

- Nutrition and Feeding in Diarrhea - anthropometry, determining nutritional status, feeding recommendations, diarrhea teaching during growth monitoring

- Assessment and Monitoring of Clinical Care - checklist preparation and use, supportive feedback, monitoring by observation and chart review

Drafts for clinical testing will be completed by the end of June 1987. Schools wishing to participate in reviewing and testing the materials should contact Dr. James Tulloch, CDD Program, World Health Organization, Geneva, Switzerland, or the authors (MEDIAC - PRITECH, 1655 N. Fort Meyer Drive, Arlington, VA 22209, USA)

REFERENCES

1. Report of Informal Consultative Group on Medical Education and Diarrhea, Geneva, August 20-25, 1985, WHO/CDD/85
2. Diarrhea Training Unit Director's Guide, World Health Organization, CDD/SER/86.1, 1986

Figure 1
How does your medical school measure up
in diarrhea teaching and learning?

1. Does the teaching hospital have a diarrhea rehydration unit which emphasizes oral rehydration and continued feeding for diarrhea patients? Is there an oral rehydration "corner" in the pediatric ambulatory clinic?
2. What percentage of mild and moderately dehydrated patients are treated with intravenous fluids? With anti-diarrheal drugs? With antibiotics?
3. What percentage of mothers of diarrhea patients know when they leave the clinic how to prepare and administer ORS correctly, how to feed their child during diarrhea and afterwards, and how to check for dehydration?
4. How many diarrhea patients has each medical student managed personally by graduation? How many has he orally rehydrated with his own hands? How many children has he fed himself?
5. How many individual mothers has each medical student taught about ORT and diarrhea prevention? How many groups of mothers? Does the school check the student's teaching by interviewing the mothers to see if they have actually learned?
6. Does the medical school curriculum include activities to produce:
 - skills in teaching about ORT and feeding during diarrhea during a growth monitoring session
 - skills in monitoring the quality of diarrhea care as done by another health worker
 - knowledge about the national diarrhea control program policies and activities
 - skill in designing and carrying out a community survey about effective use of ORT by mothers
 - skill in planning, implementing, and evaluating a project in diarrhea control for a community

How To Set Up An ORT Corner In A Health Centre

A special area in the health centre should be arranged for oral rehydration therapy. This is needed because mothers and their children who need ORS will stay at the health centre for several hours. A conveniently located and adequately equipped "ORT corner" will help the staff to manage dehydrated cases more easily.

1. Select the location for the ORT corner. This should be a place that:
 - staff frequently pass by, so that they can observe the child's progress and encourage the mother, such as near the reception area or examination room, but not in a passage;
 - is near a water source;
 - is near a toilet and washing facilities; and
 - is pleasant and well-ventilated.

2. Arrange furniture in the ORT corner:
 - a table for mixing ORS solution and holding supplies
 - shelves to hold supplies
 - a bench with a back where the mother can sit comfortably while holding the child
 - a small table where the mother can conveniently rest the cup of solution.

3. Organize supplies in the ORT corner. (These supplies are for a health centre that receives 25-30 diarrhoea cases in a week.)
 - ORS packets (a supply of at least 120 packets a month)
 - 6 bottles that will hold the correct amount of water for mixing the ORS packet
 - 6 cups
 - 6 spoons
 - 2 feeding bottles with teats (for infants who are used to bottles and refuse fluid from a spoon)
 - 2 droppers (may be easier to use than a spoon with some infants)
 - Mother's Cards -- This is a card or pamphlet which reminds mothers how to care for a child with diarrhoea. They are given to mothers to take home.
 - Soap (for handwashing)
 - Waste basket
 - Tally sheet (optional) -- A tally is kept of diarrhoea cases treated each day in children under 5 years and in older children.

4. Hang posters about diarrhoea and other health messages.

Posters on the walls of the ORT corner about treatment and prevention of diarrhoea and dehydration will be particularly interesting to mothers. Since mothers will sit in the ORT corner for a long time, it is a good opportunity for them to learn from posters about ORT and other important interventions such as breastfeeding, weaning foods, use of clean water, handwashing, and use of latrines. Also include posters with information on immunization.

ELEMENTS OF A SUPERVISORY CHECKLIST
FOR AN
ORT CORNER/AREA

1. Proper therapy for diarrhea is given:
(determine by observation if possible)
 - All mild and moderately dehydrated cases receive ORT (not intravenous)
 - All patients are given fluids before being sent home
 - Antidiarrheal drugs are not given
 - Antibiotics are given only for dysentery, high fever, severe malnutrition, and cholera
 - All diarrhea patient mothers, even mild cases, get full teaching about ORT
 - Mother teaching always includes ORS preparation by mother
 - ORT flyers are used by health workers to teach mothers about ORT
 - Every mother receives an ORT flyer to take home
 - Teaching always covers the following four aspects of effective home diarrhea treatment:
 - correct ORS preparation
 - correct feeding during and after diarrhea
 - correct self-referral, recognition of signs of dehydration
 - All patients are weighed, nutritional status determined, and receive a growth card and return appointment

2. Facilities are adequate for patient flow, and support good patient care and education
 - ORT area appears specially set-up, separate from other activities
 - Furniture (ORT chairs (Egypt model) if available) adequate for convenient ORS administration by mother
 - Places adequate for average maximum number of diarrhea patients
 - Approaches for dealing with more than usual number of patients have already been established

- ORT/diarrhea related posters are
 - on the wall in the ORT corner
 - used by the staff for teaching
- A variety of locally used containers of various sizes are present, and are used to help mothers learn to measure water accurately for ORS mixing
- Pediatric weighing scales are present and working
- 3. Supplies are adequate and well managed
 - Sufficient ORS packets for 1 month of patients are present in stock
 - ORS stock records are up to date, and correctly kept
 - ORS stock has not been below 1 months needs for past 6 months
 - Oldest ORS packets are being used first (first in first out)
 - Supplies for intravenous treatment are adequate:
 - fluids - Ringer's lactate - avg # diarrhea patients in 1 mo x 2L x 5%
 - butterfly needles
 - Pediatric nasogastric tubes present
 - Intravenous glucose available
 - ORT flyers adequate - 2 mo stock
 - Growth monitoring cards adequate - 2 mo stock
 - Clinical forms adequate - 2 months stock
- 4. Review of last 20 cases of diarrhea in children 0-4 years age, from records
 - % records complete, correctly filled out
 - % cases with
 - no or mild dehydration _____
 - moderate dehydration _____
 - severe dehydration _____
 - % cases receiving antidiarrheal drugs _____

- % cases with blood in stools
 - % cases with no notation re stool appearance _____
- % cases receiving antibiotics
- % cases with severe or moderate malnutrition _____
 - % cases with nutrition status not recorded _____
- % cases with chronic diarrhea (> 14 days) _____
 - % cases with diarrhea duration not recorded _____
- % cases given intravenous fluids

5. SUMMARY, CONCLUSIONS, ACTION PLANNED

- Positive aspects noted, things done well:
- Problems noted, weaknesses, areas needing improvement:
- Actions to be taken:
 - by health worker being supervised:
 - by supervisor:

Signature:

Supervisor _____ Health Worker(s) _____

Date _____



UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT
MISSION TO PAKISTAN

Cable: USAIDPAK

HEADQUARTERS OFFICE
ISLAMABAD

April 15, 1987

Mr. Julian Lambert
Nutrition Officer
UNICEF
Blue Area
Islamabad

Subject: Field Evaluation of Standard Size Containers for Measuring Oks

Dear Julian:

As you know, during February 1987, Terry Elliott, a PRITECH consultant was in Pakistan and designed a field test for ORS mixing containers. Since that time USAID has ordered the necessary mugs and plastic bags to carry out this field test. The commodities will be delivered to UNICEF regional offices by the end of April, 1987.

In discussions with provincial level officials, it was decided that the distribution of commodities would be done in three different Divisions in each of three provinces, Punjab, Sind and N.W.F.P. Within each division, one village (approximately 2-5000 residents) should be selected for each intervention. A uniformed method of selection should be used for each province in order that the evaluation can have a degree of credibility.

The following is a breakdown of interventions by province, district and village.

Punjab (UNICEF/Lahore)

	<u>Division 1</u>	<u>Division 2</u>	<u>Division 3</u>
- Mugs delivered to every household	Village 1-A	Village 2-A	Village 3-A
- Mugs to TBAs, Hakims and Imams for calibrating Family's own container	Village 1-B	Village 2-B	Village 3-B
- Mugs to EPI workers for calibrating Family's own container	Village 1-C	Village 2-C	Village 3-C

(2)

Sind (UNICEF/Karachi)

	<u>Division 1</u>	<u>Division 2</u>	<u>Division 3</u>
Bags delivered to every household	Village 1-A	Village 2-A	Village 3-A
Mugs to EPI workers for calibrating Family's own container	Village 1-B	Village 2-B	Village 3-B

N.W.F.P. (UNICEF/Peshawar)

	<u>Division 1</u>	<u>Division 2</u>	<u>Division 3</u>
Mugs delivered to every household	Village 1-A	Village 2-A	Village 3-A
<i>Bags?</i> Mugs delivered to every household	Village 1-B	Village 2-B	Village 3-B
Mugs to EPI workers for calibrating Family's own container	Village 1-C	Village 2-C	Village 3-C

Although UNICEF regional offices will pick the divisions and villages as well as coordinate distribution, the actual distribution will be carried out by EPI workers. PHC Project provincial staff can work with your UNICEF staff on selection and help supervise any villages which are served by Integrated Rural Health Complexes.

A leaflet is being developed and will be distributed by mid-June. It will be a color picture leaflet of two styles. One will show bags and one will show mugs. These should be distributed to the corresponding villages in each province where the bags and mugs have been distributed. An evaluation team will visit a random selection of households in September to determine the effectiveness of the different interventions.

If you have any questions or wish to discuss the logistics of the field evaluation please contact Bill Deichler, USAID/HPN, Islamabad.

Sincerely,

Heather
Heather W. Goldman, Ph. D.
Project Officer
Primary Health Care Project

cc: General Burney, NIH
Col. Akram, NIH
Dr. Wit, WHO
Terry Elliott, PRITECH/Consultant
Bill Deichler, HPN

A BRIEF ON
CONTROL OF DIARRHOEAL DISEASES (C.D.D)
PROGRAMME - PAKISTAN

BACKGROUND:

1. In Pakistan, Diarrhoea is one of the big Public Health problem causing 3,20,000 deaths of infants in a year. The estimated population of children/ infants upto age of 5 years is 17 million approx. There are 3-5 attacks of diarrhoea in children upto age of 5 years.

About half of all admissions of children in hospitals are due to diarrhoea.

2. Repeated attacks of diarrhoea leads to Malnutrition and growth retardation.

II. OBJECTIVES:

1. Impact Objectives.

The Government of Pakistan launched C.D.D. (Control of Diarrhoeal Diseases) programme in 1981. Nimkol (ORS) production was started in NIH, Islamabad which boosted the production of ORS by pharmaceutical companies for providing ORS to all children upto 5 years of age suffering from Diarrhoea for rehydrating them and thus reduce mortality by 50%.

2. Intermediate Objective.

- a) To familiarize general public about use of ORS (Oral Rehydration Salts) for keeping diarrhoeal cases hydrated.
- b) To popularize Breast Feeding Instead of bottle feeding which is being widely practised.
- c) To lay stress on provision of potable drinking water.
- d) To improve personal hygiene especially hand washing with soap and water.

3. Long Term Objectives.

- i) By 1988; 60% of mothers/parents will be made aware of treating Diarrhoea by proper preparation and use of ORS.
- ii) To secure maximum participation of masses through public communication campaign and educating them about the preventive measures to control Diarrhoeal Diseases.
- iii) To ensure a continuous & effective awareness about Oral Rehydration Therapy.
- iv) a. To establish Diarrhoeal Training Units (DTUS) at all teaching hospitals, Divisional and District hospitals.
- b. To establish Oral Rehydration Therapy Units (ORT units) at Tehsil Hospital, Maternity & Child Health Centres (MCHC); Rural Health Centres (RHCs) and Basic Health Units (BHUs).
- v) To train doctors, Nurses, LHV (Lady Health Visitors), TBAs about proper preparation of ORS solution and Management of Diarrhoea cases.

III, STRATEGY:

1. The accelerated C.D.D. Programme is being run through existing health facilities in all the provinces. All available public, voluntary Institutions and donor agencies will be utilized for the implementation of C.D.D. Programme.
2. Mass communication campaign through Health Education and Motivational messages through mass media i.e. Radio, T.V. , Cinemas, Special films production on C.D.D., Billboards (Hoardings), Posters, Retail leaflets, Simple pictorial leaflets and calendars is being launched.
3. The ORS packets are being supplied free of cost to all hospitals, DHS, DHOs, MCHC, RHC, BHUs and through outreach teams to the families at the village level.
4. The services of religious leaders, Pesh Imams, elected leaders, School teachers, village heads, tribal chiefs, Dais, TBAs are being utilized in their areas of influence.
5. Monthly surveillance reports on ORS utilization is being carried out.

After evaluation it has been found that all health outlets should work in harmony and involve all peripheral Health workers for more effective/efficient outreach as well as mobile teams for issue of ORS to mothers. The supervisory mechanism require strengthening at all levels.

V. ORS PROCUREMENT/ SUPPLY:

To augment the supply of ORS from NIH, 10 million ORS packets have been procured at competitive price through open tenders ^{from Pharmaceutical} & issued to different provinces as follows:-

		<u>Packets in Million</u>
DHS	- Punjab, Lahore	6.0 million
DHS	- Sind, Hyderabad	1.6 million
DHS	- NWFP Incl FATA Peshawar	1.6 million
DHS	- Baluchistan, Quetta	0.4 million
DHS	- A J K/ NA. Muzaffarabad	0.4 million
Grand Total:		<u>10 million</u>

VI. PREPARATION OF ORS SOLUTION:

A jug of 1 litre capacity is proposed to be developed for calibrating the containers in villages, 45,000 jugs will be required at a initial stage. UNICEF/USAIDS is consider the funding for this purpose.

VII. FURTHER PROPOSED ACTIONS:

- a) Nutritional status of child should be checked monthly by weighing and measuring the arms and charting it.
- b) Weaning foods should be provided to the child according to age group.
- c) ORS should not be mixed with any drink except water.
- d) ORS once prepared should be utilized within 24 hours. If more needed then fresh ORS solution should be prepared.
- e) No antidiarrhoeal drug should be given. In 80-90% of diarrhoeal cases no drug will be effective. Diarrhoea is self limiting diseases especially when caused by Rota Virus.

*) The shelf life of ORS is 2 years provided the product is kept under non humid conditions and preferably at temperature 10-15 °C

Quality control is being carried out as a routine and is within biochemical protocols.

- f) Timely immunization against six infectious diseases especially measles will help to prevent diarrhoea.
- g) Evaluation is essential to determine whether the objective and targets set for the programme have been achieved. This will also help in identifying operational and technical problems.
- h) Operational research should be linked with National CDD Programme to achieve a better understanding of the problems and aim at the improvement of the services.

PROPOSED C.D.D. ACTIVITIES - 1987

January, 1987
(3rd week)

<p>Inter-Provincial workshop to review National C.D.D. Plan & prepare Provincial Plans (Reps of donor Agencies & C.D.D./EMRO may Join).</p>	<p>NIH/All DHS/ORT Managers will participate.</p>
<p>A pictorial leaflet to be prepared to illiterate mothers for ORS preparation and its administration to diarrhoeal cases.</p>	
<p>Estb. of ORT units and Trg of Doctors in 16 Medical Colleges and all Divisional hospitals (26 in number).</p>	
<p>5 years long term plan to complete Trg. of Doctors in 15-20 in number for 1-2 weeks session.</p>	<p>10,000 Doctors to be given clinical training in management of diarrhoeal cases.</p>
<p>Draft proposal to be prepared for follow up studies of already trained health staff.</p>	<p>All DHS & Paediatricians to attend.</p>
<p>9 Medical College be given training in follow up studies to be helped in 1987.</p>	<p>US-AID to provide \$ 100,000 to help finance activities subject to development of proposals by institutions.</p>

March, 1987

Inter-Provincial Programme Review will be conducted in first two weeks of March, 1987 following evaluation programme.

WHO staff will participate/discuss evaluation results of C.D.D.

To be prepared by NIH/WHO/CDD,

A management information system to be designed for CDD Programme-sentinal surveillance system, ORS stocks Management & supervisory check lists.

April-May, 1987

MIS Expert needed for 3-4 weeks in supervisory check list preparation.

WHO/PRITECH to identify experts.

ORS Quality Control of in its production to improve surveillance of ORS production especially in commercial sector.

UNICEF to provide quality control equipment.

Aug-Sep, 1987
(3rd Quarter)

ORS management, storages/inventory system/information system and to impart logistic training.

Pritech to identify for its improvement.

November, 1987

Operational Research, a workshop of MOH, ORT Managers with selected university researchers to identify operational research with the help of WHO.

US-AID will provide financial assistance.

December, 1987

LHVs/TBAs are to be trained for giving T.T. and ORS Female workers will be more helpful for CDD Programme.

UNICEF to hire an expert.

Supervisory skill Trg. 25% of ADGG/MOs at Tehsil level will be trained for ORT. ADMN. SUPPORT. A senior level CDD advisor to work with CDD Programme manager at NIH and operation managers at provincial Headquarters. NIH to provide secretarial staff/office space/office Equipment. To solve CDD Programme problem if any.

WHO/CDD will supplement Trg funds to accelerate coverage of entire country.

WHO/EMRO to concur with allocation of these posts.

PAKISTAN . Showing DIVISIONS, DISTRICTS, UNION COUNCILS & VILLAGES
 PUNJAB SIND NWFP + FATA BALUCHISTAN AZAD JAMMU & KASHMIR PINA ISLAMABAD

DIVISIONS	8	3	5	4	-	-
a) DISTRICTS	32	15	13 + 0	18		
b) TEHSILS					4 + 3	1
UNION COUNCILS	76	73	61	94	13 + 12	-
	2367	572	562 + 6	315	129 + 105	11
VILLAGES	25079	5900 68000	8703 + 308	7400	625 + 625	20)
Population	55	22	15 + 0.5	5	2.0 + 0.5	0.5
Rural: URBAN RATIO	23 37 :27	57:43	85:15	84:16	93:7	95:5.
HOSPITALS	230 7	140	138	35	9 + 18	2
MCHS/R.H Centres	514	337	22	74	21 + 13	6
Dispensaries/BHU'S	2134	1102	900	335	284 + 97	10

SCOPE OF WORK

SHORT TERM CONSULTANCY IN DRUG SUPPLY MANAGEMENTLEVEL OF EFFORT

1 Pharmaceutical Supply Management Specialist for 4 Person Weeks

START AND END DATES

May 15 -- June 14, 1987

JOB DESCRIPTIONFIRST ORDER OF BUSINESS

This consultancy is a follow up to an August/September 1987 consultancy which produced a report containing 20 recommendations for improving the management of Pakistan's public sector DRG supplies. As the first order of business, the consultant will meet with appropriate NIH staff and make a preliminary review of the status of each recommendation. He will then prepare for the Director/NIH a memorandum indicating for each recommendation what follow up action has taken place (if any) and what that action has been.

SPECIFIC RESPONSIBILITIES

Based on the assessment contained in the August/September report, NIH has identified STORAGE AND DISTRIBUTION, QUALITY CONTROL AND INFORMATION MANAGEMENT as priority areas for program problem solving. In each of these areas, the consultant will carry out the activities listed below.

STORAGE AND DISTRIBUTION

1. Excessive DRG stocks at provincial and district levels was identified as a major problem. The consultant will visit a sample of storage points in Punjab, Sind, Baluchistan and North West Frontier Province to determine whether or not this problem is still wide spread.
3. During these visits, the consultant will estimate each site's optimal for DRG and drug storage space. Next, he will compare existing storage conditions with optimal needs and make an assessment of the adequacy of existing storage conditions. Finally, for cases where storage conditions are found to be inadequate, he will specify the reasons. For example, is the total amount of space available for drugs and medical supplies not sufficient? Is available space quantitatively sufficient but in poor repair? Is available space qualitatively and quantitatively sufficient, but poorly utilized? Would space for storing DRG be adequate if smaller quantities were supplied at more frequent intervals? On the basis of answers to these

questions, the consultant will propose a strategy for upgrading ORS storage conditions. Likely elements of such a strategy will be measures for using existing space more efficiently, renovation of existing space and construction of new space, rationalization of delivery intervals and stock levels and training in stock management. The consultant should also provide a protocol for carrying out such additional surveying as may be necessary to provide NIH and AID with the information required for incorporating this strategy into future project planning.

4. Poor coordination of distribution of ORS from district level storage points to clinical facilities was identified as a major problem. This resulted in over stocking in some facilities and under stocking in others. The consultant will assess the extent to which this is still a problem and propose the procedures that must be implemented in order to achieve adequate coordination or distribution of stock from provincial through district storage points and on to clinical facilities. Specifically, the consultant will prepare a detailed set of guide lines covering the following points:

- * At each level of the system who is responsible for receiving, storing and issuing ORS to the level below? Who is responsible for arranging transportation?
- * Specify the forms and procedures necessary for receiving, safely storing and issuing stock.
- * Provide criteria for determining minimum and maximum stocks for each level of the system.
- * Provide formulas for estimating future ORS needs for each level of the system.

Finally, the consultant should propose a strategy for implementing the guidelines. The strategy should cover such points as pretesting forms and procedures, training personnel in their use, implementation costs and implementation schedules. It is assumed that the information required to carry out these tasks may be gathered during the program of site visits planned for reviewing ORS storage conditions.

IMPROVED INFORMATION MANAGEMENT

1. For work to be carried out in this area, the supply management consultant will work closely with consultants in MIS. The primary role of the supply management consultant will be to define information needs and design and propose the ORS supply management information system. The MIS consultants will be responsible for creating the computer basis for improved ORS information management and integrating it into the overall Child Survival MIS.

2. The August/September report identified lack of information on

stock and offtake/dispensing at different levels of the system as a major obstacle to rational procurement and distribution of ORS. To contribute to the development of viable approach to ORS supply information management, the supply management consultant will propose an MIS based on answer to the following questions:

- * What forms and procedures are there already in place that provide information on procurement, storage and distribution of ORS (no matter how inadequate)?
- * For each level of the system what procurement, requisitioning and distribution decisions have to be made? Who is (or should be) responsible for making them? What information is required for making them? At what points in time do the decisions have to be made?

It is assumed that information to answer these questions may be gathered during the program of site visits planned for reviewing ORS storage conditions.

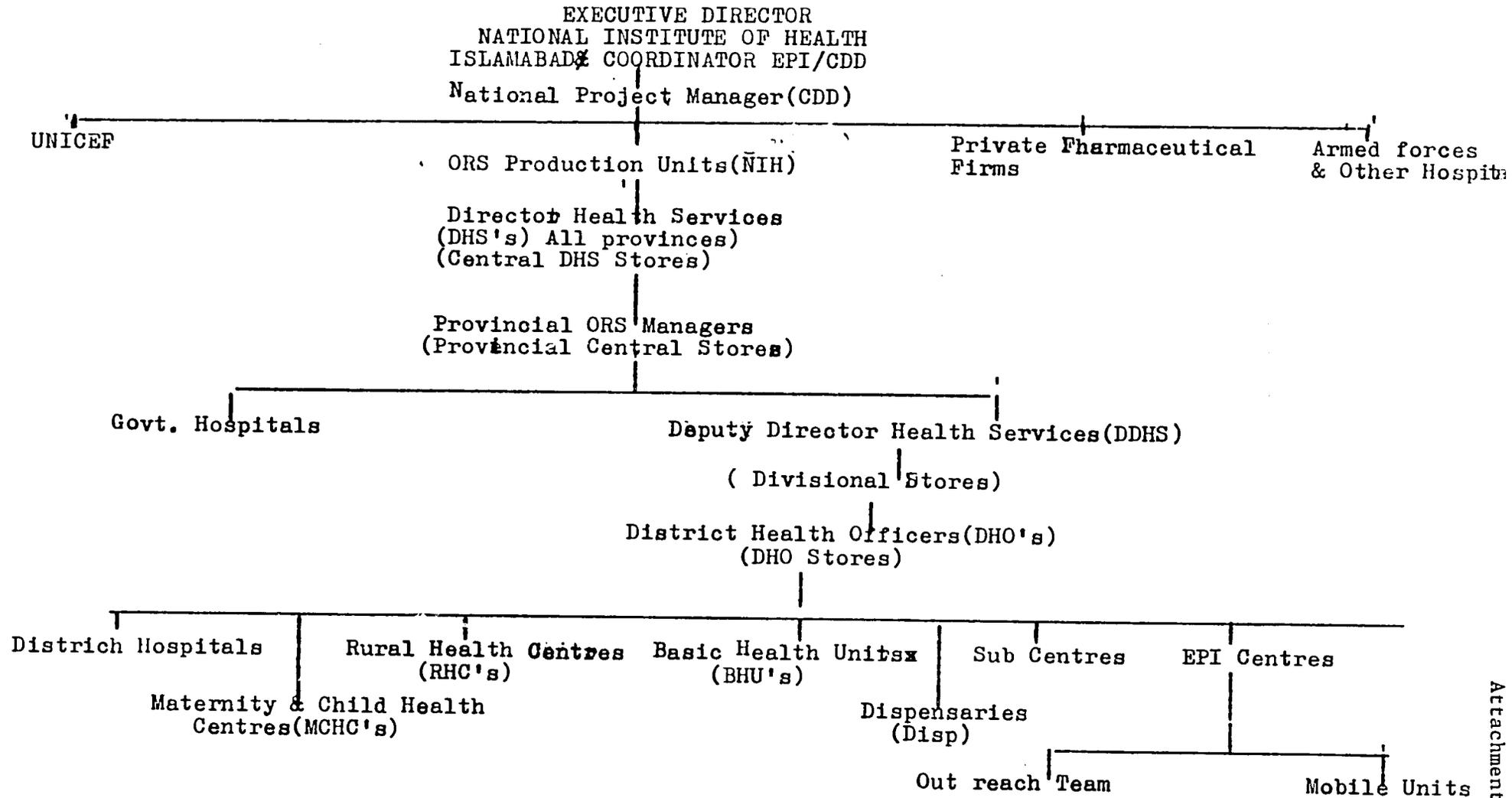
QUALITY CONTROL

1. The objectives of the quality control element of the ORS supply management consultancy are limited. The consultant is being asked at this time only to document current norms and procedures relating to quality control. Towards this end, answers the following questions should be provided:

- * When ORS procurement contracts are arranged, what measures are taken to assure that the provider will deliver a quality acceptable product? For example, does the government of Pakistan have procedures for prequalifying manufacturers? Are certificates of good manufacturing practices required? Are such certifications product specific? Or do manufacturers receive blanket certification for all products turned out at a certain plant?
- * When providers deliver ORS to public sector storage points, do recipients take any measures to check the quality of the product? Do protocols exist for sampling batches of ORS received? Do regulations and procedures exist (in theory or in practice, anywhere in the public health sector) for returning unacceptable pharmaceutical products to providers/manufacturers? What laboratory analysis arrangements for drug quality control currently exist in the public sector? "In house" capacity? Contracting to private laboratories?

C D D - PAKISTAN

ORS - PROCUREMENT & DISTRIBUTION SYSTEM THROUGH GOVT. HEALTH FACILITIES.



62

CDD INFORMATION SYSTEM

1. SENTINEL REPORTING SYSTEM

System to include 23 teaching hospital Diarrhea Training Units (DTUs), 8 DTUs in other Divisional hospitals, 4 Provincial CDD program offices, and the national CDD program office at the NIH (Islamabad): TOTAL 36 UNITS

Description:

A sentinel reporting system based at the DTUs would provide:

- data from every division
- more accurate and consistent data than a routine health information reporting system
- more rapid response
- an estimate of the impact of community health education from the proportion of severely dehydrated cases being seen at these large referral hospitals

Each reporting unit would have a half-time secretary (the other half-time would be used to support the training activities of the DTU). The secretary would be responsible for compiling the data each month and sending it on time.

Data from special clinical forms used for each patient with diarrhea would be compiled and sent. Data would include the following indicators:

- age and sex
- weight
- nutritional status
- vomiting frequency in 24 hours previous to adm
- duration of diarrhea
- previous treatment
 - home fluids
 - ORS
 - drug
- degree of dehydration
- diarrhea diagnosis

- other diagnoses
- complications of diarrhea
- treatment given
 - fluid treatment
 - IV yes/no, # liters given
 - ORS yes/no, volume given
 - feeding treatment
 - breastfeeding
 - other (type)
 - drug treatment
 - antidiarrheal
 - antibiotic
- duration of hospital stay
- outcome

Computerization of the system is recommended to motivate DTU directors, to enhance completeness of reporting, and to speed analysis at every level. The availability of a computer will allow the DTUs to carry out word processing also, which will enhance their ability to provide up to date teaching materials to trainees and medical students. The national workshops would include training in the computer skills needed to report data and do wordpreprocessing. The system does not depend on computerization, however, and can be done manually.

Training modules developed by consultants would be used to train DTU/sentinel unit Directors and Secretaries at national level. Each unit would then conduct a local workshop to train ward staff and clinicians in correct form completion.

Supervisory visits would help to ensure correct completion of data forms as well as correct case management techniques. Quarterly meetings of DTU directors, at which reports from the units would be discussed, will help to ensure prompt reporting and encourage attention being paid to the data which is being reported.

A national level data analyst would be provided to prepare regular analytic reports and statistical analysis as appropriate.

A tentative buidget is attached.

2. ORS LOGISTICS INFORMATION SYSTEM

3. SPECIAL CLINICAL CDD REPORTING

4. ROUTINE BASIC HEALTH SERVICES CLINICAL REPORTING

COMPONENTS	ESTIMATED BUDGET 5 YEAR
- Computer, printer, voltage stabilizer, software, supplies, maintenance	144,000.
- office equipment and supplies	36,000.
- clinical forms	5,000.
- secretary each unit - 1/2 time on sentinel reporting activities (other 1/2 salary from training budget) @ \$75/mo (\$150/mo (fulltime) at provincial and national levels)	175,500.
- development of training modules for secretary, staff (completion of forms), sentinel unit directors	25,000.
- training workshops at each SU (by SU director)	3,100.
- supervisory visits to each SU quarterly @ \$25/visit	15,500.
- quarterly provincial meeting	31,000.
- national course/workshop for SU directors - training of trainers, monitoring, computer skills	20,000.
- national course/workshop for SU secretaries	20,000.
- national data coordinator	50,000.
- technical assistance - 7 mo	84,000.
- 2 mo startup	
- 1 mo per year X	
	<u>608,000.</u>

63

PRITECH Plan for Pakistan

In support of Pakistan's newly intensified CDD program, PRITECH has and will provide a combination of short-term and long-term technical assistance during the period January 1987 through September 1988.

Planning:	<u>Weeks</u>
- preparation of training strategy - 4/87	1
- review of USAID Child Survival strategy - 4/87	-
- preparation of USAID Child Survival project paper - 9/87	4
- national review and replanning - 11/87	1
Training:	
- Diarrhea Training Unit review and workshop	1
- detailed national and provincial training planning	4
- medical education workshops and curriculum development	4
- DTU curriculum development (for medical officers and paramedics)	4
- monitoring and field visits to DTUs and medical schools	2
- development of private sector training program	2
- training inventory-design and implementation	8
ORS Logistics:	
- review of storage and distribution	4
- development of information system and ordering procedures	4
- quality control of ORS	1
- private sector distribution	2
- community distribution	2
Communication:	64
- leaflet development and testing	
- development and testing of training module for use of leaflet	
- radio spot development and testing	
- assessment of D.J. Keymer materials	
- review of and analysis KAP and other studies	
- planning for implementation oversight, and review of ORS mug and plastic bag tests	
- communication review and planning	

Weeks

Information System:

20

- sentinel system design, implementation, and testing
- special clinical reporting system
- design of sentinel system workshops

Program management and administrative support:

- | | |
|--|----------------|
| - local physician as technical program assistant | 60 |
| - PRITECH representative full time | 78 |
| - monitoring visits | 4 |
| - secretary | (local salary) |

Other costs:

- equipment and supplies (computer, furniture, etc.)
- office expenses
- travel

CONTROL OF DIARRHEAL DISEASES

Pictorial leaflet printed and distributed	June 1987
PRITEC TA for KAP Survey Report	June 1987
PRITECH Assistance to ORS Supply System	June 1987
PRITECH short term advisor (to stop gap until WHO advisor is identified)	June-Aug 1987
Supply Mgt. Information System ready for review	September 1987
D.J. Keymer media audience tested	September 1987
Evaluation of test for standard ORS mixing containers	September 1987
Public info programs revised according to KAP and audience test results	Oct-December 1987
Inventory of physicians training	Aug-October 1987
Plan for training private practitioners	October 1987
Work on CDD curriculum	November 1987
DTU development workshop	December 1987
Proposals from each prospective DTU	December 1987
Observation visits	January 1988
Review of proposals	January 1988
Use of pictorial leaflet by commercial companies	January 1988
CDD National Program review	January 1988
Sentinel Reporting System Workshop	February 1988
Order DTU commodities	February 1988
Antidiarrheal drugs communications campaign	March 1988
Open 10 DTUs - first course	March 1988
TA for research in DTUs	March 1988

Contract for private physician training evenings	November 1988
Second course DTUs	April 1988
Follow up of first course trainees	May 1988
Third course DTUs	June 1988
Follow up of second course trainees	June 1988
Fourth course DTUs	July 1988
Audience research for anti-drug campaign	July 1988
Follow up of third course trainees	August 1988
Fifth course DTUs	September 1988
Follow up fifth course trainees	October 1988
Annual CDD training working/planning meeting	November 1988