

Glimpse

international centre for
diarrhoeal disease research, bangladesh
NEWSLETTER

Volume 3
Number 1
January 1981



Participants introducing themselves at the Inter Regional Training Course on Diarrhoeal Diseases held in Dacca from 8-20th. December, 1980.

INTER-REGIONAL TRAINING COURSE

The inter-regional training course on diarrhoeal disease organised by the WHO and ICDDR,B was opened on Monday, December 8th by Prof. M A Matin, Minister for Health and Population Control at the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B).

The objective of the course was to increase the competence of participants in their ability to train others on management of diarrhoeal diseases to support the national programmes on diarrhoeal disease control in their respective countries.

Prof. Matin said that a significant effort will be needed to train manpower to control the diseases. He recalled that the Cholera Research Laboratory now ICDDR,B had, during its 20 years history had brought in many new ideas in the management of diarrhoeal disease.

He observed that this course would definitely help for finding out some corrective measures for imparting appropriate knowledge and skill to the professionals and para-professionals.

The members of the faculty for the course included, in addition to the scientists of the ICDDR,B,

teachers from the Harvard University, The Johns Hopkins University, Kothari Institute of Gastroenterology of Calcutta, world Health Organisation, and the Goteborg University of Sweden.

The WHO has initiated the Global Diarrhoeal Diseases Control Programme and the current training programme is expected to build up a critical mass of physicians, trainers and scientists in the countries where diarrhoea is a major health problem. The participating countries were : Burma, China, Fiji, Indonesia, Laos, Pakistan, Philippines, Sri Lanka, Thailand, Vietnam and Nepal.

A telegram stating, "Cholera with all ferocity has broken out in Ulipur. Already 10 persons are dead....." came to ICDDR, B.

After clearance from the Government of Bangladesh a medical team from ICDDR, B consisting of three doctors, left for Ulipur, a small (236 sq. miles) **thana** (an administrative unit) in Rangpur district on October 31, 1980. Though incidences of diarrhoea were equally frequent, the number of deaths came down from 41 to 6 per 100 cases, after the team's arrival.

The team met the Thana Health Administrator (the local Government Health Authority) and the Circle Officer (the Govt. Administrative Chief) and chalked out a programme for determining the extent and severity of the outbreak in order to promptly prevent deaths. Though there is a Thana Health Complex providing treatment, no diarrhoea cases had reported there. Under the THA (Thana Health Administrator) there are 53 Government Health Assistants (GHA) and 21 staff of the Health Complex. The Family Planning unit of the thana consists of 7 Family Welfare centres and 121 staff which includes Family Welfare Workers (FWW). These workers were trained to prepare and administer oral rehydrations solution and collect rectal swabs (RS). They were immediately sent to their respective areas in the villages to give treatment and report diarrhoeal cases. In addition, they collected rectal swabs to verify the cause of diarrhoea. As soon as any active case was reported, a member of the medical team went to examine the case, manage it with ORS/or tetracycline, obtain RS from cases and contacts and collect environmental specimens.

CASE FINDING

The incidence of diarrhoeal cases were more in the unions located on the banks of the river Teesta.

Out of the 123 cases of diarrhoea 37% were male and 63% were female. Females of all ages except 0-2 years group had a significantly higher attack rates than males ($p < .01; \chi^2 = 9.22$).

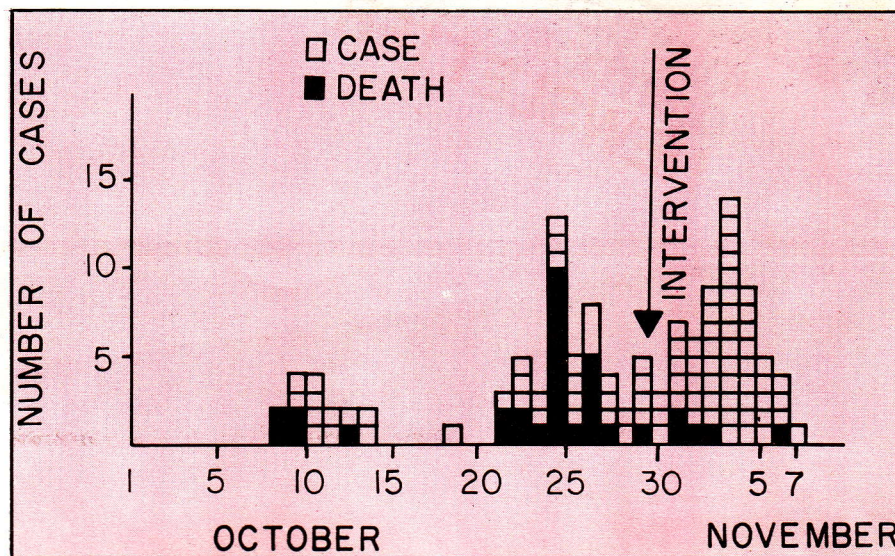
Most affected in both sexes were persons aged between 20-39 years.

It is clear from graph I that there was a clustering of cases during October 9-14 before reaching the two peaks on October 24 and November 3.

AN OUTBREAK OF CHOLERA IN ULIPUR BANGLADESH

were the most vulnerable group. Due to the lack of regular reporting detection of the outbreak was delayed.

Reporting deaths should be routine and regular, once reported, it should be checked by the Thana Health Workers. Deaths especially in adults within 1-2 days of onset of diarrhoea with



Graph 1 : Incidences of cholera in Ulipur between 1st. October to 7th. November 1980. The arrow indicates the medical team's arrival.

LABORATORY METHODS

Rectal swabs were placed in Carry-Blair media or Bile peptone broth and brought to Dacca for plating on TTGA media within 9 days. All negative plates were cultured for salmonella on MacConkey agar. All environmental specimens were collected in triple strength bile peptone and similarly plated.

Out of 24 cases cultured within 1 week, 10 yielded *Vibrio cholerae* serotype Ogawa, 1 non agglutinating vibrio and 1 shigella flexneri.

Out of the 17 community contacts cultured 1 yielded *Vibrio cholerae*. Out of the 5 family contacts of 1 positive index case, 1 yielded positive isolation. All were sensitive to tetracycline.

CONCLUSION

Though the Thana Health Complex records did not show any outbreak, it was clear from the findings of the Medical Team that there was positive evidence of a cholera outbreak in Ulipur. Until 7th November, there were 34 deaths and 84 survivors from some form of acute watery diarrhoea. Most of the deaths were within 1-2 days of attack of diarrhoea and vomiting, females aged 20-39

vomiting should alert the health personnel of a possible outbreak of cholera. An intensive surveillance should start immediately, field personnel should be alerted. Extra help if needed should be mobilised.

Local health personnel should be trained to use the Oral Rehydration Therapy to combat an emergency. They should also have the basics of health education to take preventive measures. The Thana Health Administrator should be able to coordinate all activities to combat an outbreak. Tetracycline or furazolidone should be used and intravenous solution stocked in areas where such epidemics are likely to occur.

AN OUTBREAK IN TANGAIL

After report of an outbreak of diarrhoea was received from Tangail, a microbiology technician was sent out to determine the causative organism. Out of the nine rectal swab (RS) collected, six were cholera positive. Apprehending an outbreak of cholera, a medical team from the ICDDR, B consisting of an epidemiologist, physician, laboratory assistant and a male nurse was sent on 11th November.

NEWS SNIPPETS



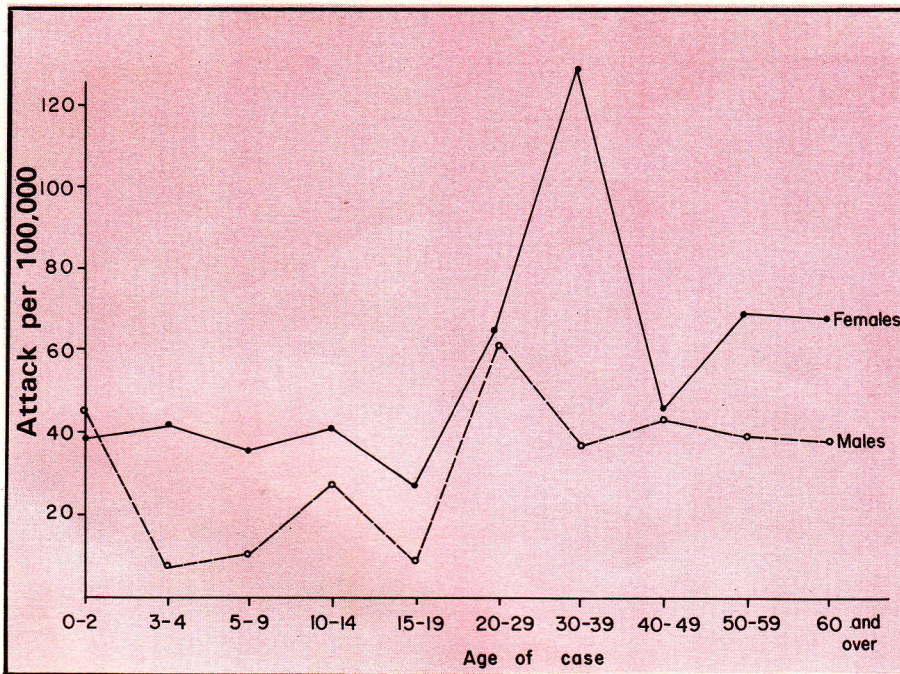
Mr. Michael Scott, the High Commissioner for United Kingdom in Bangladesh signed the Memorandum of Understanding signifying the commitment of his government to participate with the activities of the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) on November 4, 1980. U K is the 26th country to sign the Memorandum of Understanding.

The U K Government has been providing financial and technical assistance to the former Cholera Research Laboratory since its inception in 1961 and in August 1980 made a contribution of £110,000 to the ICDDR,B for the year 1980-81.



Mr. Sinnighe Danste, the first Ambassador of Netherlands in Bangladesh visited the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) on November 7, 1980. He was taken around the Centre's facilities. Later he had a meeting with the Scientists and Senior Members of the Staff. Dr. William B Greenough Director, ICDDR,B briefed him on the activities of the Centre.

The Ambassador showed keen interest in the activities of the Centre, and hoped that the Netherlands would be able to participate with ICDDR,B in the near future.



Graph II : Attack rate of gastroenteritis in Ulipur by age and sex between 1st. October & 7th. November 1980.

The team met the local Government Health Department Officials, discussions with them revealed that out of the 36 cases reported till 10th November, 11 had died (30.5%). None of the patients had come to any of the health facilities for treatment. Most of the cases were reported from 10 villages in 4 unions.

The Medical Team from ICDDR,B visited the affected villages on 11-12 November and came across 5 new cases from two additional villages, who yielded *Vibrio cholerae* from RS.

The local Field Health Personnel managed all the cases with ORS except two, where additional therapy by the ICDDR,B team was provided. This proved effective and served as practical training for the local field personnel.

A sporadic outbreak of cholera ensued in the five unions of Tangail and none of the cholera cases were reported to the local treatment centres. There were eleven deaths due to cholera before ICDDR,B went to Tangail. None thereafter; the local health authority had enough stock of I.V. and oral fluid, medicines, manpower. A refresher course for the health personnel was identified. The ICDDR,B team conducted a training session for all available health personnel.

The Civil Surgeon organised a follow-up team and re-organised the surveillance for case detection. ICDDR,B posters and leaflets on oral rehydration was supplied to the local health authorities for distribution among the villagers.

TRAINING MATERIALS TO BE COORDINATED

A committee for coordination of Training Materials Development has been formed with representatives from ICDDR,B, WHO, UNICEF, Government of Bangladesh and several voluntary agencies based in Bangladesh.

This committee would collect all available health educational training materials, examine, alter or modify as the situation demands. New materials and different training modules to suit particular situations would be developed also. This committee would be able to recommend to Government and other Organizations, proper health training programmes and materials on request.

Those who have any training materials related to health education are requested to send it to the Secretary, Committee for Coordination of Training Materials Development at the following address :

Training Coordinator
ICDDR,B
G.P.O. Box 128
Dacca 2

PUBLICATIONS

1. Hours of Onset of Cholera Classical and El Tor and Diarrhoea/*Moslemuddin Khan. August 1980. (Scientific Report No. 39)*

The hours of onset of 983 classical cholera and 1460 acute diarrhoea cases treated at the Treatment Centre of the Cholera Research Laboratory (Now ICDDR,B) during 1964 and 1965 and 1413 El Tor cholera cases and 801 acute diarrhoea cases treated in the same Centre during 1975 to 1977 were analysed.

The analysis shows that nearly 25% of all cholera cases and 20 of all diarrhoea cases had their time of onset in the early hours the morning between 3-6 a.m. None of the other time segments had such a high onset rate. This pattern of onset has considerable epidemiological significance. An individual can carry infection a long distance during the day before getting an attack during the early hours. This pattern of the hours of onset may have some relationship with physiochemical property of gut or host-parasite relationship which needs further exploration.

2. Socio-economic Differentials in Mortality in a Rural Area of Bangladesh/*Stan D'Souza, Abbas Bhuiya, Mizanur Rahman. November 1980. (Scientific Report No. 40)*

This paper examines the age specific mortality differentials of Matlab Demographic Surveillance area for 1974-1977, by socio-economic variables of the households. SES data from the 1974 census are used-classified on the basis of education, occupation and ownership of articles. Due to some matching problems of infant deaths with the household socio-economic variables, analysis on infant mortality was not covered in this paper. It is observed that mortality for all other age group is inversely related to SES status—higher levels having lower mortality rates. Among the various criteria, "education of mother" shows the greatest statistical significance.

ICDDR,B BOARD MEETING HELD



The third meeting of the Board of Trustees of the ICDDR,B in session.

The third meeting of the Board of Trustees for the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) was held in Dacca from 1-5 December, 1980.

During the five day programme, the Board members reviewed the

scientific, training and extension programme, financial regulations and the programme for resources development. The budget for 1981 was approved. The Board also reappointed Dr. WB Greenough III Director for a period of three years from 1st July, 1980.

LETTER TO THE EDITOR

SIR,—Thank you for having put my name on the mailing list of your esteemed newsletter which I read with interest.

You may perhaps consider publishing in one of your next issues a facsimile of our new label for oral rehydration salts which we have jointly developed with experts from WHO.

H. Louis Shapiro
Chief, Supply Specifications
Section
UNITED NATIONS CHILDREN'S
FUND (UNICEF)
United Nations
New York
U.S.A.

unicef

ORAL REHYDRATION SALTS

FOR ORAL TREATMENT OF DEHYDRATION ASSOCIATED WITH DIARRHOEA

Ingredients:	Glucose anhydrous, BP	20.0 g
	Sodium chloride, BP	3.6 g
	Sodium bicarbonate, BP	2.5 g
	Potassium chloride, BP	1.5 g

Net wt.: 27.5 g Excipient: 0.02% Aerosil-200

PREPARATION OF SOLUTION: Dissolve entire contents of packet in one litre of drinking water.

DIRECTIONS FOR USE: Unless otherwise instructed by a physician, drink a volume of ORS solution equal to the volume of stool passed or as much as thirst demands.

The normal range for amounts consumed is:

Age	Volume in 24 hours
below 6 months	1/4 to 1/2 litre
6 months to 2 years	1/2 to 1 litre
2 years to 5 years	3/4 to 1 1/2 litre
over 5 years	as desired

Continue feeding, ESPECIALLY BREASTFEEDING, once rehydration complete.

Storage: Keep in a dry place out of direct sunlight.

MANUFACTURERS KBI BERLIN · BREMEN · W. GERMANY

CODE 16-61-06
Mfg. Date
Batch No.

EDITORIAL BOARD

Member : Dr. Shahjanah Kabir, Dr. Ayesha Molla, Dr. L N Mutanda, Dr. Md. Yunus, A K Azad, Makhilsur Rahman
 Editor-in-Chief : Dr. K M S Aziz Associate Editor : Shereen Rahman Design & Photography : Asem Ansari
 Published by Dr. K M S Aziz, for and on behalf of the International Centre for Diarrhoeal Disease Research, Bangladesh G. P. O. Box 128. Dacca-2, Bangladesh Photocompose and Printed by Eastern Commercial Service Limited Dacca Bangladesh.