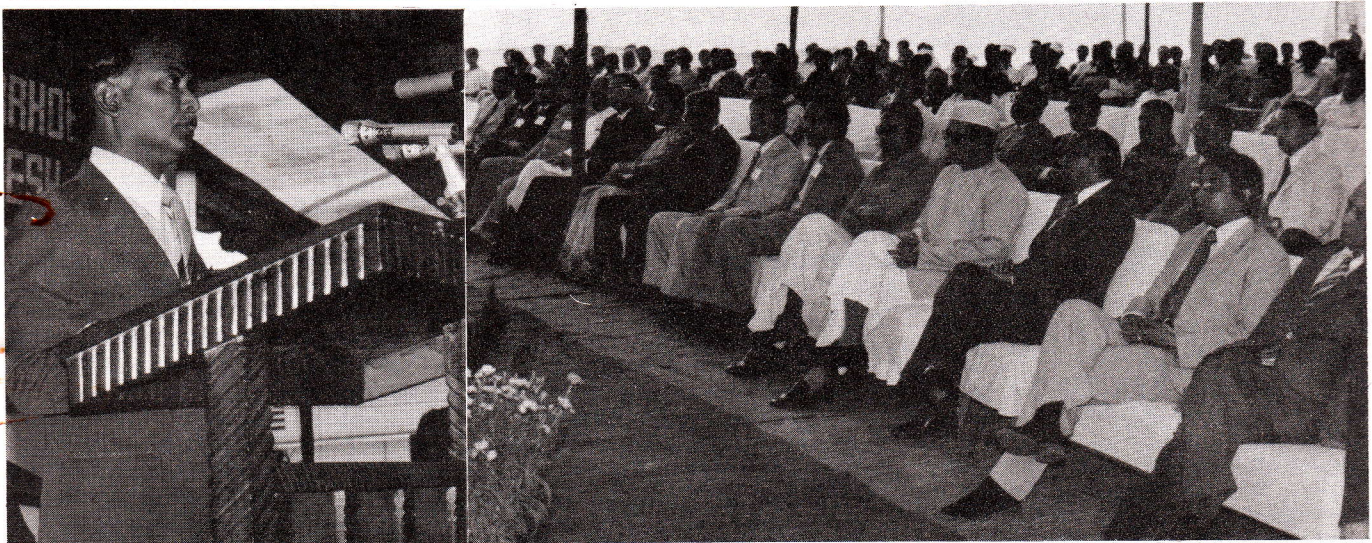


Glimpse

international centre for
 diarrhoeal disease research, bangladesh
NEWSLETTER

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President Ziaur Rahman addressing the gathering at the foundation stone laying ceremony of the new building for the ICDDR,B.

FOUNDATION STONE LAID BY PRESIDENT ZIAUR RAHMAN

President Ziaur Rahman of Bangladesh laid the foundation stone of the new building of the International Centre for Diarrhoeal Disease Research, Bangladesh on 18th February 1981. The new building will be erected within the national health complex, adjacent to the Centre's present building, on four acres of land donated by the Government of Bangladesh. Phase I of the construction expected to be completed by 1982, will house the research facilities and two hospital wards; one residential and the other for outdoor patients.

Before laying the foundation stone, the President addressed a gathering of members of the diplomatic corps, high Government

officials and the staff of the ICDDR,B. He said that the expansion of the ICDDR,B is an excellent example of cooperation among developing countries and will successfully meet the health needs of many developing countries. He outlined the threat of diarrhoea in the world, especially in the developing countries, and noted with happiness the contribution of ICDDR,B to the management and control of the diseases through the joint efforts of the various countries that are participating in the Centre. President Zia expressed his hope that the research results of the Centre's scientists now working at the Centre, who currently represent 12 different countries, will be utilised "for the

welfare of the human race."

Professor M.A. Matin, Minister for Health and Population Control and a member of the Centre's Board of Trustees, also spoke on the occasion, saying that the Centre, with its institutional and operational research, is a service-oriented organisation. He hoped that the knowledge gained at this Centre will cross all geographical boundaries and help mankind as a whole.

Mr. Jehan Raheem, the acting Resident Representative of UNDP in Bangladesh, said that to complete Phase I of the new building to house the Centre, U.S. \$1.5 million will be needed, of which \$562,000 has been donated from the OPEC

(Contd. on page 3)



Dr. Crisanta De Joya Agregado presenting the country report at the Inter-Regional Training Course.

In the Philippines, diarrhoeal disease is the leading cause of death among children under 5 and comes second only to respiratory infections. Dehydration is the major cause of diarrhoeal deaths. If we can prevent dehydration, undoubtedly most deaths can be averted.

I firmly believe that there is hardly any developing country that do not have one or more programmes for the control of diarrhoeal diseases. A plan of operation formulated for the National Control Programme of Diarrhoeal Diseases in Philippines would be an integral part of primary health care. The overall objective as formulated by WHO is common, to reduce the mortality of diarrhoeal and related diseases with wide spread implementation of oral rehydration and improved feeding practices.

The Philippine Government with the collaboration of WHO conducted field studies on the use of Oresol in health centres and homes; report received from the study was encouraging, so the national programme was developed. The urban part of the study was conducted in homes with 464 children suffering from diarrhoea Oresol was distributed through health centres where the patients were examined by the health centre physicians. The physicians discussed with the mothers the importance of the treatment and where necessary followed

Country reports presented by the participants at the Inter-regional Training Course are edited for our readers. This month we are presenting the report from Philippines by Dr. Crisanta De Joya Agregado, Chief, National Children's Hospital, Philippines.

COUNTRY REPORT

REPUBLIC OF THE PHILIPPINES

up cases in the homes. The physicians and the assistant health workers were responsible for collecting the data.

Seven villages were selected for the rural study. Local officials were involved in order to get the support of the villagers. Villagers selected their own peers for the distribution of Oresols, who were given basic training by the project staff. In both studies Oresol was found to be highly acceptable. The mothers observed that there was a remarkable improvement in general state of health and appetite of their children. Mothers also realized the value of continued feeding during diarrhoea in both studies. The investigators observed a significant decrease in the morbidity and mortality rates. They attribute the success to the full cooperation of the Oresol deliverers. The investigators were confronted with a problem i.e. to find an easily available measuring device. It was found that practically all homes had empty local beer bottles and the empty container of a popular brand of coffee, it was decided to use these containers for measuring.

Encouraged by these results WHO UNICEF, and the Ministry of Health, sponsored a 2-day national seminar workshop, where the value of oral rehydration therapy was discussed at length. In order to monitor and coordinate the different national pilot projects a four member national team was set up. However, due to the expansion of the programme, coordination became a problem especially for gathering data.

As Chief of the National Children's Hospital, my role in the

National Diarrhoea Control Programme is to be able to convince the medical staff to use oral rehydration therapy. At the beginning, when we were not so much involved in this programme we treated all dehydrated patients with I.V. fluids. However, at present we are combining the use of I.V. and oral rehydration therapy. I have observed that we are now using I.V. fluids only for severely dehydrated patients, followed by oral rehydration. In future our purchases of I.V. fluids and I.V. sets will go down by 50%-60%.

Management of acute diarrhoeas depends upon the stage of dehydration.

(1) *If there is no dehydration*-we try to prevent dehydration by giving oral rehydration therapy in the Out patient Department, and advise mothers to continue feeding.

(2) *If the child comes in with diarrhoea and dehydration*-the plan of action is to treat the dehydration and prevent further dehydration and allow mothers to continue feeding the baby, especially breastfeeding. The objective of treatment is to match the output of stool and vomitus already lost by oral rehydration fluids.

(3) *In case of diarrhoea and severe dehydration*-the objective is to save the child by giving I.V. fluids as rapidly as possible especially in poor circulatory status and when persistent severe vomiting is present. The use of antibiotics depends on the presence of the causative organism. In viral diarrhoea antibiotics are not given except when there is danger of systemic infections. Abuse of antibiotics can lead to the development of an abnormal flora in the gut which in turn can aggravate or even cause chronic diarrhoea. The only time antibiotics are needed is when a causative organism has been recovered from the stool by culture or when a patient has a proven bacterial infection. Anticholinergics have so many potentially dangerous side effects that we seldom use it.

In the Philippines there are 12 regions. The Minister of Health has appointed 12 Regional Health Directors under whom are the provincial and city Health Officers who are in-charge or the health care delivery system in the city or Provincial Hospitals, Health Centres; Sub-health Centres down to

the rural health unit. In addition we also have a small political unit called the 'barangay' headed by a barangay captain, who is in charge of 500-700 families. All of the above mentioned people coordinate with one another. Surveillance of a disease includes reporting, recording and investigation of diarrhoeal cases and contacts. This is done by the 'barangay' captain and the physician in the rural unit. All of these information are transmitted through proper channels up to the Minister of Health. An epidemiologist, a sanitary engineer and physicians are sent to the community where an epidemic occurs. Investigation to determine the sources of infection, how the diseases was transmitted and the nature and characteristic of the disease are done. Proper control and prevention of disease based on the information gathered are immediately enforced.

During diarrhoeal attacks, mother's first resort is home treatments like rice water alternating with weak tea and sometimes subjecting babies to starvation for a few hours. Some may even bring their child to faith-healers, others may bring their child to the nearest health centres or hospitals.

One of our main concern now is education of parents or the community as a whole. We should develop awareness and teach mothers to prevent and control diseases like diarrhoea. They should be made to understand that they are not only recipients of health care but are partners in the prevention and control of the disease. They should be made to realize and accept the fact that if their children get sick it becomes their own problem and therefore should do something to solve that problem. The community should feel that their own participation in the solution of the problem is very important.

FOUNDATION LAID

(Contd. from page 1)

Fund by the UNDP and \$250,000 by the Government of Saudi Arabia. Efforts are being made to raise the balance of \$800,000. He said that ICDDR,B reflects the world concern over the devastating toll of lives taken by diarrhoeal diseases. The charter of the new Centre was drawn up by the Government of Bangladesh in close consultation with an Interim



Participants of the Inter-regional Training Course on Diarrhoeal Diseases visited the field stations of ICDDR,B. In a village home in Chandpur they saw how mothers made ORS. A doctor in charge of the project explaining how the mothers were trained.

A POSITIVE EFFECT ON THE NUTRITION OF PHILIPPINE CHILDREN OF AN ORAL GLUCOSE-ELECTROLYTE SOLUTION GIVEN AT HOME FOR THE TREATMENT OF DIARRHOEA

Report of a field trial by an international study group

An oral glucose-electrolyte solution administered at home to Philippine children with diarrhoea was associated with a greater average weight gain both during an attack of diarrhoea and over a 7 month period compared with a control group. The longer term effect on weight, relative to a standard, was more pronounced in children who had more than one attack of diarrhoea in the period of observation than in those who had only one attack. The size of the longer term weight gain was 3-5 percentage points towards the standard weight. It is suggested that the vigorous compensation of salt and fluid losses improved children's appetites following diarrhoea attacks.

The international study group comprised: J.C. Azurin, J.J. Dizon, E. Sullesta, J.S. Sumpaico and C.V. Uylangco of the Philippine Cholera Committee; A.M. Angara, R. Azucena and L. Zamora of the Philippine Department of Health; D.C. Arisola, C. De La Rama, I. Henares, L.S. Maestral and R. Suplido of the Regional Health Office and City of Bacolod Health Department, Philippines; H.H.L. Burgess, H. Dhillon, M. Kacic-Dimitri, T. Okuno and A.C. Reyes of the WHO Regional Office for the Western Pacific, Manila, Philippines; N. Hirschhorn, P.J. Rousselle, and T.N. Warner of Management Sciences for Health, Cambridge, MA, USA; and an interdivisional group on diarrhoeal diseases, World Health Organization, Geneva, Switzerland.

— from the *Bulletin of World Health Organization*, Vol. 55, 1977.

International Committee chaired by UNDP and comprised of interested governments, international organizations and private foundations. In early 1979 this committee elected the Board of Trustees which is responsible for the direction and administration of the Centre. He said that the Centre has made excellent progress in the past two years.

Dr. W.B. Greenough III, Director of ICDDR,B said that since its inauguration two years ago, 28 countries and international agencies have extended their support to the Centre. The new

building, he commented, will "serve to link the study of the treatment and prevention of diarrhoea with service to the community. The facilities here serve as the springboard to remote rural areas where the treatment and prevention of diarrhoeal diseases have been linked to primary health care." Scientists and health workers from different countries of the world come here to receive training. He expressed the gratitude of all those associated with the Centre to the Government of Bangladesh for the excellent piece of land and the continuing support to the Centre.

PUBLICATION

1. A Review of Findings on the Impact of Health Intervention Programmes in Two Rural Areas of Bangladesh/*Makhlisur Rahman and Stan D'Souza*, November 1980. (*Special Publication No. 11*)

This paper provides an overview of major health problems in Bangladesh. Besides a detailed analysis of the findings of some selected intervention programmes currently being developed by the ICDDR,B field stations in Matlab and Teknaf are included.

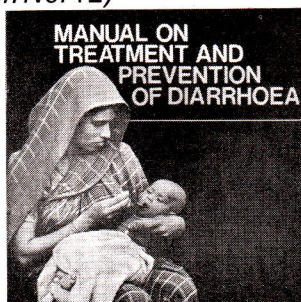
Diarrhoeal diseases account for about one-third of all deaths. Since vaccines are only partially effective and a working network of treatment centres would be beyond the immediate capacity of Bangladesh, a household programme introducing oral therapy packets might be considered a cost-effective approach to prevent deaths from diarrhoea. The findings of the ICDDR,B village-based and domiciliary oral therapy distribution programmes have shown that such an effort will not only ensure wider service coverage, as evident from over 80% use rate (which could be still higher if there were no ICDDR,B treatment centres), but will also substantially reduce the case-fatality rate.

Tetanus neonatorum accounts for about 40% of all neonatal deaths in Bangladesh. The findings of the Matlab maternal tetanus immunization study demonstrated the impact of active immunization of pregnant women on neonatal mortality. However, the impact of such a programme on the overall neonatal mortality rate in the community may not be significant because of the low acceptance rate by pregnant women (33%). From the Matlab experience we recommend that a vaccine campaign should be followed by immunization with tetanus toxoid during pregnancy in the rural areas.

Another major health problem in Bangladesh is high fertility. About

one-third of all female-deaths between the age of 15 and 44 are maternity related. The results of the ICDDR,B maternal child health and family planning programme suggest that substantial demand for family planning services exist provided such demand is offered with a full range of contraceptive methods to meet the needs of individual women.

2. Manual on Treatment and Prevention of Diarrhoea/*ICDDR,B*, December 1980. (*Special Publication No. 12*)



This manual is aimed at the grassroot level worker who will act as a trainer for the ultimate users of Oral Rehydration i.e. mothers and family members of patients.

Attempts have been made to keep the manual as simple as possible without omitting the essential information as far as the subject matter is concerned. Regarding the language used, precautions were taken to minimise the use of technical terms.

The information contained in this booklet is considered to be the minimum set of information for the trainer.

In preparing the manual, thoughts, ideas and practical experiences of many people ranging from paramedics working with diarrhoea patients in the field and in treatment centres, to research scientists on diarrhoeal diseases, have been utilised freely.

This manual has been prepared for field testing. It is expected that an improved manual will emerge

after incorporating the results obtained from field tests.

Everybody using the manual is requested to communicate their views to the Associate Director, Training and Extension, ICDDR,B who will be referring this to an inter-organizational committee, responsible for co-ordinating Educational Materials Development. This committee will also consider other educational materials developed on diarrhoeal diseases and related subjects by other organizations. Bengali version of the manual is in print.

3. Reduction of Neonatal Mortality by Immunization of Non-pregnant Women and Women During Pregnancy with Aluminum-Absorbed Tetanus Toxoid / *Makhlisur Rahman, Lincoln C. Chen, J. Chakraborty, Md. Yunus, A.I. Chowdhury, A.M. Sarder, Shushum Bhatia and George T. Curlin*. January 1981. (*Scientific Report No. 41*).

An analysis of 9,856 live births occurring between September 1, 1978 and December 31, 1979 in a rural area of Bangladesh showed that the neonatal mortality rate of infants whose mother had received two tetanus injections 48-64 months before giving birth was about 15 per 1,000 live births, lower than the rate for infants whose mother did not receive tetanus immunization (78 per 1,000). In contrast, immunization of women during pregnancy (two tetanus injections) appeared to reduce neonatal mortality rates by about one-half and by 70% on days 4-14. One tetanus injection during pregnancy did not provide protection against tetanus neonatorum. A comparison of still-birth ratios showed that the women immunized with two tetanus injections during pregnancy had a significantly lower stillbirth ratio than the unimmunized mothers.

GLIMPSE or any of these publications can be received free. Complete list of publications are available. Write to the Publication Unit ICDDR,B PO Box no 128. Dacca-2 Bangladesh

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