ICDDR,B

BOARD OF TRUSTEES MEETING

NOVEMBER 6, 1995

PROGRAMME

OF THE

BOARD OF TRUSTEES MEETING

4-6 NOVEMBER, 1995

INTERNATIONAL CENTRE FOR DIARRHOEAL DISEASE RESEARCH, BANGLADESH
Mail : ICDDR,B, GPO Box 128, Dhaka 1000, Bangladesh
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CENTRE
FOR HEALTH AND
POPULATION RESEARCH

DRAFT
27/8/95

PROGRAMME

BOARD OF TRUSTEES MEETING

4-6 NOVEMBER 1995

Venue: All meetings will be held in the Sasakawa International Training Centre on the first floor of the hospital building.

Friday 3 November Trustees arrive

Saturday 4 November

8.30 a.m. - 10.15 a.m.	Programme Committee Meeting (open)
10.15 a.m. - 10.45 a.m.	TEA
10.45 a.m. - 12.15 p.m.	Programme Committee Meeting continues (open)
12.30 p.m. - 2.15 p.m.	LUNCH
2.30 p.m. - 3.30 p.m.	Personnel & Selection Committee Meeting (closed)
3.30 p.m. - 3.45 p.m.	TEA
3.45 p.m. - 5.00 p.m.	Personnel & Selection Committee Meeting continues (closed)
5.00 p.m. - 7.00 p.m.	Programme Committee Meeting (closed) (optional)

Monday 6 November **FULL BOARD MEETING** (open)

8.00 a.m. - 8.30 a.m.	TEA
8.30 a.m. - 8.45 a.m.	Welcome and Approval of Agenda
8.45 a.m. - 9.00 a.m.	Approval of Draft Minutes of June 1995 Meeting
9.00 a.m. - 10.00 a.m.	Presentation and Discussion of Director's Report
10.00 a.m. - 10.30 a.m.	TEA
10.30 a.m. - 11.15 a.m.	Presentation and Discussion of Programme Committee Report
11.15 a.m. - 11.45 a.m.	Presentation and Discussion of Finance Committee Report
11.45 a.m.	BREAK

Closed Session of Board Meeting

11.45 a.m. - 12.15 p.m.	Presentation and Discussion of Personnel & Selection Committee Report
12.15 p.m. - 12.30 p.m.	Report from SWA
12.30 p.m. - 1.00 p.m.	Selection of Trustees
1.00 p.m. - 1.15 p.m.	Dates of Next Meeting
	Any Other Business
1.15 p.m.	Closure of Meeting
6.00 p.m.	Reception at Guest House

Tuesday 7 November Donors' Support Group Meeting

APPROVAL OF AGENDA

INTERNATIONAL CENTRE FOR DIARRHOEAL DISEASE RESEARCH, BANGLADESH
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CENTRE
FOR HEALTH AND
POPULATION RESEARCH

DRAFT
23/8/95

1/BT/Nov.95

FULL BOARD MEETING

Monday 6 November 1995

AGENDA

1. Approval of Agenda

2. Approval of Draft Minutes of Meeting held 14-16 June 1995

3. Director's Report

4. Programme Committee Report

5. Finance Committee Report

6. Personnel & Selection Committee Report

7. Selection of Trustee

8. Dates of Next Meeting

9. Report from Staff Welfare Association (SWA)

10. Any Other Business

Note: Papers submitted and discussed in Committee meetings are in the folders for those Committee meetings only.

2/BT/NOV. '95

APPROVAL OF DRAFT MINUTES

OF MEETING HELD ON 14-16 JUNE, 1995

DRAFT 2/BT/Nov.95

MINUTES OF THE MEETING OF THE BOARD OF TRUSTEES, ICDDR,B HELD IN DHAKA, BANGLADESH, ON THURSDAY 15 JUNE 1995

Members Present

Mr. S. Ahmed
Dr. Y.Y. Al-Mazrou
Prof. J.C. Caldwell
Prof. Chen Chunming
Maj. Gen. (Ret'd) M.R. Choudhury
Dr. D. Habte - Secretary
Prof. J.R. Hamilton
Dr. R.H. Henderson - Chairperson
Mr. Md. L. Majid
Prof. P.H. Makela
Mr. J.O. Martin
Prof. F. Mhalu
Prof. Y. Takeda

Apologies

Prof. J. Frenk
Prof. F. Jalil
Dr. M. Law
Dr. J. Rohde

Staff (Agenda 1-5)

Dr. Shameem Ahmed
Mr. Syed Shamim Ahsan
Dr. J. Albert
Dr. K.M.A. Aziz
Dr. A.H. Baqui
Mr. A. Felsenstein
Dr. G. Fuchs
Dr. Kh. Zahid Hasan
Dr. Bilquis A. Hoque
Mr. S.I. Khan
Mr. M.A. Mahbub
Mr. Wahabuzzaman Ahmed
Dr. A. N. Alam
Dr. Fakir Anjuman Ara
Miss J.A. Banfield (Minute Secretary)
Dr. Barkat-e-Khuda
Dr. A. de Francisco
Dr. Rukhsana Haider
Dr. S. Hawkes
Dr. M.A. Khaled
Dr. S. Laston
Mrs. Shamima Moin

Mr. N. Paljor
Dr. J. Ross
Dr. M.A. Strong
Dr. C. Tunon
Mr. G.N. Wright
Dr. Mizanur Rahman
Dr. Nigar Shahid
Mr. K. Tipping
Mr. M.A. Wahed
Dr. I. Zaman

Observers (Agenda 1-5)

H.E. Mr. S.B. Atugoda
Dr. Mehtab Currey
Mr. C. Lenton
Mr. Sk. Ali Noor
Ms G. Ross
Ms A. Slothouber
Prof. J.P. Vaughan
Mr. R. Brown
Mr. V. Kellens
Dr. R.M. Montanari
Mr. B. Proskurniak
Ms F. Shah
Dr. K. Streatfield

The Board of Trustees started the 32nd meeting by electing Dr. R.H. Henderson as chairman to substitute for Dr. Maureen Law who was unable to attend (due to circumstances beyond her control).

Dr. Henderson then proceeded to welcome the Trustees, Donor Representatives, the Director and staff, to the meeting and offered a special word of welcome to the new Trustee, Mr. J.O. Martin.

He said that in addition to Dr. M. Law apologies had been received from Prof. J. Frenk, Prof. F. Jalil, and Dr. J. Rohde.

Agenda 1: Approval of Agenda

The agenda was adopted as presented.

Agenda 2: Approval of Draft Minutes of Meeting held on 21 November 1994

The draft minutes of the Board of Trustees meeting held on 21 November 1994 were approved without change.

Agenda 3: Director's Report

The Director, Dr. D. Habte, on behalf of the staff of the Centre, welcomed the Board members, particularly the new Trustee, Mr. Jacques Olivier Martin. He also welcomed donor representatives to the meeting, and senior staff. Division Directors and staff were introduced to the meeting.

Dr. Habte advised that the Director's Report (document 3/BT/Jun.1995) had been circulated to the Board and to the donor community. He further said that the report to this meeting will consist of

- A brief overview of the activities of the Centre over the last six months by himself, and
- information on fund-raising activities in North America by Mr. G. Wright, Assistant Director, External Relations & Institutional Development.

3.1 Overview of the Activities of the Centre

3.1.1 Visitors to the Centre: The Centre has received visits from three prominent dignitaries in the last six months:

- President of CIDA, Ms Huguette Labelle
- US First Lady, Mrs. Hillary Clinton
- Crown Prince Philippe of Belgium

These visits reflect an acknowledgement of the Centre's important role in the world and Centre management and staff are proud of this.

3.1.2 Research highlights: The Centre's primary activities are in research and during the last six months the Centre's staff have continued to work prodigiously and productively. Highlights are as follows:

a. Studies have been undertaken on novel approaches to the management of diarrhoeal disease which may provide breakthroughs in the future management of children with diarrhoea. For example, short-chain fatty acids (SCFA's) were found to promote healing of colitis in a newly developed animal model of shigellosis. SCFA's were also determined to inhibit colonic water and electrolyte secretion induced by cholera toxin in another study utilizing a rabbit model.

b. A trial to persuade mothers whose young infants were hospitalized for diarrhoea to exclusively breastfeed showed that by discharge from the hospital, 63% of the intervention group (individual counselling) were exclusively breastfeeding compared to only 4% of the control group. Importantly, exclusive breastfeeding was sustained at home (all 33 of 33 infant-mother pairs).

c. Monoclonal antibodies were produced against the enterotoxin of Bacteroides fragilis and the bundle forming pilus antigen of enteropathogenic E. coli. These will help in the development of immunodiagnostic tests against these pathogens.

d. Preliminary analyses of data on genetic fingerprinting of Vibrio cholerae 01 isolates have suggested that epidemic strains may have unique fingerprints that distinguish them from others.

e. The Community Health Division launched an umbrella project, "Action Research and Impact Studies on Community Water, Sanitation and Hygiene Education Interventions", an operations research on improvement of water, sanitation and hygiene practices through community participation. The project has both rural and

urban components and is being undertaken in collaboration with both government and non-government organizations.

f. The BRAC/ICDDR,B Joint Research Project in Matlab developed a conceptual framework to assist in the design of research protocols on the two major objectives of this rural development programme on human well-being. The project underwent a mid-term external review by a 4 member team.

g. The field activities of the Chakaria Community Health Project started during the second half of 1994. The project was reviewed in February by a three member team with representatives from the donors and the Centre.

h. In the Rural MCH-FP Extension Project, the following interventions are being field-tested:

   i. Performance planning and monitoring at the local level;

   ii. Introduction of health assistant register in the national programme;

   iii. Capacity building of district FP-MCH managers through workshop/meeting, training, study tour, networking, and technical assistance;

   iv. Introduction of doorstep injectable contraceptive in Mirsarai;

   v. Cluster visitation approach;

   vi. Strengthening of satellite clinics and combining them with EPI sessions.

i. The Rural MCH-FP Extension Project conducted two "district approach" workshops in Chittagong and another two at thana level in Sirajgonj and Mirsarai, with the MOHFW officials and the project staff. Another workshop to share the experience of the pilot testing of the doorstep injectable contraceptive in eight thanas was conducted in Dhaka.

j. The Urban MCH-FP Extension Project completed the following studies of health and family planning needs in Zone 3 of Dhaka:

i. Qualitative study to identify the family planning service needs of low-parity and newly-wed couples;

ii. Survey of pharmacies and pharmacy staff;

iii. Survey of current contraceptive users who use pharmacies as sources of supply;

iv. Assessment of MCH and family planning service delivery points;

v. Assessment of family planning field workers.

The project developed an Urban Panel Survey (UPS) system in a probability sample of Zone 3 households (n=6,000) as the basis of the Project's monitoring system.

k. DSS produced the 1992 Annual Report, continued processing the 1993 census and preparations for the introduction of a rolling census, completed operations research on split households and prepared the vital event registration forms for 1995.

3.1.3 Training: Dr. Habte acknowledged the improvement in the training activities at the Centre under the new Head of the Training Coordination Bureau, Dr. A.N. Alam.

a. In collaboration with the AIDSCAP Regional Office in Bangkok, Drs. Bateman and Laston conducted a workshop entitled "Workshop for Training Coordinators in the Development and Implementation of HIV/AIDS Prevention Programs for Employees". There were 28 participants, representing 17 NGOs.

b. In addition to further improving course curricula, the Training Coordination Bureau organized: (i) courses for "Training of Trainers" on Clinical Management, Laboratory Diagnosis, and Nursing Management of Diarrhoeal Diseases, (ii) a regional workshop on "Family Planning Programmes for NGOs in the SAARC Region" to

identify effective FP programme strategies to improve management with special emphasis on quality of care.

c. An evaluation was undertaken to assess the impact of the Staff Development Programme during 1991-1993. The evaluation indicated that most staff sent for training returned to the Centre, and the majority of staff who participated in the evaluation have been using the knowledge and skills in their present jobs.

3.1.4 Service: Once again the number of patients attending the Centre's hospitals was high, and showed no sign of decreasing. In both Dhaka and Matlab there is little sign of V. cholerae 0139, although the Epidemic Control Preparedness Programme teams have found areas in the south of Bangladesh where V. cholerae 0139 remains dominant.

The Director pointed out that in April/May 1995 the number of patients was higher than at any other April/May period in the past. The increasing patient load over the years is eroding the Centre's financial stability. The problem is recognised by the Government of Bangladesh and following a visit by the Minister of Finance and the Minister of Health and Family Welfare the Centre received $250,000 for renovations to the hospital, and $250,000 for running expenses.

The Centre has been attempting to address this problem over the last two years, including establishing satellite diarrhoeal treatment centres, contributing to strengthening of urban health care system, etc.

3.1.5 Communication and Dissemination

Dr. Habte reported that a Vitamin A Symposium was held that disseminated the research done at the Centre, with findings that are likely to have policy implications. The Centre continued to work with WHO Geneva particularly in re-examining

the composition of ORS. A joint consultative meeting held in Dhaka confirmed that there was sufficient evidence to support the claim that ORS with low osmolarity may be more effective. A multi-centre trial of this new ORS formula will be held including two trials at ICDDR,B. This decision followed a workshop again held at the Centre to design a common protocol. The book "Matlab: Women, Children and Health" was published.

3.1.6 Others

a. Several new international level staff were appointed: Dr. Shameem Ahmed (Bangladesh), joined as Health Scientist in the Rural MCH-FP Extension Project; Dr. Sarah Hawkes (UK), joined the Matlab MCH-FP Project as Reproductive Health Scientist; Dr. Cristobal Tunon (Panama), joined as Management Scientist in the Urban MCH-FP Extension Project. Other international staff came to the Centre on secondment: Dr. George Fuchs III (USA), from the Louisiana State University, joined as Senior Scientist in the Clinical Sciences Division; Mr. Syed Shamim Ahsan (Bangladesh) from the Population Council joined as Adviser to the Director with specific responsibilities to the MCH-FP Extension Projects; Dr. Henry Perry (USA) from Johns Hopkins University joined as the MCH-FP Program Scientist in the Urban MCH-FP Extension Project; Mrs. Aye Aye Thwin (USA), from Johns Hopkins University joined as Operations Research Scientist in the Urban MCH-FP Extension Project.

Professor J. Patrick Vaughan will join the Centre shortly as Division Director of the Community Health Division. A Communications Specialist and Cost Analyst will join the Centre soon; Dr. Mizanur Rahman has been appointed to the position of Demographer in the Population and Family Planning Division.

b. Dr. Dilip Mahalanabis, Division Director of the Clinical Sciences Division, completed seven years of service to the Centre on January 3, 1995. Dr. Michael A. Strong, Division Director, Population and Family Planning Division will conclude on 30 June 1995 after seven years service. Dr. O. Massee Bateman, Epidemiologist, concluded his service on 31 May 1995. Professor J. Richard Hamilton, Board of Trustees member, undertook his sabbatical leave at the Centre from September 1994 to May 1995.

c. The Centre has recruited a Senior Development Officer for the Centre Fund campaign: Mr. Brent Berwager (previous head of fund-raising at Loyola College in Baltimore) and a Desk Officer, Ms Waimar Tun. Both came to Dhaka for a 3- week intensive orientation at the Centre in January 1995.

3.2 Fund raising activities in North America

Mr. G. Wright, Assistant Director External Relations and Institutional Development, presented the report on fund-raising activities summarised as follows:

3.2.1 In North America staff have been recruited for the Centre's office at the Child Health Foundation (see 3.1.6 c.).
Contacts: A great deal of progress has been made in a short time. Contacts have been made with many of the senior officials at USAID/Washington, and there is broad-based support for making an investment in the Centre Fund to give it a good start. A broad coalition of foundations is being pulled together under the leadership of the Ford Foundation. If these two initiatives yield fruit, the next move will be to use the USAID/foundation funds to leverage corporate donations.

The following have accepted to be members of the Volunteer Committee: Dr. Joshua Lederberg, Dr. John Evans, and Mr. A.K.M. Shamsuddin. Other potential committee members are being considered and approached.

A $60,000 grant was received from American Express for the training of nurses.

3.2.2 Activities in Bangladesh included the following:

Initiating a new internal competitive grants award system to foster PIs' abilities to prepare project proposals.

Preparation of some 13 project proposals (5 funded, 1 rejected, 7 pending).

Reviewing and improving the Centre's communication and dissemination strategies.

Conducting an extensive search of 111 foundations for new funding opportunities.

Preparation of two videos (Centre and Matlab) to promote the Centre and its work.

3.2.3 New contributions have been received from several donors (see Director's Report pages 30-32).

The Chairman thanked Dr. Habte and Mr. Wright for their presentations. Members of the Board had several comments and questions. Some are outlined below, and the Centre's response given, as required:

1. Professor Caldwell commented on the impressive efforts that have been made to maintain present donors and to seek new ones, but was of the opinion that the Centre needs to offer something new and exciting to attract new donors. He believed the Centre has enormous comparative advantage to contribute to major issues which are largely ignored on the world scene. If these important issues are taken up by the Centre they could be of great interest to donors. One such issue relates to follow-up of the Cairo Conference on Population and Development held in September 1994.

A central element at this Conference was the improvement of women's reproductive health. Issues of how contraception may affect prevalence and outcome of STDs and RTIs need to be looked into as well as the management of STDs/RTIs.

The ICPD also argued that the position of women should be improved in terms of education and autonomy, related to changing fertility and the changing health of women and their children. The Centre's Matlab facilities puts it in an ideal position to investigate this.

The lessons from Matlab have contributed to Bangladesh's successful population programme. Bangladesh is one of the poorest countries in the world and yet one of the very few that has a sustained fertility decline. The Centre is in a unique position to examine this very unusual phenomenon and to establish whether it can be replicated elsewhere.

2. Professor J.R. Hamilton applauded the efforts of the Centre to identify new funding sources and the professional approach that has been taken to the campaign. He believed new donors, both corporate and private, want to know what the Centre staff and Trustees are doing in terms of fund-raising and what the Bangladesh community is contributing. Irrespective of the amount, such fund-raising indicates the extent to which the institution is behind the fund-raising campaign.

Dr. Habte indicated that active efforts are being made nationally for contributions to the Hospital Endowment Fund from nationals, staff and others and that further steps are envisioned in the immediate future.

3. Professor Mhalu congratulated the Centre for its achievements and commented that the Centre's Strategic Plan aims at developing solutions to major health and population problems in the world by the year 2000. He went on to say that the Centre will be expected to provide these solutions (e.g. vaccines) and that many will be looking forward to this.

4. Mr. Majid congratulated the Director for his excellent report and the continuous progress in different fields of activities. He said that the Government of Bangladesh is also having difficulty mobilizing development programmes as external financing and foreign aid is declining very seriously at about 20% per annum. The Centre's fund raising efforts in North America and elsewhere should be strengthened in the current competitive and difficult situation, but he doubted the wisdom of having a fully paid office in the USA. He concurred with Professor Caldwell's comments that the Centre should use the opportunity of the ICPD to approach the United Nations Population Fund. Dr. Nafis Sadik may visit Bangladesh and she could be approached then.

Commenting on the number of patients in the Dhaka and Matlab hospitals, Mr. Majid said that even in non-epidemic times there will be an increase because patients are confident in the Centre's services which are not provided elsewhere. He suggested a personal representation by at least himself and the Director to the Finance Minister and the Health Minister to pursue the matter of further assistance by the government to the Centre for the provision of hospital services.

5. Major General (Ret'd) Choudhury congratulated the Director for his report and commented on the great importance of finding more funding sources so that work can also be undertaken to stop the spread of HIV/AIDS in Bangladesh, to establish further diagnostic procedures, and the introduction of safe blood transfusion.

6. Mr. J.O. Martin commented on his field visits prior to the Board meetings saying that the Centre is "people-friendly" and that makes it very attractive. Several of the challenges facing the Centre are linked to the preference of donors for how they wish to help the Centre. He pleaded with donors to understand that the core activities of the Centre are a necessary function and worthy of support. He concurred with Professor Caldwell's comments on the role the Centre can play in following up the commitment of governments to the Cairo Conference declarations.

7. Professor Chen Chunming congratulated the Director on the achievements of the Centre and commented that the future strategy of the Centre in the area of nutrition should now be focussed in developing preventive strategies. She also suggested more effort should be put by donors to coordinate support for priority problems instead of funding individual projects.

8. Mr. Syed Ahmed commented on the excellent working relationship between the Government of Bangladesh and the Centre since 1990. The government's financial contributions to the Centre have increased markedly including a 750% increase in 1992/93. Further ad hoc contributions have been given during epidemic periods and in 1995 for hospital renovation and hospital services. The government is continuing to demonstrate its commitment to the Centre by considering increasing further their contribution to the Centre.

The Centre has assisted the government in a recently concluded nutrition project with the World Bank. The Centre's ECPP project continues to provide assistance to the national diarrhoeal control programme in responding to diarrhoea epidemics throughout the country. The results from the health and family planning programmes at Matlab have been directly translated into national programmes.

Mr. Ahmed commented that with the move into the social sciences area, more eminent social scientists in the field of reproductive health and population and nutrition are needed. Diarrhoea and other health problems continue but diversity is needed. Bangladesh is the poorest country in the world but has a consistent decline in fertility despite severe social economic constraints. An investigation is needed on how this took place given the poverty, illiteracy, culture, etc. of the country.

Donors were then invited for comments or questions:

9. Mr. Cliff Lenton of the European Union commented on his experiences with fund-raising campaigns in the private sector. Bilateral donors often expect to see results very quickly.

10. Mr. Richard Brown of USAID/Dhaka commented on his relationship with the Centre indicating the excellent leadership and technical development activities taking place. He commented further on the important issue of financing and the programmes funded by USAID including the MCH-FP Urban and Rural Extension Projects. The Office of Foreign Disaster Assistance in USAID (OFDA) has been approached regarding using the Centre's experience in Goma to provide training to disaster relief workers. Mr. Brown commented that USAID still supports the core budget of the Centre but the current atmosphere in the US Congress with regard to development assistance is cause for alarm.

11. Ms Gabrielle Ross of the Ford Foundation commented on the Foundation's interest in the Centre's endowment campaign. She said that the cutting edge of the population field now is the challenge of implementing the recommendations of the ICPD. With regard to HIV she stated that the Centre has an important role to play on the National AIDS Committee and other bodies.

12. Ms Fabia Shah, Australian High Commission, commented that the Centre should continue to look for funds in the developing countries which benefit from the Centre's research. A review is needed on the extent to which the research has been implemented at the policy level and down to the field level. She commended the Centre for its efforts to link with international research institutions in developed and developing countries but also recommended that more be done in Bangladesh with research institutions. She agreed that all new projects need to be well coordinated and fit into the broader agenda of the Centre.

13. Dr. R.H. Henderson commented on the Board's concern at the cost of the North America office in view of the budget not being met.

He further suggested that the Centre could follow a WHO pattern of publicizing in the US success stories from the Centre's research using links with the local press. He also suggested that UNFPA could ask the Centre to help the government with its action plan on ICPPD follow-up and funds could be sought from a number of areas. Bangladesh is in a good position to show leadership in the world on fertility and reproductive health.

Concern on emerging infectious diseases has taken the US by storm. WHO is looking at activating sentinels throughout the world to monitor resistance and to look for new epidemics. The Centre can play a role in this.

Dr. Henderson further commented on the implications for the Centre in not meeting its budget. Constant savings are being implemented in staff salaries and emoluments and the gap between the level staff are paid and the local salaries paid by other UN organizations continues to grow. The Centre's policy has been to reduce the staff complement to the minimum required, but the Centre must make a reasonable remuneration to its staff.

14. Dr. Habte responded that all the comments made are useful and would be taken seriously by Centre management. However, it was his opinion that the value of the North America office has been great. It has given the Centre publicity in the donor community in Washington and New York, not just for the Centre Fund but for all the Centre's activities, and positive results have been received in raising endowment.

Following the ICPD meeting in Cairo ten developing countries in Asia, Africa and South America established a "South South Partners in Population and Development". Bangladesh won the bid to house the secretariat of the Partnership and it will be located on the compound of ICDDR,B although maintaining its autonomy. This puts Bangladesh and the Centre in the forefront of population and family planning in the Third World.

Agenda 4: Programme Committee Report

The Chairperson of the Programme Committee, Professor P. Helena Makela, presented the report of the Programme Committee meeting held on Tuesday 13 June 1995 to the Board of Trustees.

The Committee had heard reports from the four scientific divisions and the Training Coordination Bureau, and each report was followed by intensive discussion. The Committee also received the report of the Programme Committee's Review of the Population and Family Planning Division. Highlights from the report are as follows:

4.1 Balance between basic and applied research: This aspect came out clearly in the review of the PFPD. The Extension Projects in this division represent an interface between research and action. Basic research is the necessary balance for continued work and applications on one hand, and applied research to produce practical results and to promote their efficient utilization through policy and programme design on the other. It seems that the Centre has found a very good balance between these two.

4.2 High quality of research: The Committee stressed the requirement of high quality applies equally to the basic and applied arms of research. The ability of a research institution to perform its functions is dependent on the appreciation and recognition of the research it does, and this appreciation must be tested internationally. The importance of pitting itself against international peer review is essential to the Centre. An even higher level of ambition in the choice of journals should be set as a goal.

4.3 The image of the Centre: The Committee stressed that the Centre's accomplishments are such that it could have an even higher status among research institutions in the world. This view is based on the Centre's unique assets: the long term Demographic Surveillance System (DSS), the model of Matlab for population studies, the "Cholera Hospital", excellent laboratory facilities, demonstration of success including ORS and

treatment of cholera as well as effective fertility reduction.
The Committee urged the Centre to look for ways to use this basis to raise its image even further among the scientific community.

4.4 Specific points for consideration:

4.4.1 The need of a pathologist that would enable both autopsies and laboratory research to be undertaken.

4.4.2 The need of including ETEC and possibly other enteric pathogens in the continuous surveillance of etiology of diarrhoea.

4.4.3 The widespread nature of a large number of relatively small research projects; some focusing and combining of related projects would be beneficial.

4.4.4 The importance of some pathogens (e.g. Mycobacteria, Giardia, Ascaris) not being included in the present programme.

4.4.5 The results from the recently started studies on sexual behaviour and reproductive health including infections of the reproductive tract are eagerly awaited in view of the importance of these data for future planning and application.

4.4.6 The importance of adolescents as a target group for family planning and reproductive health.

4.5 Programme Review of the Population and Family Planning Division

The Committee received the report of the Programme Review of the Population and Family Planning Division held in March 1995 and expressed its appreciation for the thoughtful work put into the report and its recommendations. It suggested that the Centre respond to the Review by the next Board meeting.

4.6 Update on the Integrated Institutional Review

The Director presented an update on the Integrated Institutional Review of the Centre which is to take place during 1995, as follows:

4.6.1 Following the positive experience with the Gordon Smith/David Sencer review in 1990, the Board adopted a policy of having a review of programme and management once every four years. Such a review was intended to complement the rigorous review process of science that is overseen by the Scientific Programme Committee.

4.6.2 In the current climate of dwindling interest of donors in development assistance, particularly in health research, a confirmation (or lack of it) that the Centre remains an important international resource in health research by leaders in the field of public health, will be useful.

4.6.3 The terms of reference for the review should revolve around whether

a. the Centre is an international health research resource worthy of support, and if so

b. whether its organization and management allow it to continue to merit support.

4.6.4 The review should be stewarded by the UNDP in order to ensure neutrality and to avoid undue pressure from donors.

4.6.5 Funds should be sought from UNDP and/or Centre's own resources.

4.6.6 A maximum of four or five persons is suggested for the review. During discussion, it was stressed that gender diversity and the social sciences discipline be considered. The Director advised the meeting that further suggestions of reviewers would be welcome and that copies of the terms of reference for the review will be made available to the donor community in Dhaka.

4.7 Report on Review of BRAC/ICDDR,B Project

The Committee noted the report on the Review of the BRAC/ICDDR,B Project. Copies of the report had been distributed to Board of Trustees members.

4.8 Report on Review of Chakaria Community Health Project

The Committee noted the report on the Review of the Chakaria Community Health Project. Copies of the report had been distributed to Board of Trustees members.

4.9 Revised Biennial Work Plan 1995/96

The Committee noted that copies of the revised Biennial Work Plan for 1995/96 had been distributed to Board of Trustees members.

Dr. R.H. Henderson, Chairman of the Board, asked for comments from the meeting. Several questions were asked and information provided. Dr. Henderson thanked Professor Makela for the presentation of the report. The meeting approved the report.

Agenda 5: Finance Committee Report

Professor J.R. Hamilton, Chairman of the 32nd meeting of the Finance Committee, presented the report of the Finance Committee meeting held on Wednesday 14 June 1995 to the Board of Trustees.

5.1 **Audited Financial Statements for 1994**

It was noted from the Financial Statements that the total income increased by $188,000 (1.7%) from $10,956,000 to $11,144,000, and the expenditure increased by $676,000 (5.8%) from $11,712,000 to $12,388,000. The net operating deficit increased by $488,000 (64.6%) from $756,000 to $1,244,000. The cash operating deficit, after adjusting for profit on sale of fixed assets of $20,000 (1993 - $2,000), increased from $52,000 to $504,000.

The Committee recommended to the Board that the audited Financial Statements for 1994 be accepted.

5.2 **1995 Forecast**

It was reported to the Board that the total income for 1995 was budgeted at $13,660,000, but is now forecast at $13,249,000, a decrease of $411,000 (3.0%). Total expenditure was budgeted at $14,304,000, and is now anticipated to decrease by $96,000 (0.7%) to $14,208,000.

The net operating deficit after depreciation was budgeted at $644,000. This is anticipated to increase by $315,000 (48.9%) to $959,000 because of the net effect of changes in income and expenditure.

The net cash surplus before depreciation was budgeted at $102,000. This is now anticipated to decrease by $315,000 and give a deficit of $213,000. A major factor leading to the adjustments in the budget has been a further unanticipated increase in patient numbers.

The Board viewed the figures presented by the Committee with great concern particularly in light of a similar trend during the past two years. It instructed the Centre to end the financial year with a balanced budget.

5.3 **Appointment of Auditors for 1995**

On the advice of Centre's management, the Committee agreed to recommend to the Board that Deloitte, Haskins & Sells, Calcutta, be appointed for one more year, and that Hoda Vasi Chowdhury & Co. be replaced by ACNABIN & Co. This follows advice that external auditors should be changed not less frequently than five to seven years.

5.4 **ICDDR,B Hospital Endowment Fund**

It was reported to the Board that the significant increase in the Hospital Endowment Fund since 1993 has necessitated the adoption of Bye-Laws to

define the Fund and set parameters under which it may operate. The initial Trustees of the Fund were appointed by the Director and the Operating Bye-Laws were adopted and signed by the inaugural meeting of the Trustees on 14 December 1994.

The Board was advised that an Investment Committee will be formed to devise an investment strategy and have the authority to invest up to $200,000 without seeking the approval of the Board of the Fund. The balance of the Hospital Endowment Fund at December 31, 1994, including a contribution of $3 million from the Swiss Development Cooperation, was $3,163,953. The balance at April 30, 1995, was $3,181,661.

The Board agreed to request the technical expertise of SDC, through Mr. J.O. Martin, to scrutinise the current Bye-Laws of the Hospital Endowment Fund and report to the next Board of Trustees meeting.

Dr. Henderson invited comments from the meeting on the Finance Committee Report. Several comments were made including the following:

Mr. Syed Ahmed advised the Board that he would investigate the possibility of an ad hoc contribution from the Government of Bangladesh to assist the Centre in wiping out the deficit. Mr. Ahmed's suggestion received acclamation from the Trustees. The Chairman suggested that donors could also consider a contribution to the hospital which would represent a contribution to the welfare of the citizens of Bangladesh.

It was agreed to accept the report of the Finance Committee.

The following resolutions were passed:

Resolution

1/Jun.95 The Board resolved to accept the audited Financial Statements for the 1994 year.

2/Jun.95 The Board resolved that the Centre undertake the necessary steps to end the year with no cash operating deficit.

3/Jun.95 The Board resolved to appoint Deloitte, Haskins & Sells, Calcutta, and ACNABIN, Dhaka, as Auditors for the year 1995 at a fee not to exceed $13,500.

4/Jun.95 The Board resolved to express its gratitude to the Swiss Development Cooperation for the donation of $3 million to the ICDDR,B Hospital Endowment Fund.

5/Jun.95 The Board resolved that the assets and liabilities of the ICDDR,B Hospital Endowment Fund be excluded from the annual accounts of the Centre and that separate audited accounts for the ICDDR,B Hospital Endowment Fund be prepared commencing January 1, 1995.

6/Jun.95 The Board resolved to approve the Operating Bye-Laws of the ICDDR,B Hospital Endowment Fund as presented. It further resolved that the bye-laws be amended to reflect the changes detailed in annexure "a", i.e. the current version.

7/Jun.95 The Board resolved to approve expenditure of $579,767 from the Fixed Asset Acquisition and Replacement Fund for 1994.

8/Jun.95 The Board resolved to authorize the continuation of the overdraft facility of up to $2 million with the American Express Bank for the year to August 18, 1996.

9/Jun.95 The Board resolved to authorize the Centre to borrow money as and when required from the ICDDR,B Hospital Endowment Fund at an interest rate mid way between the Amex overdraft rate and the Fund's one month term deposit rate. Such borrowings will be limited to a one month duration with rollover by mutual consent and shall not exceed $750,000 at any point in time.

Agenda 6: Personnel & Selection Committee Report (closed session)

1. STAFFING

1.1 Overview of the Staffing Situation

Attention was drawn to Tables 1-9 of the report to the Personnel & Selection Committee. It was noted that the Board's instructions on recruitment have continued to be followed although there has been a net increase in staff of 3. This has occurred for essential project positions. At 31 March 1995 the total staff numbered 948 compared to 945 at 30 September 1994. However, core staff has gone down from 609 to 606.

The Committee complimented the Centre's management on their continued actions to reduce staff and recommended a continuation of the current policy.

1.2 Status of Recruitment of International Staff

1.2.1 Director, ICDDR,B

The Committee discussed this matter in the absence of the Director and other members of the Centre staff.

It was agreed that, subject to the required amendment of the law in line with the relevant Government of Bangladesh decision:

a. Dr. Demissie Habte be offered a three year extension of his contract, and

b. the Board notes that this appointment is an exception to its general policy of limiting the appointment of a Director to a maximum of two three-year terms, in view of Dr. Habte's exceptional performance.

It was further agreed that the Board should initiate a search process for a new Director at least eighteen (18) months prior to the termination of the current Director's term.

The Board noted that presentations were made to the Government of Bangladesh regarding the Board's concern for the continued stability of the Centre during a transition period when all division directors will be replaced, and recognizing the exceptional work of the current Director.

1.2.2 **Senior Scientist - Division Director (D1), Clinical Sciences Division**

It was noted that Dr. George Fuchs III, (USA) seconded by the Louisiana State University for a period of 3 years, has been acting as the Division Director, CSD, since February 1995.

It was agreed that Dr. George Fuchs III be offered the position of Division Director effective July 1, 1995.

1.2.3 **Senior Scientist - Division Director (D1), Community Health Division**

It was noted that Professor J. Patrick Vaughan (UK), has been offered the position on a secondment agreement from the London School of Hygiene and Tropical Medicine. Professor Vaughan has accepted the position and will commence as Division Director of the Community Health Division within the next few months.

1.2.4 **Senior Scientist - Division Director (D1), Laboratory Sciences Division**

It was noted that the position of Division Director LSD fell vacant after the departure of Dr. R. Bradley Sack in June 1994. Dr. John Albert was appointed Acting Director of the

Laboratory Sciences Division in June 1994. A number of promising candidates have been identified (the most recent being Professor Dr. G. Riethmuller, a German national), but have declined for a variety of reasons.

It was agreed that, recognizing the urgency of filling the position of Division Director, Laboratory Sciences Division with a person of high scientific merit, the Director be urged to continue his consultations with a view to filling the position as quickly as possible.

1.2.5 **Epidemiologist (P5), Community Health Division**

It was reported to the meeting that the Board approved an extension of the contract of Dr. O. Massee Bateman, Epidemiologist, for another term of three years beginning March 30, 1995. Dr. Bateman accepted the extension of his employment contract but later informed his desire to terminate same and gave notice that he will leave on 30 May 1995. The recruitment process for this position has already commenced in consultation with Professor Patrick Vaughan.

1.2.6 **Demographer (P3/P4), Population and Family Planning Division**

In response to the advertisement published in the "Economist" and circulation of the advertisement to members of the Board of Trustees, donors and other collaborating agencies, 23 applications were received from which 5 applications were short-listed and interviewed on March 29, 1995. The meeting was advised that Dr. Mizanur Rahman was unanimously selected by the Selection Committee and was offered the position effective April 1, 1995.

1.2.7 Cost Analyst (P3/P4), Population and Family Planning Division

In response to the advertisement published in the "Economist" and circulation of the advertisement to all members of the Board of Trustees, donors and other collaborating agencies, 29 applications were received from which 3 applications were short-listed and interviewed on April 18, 1995. The meeting was advised that Dr. Ann Levin was selected and offered the position.

1.2.8 Communications Specialist (P3/P4), Rural MCH-FP Extension Project

This position has been announced in the national dailies and at selected universities and international organizations. 96 applications from Bangladesh and abroad were received, from which 12 were short-listed. The short-listed candidates were interviewed on April 17, 1995, and 4 candidates were shortlisted for the final interview on May 7, 1995. Ms Marsha McCoskrie was selected and offered the position.

1.2.9 Management Scientist (P4), Urban MCH-FP Extension Project

This position was to be recruited through the Johns Hopkins University. Dr. Cristobal Tunon, a Panamanian national, was selected by the Johns Hopkins University in consultation with ICDDR,B. At the request of the Project Director, Dr. Abdullah Baqui, it was agreed to move Dr. Tunon to the project's budget at the Centre and to move Dr. Baqui to the Johns Hopkins budget. This arrangement is agreeable to ICDDR,B, USAID and JHU. There are no implications on the project or budget concerning this changeover of the budget charges. Dr. Cristobal Tunon joined this position on 1 December 1994.

It was agreed that approval be given for the changeover of the budget charges for this position.

1.2.10 **Replacement of Associate Project Director MCH-FP Extension Project (Rural)**

It was reported to the meeting that Dr. Rushikesh Maru has been working as an Associate Project Director with the MCH-FP (Rural) Extension project from January 1, 1993 to June 1994 on secondment from the Population Council. His contract was further extended until June 30, 1996, but Dr. Maru resigned on 30 June 1995. The Population Council is in the process of recruitment of a replacement.

1.2.11 **Division Director, Population and Family Planning Division**

The Director indicated to the meeting that, pending the response of the Centre to the recommendations from the Review Committee on the Population and Family Planning Division, this appointment would be held in abeyance.

1.3 Information on Seconded Staff

1.3.1 **Senior Scientist (P5/P6), Population and Family Planning Division**

It was reported to the meeting that the Population Council will second a senior scientist to provide advice and leadership on the research activities in the two MCH-FP Extension Projects.

1.3.2 **Advisor to the MCH-FP Extension Project**

It was reported to the meeting that Mr. Syed Shamim Ahsan, recently retired as Secretary, Ministry of Health and Family Welfare, Government of Bangladesh, joined on December 1, 1994, as Adviser to the Director with specific responsibilities to the MCH-FP Extension

Projects (Rural and Urban), on secondment from the Population Council.

1.3.3 Operation Research Scientist, Urban MCH-FP Extension

It was reported to the meeting that Dr. Aye Aye Thwin, a Burmese national, joined the Urban MCH-FP Extension Project as Operation Research Scientist from February 1, 1995. She is seconded from the Johns Hopkins University for a period of two years from February 1, 1995 to January 31, 1997.

1.3.4 Program Scientist, Urban MCH-FP Extension

It was reported to the meeting that Dr. Henry Perry, an American national, joined the Urban MCH-FP Extension Project as Program Scientist on secondment from the Johns Hopkins University. His period of assignment is from January 23, 1995, to September 30, 1996. It was noted that if the agreement with USAID, which funds this project, is extended beyond September 30, 1996, it is anticipated that Dr. Perry's contract will also be extended.

1.3.5 International Fellow

It was reported to the meeting that Dr. med. Ursula von Gierke, a German national, having expressed interest in working at the Clinical Research and Services Centre (CRSC) as part of her requirements to specialize in infectious and tropical diseases and having seconded funds from a German organization, joined the Centre on March 6, 1995.

The following Resolutions were passed:

10/BT/Jun.95 The Board resolved to accept the Report of the Personnel and Selection Committee.

11/BT/Jun.95

The Board resolved that, subject to the required amendment of the law in line with the relevant Government of Bangladesh decision:

a. Dr. Demissie Habte be offered a three year extension of his contract, and

b. this appointment is an exception to its general policy of limiting the appointment of a Director to a maximum of two three-year terms, in view of Dr. Habte's exceptional performance.

The Board further agreed that it should initiate a search process for a new Director at least eighteen (18) months prior to the termination of the current Director's term.

12/BT/Jun.95

The Board resolved that the position of Senior Scientist - Division Director, Clinical Sciences Division, be offered to Dr. George J. Fuchs III.

13/BT/Jun.95

The Board resolved that, recognizing the urgency of filling the position of Division Director, Laboratory Sciences Division, with a person of high scientific merit, the Director be urged to continue his consultations with a view to filling the position as quickly as possible.

14/BT/Jun.95

The Board approved the changeover of budget charges for the position of Management Scientist (P4) Urban MCH-FP Extension Project, from Johns Hopkins University to the project budget at ICDDR,B, with Dr. Abdullah Baqui moving to the Johns Hopkins budget.

Agenda 7: Selection of Trustees

After discussion it was agreed to reaffirm the Personnel and Selection Committee's policy of appointing Board of Trustees members at large for a maximum of six (6) years.

7.1 It was agreed that Dr. Tawfik Khoja (developing country Middle East) be invited to join the Board of Trustees effective from 1 July 1995.

7.2 It was agreed that Professor Peter McDonald (developed country Pacific region) be invited to join the Board of Trustees effective from 1 July 1995.

7.3 It was agreed that Professor Rita Colwell (developed country North America) be invited to join the Board of Trustees effective from 1 July 1995.

7.4 The Board recognized that the Board of Trustees is under-represented in the area of demography and population sciences and that this needs to be a priority for the Board to address as soon as possible.

7.5 The Board agreed to extend its thanks to Mr. Syed Shamim Ahsan for his outstanding contribution to the Centre as a member of the Board of Trustees representing the Government of Bangladesh from 1993 to November 1994.

7.6 The Board agreed to extend its thanks to Dr. Y.Y. Al-Mazrou for his outstanding contribution to the Centre as a member of the Board of Trustees from 1989 to 1995.

7.7 The Board agreed to extend its thanks to Emeritus Professor J.C. Caldwell for his outstanding contribution to the Centre as a member of the Board of Trustees from 1989 to 1995.

7.8 The Board agreed to extend its thanks to Professor J.R. Hamilton for his outstanding contribution to the Centre as a member of the Board of Trustees from 1989 to 1995.

7.9 The Board instructed the Acting Chairman of the Board of Trustees to convey the sentiments of the Board to Mr. Shamim Ahsan, Dr. Y.Y. Al-Mazrou, Professor J.C. Caldwell, and Professor J.R. Hamilton.

7.10 **Professor Julio Frenk**

The Personnel and Selection Committee requested the Director to obtain as soon as possible a confirmation that Professor Frenk was withdrawing as a member of the Board.

It further requested the Director to obtain as many nominations as possible for potential candidates for a Board of Trustees position from the South America and Caribbean region for a decision to be made at the November 1995 Board of Trustees meeting.

7.11 **Miscellaneous**

The meeting noted that the Board of Trustees positions occupied by members appointed by organizations (Government of Bangladesh, UNICEF, and WHO) do not have a specific time limit. At the end of each three years the organizations are contacted for nominations to fill the positions.

The following Resolutions were passed:

15/BT/Jun.95 The Board resolved that Dr. Tawfik Khoja be appointed to the Board of Trustees for three years effective 1 July 1995.

16/BT/Jun.95 The Board resolved that Professor Peter McDonald be appointed to the Board of Trustees for three years effective 1 July 1995.

17/BT/Jun.95 The Board resolved that Professor Rita Colwell be appointed to the Board of Trustees for three years effective 1 July 1995.

Agenda 8: Election of Chairperson of the Board

It was agreed that Dr. Maureen Law be appointed Chairperson of the Board of Trustees for one year from 1 July 1995.

a) **Appointments to Committees**

Dr. R.H. Henderson was re-elected as the Chairman of the Personnel & Selection Committee, Dr. J. Rohde was re-elected as the Chairman of the Finance Committee (subject to his approval), and Professor P.H. Makela was re-elected as the Chairperson of the Programme Committee.

The following resolutions were passed:

Resolution

18/Jun.95 The Board resolved that Dr. Maureen Law be appointed Chairperson of the Board of Trustees for one year from 1 July 1995.

19/Jun.95 The Board resolved that the following members be appointed to the Personnel & Selection Committee for a one year term effective 1 July 1995:

Dr. R.H. Henderson (Chairman)
Mr. Syed Ahmed
Dr. Y. Takeda
Prof. F. Jalil
Chairperson of the Board and Centre Director are ex officio members.

20/Jun.95 The Board resolved that the following members be appointed to the Finance Committee for a one year term effective 1 July 1995:

Dr. J. Rohde (Chairman)
Dr. J. Frenk
Mr. Md. Lutfullahil Majid
Mr. J.O. Martin

Chairperson of the Board and Centre Director are ex officio members.

21/Jun.95 The Board resolved that the following members be appointed to the Programme Committee for a one year term effective 1 July 1995:

Prof. P.H. Makela (Chairperson)
Prof. Chen Chunming
Maj. Gen. (Ret'd) M.R. Choudhury
Prof. R. Colwell
Prof. P. McDonald
Prof. F. Mhalu

Chairperson of the Board and Centre Director are ex officio members.

Agenda 9: Dates for 1995 and 1996 Meetings

It was agreed that the meetings of the Board should be held in Dhaka on the first Saturday, Sunday and Monday of June and November each year.

Accordingly, the programme for 1995 and 1996 is as follows:

PROGRAMME COMMITTEE REVIEW OF CSD - NOVEMBER 1995

Wednesday 1 November	Reviewers arrive
Thursday 2nd November	Review of the Clinical Sciences Division
and Friday 3 November	and write-up of report

BOARD OF TRUSTEES MEETING - NOVEMBER 1995

Friday 3 November	Trustees arrive
Saturday 4 November	Programme Committee Meeting
	Personnel & Selection Committee Meeting
Sunday 5 November	Finance Committee Meeting
	Report Writing
Monday 6 November	Full Board Meeting
Tuesday 7 November	Donor Support Group Meeting

PROGRAMME COMMITTEE REVIEW OF LSD - JUNE 1996

Wednesday 29 May	Reviewers arrive
Thursday 30 May	Review of the Laboratory Sciences Division
and Friday 31 May	and write-up of report

BOARD OF TRUSTEES MEETING - JUNE 1996

Friday 31 May	Trustees arrive
Saturday 1 June	Programme Committee Meeting
	Personnel & Selection Committee Meeting
Sunday 2 June	Finance Committee Meeting
	Report Writing
Monday 3 June	Full Board Meeting

PROGRAMME COMMITTEE REVIEW OF CHD - NOVEMBER 1996

Tuesday 39 October	Reviewers arrive
Wednesday 30 October	Review of Community Health Division
to Friday 1 November	and write-up of report

BOARD OF TRUSTEES MEETING - NOVEMBER 1996

Friday 1 November	Trustees arrive
Saturday 2 November	Programme Committee Meeting
	Personnel & Selection Committee Meeting
Sunday 3 November	Finance Committee Meeting
	Reporting Writing
Monday 4 November	Full Board Meeting
Tuesday 5 November	Donor Support Group Meeting

Agenda 10: Any Other Business

10.1 Report from Staff Welfare Association (SWA)

As part of its agenda, the Board met with the Staff Welfare Association (SWA) Executive Committee at 12.30 p.m. on Wednesday 14 June 1995 and received the report of the President of SWA.

The Chairman reported that the concerns of the Board were shared with SWA.

10.2 Dr. M.A. Strong

The Board of Trustees unanimously agreed to express its gratitude to Dr. Michael A. Strong for his outstanding contribution to the Centre as Director of the Population and Family Planning Division from 1988 to 1995.

10.3 Annual Report 1994

The Board noted the publication of the ICDDR,B Annual Report for 1994 and expressed appreciation for its excellent production.

The meeting closed at 1.30 p.m.

3/BT/NOV. '95

DIRECTOR'S REPORT

CENTRE
For Health and
Population Research

Developing and disseminating solutions
to major health and population problems facing the world

Director's Report

TO
THE BOARD OF TRUSTEES MEETING
4 - 6 NOVEMBER 1995

"The ICDDR,B really ought to be called the International Children's Research Centre because it is emerging as the foremost research centre in the world on so many aspects of the diseases of children."

"In one year, because of the existence of the Centre, we were able to learn more about the new strain of cholera than was learned in a hundred years about the old strain, and if we had had such a facility available for AIDS in Africa ten years ago, it would have changed the pattern of the AIDS epidemic worldwide."

"It has become the training ground for the world's outstanding scientists in these fields who come to work here."

- *The late James P. Grant, previous Executive Director, UNICEF*

TABLE OF CONTENTS

1.0 OVERVIEW

1.1 RESEARCH HIGHLIGHTS

* A non invasive method to **assess gastric acid output** has been developed and validated.

* A new method to **evaluate hydration status** has been developed utilizing bioelectrical impedance analysis. Using this technique, a study comparing cholera and non-cholera diarrhoea indicates differential changes between intra- and extracellular water compartments.

* A protocol to **assess vitamin A status** using the deuterated retinol dilution technique showed that the study will be beneficial to assess vitamin A status of body using a single blood sample.

* The characterization of six water **isolates of *Aeromonas trota*** that cross-react with *Vibrio cholerae* 0139 Bengal has been completed.

* In collaboration with scientists at the Karolinska Institute, Stockholm, Sweden, the Laboratory Sciences Division determined the **chemical structure of capsular polysaccharide of *V. cholerae* 0139.**

* Cytolethal distending toxin **(CLDT) producing *Escherichia coli*** is a newly described category of toxigenic *E. coli*. CLDT may be an additional virulence factor of EPEC and that CLDT production by otherwise non-pathogenic strains may not confer diarrhoeagenic property on these strains.

* A killed oral enterotoxigenic ***Escherichia coli* (ETEC) vaccine** consisting of the B-subunit of cholera toxin (CT) and colonization factor antigens (CFAs) of *E. coli* were tested in 27 adult volunteers for reactogenicity and immunogenicity. The vaccine was well tolerated and the majority of volunteers mounted an immune response to both CT and CFAs.

* A study of risk factors for acquiring **neonatal rotavirus infection** was conducted.

* **Microbiological studies of duckweed and fish** fed on duckweed were carried out: waste-water grown duckweed seems to be a safe fish feed.

* A variety of **tests related to vitamin A studies** have been established. Studies on vitamin A status of young infants showed that about 60% of Bangladeshi infants are vitamin A deficient.

* Field work of research study, "**Maternal supplementation with vitamin A** (retinol or beta-carotene)" has been completed successfully. A high rate of compliance was recorded. Laboratory work on the serum and breast milk samples is continuing.

* The recruitment of cases and controls for the wheezing associated respiratory distress concluded. Laboratory work on **bacterial and viral etiologies of ALRI** on the samples collected continues. Data entry is being carried out currently.

* The research projects "Action research and impact studies on **community water sanitation and hygiene education** intervention in Bangladesh" are being undertaken in rural and urban communities. The baseline and need assessment survey was conducted in Singair Thana (rural area) and three wards in urban Dhaka. A meeting of the national Task Force of these projects was held on August 8, 1995.

* A 10-day network analysis **training workshop** for the Social and Behavioural Sciences staff and others was conducted.

* Initiation of a baseline study on **women's networks-cum-empowerment** in the BRAC-Matlab programme was undertaken.

* Under the **BRAC-ICDDR,B Project** a series of exploratory studies, and an interim assessment of the demographic rates in the four study cells of BRAC - ICDDR,B interventions in Matlab has been made. The first round of quarterly data collection on nutrition, illness behaviour, fertility control, income and expenditure, and various aspects of women's lives in the four study cells has also been completed.

* Under the Self-help for Health: **Chakoria Community Health Project**, the process of self-help initiatives for the improvement of health other than health education by the local organizations has begun. In three villages the self-help organizations took initiative to control malaria in their villages. The project assisted the self-help organizations by way of linking them with the Government malaria control programme.

* A study to **assess the impact of the 1995 flood** in Matlab has been initiated. Additional information will be collected from the same sampled households shortly.

* The Population Studies Centre has undertaken two research projects in collaboration with the East-West Center Population Institute as part of the Secondary Analysis Project of the **Bangladesh Demographic and Health Survey**. These studies are: An Evaluation of the BDHS Data, and Proximate Determinants of Fertility.

* With the assistance of the MCH-FP Extension Project (Rural), GoB has established an **Emergency Obstetric Care** unit and has posted essential personnel required for delivery of complicated pregnancies in Mirsarai Thana.

* A rapid assessment procedure for the **assessment of needs of the MCH-FP programme** and the demand and utilization of MCH-FP services at the thana-level and below has been developed.

* A management improvement tool named **Performance Planning and Monitoring System,** has been developed for the thana-level MCH-FP managers.

* The MCH-FP Extension Project (Rural) developed a **Health Assistant Register**, which has been approved by the MOHFW for national implementation. As part of nationwide implementation, the Project is introducing it in three Project Thanas. The lessons learned will be used for implementation of the Register by the MOHFW.

* The MCH-FP Extension Project (Rural) has held a **series of workshops** with MOHFW National, District and Thana level officials.

* The MCH-FP Extension Project (Urban) identified **eight interventions** to improve and strengthen the key areas of urban MCH-FP service delivery. Five of these interventions (Phase-I Interventions) have been designed and are being implemented: i) Planning and Coordination of Services, ii) Field Information System, iii) Clinic Information System, iv) Quality Assurance-Community-based services, v) Quality Assurance-Clinic-based services.

1.2 TRAINING

* During the period, the courses and workshops organized included:

(i) one international training course for nurse trainers in the prevention and treatment of diarrhoeal diseases,

(ii) one international workshop on FP Programme Effectiveness and Quality of Care through Operations Research,

(iii) one national workshop on "Training of Trainers" on Clinical Management, and Laboratory Diagnosis of Diarrhoeal Diseases,

(iv) a workshop on Epidemiological Methods in Public Health,

(v) one course for Training for Emergency Response to Cholera and *Shigella* epidemics,

(vi) two courses on Disaster Preparedness and Environmental Health Management in Rural Areas,

(vii) one workshop on Surveillance, Screening and Control of HIV,

as well as 65 orientation training programmes and the clinical and research fellowship programmes for 51 fellows.

1.3 SERVICE

* The number of **patients** to visit the Dhaka hospital continued at a very high rate; 70,648 during the six months of the report period. As in past years, epidemics due to cholera have been experienced in their typical bimodal peak (April-May and August-September) in 1995. In addition, a large non-cholera epidemic due to enterotoxigenic *E. coli* was superimposed on the usual seasonal cholera epidemic in April and May of 1995 resulting in a marked increase in patient visits to the hospital (mean 14,269 patients per month for April-May). A second epidemic of cholera was experienced as expected in August and September, however, the patient numbers were substantially more than usual (13,396 patients in August).

* The **Epidemic Control Preparedness Programme (ECPP)** with the national CDD programme and local Government health personnel conducted field investigations and interventions in 29 Thanas.

1.4 OTHERS

* A **reorganization** of the Dhaka hospital's research units (Metabolic Ward, Study Ward) and the Physiology Laboratory is underway.

* Several **new international level staff** were appointed: Dr. George Fuchs III (USA), on secondment from the Louisiana State University has taken over as Division Director, CSD; Dr. Ann Levin, (USA) joined the Centre as Health Economist/Cost Analyst in the MCH-FP Extension Project (Rural); Dr. Mizanur Rahman (Bangladesh), a former National Officer category staff and a Consultant to the MCH-FP Extension Project (Rural) joined; and Prof. J. Patrick Vaughan (Britain), on secondment from the London School of Hygiene and Tropical Medicine joined the Centre on September 27, 1995 as Division Director, CHD.

* Several **international level staff left** the Centre: Dr. Michael A. Strong, Division Director of the Population & Family Planning Division; Dr. Osgood Massee Bateman, Epidemiologist of the Community Health Division and Dr. Rushikesh Maru, Senior Operations Researcher in the MCH-FP Extension Project (Rural).

* Several **large project proposals** were prepared and submitted for funding: **European Union** (Bangladesh Health Action Research Project - $12,587,000 over 5 years); **Japan** (International Family Planning Training Program - $5,614,875 over 5 years; year 1 $2,324,243 including Matlab Training Centre construction - $400,000; Dhaka Family Planning Centre - $970,000): pending; **ODA/Thailand** (computer systems training and consultancy $365,000/$380,350); **USAID/ Washington** (institutional and targeted research - $8,725,000 over 5 years, including $3 million for the Centre Fund).

* **Expert volunteers** are being identified and recruited in collaboration with British Executive Services Overseas. The first expert is to look at the cost and management of the Centre's Dhaka and Matlab hospitals, and another has been requested to help with the detailed design and implementation of the Centre's communication and dissemination strategy.

* The **Centre Fund** Volunteer Committee is still being recruited, and initial approaches are being made to foundations and corporations. USAID has obligated $1 million for the Centre Fund endowment, The Ford Foundation has informed the Centre that as much as $1 million would be contributed in this stage of the campaign if it can increase USAID's initial pledge and obtain additional support from other sources, and the Rockefeller Foundation is expected to contribute $150,000 in unrestricted funds.

* High level **visits to the Centre** continued: Mrs. Hillary Rodham Clinton; Carol Lancaster (Deputy Administrator USAID); Ms. Robin Raphael (US Assistant Secretary of State for South Asia); Ms. Huguette Labelle (President CIDA); Hon. Ministers of Finance, Health and Family Welfare, and Women and Children's Affairs, GoB; Crown Prince Philippe of Belgium; Mrs Adam BA Konare (wife of President of Mali); H.E. Mr. Atugoda, (Sri Lankan High Commissioner to Bangladesh); and many others.

2.0. RESEARCH AND RELATED ACTIVITIES

2.1. RESEARCH OUTPUT

Table 1: Research Output

Papers/Protocols	CHD	CSD	LSD	PFPD	Total
Papers published					
1 Apr 93 - 30 Sep 93	11	11	15	5	42
1 Oct 93 - 31 Mar 94	8	13	21	3	45
1 Apr 94 - 30 Sep 94	8	9	30	4	51
1 Oct 94 - 31 Mar 95	6	8	21	4	39
1 Apr 95 - 30 Sep 95	6	14	18	3	41
Papers in Press					
1 Apr 93 - 30 Sep 93	8	14	11	4	37
1 Oct 93 - 31 Mar 94	15	18	17	5	55
1 Apr 94 - 30 Sep 94	10	23	17	9	59
1 Oct 94 - 31 Mar 95	9	26	10	6	51
1 Apr 95 - 30 Sep 95	10	19	19	4	52
Total Papers published and in press					
1 Apr 93 - 30 Sep 93	19	25	26	9	79
1 Oct 93 - 31 Mar 94	23	31	38	8	100
1 Apr 94 - 30 Sep 94	18	32	47	13	110
1 Oct 94 - 31 Mar 95	15	34	31	10	90
1 Apr 95 - 30 Sep 95	16	33	37	7	93
Research Protocols/ Programmes in Progress					
1 Apr 93 - 30 Sep 93	33	25	26	5	89
1 Oct 93 - 31 Mar 94	38	28	17	10	93
1 Apr 94 - 30 Sep 94	27	25	23	13	88
1 Oct 94 - 31 Mar 95	35	23	19	7	84
1 Apr 95 - 30 Sep 95	35	25	16	5	81

For details of these see Appendix A

2.2. CLINICAL SCIENCES DIVISION

1. The number of **patients** to visit the hospital continued at a very high rate - 70,648 during the six months of the report period. Of these, 4,309 patients with additional complications required admission to the hospital for more intensive treatment. Patient visits for the first nine months of 1995 project that this year will be one of the busiest years ever for the hospital. *Vibrio cholerae* 01 remains the predominant pathogen of epidemic cholera in Dhaka with comparatively very few cases of 0139, perhaps indicating a fundamental change in the epidemiology of 0139 as a low-incident organism.

As in past years, epidemics due to cholera have been experienced in their typical bimodal peak (April-May and August-Sept) in 1995. In addition, a large non-cholera epidemic due to enterotoxigenic E.coli was superimposed on the usual seasonal cholera epidemic in April and May of 1995 resulting in a marked increase in patient visits to the hospital (mean 14,269 patients per month for April-May). A second epidemic of cholera was experienced as expected in August and September; however, the patient numbers were substantially more than usual (13,396 patients in August). Research, training, and dissemination activities have advanced at their customary level.

Notable results of selected research projects include:

1. A noninvasive method to **assess gastric acid output** has been developed and validated. Future studies are planned to investigate the role of *H pylori*-induced achlorhydria on disorders of health and nutrition.

2. ***V. cholerae* 0139** emerged as a second etiological agent of cholera in Dhaka in January 1993, and replaced *V. cholerae* 01 as the predominant cholera strain. The rapid emergence and predominance of *V. cholerae* 0139 was considered to possibly herald the start of the pandemic of cholera. However, the surveillance study data indicates the prevalence of *V. cholerae* 0139 has decreased dramatically with *V. cholerae* 01 resuming the role of dominant cholera strain.

3. A new method to **evaluate hydration status** has been developed utilizing bioelectrical impedance analysis. Using this technique, a study comparing cholera and non-cholera diarrhoea indicates differential changes between intra- and extracellular water compartments. Extracellular water depletion is common in both cholera- and non cholera-associated dehydration. Unlike non cholera dehydration, dehydration due to cholera additionally has a marked depletion of intracellular water. The importance of this finding as it relates to treatment failures are to be investigated. Studies to determine the influence and importance of electrolyte concentration (standard vs reduced osmolality ORS) on differential recovery of water compartments in cholera vs non cholera diarrhoea are currently in progress.

4. **Antimicrobial trials** in cholera and shigellosis continue to result in simplified regimens as well as treatment options.

5. A recent study in the CSD has demonstrated that **reactive oxidative species** (ROS) are generated in high amounts in children with all types of protein-energy malnutrition, not just kwashiorkor. Intervention strategies using antioxidants in PEM and shigellosis are being tried.

Results of studies completed:

1. **Rabbit Gut Loop Studies** of an anti-secretory component of rice: the experiments conducted in surgically created blind rabbit small intestinal loops in vivo were based on recent results from Prof. Hamilton's McGill laboratory in which the rice factor was shown to inhibit the response of the chloride channel to cAMP in suspensions of rabbit crypt cells. Under a variety of experimental conditions in which the rice factor was administered to intestinal loops, either at the time of or after cholera toxin, no significant antisecretory affect of the rice factor could be demonstrated.

Further exploration of these matters will require purification of the rice factor and more specific techniques to assess ion transport in intact gut. The data from isolated intestinal epithelium suggests that a major mechanism for intestinal secretion can be inhibited and that further exploration of a component of rice as an effective antisecretory agent is warranted.

It is hoped that further studies will continue to involve collaborative efforts between ICDDR,B and McGill.

2. A protocol to **assess vitamin A status** using the deuterated retinol dilution technique showed that this method can assess vitamin A status using a single blood sample.

Administrative activities

1. The coordination and centralization of staffing in the research units (**Metabolic Ward, Study Ward**) is beginning to be implemented. At present, there are few core staff in these units. Each project hires its own research staff which has resulted in inefficient utilization of personnel. An administrative team has been assembled to work with the Division Director consisting of Dr. Kabir, Scientist; Nafiza Anwar, Nursing Consultant; Makduma Khatun, Research Associate; and NH Alam, Sr Medical Officer.

Each project will continue to budget for personnel in the manner of current practice. However, staffing needs for projects in these units will be assessed jointly with the principal investigators, and Ms Makduma and Ms Anwar will assume major responsibilities for coordination of support research personnel, training of staff, and ensuring quality control of protocol implementation. It is expected that this will result in better utilization of personnel by their participation in more than one project. It is also anticipated that certain project staff will be retained on an ongoing basis by rollover into new projects. This should have the overall effect of minimizing the turnover of staff, reducing the need for frequent re-training in research practices of newly acquired staff, and therefore also facilitate quality control. Staff not fully engaged in a specific project will be available to assist in unfunded pilot projects or assist in patient care activities of the hospital.

2. Dr. GH Rabbani, with assistance from MA Khaled, has been designated to coordinate activities of the **Physiology Laboratory**. Their role is to facilitate and assist investigators relating to the Physiology Laboratory, maintain equipment of the Physiology Laboratory, coordinate utilization of laboratory space, etc. While their recommendations will often be solicited, their directive will specifically not include review/approval of projects of the Physiology Laboratory; rather this responsibility will be retained with the Office of the Division Director.

It is expected that individuals from the LSD will also relate to the activities of the Physiology Laboratory. Discussions have been held with LSD to develop new areas of research in a way that is additive and complimentary but without duplication. A potential area of CSD/LSD collaboration in this regard is the development of laboratory capabilities to investigate the role of reactive oxidative species and nitric oxide species in the mechanisms of intestinal inflammation and immune regulation.

Collaborative activities

1. Jose Alvarez, PhD Professor and Head, Department of International Health, University of Alabama in Birmingham (UAB), visited to review ongoing collaborative projects in the area of vitamin A. New proposals were discussed and prepared. Training opportunities at UAB for ICDDR,B staff were also reviewed.

2. Mathuram Santosham, MD, MPH, Professor of International Health, Johns Hopkins University visited in association with the multi centre ORS trial. In addition, new initiatives were developed and proposals submitted for funding for studies in the areas of oral rehydration solution, acute respiratory infection, and cholera-associated hyponatremia.

3. Sten Vermund, MD PhD, Chief, Department of Epidemiology and Head, Geographic Medicine, University of Alabama in Birmingham (UAB), visited as a course director of the HIV workshop co-sponsored by UAB; UCLA, and ICDDR,B. In addition, Dr. Vermund discussed the progress of a CSD study in which he is a co-investigator.

4. Charles Stephensen, PhD, University of Alabama at Birmingham, visited the Division in connection with Dr. Amal Mitra's vitamin A project (collaborative) and also reviewed the progress and methodologies for testing various components of the study in the lab.

5. William Cutting, MD, Child Health Department, University of Edinburgh visited to develop collaborative projects. A proposal to study the role of iron and iron deficiency on growth has been developed.

6. George Fuchs, MD, PhD was a faculty member of the Louisiana State University (LSU) National Annual Pediatric Review in September. He took the opportunity of this visit to the United States to pursue and facilitate collaborative activities between individuals at LSU and ICDDR,B (CSD and LSD); he also visited the University of Alabama at Birmingham, USA, the Institute of Child Health, London, the University of Edinburgh, UK, and the Wageningen Agricultural University in the Netherlands, to strengthen present collaborative linkages and explore further possibilities with these institutions.

Trainees

1. Dr. M.K. Bhattacharya and Dr. Telahun Teka, are presently in their second year of training as international research fellows and during this time have, apart from assisting in ongoing protocols, also developed several proposals which are being reviewed.

2. Dr. Abdullah Brooks, MD, MPH, a fellow at the department of Preventive Medicine (Intl. Health), Johns Hopkins University, visited the Division for three months. During his stay in Dhaka he assisted with the ongoing hypo-osmolar ORS trial. Dr. Brooks also assisted with developing several proposals which will be finalized in the near future.

3. Dr. Ursula von Gierke, Germany, is presently at the Centre for a year to gain experience in a tropical country hospital, a requirement which will enable her to specialize in infectious and tropical diseases. Dr. von Gierke has during her stay here developed a proposal on the efficacy of tetracycline in the treatment of cholera due to strains of *Vibrio cholerae* in vitro resistant to the drug and hopes to secure funding for this study from sources in Germany.

4. Ms. Stacy McDonald and Ms. Cori Meek, first year students at the Louisiana State University Medical Centre, spent their elective time (1 to 2 months) at the Centre.

5. Dr. R. Haider is presently in London for a period of 3 months to complete preliminary requirements for enrollment and to finalize her dissertation topic for a PhD at the London School of Hygiene and Tropical Medicine.

Conferences attended

1. Drs. R. Haider and S.K. Roy attended a workshop on Maternal Nutrition and Low Birth Weight, organized by the Bangladesh National Nutrition Council and UNICEF from 25-27 July, 1995.

2. Dr. S.K. Roy, Member, Caring Practices Network, UNICEF, attended a meeting in July to assist with developing the terms of references for the network and plan future activities.

3. Drs. M.A. Salam, Wasif Ali Khan and Ujjal Dhar, were invited to attend the "Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC)" and a Conference of the Infectious Diseases Society of America (IDSA) in San Francisco from September 15-20, 1995. They presented a paper entitled "Pharmacokinetics of Ciprofloxacin (CIP) in Patients with Diarrhoea".

4. Drs. P.K. Bardhan and S.A. Sarker attended the Annual Diagnostic Diseases Conference of the American Gastroenterology Association in San Diego, USA from May 14-18 and the 4th United European Gastroenterology Conference in Berlin, Germany from September 7-21.

2.3. LABORATORY SCIENCES DIVISION

This Division continued to operate productivity under Dr. John Albert as acting director fulfilling its various mandates, namely research, training and support.

Highlights of major accomplishments include the following:

1. The **characterization** of six water isolates of *Aeromonas trota* that cross-react with *Vibrio cholerae* 0139 Bengal has been completed. The cross-reacting antigens are lipopolysaccharide antigens. Antiserum to *A. trota* cross-protected suckling mouse against cholera upon challenge with *V. cholerae* 0139. Genetic characterization of cross-reacting bacteria will shed light on from which bacteria *V. cholerae* 01 El Tor strain would have picked up novel genes to mutate to *V. cholerae* 0139.

2. In collaboration with scientists at the Karolinska Institute, Stockholm, Sweden, the Division contributed to the determination of **chemical structure of capsular polysaccharide of *V. cholerae* 0139**. The capsular polysaccharide is built up of hexasaccharide repeating units containing *inter alia* D-galactose - 4, 6 - cyclophosphate.

3. Cytolethal distending toxin **(CLDT) producing *Escherichia coli*** is a newly described category of toxigenic *E. coli*. The Division has studied the epidemiological association of CLDT *E. coli* with diarrhoea by screening for such strains in children with and without diarrhoea. Although CLDT *E. coli* were isolated from more children with diarrhoea (3.1%) than from control children (0.93%), this difference was not statistically significant ($p=0.082$). Most of the CLDT *E. coli* possessed the virulence factors of enteropathogenic *E. coli* (EPEC). We conclude that CLDT may be an additional virulence factor of EPEC and that CLDT production by otherwise non-pathogenic strains may not confer diarrhoeagenic property on these strains.

4. **Enterotoxigenic *Bacteroides fragilis* (ETBF)** is a newly identified enteric pathogen. To make its diagnosis is simpler, the Division has developed a monoclonal antibody-based enzyme immunoassay. Evaluation of the assay is being carried out using clinical samples.

5. A **killed oral Enterotoxigenic *Escherichia coli* (ETEC) vaccine** consisting of the B-subunit of cholera toxin (CT) and colonization factor antigens (CFAs) of *E. coli* were tested in 27 adult volunteers for reactogenicity and immunogenicity. The vaccine was well tolerated and the majority of volunteers mounted an immune response to both CT and CFAs.

6. A study of risk factors for acquiring **neonatal rotavirus infection** was conducted. The risk factors included a longer stay in the hospital after birth, birthing complications in mothers and failure to wash hands by mothers after cleaning the babies' stools.

7. **Microbiological studies of duckweed and fish** fed on duckweed were carried out. The test duckweed and fish were from faecally contaminated waste water ponds and the control duckweed and fish were from non-waste water ponds. The faecal coliform count in duckweed treated contaminated ponds dropped from 10^6/ml to 10^2/ml. Only a few fish fed duckweed from contaminated ponds carried enteric pathogens and no fish samples fed duckweed from the control pond carried enteric pathogens. Thus the waste-water grown duckweed seems to be a safe fish feed.

8. A variety of tests related to vitamin A studies have been established. Studies on vitamin A status of young infants showed that about **60% of Bangladeshi infants are vitamin A deficient.**

9. An **international course** was conducted on the "Laboratory diagnosis of common enteric pathogens". Participants from some developing countries of Asia and Africa attended.

10. One staff member received a Ph.D. degree in microbiology/immunology from Huddinge Hospital.

11. The Clinical Laboratory trained several personnel from Bangladesh and other developing countries in clinical microbiology, pathology and bio-chemistry.

12. The bio-engineering cell installed several new pieces of equipment and repaired some old ones.

13. Five staff members attended six international meetings.

2.4. COMMUNITY HEALTH DIVISION

Achievements and new developments

CHD Administration

1. In the absence of a Division Director, Dr K.M.A. Aziz, Senior Scientist and Dr Nigar S. Shahid, Scientist acted as the Acting Division Director during this period.

2. The CHD continued to operate through five programmes: The Matlab Clinical Research Centre (Programme Head: Dr. Md. Yunus), the Matlab MCH-FP Programme (Programme Head: Dr. Andres de Francisco), the Epidemiology and ECPP Programme (Programme Head: Dr. A.K. Siddique), the Environmental Health Programme (Programme Head: Dr. B.A. Hoque), and the Social and Behavioural Sciences Programme (Programme Head: Dr. James L. Ross). In addition, two Scientific Interest Groups remained active: the Social Sciences Interest Group (Head: Dr. K.M.A. Aziz), and the Health Systems Research Interest Group (Head: Dr. Martinus Desmet).

The major accomplishments of the Division during these six months are given below:

1. Matlab Clinical Research Centre

1. Matlab Clinical Research Centre continued to provide treatment at the Matlab Diarrhoeal Treatment Centre (DTC) to diarrhoea patients. During April 1, 1995 to September 30, 1995, 8669 diarrhoea **patients** were treated; 1966 (22.7%) of them came from the Demographic Surveillance System (DSS) area and the rest from outside. Rectal swab stool specimen cultured from DSS patients revealed isolation of 220 (11.2%) for *V. cholerae* O1, 27 (1.4%) for *V. cholerae* O139 and 252 (12.8%) for *Shigella* Sp.

2. A new protocol entitled, "Does disease due to *V. cholerae* O1 confer protection against subsequent diarrhoea due to *V. cholerae* O139?" by Drs Md. Yunus, John Clemens and K. Zaman was approved by the RRC in August 1995 and subsequently started. This will be a collaborative study between ICDDR,B and the National Institute of Child Health and Human Development, NIH, USA.

3. A pilot study at Matlab, "Effect of recurrent infections on vit A stores in children with adequate vit A levels" by George Fuchs, Cris Markis, K.M.A. Aziz, Md. Yunus, D.S. Alam and M.A. Wahed has been approved by RRC. This is a collaborative study between ICDDR,B and University of Alabama at Birmingham. At the Centre this is a collaborative study between CSD, CHD and LSD.

2. MCH-FP Programme, Matlab

1. The ODA funded protocol on **Reproductive Tract Infections** in Matlab has taken off. Most supplies have been received, staff recruited and training of staff is continuing, and the study has started.

2. Field work of research study, "**Maternal supplementation with vit A** (retinol or beta-carotene)" has been completed successfully. A high rate of compliance was recorded. Standardization of laboratory tests for the B Carotene and Retinol study in mother's milk and its reflection in infant's sera are complete and study samples analyses are in progress.

3. The recruitment of cases and controls for the wheezing associated respiratory distress concluded. Laboratory work on **bacterial and viral etiologies of ALRI** on the samples collected continues. Data entry is being carried out currently. The data collected will form the doctoral thesis of the PI.

4. The laboratory part of the "**Measles antibody decay in infants**" was finalized. It is now clear from with highly sensitive Plaque Neutralization techniques, that the maternal antibody in infants decays at a higher rate than expected in rural Bangladesh. Detailed analysis is ongoing.

3. Epidemiology and ECPP Programme

1. Between April and September 1995, the Director General, Health Services (Epidemic Surveillance), GoB reported a total of 315,885 acute diarrhoea cases with 1,093 deaths during epidemic outbreaks from 45 districts. At the request of the Director General-Health Services the epidemiologist and physicians of the **Epidemic Control Preparedness Programme (ECPP)** in collaboration with the national CDD programme and local Government health personnel conducted field investigations and interventions in 29 thanas of Barisal, Jhalokathi, Pirojpur, Bhola, Narail, Jessore, Khulna, Bagerhat, Noakhali and Chittagong districts. The teams treated over 1500 acute diarrhoea patients in the affected areas and collected 247 rectal swabs for laboratory analysis. In Narail and Pirojpur districts, only *Vibrio cholerae* O139 strains were isolated, whereas in Bhola district O139 strains accounted for only 23% of the isolated vibrios, others were El Tor O1. Out of 29 thanas *V. cholerae* O139 strains were isolated in Narail, Pirojpur and Bhola districts only. *Vibrio cholerae* O1, biotype El Tor, serotype Ogawa, mostly sensitive (> 80%) to tetracycline were isolated in all other districts. All O139 strains were also sensitive to the drug tetracycline.

2. Dr AK Siddique, Head of ECPP has been selected by the Ministry of Health as a permanent member of the national **Task Force/Working Group** (supervisory team) to overview, coordinate and facilitate diarrhoea epidemic control activities in the country.

3. The research study, "**Epidemiology of Diarrhoea and ARI** in a Cohort of New Born Children in Rural Bangladesh" is continuing in 10 villages at Mirzapur with the support from Kumudini Hospital - a 500 bed general hospital. Between October 1, 1993 and Sept 30, 1994 a total of 288 newborns were registered. 24 children were registered in each month for one year on an average. These children are to be followed up for 24 months from birth. From October 1, 1995 some children will attain 24 months of age and will be dropped from the study. Data analyses programmes are being developed.

4. Environmental Health Programme

1. The research projects "Action research and impact studies on **community water sanitation and hygiene education** intervention in Bangladesh" are being undertaken in rural and urban communities. The baseline and need assessment survey was conducted in Singair Thana (rural area) and three wards in urban Dhaka. A meeting of the national Task Force of these projects was held on August 8, 1995. Experiences gained from this collaborative project between GoB and ICDDR,B, were discussed. This meeting was chaired by the Secretary, Ministry of Local Government, Rural Development & Cooperatives, and senior representatives from GoB, donors, UN agencies, elected community representatives and project advisors were present. The proceedings were sent to the Ministry of Local Government, Rural Development and Cooperatives. Policy and programme recommendations are now being considered by the concerned ministries and GoB agencies.

2. All 3 wards of the urban project were affected by **flood** in July. Disaster related environmental health activities through extensive community participation have been carried out along with regular project activities.

3. The final report for the projects, "Ingestion of unsafe water" and "Development of handwashing messages" was sent to UNICEF.

4. As technical assistance, the Environmental Health Laboratory has been providing services to various national committees and agencies concerned with health situations at risk after flood.

5. One Ph.D. student from the North Carolina University, one M.Sc. student from the University of Dhaka and several trainees, worked at the Environmental Health Programme during this period.

6. A half day meeting of GARNET group (**Global Applied Research Network**) was held. About 50 participants from GoB, NGOs, UN and donor agencies took part. Case studies by Shakti Foundation and UCEP and national and global WSS issues were discussed. A report on GARNET activities has been sent to the Global Headquarters at WEDC, London.

5. Social and Behavioural Sciences Programme/Interest Group

1. A 10-day, **network analysis training workshop** for the Social and Behavioural Sciences staff and others was conducted by Dr Stephen Borgatti of the University of South Carolina and Dr Pertti Pelto of the University of Connecticut. A hands-on training was conducted in the use of ANTHROPAC, UCINET, and KRACPLOT; computer-based software for the management and analysis of network data.

2. Initiation of a baseline study on **women's networks-cum-empowerment** in the BRAC-ICDDR,B Matlab programme was taken.

3. Drs Pelto and Laston and SBS staff conducted a 10 day **training programme on qualitative research** for the staff of the Dhaka Urban Community Health Project.

4. Fifteen concept papers on **reproductive and sexual health** were submitted for consideration by the European Union, and 8-10 papers will be prepared for ASCON V.

5. Dr Ross, Head of the SBS Programme taught a section on non-survey methods and the integration of qualitative and quantitative methods in the LSHTM course on Reproductive Health.

6. Three Social and Behavioural Science research staff participated in a short course on reproductive health at the London School of Hygiene and Tropical Medicine.

7. The Centre continued its activities relating to **HIV/AIDS** issues. Since joining in July Dr Nahid Chowdhury, the Centre's HIV/AIDS Coordinator, has been co-opted as Executive Committee Member of the national STD/AIDS Network. She became a member of the Steering Committee for NGO National Consensus workshop on HIV/AIDS to be held on October 16-17, 1995. A staff education committee on HIV/AIDS has been formed now and new activities have been planned. In August 1995 a seminar on "Staff education on HIV/AIDS - an experience of CARE Bangladesh" was held. A workshop was organized on HIV/AIDS surveillance, screening and control, in collaboration with the Training Coordination Bureau, Faculty of UAB and IEDCR (GoB). A one day seminar on "AIDS" in collaboration with the French Embassy was held. Dr. Chowdhury is also involved in the preparation of a country paper on "Gender, Sexuality and Reproductive Health", in collaboration with Dr Jim Ross, Dr Tanjina Mirza, and Dr Nurul Alam (Jahangir Nagar University).

8. The members of the **Social Science Interest Group** held their monthly meetings during the period under review. These meetings provided opportunity for presentation of new ideas and research results. Presentations were made by the Centre as well as guest scholars. These meetings were attended by members from CHD and other Divisions. The Interest Group Meetings proved to be a useful forum for dissemination and learning.

9. USAID and SDC funded **protocol on B carotene rich foods** as a source of vitamin A has been completed and data analysis and report writing are in progress.

10. IDRC supported research protocol **Women and Health**: Exploring the Socio-Cultural Barriers and Determinants of Women's Health Status in Rural Bangladesh has been completed in six villages in the comparison area of Matlab. Data collection on 70 families has been done. Twenty-three dais (TBAs) and several key informants were also interviewed. Data entry is complete and write-up of project findings is under way.

11. **BRAC-ICDDR,B Joint Research Project in Matlab:** Exploratory studies on operational issues in reaching the poorest of the poor, nature of vulnerability of maritally disrupted women and female headed households, profitability of BRAC supported income generating activities, and differentials in nutritional status of children from BRAC member and non-member households, have been completed during the last six months. In addition to the above, an interim assessment of the demographic rates in the four study cells of BRAC - ICDDR,B interventions in Matlab has been made.

The first round of quarterly data collection on nutrition, illness behaviour, fertility control, income and expenditure, and various aspects of women's lives in the four study cells has also been completed. Currently these data are being computerized. Suggestions made by the mid-term review team were taken into consideration during the quarterly data collection process.

12. **Self-help for Health: Chakoria Community Health Project:** the recommendations made by the review team have been implemented during the last six months. Activities which have been initiated in three unions, with a population of 60,000, during the first half of 1995 also continued during the last six months.

In Baraitali union health education is being given by the village health (male and female) and school health volunteers nominated by self-help organizations and trained by the project. Identification of local initiatives/organizations especially in Kayerbeel and BM Char unions has continued and volunteers have been identified by the community. The training of the volunteers on diarrhoeal diseases and related issues of water and sanitation and hygiene has started.

The process of self-help initiatives for the improvement of health, other than health education, by the local organizations has begun. In three villages the self-help organizations took initiative to control malaria in their villages. The project assisted the self-help organizations by linking them with the Government malaria control programme of impregnating bed nets. The project has documented the process of organization and implementation of the programme to highlight the operational problems. The project staff members are also trying to identify the missed households, reasons for non-participation, and the characteristics of these households. The project is also monitoring the effectiveness of the malaria control programme in collaboration with the Government using participatory techniques.

6. Health Systems Research Scientific Interest Group

1. The Interest group held one meeting in June 1995 on patient-load at the Matlab Diarrhoea Treatment Centre. In this meeting the data and recommendations of the Task Force on the issue was presented and discussed.

Attendance at Conferences and Seminars by CHD staff:

1. Dr K. Zaman, Assistant Scientist attended the XXIst International Congress of Paediatrics held in Cairo, Egypt during September 10-15, 1995. He presented a paper at the conference titled, "Association between nutritional status, cell-mediated immune status and acute lower respiratory infections in Bangladesh children".

2. The International Congress of Paediatrics invited Dr. Siddique as a guest speaker in one of the symposia on Infectious Diseases of International Importance during XXIst International Congress held in Cairo during September 10-15, 1995. Dr Siddique attended the congress and presented a paper entitled "Current problem with the resurgent and development of new strains of cholera."

3. Dr Nigar Shahid attended the Australian Centre for International and Tropical Health and Nutrition Conference held in Brisbane, Australia during September 18-20, 1995 and presented a paper, "Maternal Immunization with Polysaccharide Pneumococcal Vaccine".

4. Dr Chowdhury attended the "Third International Conference on AIDS in Asia and the Pacific" held in Chiang Mai from 17 - 23 September 1995.

5. Drs K.M.A. Aziz and Abbas Bhuiya attended the "Research Planning Conference on Social Science and Immunization" held in Rajendrapur, Bangladesh from 19 - 24 August 1995.

Students/Fellows:

1. Mr Thomas Handzel, a Ph.D. Fullbright scholar from the North Carolina University, is working at the Environmental Health Programme from early 1995. Preceptor - Dr Bilqis A. Hoque

2. Ms. Zarin Greenough, a DVM student from Tufts University, USA is working on her research topic, "Platanista gangetica as an environmental sentinel species for the riverine ecosystem of the Ganges river delta". Preceptor - Dr Bilqis A. Hoque

3. Ms. Irene Kraenzlin, Lucerne, Switzerland visited the Environmental Health Programme during 18-24 August, 1994 relating to her thesis. Preceptor - Dr. Bilqis A. Hoque

4. Ms Lazul Laila, an M.Sc. student from the Dept of Microbiology, University of Dhaka, is working on her thesis from July 1994. Preceptor - Dr Bilqis A. Hoque

5. Ms Saminaz Akhter, an undergraduate student from the Department of Sociology, Johns Hopkins University, completed a fellowship during June 30 to August 20, 1995. Preceptor - Dr K.M.A. Aziz

6. Mr Jeroen Van Dillen of University of Amsterdam spent about 3 months at the Centre during June - August, 1995. Preceptor - Dr Andres de Francisco

7. Ms Margaret Leppard of London School of Hygiene and Tropical Medicine is working on her Ph.D. dissertation from September 1995. Preceptor - Dr James L. Ross

8. Ms Maria Jerardi, a student from Washington College worked at CHD from October 1994 to July 1995. Preceptor - Dr Abbas Bhuiya

2.5. POPULATION AND FAMILY PLANNING DIVISION

Introduction

1. The PFPD was reviewed by the Board's Programme Committee in March 1995. The activities of the Division during this reporting period have been shaped to a considerable extent by the comments, suggestions, observations and recommendations of the Review Team.

2. The Division has four major programmes or projects: Matlab Demographic and Surveillance System (DSS), Population Studies Centre (PSC), MCH-FP Extension Project (Rural) and MCH-FP Extension Project (Urban). Two supporting units - Computer Information Service (CIS) and Data Archiving Unit form part of the PFPD.

3. Dr. Jeroen van Ginneken will join as project director of DSS from early November 1995 through the financial assistance of the Government of the Netherlands.

Achievements

1. Division

1. In order to **improve the scientific review process**, to foster exchange of ideas and scientific interactions between research staff and to ensure the staff of the Division is fully engaged and informed about the Division's various activities, a Division-wide monthly meeting has been formalised and regularly held in the past three months. The monthly Division gathering of the research staff has been used effectively to review all research protocols before their formal submission to the Centre's Research and Ethical Review Committees.

2. A formal review procedure for working papers, special publications, and briefing notes has been instituted in the Division to ensure that all such publications meet the basic scientific criteria on par with the Centre's tradition of scientific excellence.

3. Inter-divisional collaboration and emerging **issues from the ICPD** which fall under the purview of the Division mandate are being given considerable attention by the Division. Several discussions have been held to identify and prioritize new issues emerging from the ICPD meeting which the different programmes in the Division can pursue in the coming years.

2. Demographic Surveillance System

1. The necessary ground work has been completed, including field testing of the questionnaire to carry out the long-planned **rolling census** in the DSS area as soon as the new DSS Project Director joins the Centre (projected date: November).

2. An assessment of the **change in head of households** in the Matlab DSS was completed, and based on the assessment, necessary modifications in the identification procedure of a split household have been made and are being carried out.

3. A study to assess the **impact of the 1995 flood** in Matlab has been initiated. Additional information will be collected from the sampled households.

4. Preliminary tables for the **1993 DSS Annual Report** have been prepared and are awaiting final review.

5. The questionnaire and the sampling design of the **Health and Socio-economic Survey**, a collaborative study of RAND and the Centre have been field-tested in Matlab and will be implemented in the coming months.

3. Population Studies Centre (PSC)

1. A report on the first phase of the project "**An Evaluation of the Bangladesh Demographic and Health Survey** in Matlab" was submitted to Macro International who funded the study. The preliminary results suggest that Matlab mothers can report their fertility accurately; however, they appear to underestimate the mortality of their children.

2. PSC has undertaken two research projects in collaboration with the East-West Center Population Institute as part of the Secondary Analysis Project of the Bangladesh Demographic and Health Survey. These studies are: An Evaluation of the BDHS Data, and **Proximate Determinants of Fertility**.

3. PSC has developed a project on Male Involvement in Family Planning and De-Matlabisation which has been submitted to the European Union for funding.

4. PSC provided technical assistance to Mr. Shambhu Acharya, a WHO staff member based in Dhaka in the design, analysis and write-up of his doctoral thesis titled **Gender Preference in Nepal: Its Effects on Contraceptive Use, Fertility and Mortality** for the University of North Carolina at Chapel Hill.

5. PSC's monthly population seminars were held regularly. The seminars are designed to share the results of studies with the national and international development partners, program planners, policy-makers, researchers and members of the development community.

4. MCH-FP Extension Project (Rural)

1. With the assistance of the Project, GoB has established an **Emergency Obstetric Care unit** and has posted essential personnel required for delivery of complicated pregnancies in Mirsarai Thana.

2. A pictorial card showing the **complications related to frequency of childbirth** has been developed by the Project. The card has been field-tested. Preliminary results show that both mothers and service providers find the card helpful. The long-run implication is that the use of the card may help reduce maternal morbidity and mortality.

3. A **rapid assessment procedure** for the assessment of needs of the MCH-FP programme and the demand and utilization of MCH-FP services at the thana-level and below has been developed. This procedure has been tested in several thanas. This will greatly help thana managers to identify strengths, weaknesses, opportunities, and constraints of programme, and thereby help develop strategies for programme improvement. Currently, the Project is providing technical assistance to thana managers for introducing it in thanas of Chittagong District under the Project's "District Approach" intervention.

4. A management improvement tool named, **Performance Planning and Monitoring System** has been developed for the thana-level MCH-FP managers.

5. A **multipurpose client card**, containing information and counselling on MCH-FP, immunization, obstetric care, and selected health care aspects, has been developed by the Project. This will be helpful for both providers and clients, since this card will replace several cards which are being used at present (reception).

6. The **FWA Register**, a useful monitoring tool for the door-step MCH-FP service providers, was developed by the Project several years ago. This card has been improved further by the Project. The Project now has finalized the so-called "third generation FWA Register", and is currently designing a strategy to replace the revised FWA Register.

7. The Project developed a **Health Assistant Register**, which has been approved by the MOHFW for national implementation. As part of nationwide implementation, the Project is introducing it in three Project Thanas. The lessons learned will be used for implementation of the Register by the MOHFW.

8. The project helped in the development of **indicators and monitoring formats** for eight critical areas of MCH-FP program performance for the national-level monitoring committee.

9. Several **workshops** were held to plan and disseminate the project's ongoing research activities.

i) Three Needs Assessment of Health and MCH-FP Programs workshops were held with Chittagong District health and family planning officials, by the Thana health and family planning officials in six Thanas.

ii) Two District Dissemination Workshops were held in April and August with District and Thana health and family planning officials of 14 Thanas.

iii) A workshop on Sterilization of Equipment was held in July with medical officers (MHS) of 13 thanas of Chittagong District of the Health and Family Welfare Ministry.

iv) A workshop on the Implementation of HA Register was held in July with District health officials of Chittagong and Jessore Districts and Thana Health Officials of Abhoynagar and Mirsarai Thanas.

5. MCH-FP Extension Project (Urban)

1. The project identified **eight interventions** to improve and strengthen the key areas of urban MCH-FP service delivery. Five of these interventions (Phase-I Interventions) have been designed and are being implemented. The other three are being designed and will be implemented in December 1995 during the Phase-II Interventions.

Phase-I Interventions

i) Planning and Coordination of Services
ii) Field Information System
iii) Clinic Information System
iv) Quality Assurance-Community-based services
v) Quality Assurance-Clinic-based services

Phase-II Interventions

i) Basic Service Package - Community
ii) Basic Service Package - Clinic
iii) Alternative Service Delivery Strategies

2. Data collection for "The Determinants of **Birth Weight, Gestational Age, and Perinatal Mortality** Among the Urban Poor in Dhaka" was completed in June 1995 and the data is now being analysed.

3. A study to assess the **impact of the National Immunization Day** (NID) was carried out to provide feedback to the government on the impact of the National Immunization Day (NID) campaigns.

4. **Urban Needs Assessment** of Bangladesh was undertaken for an overall needs assessment of the urban population in Bangladesh, through review of previous studies, and secondary analysis of urban data from the Bangladesh Demographic and Health Survey and Urban Surveillance System.

5. A **Demand Analysis of Health and Family Planning Services** in Zone 3 has been carried out which involves a household survey of choices made between different health and family planning service providers on the basis of expenditures, travel costs and perceived quality. The study results will enable planning for the delivery of a basic service package and determination of differential price levels of those services.

6. **Cost Analyses of MCH-FP Services** at CWFP Facilities in Zone 3 was undertaken to have a baseline estimate of costs that would be compared to costs borne later as a consequence of different improvements in quality of care and management capacity, to identify areas for cost reductions and the capacity for the development of cost recovery schemes.

7. The Project held a number of **workshops** to seek input to design and develop research activities with its NGO and Government collaborating partners:

i) A Work Planning Workshop was organized in April 1995 to discuss and finalize the detailed work plan, including activities, responsibilities, time frames, indicators, monitoring mechanisms and evaluation plan for the phase-I interventions.

ii) A Visioning Workshop was held in May to begin to plan and project beyond July 1997 which is when the current project is anticipated to end.

iii) An Intervention Coordination Workshop was held in August to develop an integrated implementation plan for the Phase-I interventions.

iv) An Orientation Workshop for Ward Commissioners of Zone 3 was held in April to orient the Ward Commissioners of Zone 3 about the Urban MCH-FP Initiative to establish an integrated MCH-FP service in all the community centres of each of the wards of Zone 3.

v) A Discussion Meeting with the Directors of the Directorates of Health and Family Planning was held in May to present an update on the Urban MCH-FP Initiative, its activities and the planned interventions; and to obtain feedback on the relevance of the interventions, identify focal points from the Directorates for the interventions and to establish a mechanism to provide regular updates to the Directorates.

vi) A Formal Project Launching Ceremony was held in May at the Nagar Bhaban (Dhaka City Corporation).

vii) An Urban Health Forum has been organized to bring together professionals from various agencies that either provide direct care to clients, conduct research, or assist with financial and technical assistance in the delivery of health and family planning services in Dhaka and other cities. The first Forum was held in June.

Staff

1. Dr. Michael Strong left the Centre in July after completing his term. Dr. R. Bairagi was appointed as the Division Director in an acting capacity in July.

2. Dr. Mizanur Rahman has joined the MCH-FP Extension Project (Rural) at P level as a Demographer in May.

3. Dr. Ann Levin joined in July as Health Economist for the MCH-FP Extension Projects.

4. Dr. Jeroen van Ginneken is expected to join the Centre as the Project Director of the DSS in November 1995.

5. Dr. Bruce Caldwell will join the MCH-FP Extension Project (Rural) as a Post-doctoral Fellow on October 7.

6. An Associate Scientist position has been announced for the PSC but no suitable candidate has been found so far. Other possibilities are being explored to fill the position.

Training

1. Mr. Nurul Alam and Mr. Nihil Chandra Roy returned in September 1995 after completing their Masters training in demography from the London School of Hygiene and Tropical Medicine.

2. Dr. Shams El Arifeen attended an international course on "Quality Assurance Management Methods in Developing Countries" from June 4-17 at the Johns Hopkins University. Dr. Surayia Begum attended a training course on "Communication Strategies and Techniques for Sexual Behaviour Change" during April 17-28 at Dhurakijpundit University, Bangkok.

3.0. TRAINING

The Training Coordination Bureau has been very active during this period and has organized several courses, workshops, fellowships, etc.

Table 2: ICDDR,B Training Activities during April 1 - September 30, 1995

Particulars of activities/courses/programmes	Numbers	
	Courses	Participants
1. Health Research Training Programme		
1.1 Health Research Training Fellowship*		2
1.2 Training Course on Epidemiological Methods in Public Health,	1	9
1.3 Project-based Fellows:**		
- Physicians 3		
- Others 2		5
2. Clinical Fellowship Programme***		
2.1 Clinical Fellows 12		
2.2 Nursing Fellows 9		
2.3 Research Trainees 14		
2.4 Post-graduate Students <M.Sc. - 8 & Ph.D-1> 9		44
3. Short International Training Courses		
3.1 Improving Family Planning Programme Effectiveness and Quality of Care through Operations Research organized (23 April-03 May) in collaboration with ICOMP and Commonwealth Secretariat, U.K.	1	13
3.2 Training of Nurse Trainers in Prevention and Treatment of Diarrhoeal Diseases (1-25 May)	1	13
3.3 Clinical Management of Diarrhoeal Diseases (25 June-06 July)	1	15
3.4 Laboratory Diagnosis of Common Diarrhoeal Diagnosis Agents held 13-24 August	1	13
4. Short National Training Courses		
4.1 Disaster Preparedness and Environmental Health Management in Rural Areas conducted in collaboration with the Centre's Environmental Health Programme	2	63
4.2 Workshop on Surveillance, Screening and Control of HIV held during 23-28 September in collaboration with UAB, UCLA (USA), IEDCR, Bangladesh & ICDDR,B	1	24
5. Others		
5.1 Orientation Training		65
5.2 Seminars:		
- Weekly Seminars - 13		
- Inter-divisional Scientific Meeting - 24		
- Clinical Semianrs - 10		
Total	8	266

Note for the Table 2:

- No new recruitment during the period.
-- New recruitment during the period - 5 (Physicians -3 & Others - 2).
--- New recruitment during the period (DU students - Ms.C-2, Nursing fellows-9 & Clinical fellows-8)

Home countries of participants (showed in Table 2):

a) Asia: Bangladesh, Cambodia, India, Indonesia, Laos, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand and Vietnam.

b) Africa: Ghana, South Africa, Sudan, Tanzania, Uganda and Zimbabwe.

c) Europe: Belgium, Netherlands, UK and USA.

Staff Development

1. The Centre continued its efforts to maintain a directed programme of staff development in response to the needs of the new Strategic Plan. During the period 15 staff left for further education or short courses. (See Appendix B).

2. In addition, 35 staff participated in international and national conferences, seminars etc. (See Appendix B).

4.0. HEALTH CARE

4.1. HOSPITALS

4.1.1. Clinical Research and Service Centre, Dhaka

Table 3: Patient statistics of April to September, 1995

Month	Visits			Admissions *								
	OPD			IPD* (other than ICU)				ICU* (direct admissions only)				Grand total
	≤ 12 hours	> 12 hours	Total	< 1 day	1-7 days	> 7 days	Total	< 1 day	1-7 days	> 7 days	Total	
Apr '95	11,169	4,645	**15,814**	4	490	120	**614**	13	215	36	**264**	**878**
May '95	8,686	4,037	**12,723**	2	476	108	**586**	3	191	38	**232**	**818**
Jun '95	6,055	2,285	**8,340**	2	333	113	**448**	7	131	23	**161**	**609**
Jul '95	7,624	2,687	**10,311**	-	371	126	**497**	3	131	26	**160**	**657**
Aug '95	8,530	4,866	**13,396**	6	507	118	**631**	6	142	29	**177**	**808**
Sep '95	5,803	4,261	**10,064**	-	345	116	**461**	4	126	28	**158**	**619**
Total--->	**47,867**	**22,781**	**70,648**	**14**	**2,522**	**701**	**3,237**	**36**	**936**	**180**	**1,152**	**4,389**

4.1.2. Matlab

Table 4: **Number of patients visited with duration of stay at Matlab Diarrhoea Treatment Centre from April to September, 1995**

Month	< 1 Day	1 Day	2-6 Days	≥ 7 Days	Total
Apr. 1995	614	685	461	26	1786
May 1995	538	706	540	22	1806
June 1995	324	464	446	23	1257
July 1995	342	485	420	12	1259
Aug. 1995	407	482	285	8	1182
Sep. 1995	417	549	397	16	1379
Total	2642	3371	2549	107	8669

Table 5: **Number of patients visited from April to September, 1995 at Matlab MCH-FP Service Locations (Sub-Centre and Matlab Clinic)**

Distribution by duration of stay

Month	Short[1]	24 Hours[2]	< 1 Week[3]	1 Week +[4]
Apr. 1995	3167	11	63	18
May 1995	2778	4	64	15
June 1995	2993	6	68	16
July 1995	2651	6	66	29
Aug. 1995	3270	16	67	12
Sep. 1995	3230	16	65	8
Total	18089	59	393	98

[1] Outpatient MCH-FP Sub-Centres and OPD Matlab Hospital.
[2] Inpatient overnight.
[3] Inpatient 2-7 days.
[4] Inpatient over one week.

5.0 TECHNICAL SERVICES

5.1. COMPUTER INFORMATION SERVICES

1. The **Mainframe Technical Support and System Operation Unit** has managed a mainframe system's break down successfully. In August suddenly a component of the mainframe's hard disk failed (probable cause may be the expiration of its life time). This hard disk contains the very important data sets of Finance, Personnel and DSS. Due to this break down the important processing of the above applications were stopped.

As the mainframe has become outdated, it was also difficult for IBM to locate and replace the card at once. Under pressure from CIS IBM collected a card from Thailand and replaced the defective one in a week. Normally this task was supposed to take more than a month. Moreover, CIS was able to recover all important data and make them available to the users. Finance and Personnel were able to continue and finish their scheduled processing.

2. **Application and Data Management/Analysis Unit** has completed or is in the process of completing the following:

i) The CIS Senior Programmer took over the payroll and its related computer activities after the departure of Payroll's Senior Programmer. He continued the work successfully until the new recruit joined Finance.

ii) An Inventory System for the Staff Clinic has been developed in a personal computer.

iii) Data Management creation of new data and creation of statistical tables for the Project "ARI: Barriers to treatment seeking protocol", and for the rotavirus, and contraception studies in CHD.

iv) Application modification and programming support to Personnel Management System.

3. The **PC Laboratory** was used for a wide variety of training workshops including two Epidemiological Methods courses, and a WHO workshop, The Laboratory is being used by BRAC-ICDDR,B collaboration project for their data entry, and for analysis by a variety of projects (Matlab Treatment Centre, Social and Behavioural Sciences Program) in CHD.

4. **E-mail support** has been extended to the following projects/PI's desks: Laboratory Sciences Division, Clinical Science Division (Hospital), BADC (CHD), Environmental Health Programme (CHD). The following Projects/PI's e-mail connection to PC on desk are under implementation: DISC, Community Health Division, Social and Behavioural Sciences, and Dr. S.K. Roy in the hospital, as well as CIS PC-Lab.

5. The Centre's campus wide data communication backbone started to grow in a modest way. At present there two **Local Area Networks** (LAN) with a gateway between them. Some e-mail users and a few application developers are getting benefit out of this networking. It is expected that in near future there will be many interconnected LAN throughout the campus and the facility will reach the every desk in need of it.

6. Discussions were held with the ODA on the possibility of ODA assisting with the implementation of the **Information Technology Strategy** (ITS) to upgrade the Centre's computer facilities. ODA will appointed a consultant from the National Computing Centre in Manchester, UK to assist the Centre prepare a project proposal for funding by the ODA.

Training

1. Mrs. Saleha Begum has attended a Seminar on "Computer Centre Management" conducted by the International University of Business, Agriculture and Technology.

5.2. DISSEMINATION AND INFORMATION SERVICE CENTRE (DISC)

During the period, DISC performed the following activities:

1. Two issues (Vol. 13, no. 1 & 2, 1995) of the **Journal of Diarrhoeal Diseases Research** and the Bibliography on Diarrhoeal Diseases (within the journal) were published, and the September 1995 issue (Vol. 13, no. 3) is in press. After the departure of Dr D Mahalanabis, Dr R Eeckels, a former Director of the Centre, was made the Editor-in-Chief of the journal.

2. Three issues (March-April, May-June, and July-August, 1995) of the newsletter **Glimpse** were published, and the September-October 1995 issue is being made ready for publication. The newsletter was made more attractive to the readers. It is now distributed in over 120 countries.

3. Two issues (Vol. 4, no. 1 and 2, 1402) of the Bangla newsletter **Shasthya Sanglap** were published, and the issue no. 3 of 1402 is in press. 25,000 copies of each issue of the newsletter are produced for distribution among peripheral health workers.

4. Three issues (March-April, May-June, and July-August 1995) of the bilingual **ICDDR,B News** were produced. Publication of the September-October 1995 is in progress.

5. Two **special publications** ("Disease patterns, treatment practices and drug requirements in rural MCH-FP government facilities of Bangladesh", by H Wirzba and T Juncker and "Report on Vitamin A Symposium"), and one scientific report (Demographic Surveillance System-Matlab. V. 23. Registration of demographic events-1992) were also published. The CARE-ICDDR,B joint publication entitled "Prevention of diarrhoea through improving hygiene behaviors; the Sanitation and Family Education (SAFE) Pilot Project experience" was reprinted for wider dissemination.

6. The library accommodated about 5,780 **users** who enjoyed the different facilities and services of the library. The user groups include the members of the Centre's staff, national and international trainees, and researchers, teachers, physicians, and students from universities, medical institutions, and other organizations.

7. 12 issues of the **DISC Bulletin** and 49 issues of the Fast Bulletin were produced. After scanning the Table of Contents of journals, information on 1,187 relevant articles, documents, books and monographs was disseminated through the DISC Bulletin, in addition to announcing the conference news and training opportunities .

Training

1. Under the programme of collaborative activities with national institutions, Ms. Khurshid Jahan, Library Assistant, Independent University, Bangladesh, undertook a one-month practical training course in DISC from 7 August to 7 September 1995.

2. Mr. Md. Anisur Rahman, a former student of the Department of Library and Information Science, University of Dhaka, was accepted for a 3-month training course in DISC beginning 20 September 1995.

3. At the request of the Chairman, Department of Library and Information Science, University of Dhaka, DISC provided a two-week internship training to 8 students of the 3rd Year Honours Course in Library and Information Science, from 11 July to 15 August 1995.

4. Mr. M. Mahfuzul Hassan, Senior Secretary and Mr. Md. Nazimuddin, Librarian, attended a an 8-day "Regional Workshop on Data Processing for CD-ROM", held in New Delhi, from 28 August to 4 September 1995.

5. Mr. S.I. Khan, Head of DISC, attended the International Congress of Muslim Librarians and Information Scientists (COMLIS-IV), held in Tehran, from 19 to 21 June 1995. He also attended the 2nd Board of Directors' meeting of the Asian Health, Environmental and Allied Databases (AHEAD), held in Bangkok, from 15 to 17 August 1995.

5.3. AUDIO VISUAL UNIT

1. Projection and photographic support was provided to a wide range of visits by dignitaries, to projects and training activities.

2. The Newsletter "Glimpse" was completely redesigned with a new layout. Three issues are already out with new look. The Unit selected photographs, designed new computer graphics with graphs, layout and organograms etc. for the Centre's 1994 Annual Report.

3. Technical assistance was provideed to the many publications of the Centre, including layout, cover design, illustrations, etc.

5.4. BIO-ENGINEERING CELL

1. The Bio-Engineering Cell successfully installed 8 pieces of new equipment in the LSD laboratories and other areas during the period. It also gave training to the operators and users for proper and safe operation of the equipment. In addition, major repair work was undertaken during this period, including on an Ultra-low -70° freezer and air-coolers for Animal Resources Branch. All the Bio-hazard cabinets were fumigated and filters were replaced for the first time after installation. Bio-Engineering Cell also made a study of "Clean Air Systems of the Laboratory and Hospital' and compared it with the standard one.

6.0. ADMINISTRATION AND PERSONNEL

6.1 PERSONNEL OFFICE

1. Despite sustained efforts undertaken to enforce strictly the policy of the ban on hiring of fixed-term staff in the core areas, a few replacements in National Officer and General Services categories were necessary to support research.

Three new appointments were made in the International Professional category. During this reporting period 30 staff members (including 2 International Professionals) were separated and a total of 67 (including 2 International Professionals) staff members were recruited out of which 16 were converted from existing Contractual Service Agreements and Consultants to Fixed-Term positions. 50 were newly recruited, mostly for projects. Thus, the Centre's staffing status as of September 30, 1995 and as detailed below shows a net addition of 37 staff members, almost all of whom hold project positions.

A) List of addition and separation

Additions			Separations		
NO & GS			NO & GS		
a) Conversion from Contractual Service Agreement	:	15	a) Retirement/Abolition of post/Termination/ Death	:	6
			b) Resignation	:	18
b) New appointments	:	50	c) Separation by Mutual Agreement	:	4
International Professional					
a) New appointment	:	2	a) End of tenure	:	2
Total		67			30
			Net additions :		37

B) Recruitment

i) Fixed-term International Professional Staff

1. Dr. George Fuchs III (USA), on secondment from the Louisiana State University has been converted to International Fixed-Term staff as Division Director, CSD on July 01, 1995.

2. Dr. Ann Levin, (USA) joined the Centre as Health Economist/Cost Analyst in the MCH-FP Extension Project (Rural) on July 16, 1995 for a period of 3 (three) years.

3. Dr. Mizanur Rahman (Bangladesh), a former National Officer category staff and a Consultant to the MCH-FP Extension Project (Rural) offered an International Professional Fixed-Term position as Demographer from April 1, 1995 for a period of 3 (three) years.

ii) Seconded staff

1. Prof. J. Patrick Vaughan, (Britain), on secondment from the London School of Hygiene and Tropical Medicine joined the Centre on September 27, 1995 as Division Director, CHD.

C) Separation

i) International Professional Staff

1. Dr. Michael A. Strong, Division Director of the Population & Family Planning Division left the Centre on June 30, 1995.

2. Dr. Osgood Massee Bateman, Epidemiologist of the Community Health Division left the Centre on May 31, 1995.

ii) Seconded Staff

1. Dr. Rushikesh Maru, Senior Operations Researcher in the MCH-FP Extension Project (Rural) and on secondment agreement with the Population Council, left the Centre on June 30, 1995.

6.2. STAFF CLINIC

1. A total of 11,978 patients attended the Staff Clinic in the reporting period. Continuing the Health Education Programme, a total of 13 seminars have been organized for staff members and their dependents, of which 5 took place during the reporting period.

6.3. ESTATE & TRAVEL OFFICE

1. The Estate and Travel units continued to provide routine support services to facilitate smooth functioning of the Centre's research, training and service activities.

6.4. PROCUREMENT UNIT

1. This unit has received 1,912 Requisitions valued at US$ 1,238,813 and issued 1,383 Purchase Orders valued at approximately US$ 1,238,813. About 259 shipments were handled including 81 perishable shipments.

6.5. ENGINEERING & MAINTENANCE OFFICE

1. The office has as usual ensured normal supply of electric power, water and gas for the proper functioning of the Centre's scientific, research and other activities. The main achievements are:

i) The construction of an 8000 sq. ft. office floor on top of the Library building has been completed to house the Chakariat, BRAC-ICDDR,B, and Environmental Health Projects, and MCH-FP Extension (Urban) office.

ii) A 2" diameter water connection has been obtained from WASA which has solved a long-standing water shortage problem of the hospital and laboratories.

6.6. TRANSPORT MANAGEMENT OFFICE

1. This office has continued to provide water and land transportation.

2. During this period, 8 new vehicles (ECPP-1, Health Environment Project-1, Chakaria Project-1, Pool-5 including one Ambulance donated by the Bangladesh Government) were added to the fleet.

6.7. GENERAL SERVICES UNIT

1. This unit has been providing continued services for safety and security, cleaning, mail, conference management etc. Several steps have been taken to improve the services during this period in particular to respond to security issues that have arisen.

7.0. FINANCE

During the six months March to September 1995, the Finance division continued to perform the necessary functions of a service support unit. Special achievements include:

1. The ICDDR,B Hospital Endowment Fund Council of Investment Advisors, comprising leading Bangladeshi business persons and one international banker, was brought into operation and the Council has formulated an initial investment strategy.

2. Disallowances in the USAID final report on the 1993 audit of the cooperative agreements totalled $220,795. All but one disallowance were challenged and the Centre was finally only required to repay $1,024. The unchallenged item of $1,024 related to the use of non US air carrier by a visitor who had committed to the Centre the expenditure without the prior knowledge of the Finance Division.

3. The renegotiation of the cost of medical etc. insurance for international employees and national staff temporarily visiting overseas. The cover was held the same but the premiums were reduced by approximately 12.5% which results in an annual cost saving of some $25,000.

4. The Centre's banking agreement with Amex was renegotiated and it is now earning interest on its checking accounts.

5. The strengthening of the Treasury Department allows the Centre to manage its funds more effectively and generated a higher yield on term deposits.

8.0. EXTERNAL RELATIONS & INSTITUTIONAL DEVELOPMENT

The External Relations and Institutional Development (ER&ID) Office continued to implement the planned activities for 1995:

Resource Development Activities

1. The Office continued to prepare and assist in the preparation and follow-up of a wide variety of **project proposals** for funding by:

European Union (Bangladesh Health Action Research Project - $12,587,000 over 5 years): pending;

Japan (International Family Planning Training Program - $5,614,875 over 5 years; year 1 $2,324,243 including Matlab Training Centre construction - $400,000; Dhaka Family Planning Centre - $970,000): pending;

ODA (computer systems - $365,000): pending;

Thailand (computer systems training and consultancy - $380,350 over 2 years): pending;

USAID/Washington (institutional and targeted research - $8,725,000 over 5 years, including $3 million for the Centre Fund): pending;

AGFUND (Child Survival Activities at CRSC - $300,000 for 1 year): pending;

as well as several other smaller proposals.

2. In addition, in **response to the post-flood epidemic** in the hospital, proposals were prepared and sent out to nearly twenty different donors in Dhaka, generating over $312,000 in additional funds to help meet this extraordinary need.

3. To foster PIs' abilities to prepare project proposals, a new **internal competitive grants award system** has been developed. This system is used to allocate the SDC and USAID/W research grants and prompted over 23 applications. Those who were not funded from the money available under the internal system will be further refined in line with the reviewer's comments and prepared for submission to external funding agencies.

4. The ER&ID Office held two **seminars on the use of the Logical Framework** to plan and build consensus around projects. This technique was then used to prepare project proposals for the International Family Planning Training Program, the Emergency Obstetric Care Program, and a variety of urban interventions under the MCH-FP Extension (Urban) Project.

5. A large scale mailing has been undertaken to search for new funding opportunities, and to identify new foundations and corporations that might provide opportunities for the Centre to broaden its funding base. 111 foundations and corporations in USA, Europe and Japan were mailed initially in September 1994, with a follow-up of non-responding foundations in February 1995. The results are not entirely encouraging: 55 foundations replied negatively, 2 offered possibilities for staff development activities (through fellowships), 10 required the Centre to apply through CHF (since they require IRS 501(c)3 tax-deductible donation status), and 42 have not replied to either of the mailings. This confirms that the Centre has very limited direct access to foundations worldwide, and will have to look for collaborative partners with whom to submit proposals, as well as continue to depend on its traditional donors for funding.

In addition, the Centre has intensified its attempts to encourage contributions from developing countries, particularly those from the SAARC and ASEAN regions who have benefitted most from the Centre's research and training activities.

Most importantly, the Centre sent out letters of request to make financial contributions to the governments of Colombia, Russian Federation, Kuwait, Indonesia, India, and the Philippines. These countries were original signatories of the Interim International Committee which met at WHO Geneva on 13-14 February 1979 to assist the establishment of ICDDR,B as provided for in the Ordinance establishing the Centre. Hence, donations from these governments have great symbolic value. Similar letters are ready to be sent out to Ecuador and Egypt as well. Almost all the ambassadors of these countries have strongly recommended our request for funding to their home governments.

6. Expert volunteers are being identified and recruited in collaboration with British Executive Services Overseas. The first expert is to look at the cost and management of the Centre's Dhaka and Matlab hospitals, and another has been requested to help with the detailed design and implementation of the Centre's communication and dissemination strategy.

7. The ER&ID Office continued to provide support to **The Centre Fund Campaign activities**, including a visit to the USA by the Assistant Director, ERID to follow-up on Hillary Clinton's visit, clarify institutional relationship issues, and work with US-based staff to plan the activities for the rest of 1995.

i) The priorities for The Centre Fund Campaign staff in the United States have been as follows:

- to obtain a leadership level gift from USAID;
- to build foundation support;
- to build corporate support;
- to recruit a Centre Fund volunteer committee;
- to maintain and build linkages with U.S., and international institutions; and
- to build a constituency for the Centre in the U.S., particularly among the Centre's alumni, the Bangladeshi community and U.S. government leaders.
- to develop an opportunity for Hillary Clinton to promote ICDDR,B and The Centre Fund to current donors and donor prospects.

ii) The **results** of these efforts have been good:

a. Financial:

* USAID has obligated $1 million for the endowment fund.

* The Ford Foundation said that as much as $1 million would be contributed in this stage of the campaign if ICDDR,B could increase USAID's initial pledge and obtain additional support from other sources. (A minimum commitment of $500,000 is expected based on USAID's commitment of $1 million.)

* The Rockefeller Foundation has committed a gift of $150,000 in unrestricted funds.

b. Centre Fund Committee Recruits:

Mr. Azmat Ali, Chairman and CEO, NYMA (a U.S.- based aerospace company);
Dr. John Evans, Chairman, Rockefeller Foundation;
Dr. William B. Greenough, Johns Hopkins University (ex officio);
Dr. Demissie Habte, ICDDR,B (ex officio);
Dr. D.A. Henderson, Johns Hopkins University;
Dr. Joshua Lederberg, President Emeritus, Rockefeller University;
Mr. A.K.M. Shamsuddin, Managing Director, Rhone-Poulenc Bangladesh;
Mr. Abu Solaiman, President, Data Flow Corporation (a U.S.-based data processing, software and systems analysis company).

In addition, the following have been approached and are considering roles on the Centre Fund Committee:

Dr. G. Gordon Douglas, President, Merck Vaccines, Merck & Company;
Dr. Leon Rosenberg, President, Bristol-Myers Squibb Pharmaceutical Research Institute.

Other influential and high profile prospects are also being approached.

c. **Approaches to Foundations:**

Approaches to the following foundations have been developed and are currently under way: Carnegie Corporation of New York, The William & Flora Hewlett Foundation, The W.K. Kellogg Foundation, The Mellon Foundation, The Turner Foundation.

d. **Corporate Support:**

Discussions have been held with the following corporations for their participation in the campaign: American Express Bank, Bristol-Myers Squibb, Coca-Cola Company, Levi Strauss & Company, Merck & Company.

e. **Constituency Building:**

The U.S. office has worked to make the Centre more influential in governmental, political, foundation and corporate circles. Among the introductions to the Centre which the U.S. office facilitated are: J. Brian Atwood, Administrator, USAID, Congressman Tony Hall, Hugo Hoogenboom, President, Population Action International, Carol Lancaster, Deputy Administrator, USAID, Jan Piercy, Director, World Bank, Senator Joseph P. Tydings, Robert B. Wallace, President, Wallace Global Fund. This is an on-going process.

A full report on the progress of the Centre Fund campaign is attached as Appendix D.

8. Considerable effort was put into planning the next expansion phase of the **Hospital Endowment Fund activities**. Major General M.R. Choudhury has kindly consented to chair the Hospital Endowment Committee. The Committee completed a series of preparatory meetings, made progress in appointing members to the Council of Investment Advisors and the Council of Goodwill Ambassadors, drafted a Case Statement for the campaign, and examined new and alternative approaches to involving the business community in Bangladesh in the campaign. With the active assistance of Ms. Loretta Saldanha, the Hospital Endowment Barbecue Ball is on-track, and has already attracted sponsorship in excess of $14,000 from the local business community, and will earn still more through sales of tickets etc.

9. The ER&ID continued to develop plans for a small-scale **European fund-raising strategy**, using a minimalist institution to allow the Centre to apply for matching grants under the Joint Funding Schemes of the ODA and the European Union.

Strategic Planning Activities

1. In addition to the decision to implement a policy of charging for registration at the hospital, the **Long-Term Hospital Strategy Committee** defined the outline of an action plan to develop the capabilities of the Government diarrhoea treatment facilities in and around Dhaka. This was then built into a project proposal submitted to the European Union for funding. In addition a cost and management review of the Dhaka and Matlab hospitals is planned for October-December.

2. The Office coordinated the completion of the Centre's **biennial work plans** for 1995/96 with Mr. N. Paljor.

PR/Marketing Activities

1. The ER&ID Office coordinated the **visits** of Mrs. Hillary Rodham Clinton; Carol Lancaster (Deputy Administrator USAID); Ms. Robin Raphael (US Assistant Secretary of State for South Asia); Ms. Huguette Labelle (President CIDA); Hon. Ministers of Finance, Health and Family Welfare, and Women and Children's Affairs of GoB; Crown Prince Philippe of Belgium; Mrs Adam BA Konare (wife of President of Mali); H.E. Mr. Atugoda, (Sri Lankan High Commissioner to Bangladesh); and many others.

2. A **media**-blitz accompanied the visit of Mrs. Hillary Rodham Clinton, and press releases, press packs and photographs were prepared for and distributed to the 16-member pool of US journalists travelling with Mrs. Clinton, and the 16-member pool of Bangladeshi journalists covering her visit.

3. Continuing efforts are under way to refine and improve **Glimpse** in accordance with the communications strategy developed earlier in 1995. In addition, ER&ID played a key role in reviewing and updating the Glimpse mailing list.

4. An up-dated version of **Partnership in Progress** outlining the collaboration and cooperation between the Centre and the Government of Bangladesh is being prepared. An up-dated version of the Centre's Family Planning brochure outlining the Centre's work on family planning and reproductive health is also being prepared.

Committees Coordination Office Activities

The Committees Coordination Officer continued to run the Centre's mandatory committees:

Research Review Committee (RRC)

During the reporting period, the Research Review Committee (RRC) met five times (April 13, May 17, July 12, August 16 and September 20, 1995) and considered 16 (sixteen) research proposals. The Committee approved thirteen proposals, and consideration of three proposals was deferred.

Programme Coordination Committee (PCC)

During the period the PCC did not meet, but the collaborative activities with the national institutions continued in the fields of training, research and other areas.

In response to PCC recommendations, the Centre has organized eleven courses on "Epidemiological methods in public health" since August 1991. These courses were attended by 197 Bangladeshi participants from the Government and Non-Governmental organizations.

Two PCC-collaborative protocols were completed in June 1995 in the respective institutions of the PIs, and these were :

a) PCC/001/93 entitled "A study on health related behaviour among the primary school children". PI: Dr. Mohammad Nazmul Haque, Assistant Professor, Institute of Education and Research, Dhaka University.

b) PCC/002/93 entitled "Studies on Streptococcus pneumoniae: a major cause of child mortality in Bangladesh". PI: Dr. Samir K. Saha, Associate Professor, Department of Microbiology, Dhaka Shishu Hospital, Dhaka.

The Scientific Review Committee (SRC) of PCC met on August 31, 1995 to consider the following two research proposals emanating from national institutions, and revisions are being made by the PIs as per the reviewer's comments :

a) "Inter-relationship between Anthropometric Indices, Morbidity, Vitamin A and Iron status in Adolescent Girls". PI: Dr. Faruk Ahmed, Associate Professor, Institute of Nutrition & Food Science, Dhaka University.

b) "Impact of Zinc & Vitamin A supplementation in malnourished children with persistent diarrhoea". PI: Dr. Farida Khatun, Associate Professor of Child Health, Dhaka Medical College Hospital, Dhaka.

Currently, one protocol entitled "Purification and characterization of anti-shigella active principles from herbs (E.hirta)", (PI: Professor Kamaluddin Ahmad) is in progress at Bangladesh Institute of Herbal Medicine, Dhaka.

Ethical Review Committee (ERC)

During the reporting period, the Ethical Review Committee (ERC) met seven times (April 30, May 4, May 31, June 4, June 29, July 31 and August 31, 1995) and considered 13 (thirteen) research proposals. The Committee gave ethical clearance to twelve proposals, and consideration of one proposal is pending.

Animal Ethics Experimentation Committee (AEEC)

During the reporting period, the Animal Ethics Experimentation Committee (AEEC) met twice (May 15 and June 19, 1995) and considered two applications for animal studies entitled (a) "Exploratory work in the rabbit of an antisecretory component of rice" (PI: Prof. J.R. Hamilton), and (b) "Platanista gangetica as an environmental sentinel species for the Ganges river delta" (PI: Ms. Zarin Greenough). Both the applications were approved.

Technical Cooperation Office Activities

1. The new Technical Cooperation Officer (TCO) has ensured that the **terms and conditions of grants** offered by donors are acceptable to the Centre. He has also assisted the PIs in understanding and complying with grant conditions as laid out in the signed grant document.

2. From the Centre, the TCO had administered the 1991-95 five-year Cooperative Agreement with USAID Washington and had assisted the Centre's MCH-FP Extension Projects in dealing with USAID Dhaka. After the completion of the recent USAID audit of the Centre, the TCO organized two special seminars on **USAID regulations** and handed out easy-to-understand briefs to everyone at the Centre dealing with USAID funds.

3. The TCO has also organized follow-up **workshops** with the Centre's Travel, Procurement & Supply, Personnel, Budget & Finance offices for explaining various grant documents, including USAID. These workshop sessions have helped the Centre staff to understand more clearly the conditions, time-limit, reporting deadlines, etc. of the agreements under which they operate. These interactions with PIs and administrative support staff have led to sound management of funds and has enhanced the Centre's reputation as a financially sound and prudent institution.

4. The TCO put together a **database on donor reporting**, and this is now running smoothly ensuring that the donor agencies receive the required financial and technical reports on time. The database is to be handed over to and administered by the ER&ID Office Manager.

CONTRIBUTIONS RECEIVED

Aga Khan Foundation

The financial support for the first year from the Aga Khan Foundation for a 3-year study entitled "Socio-economic Development and Human Well-Being: Exploring Pathways of Change" was received. The 1995 grant of US$47,738.55 from AKF will allow Drs. Abbas Bhuiya and Mushtaque Chowdhury of BRAC to undertake research on this important social science topic.

AMEX-Child Health Foundation

A grant of $75,000 from the American Express Foundation - made on behalf of the American Express Bank - was made to ICDDR,B through the Washington-based Child Health Foundation. This grant allowed the Centre to fund a two week "train-the-trainer" workshop designed to train nurses to teach other health care workers in the use of ORS. Senior nurses participated in this training workshop from Pakistan, Sri Lanka, India, and Bangladesh. The financial contribution to the "train-the-trainer" workshop was made in recognition of American Express Bank's 75th anniversary.

AusAID

The Government of Australia made its annual contribution for 1995 of A$ 420,000 (equivalent to Taka 12,180,420.00) to the Centre. AusAID also gave A$30,000 to the Centre towards the Hospital treatment work during the epidemic.

BADC

The annual core support of the Belgian Government was also received. The 1995 contribution of 12m Belgian Franc came to $419,245 after conversion.

Government of Bangladesh

The Government of Bangladesh has made very important contributions during the month of June. These were:

* a one-time grant of Tk. 1 crore ($250,000) for the Dhaka Hospital;

* an additional one-time grant of Tk. 1 crore ($250,000) for the improvement of the hospital and the Dutch-built shed facilities;

* an annual contribution of Tk. 75 lac ($187,500). This will help the Centre to continue to provide free clinical services at the Hospital and will provide support to other core activities of the Centre.

In addition, efforts are under way to increase the annual GoB contribution by another Tk. 50 lac ($125,000) during 1995. All told, the total contribution of GoB to the Centre for the year added up to nearly a million dollars and made the GoB one of the leading donors to the Centre.

A two-year project, with a budget of $120,000 and to be undertaken at ICDDR,B, was approved recently. Of this, an amount of Tk. 360,000 was received for Phase I of the protocol entitled "Establishment of current WHO technique for surveillance of antimicrobial resistance and serotyping of *S. pneumoneae* and *H. influenzae*" from the Project Director, ARI, Office of the Director-General Health Services, GoB. The grant was possible because of the financial contribution of **World Bank** to the Government of Bangladesh, who, in turn, had approached ICDDR,B for undertaking the surveillance study. **WHO** is also involved with the project as it is sending consultants to this project.

The Government of Bangladesh also agreed to make some medicines and cleaning materials available for the Centre's use in responding to the epidemic.

CIDA

The remaining part of the CIDA contribution for 1994 was received recently. They had previously given Cdn$400,000 and has now given Cdn$100,000 thus making a total contribution of Cdn$500,000 for 1994. Despite the successful visit of Ms. Huguette Labelle CIDA's contribution to the Centre for 1996-8 will be only Cdn$ 300,000 pa. CIDA sources say that the Centre is the only international NGO (without representation in Canada - those with offices in Canada {CARE etc.} have the lobby-groups to protect their interests) not to be cut back to zero. The annual contribution of Cdn$8 million to the International Planned Parenthood Federation has been reduced to zero.

DANIDA

The Government of Denmark responded to the Centre's request for a contribution to the epidemic response. The local DANIDA office gave Knr 75,000, equivalent to $13,850.

Dutch

The Royal Netherlands Government made a contribution of $15,625 for post-flood epidemic response work.

European Union

A contract was signed between the European Community and the University of Goteborg for a project entitled "Development and Testing of an Oral B Subunit-Whole Cell Cholera Vaccine Protecting Against Both 01 and 0139 Cholera" for 349,450 ECU. Subsequently, a subcontract was signed between the Centre and University of Goteborg. Under the subcontract, Dr. Firdausi Qadri of the Centre's Laboratory Sciences Division would be collaborating with Dr. Jan Holmgren of the Department of Medical Microbiology and Immunology of the University. An amount of 60,000 ECU, equivalent to $79,800 has been initially received by the Centre for this collaborative cholera vaccine study.

Republic of France

The post flood epidemic proposal was declined, but two scholarships "in any special field you would be interested in" were offered.

Ford Foundation

A supplementary grant of $100,000 from the Ford Foundation for public policy and policy-oriented research on HIV/AIDS in response to the proposal submitted by Drs. Massee Bateman and Jim Ross.

Germany

The Government of Germany pledged to give $35,000 to the Centre to buy drugs and medicine. The contribution from Germany came in response to the Centre's call for epidemic assistance.

Japan

The Government of Japan has approved the 1995 contribution to the Centre. This year's contribution will be allocated in the following manner:

Laboratory Sciences	$120,000
Clinical Sciences	$140,000
SAARC Fellowships	$ 70,000
Training Courses	$ 50,000
Matlab Family Planning	$300,000
Total	$680,000

Kingdom of Saudi Arabia

The Government of the Kingdom of Saudi Arabia made an annual core contribution of Bangladesh Tk. 2,358,490.57 (equivalent to US$59,227.15) to the Centre.

Norway

The Government of Norway - Emergency Response Unit made a contribution of some $207,000 to support its epidemic response work. This contribution will be used to provide treatment to the many patients attending the Centre's Dhaka hospital, and to undertake preventive activities in collaboration with the Dhaka City Corporation and the Ministry of Health and Family Welfare in the worst affected areas.

Overseas Development Administration

The ODA (through the Aid Management Office Dhaka) has agreed to fund a £346,900 proposal for three years of an international level Health Economist together with two national officer positions and logistical back-up to develop health economics as a discipline within the Centre. In response to the Centre's request to meet the rising expenses due to the massive increase in patient load at the Dhaka Hospital, ODA agreed to give 10,000 pounds sterling for procurement of equipment.

Rockefeller Foundation

The Rockefeller Foundation will contribute $150,000. The Centre's U.S. Office is liaising with Dr. Steve Sinding so that funds can be transferred to the Centre Fund campaign.

Sri Lanka
The Government of the Democratic Socialist Republic of Sri Lanka has given its first annual contribution to the Centre in recognition of the importance of the Centre's work for developing countries throughout the world.

UNICEF
The UNICEF core contribution ($250,000) together with an additional $75,000 for low-osmolarity ORS studies was approved from the MRR Global Fund.

USAID
The Centre suffered another set-back when USAID reduced its contribution for 1995 by $394,000 in response to budgetary cuts in Washington. This was off-set in part by an additional contribution from USAID/Dhaka of $198,000 for the Urban Environmental Health pilot project.

Effective representation, PR and lobbying in North America as well as the Centre's work in Goma, Hillary Clinton's visit, and the celebrations of 25 years of ORS, has meant that the Centre has a high and positive profile in USAID/Washington. It is hoped that this may shield the Centre from bearing too much of the brunt of the budgetary cuts in the future.

USAID/Washington has committed the first $1 million for the Centre Fund, and is looking to commit more in the future. This contribution (made despite deep cuts in the organization's operation budget) reflects USAID's belief in and commitment to the Centre and its work.

The Human Nutrition Institute (HNI) of the International Life Sciences Institute Research Foundation has provided a two-year grant worth of $199,621 for a research project entitled "Dietary Fat and Infection: Relationship to Vitamin A Status of Women and their Infants Breastmilk Retinol/Carotinoid, and Dietary Assessment Methodology" to Dr. George Fuchs.

The Centre signed a subcontract with the East-West Center for a programme on population. The subcontract is worth $24,945. The project, funded by USAID, involves extended analysis of the 1994 Bangladesh Demographic Health Survey.

Overdue:
A request for funding was submitted (via UNDP) to the **Arab Gulf Fund** for $450,000 for 1994. There appears to be some confusion about this request (which was delivered to UNDP New York in April, and only forwarded to UNDP Riyadh in September). The Arab Gulf Fund has informed the Centre that they have still not received the proposal. The proposal now seems unlikely to be funded.

A request has been submitted to the Embassy of **China** for another grant of $20,000. However, despite follow-up no reply (one way or another) has been received.

An on-going discussion with **UNFPA** on their 1994 and 1995 contributions is expected to be resolved in the near future.

APPENDIX A

THE CENTRE'S PUBLICATIONS AND PROTOCOLS

Note: Collaborative publications (marked *) are listed under two Divisions

CLINICAL SCIENCES DIVISION
LIST OF PUBLICATIONS
(April 1995 - September 1995)

MANUSCRIPTS PUBLISHED

1. **Alam NH.** Trimethoprim-Sulphamethoxazole (TMP-SMX) in the treatment of persistent diarrhoea: a double blind placebo controlled trial. Arch Dis Child 1995; 72:483-486.

2. **Islam MR, Alam AN, Hussain MS, Mahalanabis D.** Effect of antimicrobial (Nalidixic acid) therapy in shigellosis and predictive values of outcome variables in patients susceptible and resistant to it. J Trop Med Hyg 1995, 98:121-125.

3. **Islam MR, Alam AN, Hossain MS, Mahalanabis D, Hye AKMA.** Double-blind comparison of oral gentamicin and nalidixic acid in the treatment of acute shigellosis in children. J Trop Pediatrics 1994; 40:320-325.

4. **Khaled MA, Kabir I, Mahalanabis D.** Effect of protein energy supplementation on oxidative stress in malnourished children. Nutr Res 1995;15(8):1099-1104

5. **Khan WA, Seas C, Dhar U, Salam MA.** Bacterial meningitis in a diarrhoeal disease treatment centre in Bangladesh, and susceptibility of the pathogens to antimicrobials. (Short Communication). Acta Paediatrica, 1995, 85:693-4.

6. **Mahalanabis D, Faruque ASG, Hoque SS, Faruque SM.** Hypotonic oral rehydration solution in acute diarrhoea: a controlled clinical trial. Acta Paediatrica 1995, 84:289-93.

7. **Mitra AK, Rahman MM, Mahalanabis D, Patra FC, Wahed MA.** Evaluation of an energy-dense meal liquefied with amylase of germinated wheat in children with acute watery diarrhoea: a randomized controlled clinical trial. Nutrition Research, 1995, 15:939-951.*

8. **Mitra AK.** The importance of breastfeeding in minimizing mortality and morbidity from diarrhoeal diseases: The Bangladesh perspective. JDDR, 1995;13(i):1-7.

9. **Rahman MM, Majumder RN, Ali Md, Mahalanabis D.** Role of amylase-treated, energy dense liquid diet in the nutritional management of acute shigellosis in children: a controlled clinical trial. Acta Paediatrica, Aug 1995; 867-872.

10. **Rahman MM, Mahalanabis D, Wahed MA, Islam M, Habte D, Khaled MA, Alvarez JO.** Conjunctival impression cytology fails to detect subclinical vitamin A deficiency in young children. Community and International Nutrition, Jan 1995, 1869-1874.

11. **Roy SK.** Zinc supplementation in the treatment of children with diarrhoea. Int. J Pediatr 1995; 62:181-193.

12. **Sarkar SA, Mahalanabis D.** The presence of bicarbonate in Oral Rehydration Solution does not influence fluid absorption in cholera. Scand J Gastroenterol 1995; 30:242-45.

13. **Sarkar SA, Majid N, Mahalanabis D.** Alanine and glucose based hyposmolar oral rehydration solution in infants with persistent diarrhoea: a controlled clinical trial. Acta Pediatr 1995; 86:775-80.

14. **Shoda R, Mahalanabis D, Wahed MA, Albert MJ.** Bacterial translocation in the rat model of lectin-induced diarrhoea. GUT, 1995, 36:379-381.

MANUSCRIPTS IN PRESS

1. **Bardhan PK, Rahman ASMH, Islam S, Rahman M, Gyr K.** Octreotide (SMS 201-995) as an antisecretory agent in cholera toxin and bile acid induced intestinal secretion in an in vivo animal study. Int J Med Res.

2. **Faruque ASG, Mahalanabis D, Hamadini J, Hoque SS.** Hyposmolar sucrose ORS in acute diarrhoea.: A pilot study. Acta Paediatrica.

3. **Haider R, Islam A, Kabir I, Habte D.** Early complementary feeding is associated with low nutritional status of young infants recovering from diarrhoea. J Trop Pediatrics.

4. **Hoque SS, Alam AN, Kibriya AKMG, & Albert MJ.** Moraxella septicaemia in children with diarrhoeal disease. Diag Microbial Infect Dis.

5. **Islam A, Molla AM, Ahmed MA, et al.** Is rice-based oral rehydration therapy effective in young infants ? Arch Dis Child, 1994;71:00-00.

6. **Islam A, Rahman MM, Mahalanabis D, Rahman AKSM.** Death in a diarrhoeal cohort of infants and young children soon after discharge from hospital: risk factors and causes of verbal autopsy. J Trop Paed.

7. **Khan WA, Begum M, Salam MA, Bardhan PK, Islam MR, Mahalanabis D.** Comparative trial of five antimicrobials in the treatment of cholera in adults. Transactions of the Royal Society of Tropical Medicine and Hygiene.

8. **Khan WA, Dhar U, Begum M, Salam MA, Bardhan PK, Mahalanabis D.** Antimicrobial treatment of adults with cholera due to Vibrio cholerae 0139 (Synonym Bengal) Drug 49 (Suppl.).

9. **Khan WA, Salam MA, Bennish ML.** C-reactive protein and prealbumin as markers of disease activity in shigellosis. GUT.

10. **Khan AM, Albert MJ, Sarker SA, Bhattacharya MK and Azad AK.** Septicemia due to vibrio cholerae 0139 Bengal. Diagnostic Microbiology and Infectious Disease.

11. **Majumder RN, Kabir I, Rahman MM, Khatun M, Mahalanabis D.** Absorption of macronutrients from a calorie dense diet in malnourished children during acute shigellosis. J Pediatr Gastroenterol Nutr.

12. **Mahalanabis D, Rahman MM, Sarker SA, Bardhan PK, Hildebrand P, Beglinger C, Gyr K.** Helicobacter pylori infection in infants and children in a poor community of Bangladesh: prevalence, socioeconomic and nutritional aspects. Int J Epidemiology.

13. **Mahalanabis D, Faruque ASG, Islam A, Hoque SS.** Maternal education and family income as determinants of severe disease following acute diarrhoea in children: a case control study. J Biosoc Sci.

14. **Mitra AK, Mahalanabis D, Ashraf H, Unicomb L, Eeckels R, Tzipori S.** Hyper-immune cow colostrum reduced diarrhoea due to rotavirus: a double-blind, controlled clinical trial. Acta Paediatrica.

15. **Rabbani GH, Albert J, Rahman H, Islam M.** Development of an improved animal model of Shigellosis in adult rabbit by colonic infection with virulent Shigella Flexneri 2a. Infection and Immunity.

16. **Rahman MM, Islam MA, Mahalanabis D.** Mothers knowledge about vaccine preventable diseases and immunization coverage of a population with high rate of illiteracy. J Trop Paed.

17. **Rahman MM, Mitra AK, Mahalanabis D, Wahed MA, Khatun M, Majid M.** Absorption of macronutrients from an energy dense diet liquefied with amylase from germinated wheat in infants with acute diarrhoea. J Pediatr Gastroenterol & Nutr.*

18. **Sarkar SA, Rahman MM, Mahalanabis D, Bardhan PK, Hildebrand P, Beglinger C, Gyr K.** Prevalence of Helicobacter pylori infection in infants and family contacts in a Bangladeshi Poor Community. Dig Dis Sci.

19. **Shoda R, Mahalanabis D, Islam KN, Wahed MA, Albert MJ.** Vitamin A supplementation on lectin-induced diarrhoea and bacterial translocation in rats. Nutrition Research.*

ON-GOING RESEARCH PROTOCOLS (September 1995)

1. ICDDR,B Surveillance Programme, Clinical Research Centre (G. Fuchs/ASG Faruque).

2. Double-blind, randomized study of the safety and efficacy of ciprofloxacin in the treatment of childhood shigellosis (M.A. Salam).

3. Impact of ready-to-use packaged rice ORS on morbidity and nutrition of infants and young children, and response of mothers when provided as an antidiarrhoeal medicine in rural Bangladesh (ASG Faruque).

4. Role of micronutrient mixture in reducing the incidence and severity of acute diarrhoea and acute respiratory infections (ASG Faruque).

5. The role of Entamoeba histolytica in the dysenteric syndrome in children and adults (D. Mahalanabis).

6. Oral 5-ASA treatment of shigellosis (Dr. R. Islam).

7. H. pylori as a risk factor for acute diarrhoea and persistent diarrhoea (P.K. Bardhan).

8. A study on the immunological effect of vitamin A and Zinc in a placebo controlled 4-cell trial (S.K. Roy).

9. A new non-invasive test to assess gastric acid output in children. (Shafique Sarker).

10. Nosocomial transmission of measles and diagnostic salivary IgM assay (S.M. Akramuzzaman).

11. Fiber (guar gum) in the treatment of acute non-cholera diarrhoea in children (N.H. Alam).

12. Immune disruption caused by measles (S.M.Akramuzzaman).

13. Infuso-feed balloon in the management of children with diarrhoea and malnutrition (P.K. Bardhan).

14. Vitamin A loss in urine during acute infection (A.K. Mitra, Univ of Alabama/ICDDR,B collaborative).

15. Evaluation of hyperimmune bovine colostrum (HBC) in the treatment of E. Coli and rotavirus diarrhoea and H. pylori infection in children (S.A. Sarker).

16. Single-dose ciprofloxacin vs doxycycline in the treatment of cholera (W.A. Khan/M.A. Salam).

17. Vegetable protein sources for refeeding malnourished children with shigellosis (I. Kabir).

18. Multi-centre clinical trial to evaluate the efficacy/safety of reduced osmolarity ORS solution in children with acute diarrhoea (R. Majumder/G. Fuchs).

19. Multicentre clinical trial to evaluate the safety/efficacy of reduced osmolarity ORS solution in adult patients with cholera. (N.H. Alam/G. Fuchs).

20. Impact of peer counsellors on feeding practices of mothers in the urban community. (R. Haider).

21. Effect of dietary fat and infection on vitamin A status and dietary intake methodology (G. Fuchs).

22. Oxidative stress in bacterial translocation (M.A. Khaled).

23. Unripe banana and short chain fatty acids in the treatment of acute diarrhoea (G. Rabbani/G. Fuchs).

24. Hypotonic ORS in children with persistent diarrhoea (S.A. Sarker).

LABORATORY SCIENCES DIVISION
LIST OF PUBLICATIONS
(April 1995 - September 1995)

MANUSCRIPTS PUBLISHED

1. **Albert MJ.** The first epidemic of *Vibrio cholerae* 0139 [Reply]. J Clin Microbiol 1995; 33:1972.

2. **Ansaruzzaman M, Kibriya AKMG, Rahman A, Neogi PKB, Faruque ASG, Rowe B, Albert MJ.** Detection of provisional serovars of *Shigella dysenteriae* and their designations as *S. dysenteriae* 14 and 15. J Clin Microbiol 1995; 33:1423-1425.

3. **Ansaruzzaman M, Rahman M, Kibriya AKMG, Bhuiyan NA, Albert MJ.** Isolation of sucrose late-fermenting and non-fermenting variants of *Vibrio cholerae* O139 Bengal: implications for diagnosis of cholera. J Clin Microbiol 1995; 33:1339-1340.

4. **Azim T, Halder RC, Sarker MS, Ahmed S, Hamadani J, Chowdhury A, Qadri F, Salam MA, Sack RB, Albert MJ.** Cytokines in the stools of children with complicated shigellosis. Clin Diag Lab Immunol 1995; 2:492-495.

5. **Clemens J, Albert MJ, Rao M, Qadri F, Sack D, Huda S, Kay B, van Loon FPL, Pradhan B, Sack RB.** Impact of infection by *Helicobacter pylori* upon the risk and severity of endemic cholera. J Infect Dis 1995; 171:1653-1656.

6. **Haque MA, Qadri F, Ohki K, Kohashi O.** Surface components of shigellae involved in adhesion and haemagglutination. J Appl Bacteriol 1995; 79:186-194.

7. **Hoque SS, Alam AN, Kibriya AKMG, and Albert MJ.** *Moraxella* septicemia in children with diarrhoeal disease. Diag Microbiol Infect Dis 1995; 21:215-217.

8. **Huq A, Colwell RR, Chowdhury MAR, Xu B, Moniruzzaman SM, Islam MS, Yunus M, Albert MJ.** Coexistence of *Vibrio cholerae* O1 and O139 Bengal in plankton in Bangladesh. Lancet 1995; 345:1249.

9. **Islam MS, Alam MJ, and Khan SI.** Occurrence and distribution of culturable *Vibrio cholerae* 01 in freshwater environments of Bangladesh. International Journal of Environmental Studies 1995; 46 : 217-223.

10. **Islam MN, Hossain MA, Rahman M, Yasmin M, Alam AN, Hoque M, Sattar H.** Development and evaluation of coagglutination test to detect rotavirus antigens in stools of patients with diarrhoea. Bangladesh Med Res Counc Bull. 1995, 21(1):11-17.

11. **Khaled MA, Wahed MA, Alvarez JO, Rahman MM, Mahalanabis D, and Habte D.** Vitamin A status in post supplemented 1 year-old infants using the relative dose responses(RDR) test. Abs. The FASEB Journal(1995): 9(3);A460.

12. **Linnerborg M, Widmalm G, Weintraub A, Albert MJ.** Structural elucidation of the O-antigen lipopolysaccharide from two strains of *Plesiomonas shigelloides* that share a type-specific antigen with *Shigella flexneri* 6, common group 1 antigen with *Shigella flexneri* spp. and *Shigella dysenteriae* 1. Eur J Biochem 1995; 231:839-844.

13. **Mitra AK, Rahman MM, Mahalanabis D, Patra FC, Wahed MA.** Evaluation of an energy-dense meal liquefied with amylase of germinated wheat in children with acute watery diarrhoea: a randomized controlled clinical trial. Nutrition Research, 1995, 15:939-951.*

14. **Qadri F, Albert MJ.** Utility of monoclonal antibody-based coagglutination test for direct detection of *Vibrio cholerae* O1 and/or O139 in stool samples (reply). J Clin Microbiol 1995; 33:509-510.

15. **Rahman, ASMH.** Studies on the Natural and Experimental Cryptosporidiosis in calves, mice, rats and chickens. A Ph.D. Dissertation, Department of Parasitology, Bangladesh Agricultural University, Mymensingh, 1995 : 1-187.

16. **Ridell J, Siitonen A, Paulin L, Lindroos O, Korkeala H, Albert MJ.** Characterization of *Hafnia alvei* with biochemical test, RAPD-PCR and partial sequencing of the 16S rRNA gene. J Clin Microbiol 1995; 33:2372-2396.

17. **Shoda R, Mahalanabis D, Wahed MA, Albert MJ.** Bacterial translocation in the rat model of lectin-induced diarrhoea. Gut 1995; 36:379-381.

18. **Wahed MA, Alvarez JO, Khaled MA, Mahalanabis D, Rahman MM and Habte D.** : Comparison of the modified relative dose response (MRDR) and the relative dose response (RDR) in the assessment of vitamin A status in malnourished child. American Journal of clinical Nutrition (1995) : 61; 1253-6.

19. **Wahed MA, Alvarez JO, Rahman MM, Hussain M, Jahan F, Mahalanabis D, and Habte D.** Prevalence of subclinical vitamin A deficiency in healthy 6 month old infants in Bangladesh. Abs. The FASEB Journal (1995), 9(3); A460.

MANUSCRIPTS IN PRESS

1. **Albert MJ, Ansaruzzaman M, Shimada T, Rahman A, Bhuiyan NA, Nahar S, Qadri F, Islam MS.** Characterization of *Aeromonas trota* strains that cross-react with *Vibrio cholerae*-0139 Bengal. J Clin Microbiol (in press).

2. **Albert MJ.** *Vibrio cholerae* 0139 Bengal: probable causative agent of the eighth pandemic of cholera. Hong Kong J. Paed. (in press).

3. **Azim T, Islam LN, Halder RC, Khanum, N Hamadani J, Sarker MS, Salam MA, and Albert MJ.** Peripheral blood neutrophil responses in children with shigellosis. Clin Diag Lab Immunol (in press).

4. **Dalsgaard A, Albert MJ, Taylor DN, Shimada T, Meza R, Serichantalergs O, Echeverria P.** Characterization of *Vibrio cholerae* non-O1 serogroups obtained from an outbreak of diarrhoea in Lima, Peru. J Clin Microbiol (in press)

5. **Faruque SM, Roy SK, Alim ARMA, Siddique AK, Albert MJ.** Molecular epidemiology of toxigenic *V. cholerae* in Bangladesh based on numerical analyses of rRNA gene restriction patterns. J Clin Microbiol (in press).

6. **Girón JA, Gomez-Duarte OG, Maneval DR, Albert MJ, Levine MM, Kaper JB.** Heterogeneity, association and prevalence of longus with colonization factors, enterotoxin types and serotypes of enterotoxigenic *Escherichia coli*. Infect Immun (in press).

7. **Hoque T, Iliadou P, Hossain MA, Crawford DH.** Epsteins-Barr virus infections: A seroepidemiological study in Bangladesh Journal of Infection, 1995 (in press).

8. **Islam MS, Alam MJ, Miah MA, Felsenstein A, and Sack RB.** (1995). Detection of non-culturable *Vibrio cholerae* O139, by PCR and fluorescent antibody methods, in laboratory microcosms. World Journal of Microbiology and Biotechnology. 11:000-000 (In press).

9. **Islam MS, Siddique AKM, Salam A, Akram K, Majumdar RN, Zaman K, Fronczak N, and Laston S.** (1995). Microbiological investigation of the diarrhoea epidemics among Rwandan refugees in Goma, Zaire.*Transactions of the Royal Society of Tropical Medicine and Hygiene*. 89:000-000 (In press).

10. **Khan AM, Bhattacharya MK, Albert MJ.** Neonatal diarrhea caused by *Vibrio cholerae* 0139 Bengal. Diagn Microbiol Infect Dis (in press).

11. **Knirel YA, Jansson P-E, Weintraub A, Widmalm G, Matheson L, Albert MJ.** Structure of the capsular polysaccharide of *V. cholerae* 0139 synonym Bengal containing D-galactose-4, 6-cyclophosphate. Eur J Biochem (in press).

12. **Mitra AK, Mahalanabis D, Ashraf H, Unicomb L, Eeckels R, Tzipori S.** Hyperimmune cow colostrum reduces diarrhea due to rotavirus : a double-blind, controlled clinical trial. Acta Paediatr(in press).

13. **Myaux JA, Unicomb L, Uzma A, Islam AM, Besser RE, Modlin JF, Santosham M.** Effect of diarrhea on the humoral response to oral polio vaccination. Pediatr Infect Dis J (in press).

14. **Nair GB, Albert MJ, Shimada T, Takeda Y.** *Vibrio cholerae* 0139 Bengal: the new serogroup of *V. cholerae* causing cholera. Med. Microbiol. Rev. (in press).

15. **Qadri F, Mohi MG, Hossain J, Azim T, Khan AM, Salam MA, Sack RB, Albert MJ, Svennerholm A-M.** Vibriocidal antibody response in cholera due to *Vibrio cholerae* O139 Bengal: A comparison with response in cholera due to *Vibrio cholerae* O1. Clin Diag Lab Immunol (in press).

16. **Rabbani GH, Albert MJ, Rahman ASMH, Islam M, Mahalanabis D, Kabir I, Alam K, Ansaruzzaman M.** Development of an improved model of shigellosis in the adult rabbit by colonic infection with virulent *Shigella flexneri* 2a. Infect Immun (in press).

17. **Rahman M, Levy J, and Butzler JP.** Role of R Plasmid and *GyrA* gene in the mechanism of nalidixic acid resistance in *S. dysenteriae* type 1. J. Clin. Microbiol (in press).

18. **Rahman MM, Mitra AK, Mahalanabis D, Wahed MA, Khatun M, Majid M.** Absorption of macronutrients from an energy dense diet liquefied with amylase from germinated wheat in infants with acute diarrhoea. J Pediatr Gastroenterol & Nutr (in press). *

19. **Sack RB, Albert MJ, Siddique AK.** (1995). The emergence of *Vibrio cholerae* 0139 Bengal. In J.S. Remington and M. Swartz (ed.). Current Clinical Topics in Infectious Diseases. Blackwell Science, Boston (in press).

20. **Stroeher UH, Jedani KE, Dredge BK, Morona R, Brown MH, Karageorgos LE, Albert MJ, Manning P.** The new age of cholera-serotype O139 synonym Bengal: Identification of VcIS1 and its role in genetic rearrangement of the *rfb* regions of *Vibrio cholerae* O1 and O139. Proc Natl Acad Sci USA (in press).

21. **Shoda R, Mahalanabis D, Islam KN, Wahed MA, Albert MJ.** Vitamin A supplementation on lectin-induced diarrhoea and bacterial translocation in rats. Nutrition Research (in press).*

RESEARCH PROTOCOLS IN PROGRESS

1. Biochemical fingerprinting in the epidemiological studies of diarrhoeal pathogens in Bangladesh (Dr. M. John Albert).

2. Production and characterization of monoclonal antibodies to the virulence-associated factors of enteropathogenic *Escherichia coli* for use as diagnostic reagents (Dr. M. John Albert).

3. Direct Identification of enteric pathogen in biological specimens by specific DNA amplification: Part I (Dr. Shah M. Faruque).

4. Characterization of epidemic strains of toxigenic *Vibrio cholerae* O1 and non-O1 based on genetic and phenotypic traits (Dr. Shah M. Faruque).

5. Immune status of children who develop persistent diarrhoea (Dr. Tasnim Azim).

6. A study on the immunological effect of vitamin A and zinc in a placebo controlled 4 cell trial (Dr. S.K. Roy/Dr. Tasnim Azim).

7. Local and systemic antibody response to a peroral inactivated ETEC vaccine (Dr. Firdausi Qadri).

8. Local and systemic immune response in patients in a diarrhoeal epidemic due to *Vibrio cholerae* O139 (Dr. Firdausi Qadri).

9. Safety and immunogenicity of an oral bivalent B subunit *V. cholerae* 01/0139 whole cell (B01/0139 WC) vaccine in adult Bangladeshi volunteers (Dr. Firdausi Qadri).

10. Role of various aquatic flora, fauna and physicochemical conditions of water in maintaining cholera in Bangladesh (Dr. M. Sirajul Islam).

11. Survey of culturable *V. cholerae* in the aquatic environment (Dr. M. Sirajul Islam).

12. Rapid diagnosis of pathogenic *E. histolytica* infection (Dr. Rashidul Haque).

13. Field evaluation and further characterisation of an invasive-specific monoclonal antibody against *E. histolytica* (Dr. Rashidul Haque).

14. Evaluation of live oral cholera vaccine candidates in the RITARD model (Dr. Zia U. Ahmed).

15. Vitamin A status of young infants in Bangladesh (M.A. Wahed).

16. Vitamin A stores of fatal cases (M.A. Wahed and Dr. A.K. Azad).

COMMUNITY HEALTH DIVISION
LIST OF PUBLICATIONS
(April 1995 - September 1995)

PAPERS PUBLISHED

1. **Bateman OM, Jahan RA, Brahman S, Zeitlyn S, Laston SL.** Prevention of diarrhoea through improving hygiene behaviours: the sanitation and family education (SAFE) pilot project experience, Dhaka, Bangladesh: CARE-ICDDR,B joint publication, 1995. ICDDR,B Special Publication No. 42.

2. **Bhuiya A and Streatfield K.** Feeding, home-remedy practices, and consultation with health care providers during childhood illness in rural Bangladesh. Journal of Diarrhoeal Disease Research, volume(2), 1995.

3. **Bhuiya A, Bhuiya I, and Chowdhury M.** Factors affecting acceptance of immunization in rural Bangladesh. Health Policy and Planning, volume 10(3), 1995.

4. **Chowdhury HR, Yunus M, Khan EH, Zaman K, Rahman A, Sack RB.** Pivmecillinam resistant shigella infections in rural Bangladesh (letter). Tropical Doctor, 1995;25:141-42.

5. **Hawkes S, West B, Wilson S, Whittle H, Mabey D.** Asymptomatic carriage of *Haemophilus ducreyi* confirmed by the polymerase chain reaction. Genitorrin Med. 1995;71:224-227.

6. **Siddique AK.** Failure of treatment centres to prevent cholera deaths in Goma. Lancet, 1995;345:79.

MANUSCRIPTS IN PRESS

1. **Bilqis AH, Juncker T, Sack RB, Ali Md and Aziz KMA.** Sustainability of a water, sanitation and hygiene education project in rural Bangladesh: a five year follow-up. WHO Bulletin.

2. **Bilqis AH, Mahalanabis D and Pelto B.** Research methodology for developing efficient handwashing options: an example from Bangladesh. J Trop Medicine and Hyg.

3. **Huttly S, Bilqis AH.** Developing questionnaire in case-control book. Editors - Andy Hall and Simon Cousins.

4. **Hall A and Bilqis AH.** Planning field activities in book "Editing Meeting on Case-Control Book". Editors - Andy Hall and Simon Cousins.

5. **de Francisco A, Zaman K, Chowdhury HR, Wahed MA, Chakraborty J, Yunus M.** A case of accidental ingestion of vitamin A (short report). Tropical Doctor.

6. **de Francisco A, Chakraborty J.** Maternal recall of Tetanus Toxoid Vaccination. Annals of Tropical Paediatrics.

7. **de Francisco A, Baqui AH.** Vitamin A and vaccines, the importance of side effects. Europ J of Clin Nutr.

8. **Shahid NS.** Maternal Immunization with Polysaccharide Pneumococcal Vaccine. Lancet.

9. **Hasan KZ**. The Diarrhoea Malnutrition Cycle. The Hong Kong J of Paediatrics, 1(supple): 44-55, 1995.

10. **Myaux J, Chakraborty J, Yunus M, Khan EH, de Francisco A.** The effects of Health Services Utilization on the Recovery from Dysentery. J of Trop Pediatrics.

LIST OF ONGOING PROTOCOLS

1. ß-carotene rich foods as a source of vitamin A (Dr K.M.A. Aziz).

2. Improvement of health through community development oriented programme in rural Bangladesh (Dr Abbas Bhuiya).

3. The impact of social and economic development programmes on health and well-being: a BRAC-ICDDR,B collaborative project in Matlab (Dr Abbas Bhuiya).

4. Initiation of HIV-Related Research and Service Activities at ICDDR,B (Dr S. Nahid Mukith Chowdhury).

5. Asia and Pacific Network on Gender, Sexuality and Reproductive Health at ICDDR,B, De La Salle University Social Development Research Centre (Dr S. Nahid Mukith Chowdhury).

6. Efficacy of Bismuth Subsalicylate in preventing acute diarrhoeal episodes from becoming persistent in rural Bangladesh children (Dr Hafiz R. Chowdhury).

7. Health care use patterns of slum residents in Dhaka city, Bangladesh (Dr Maarten Desmet).

8. Health care use patterns of non-slum residents in Dhaka city (Dr Maarten Desmet).

9. Wheezing associated respiratory disorders (WARD) and hypoxemia in hospitalized children under five years of age in rural Bangladesh (Dr Samuel Erny, Dr Andres de Francisco).

10. Matlab Maternal and Child Health and Family Planning (MCH-FP) Programme and Record Keeping System (RKS) (Dr Andrés de Francisco, Mr J. Chakraborty).

11. Nutrition surveillance system (Dr Andrés de Francisco, Mr J. Chakraborty).

12. Safe Motherhood (Dr Andrés de Francisco, Dr Anna-Maria Vanneste).

13. Measles maternal antibody decay in infants (Dr Andrés de Francisco).

14. Control of Acute Lower Respiratory Infections (ALRI) through case finding and management (Dr Andrés de Francisco).

15. Nutrition Rehabilitation in Matlab (Dr Andrés de Francisco).

16. Measles surveillance system (Dr Andrés de Francisco).

17. Epidemiology of diarrhoea and ARI in a cohort of newborns in rural Bangladesh (Dr Kh. Zahid Hasan).

18. Action research and impact studies on community water sanitation and hygiene education intervention in rural Bangladesh (Dr Bilqis A. Hoque).

19. Action research and impact studies on community water sanitation and hygiene education intervention in urban Bangladesh (Dr Bilqis A. Hoque).

20. Technical assistance on impacts of the water-sanitation (WS) programme by DPHE-UNICEF at Banaripara (Dr Bilqis A. Hoque).

21. Socio-environmental assessment of Meghna-Donagoda irrigation project, Matlab (Dr Bilqis A. Hoque).

22. Technical assistance to UNICEF on home management of water and water ingestion of polluted water (Dr Bilqis A. Hoque).

23. Technical assistance to UNICEF on hand washing in urban and rural areas in Bangladesh (Dr Bilqis A. Hoque).

24. Reproductive Tract Infections in Matlab (Dr Sarah Hawkes).

25. Women and Health: exploring the socio-cultural barriers and determinants of women's health status in rural Bangladesh (Dr S. Laston, Dr KMA Aziz).

26. Clustering pattern of watery diarrhoea (cholera-like) cases in Matlab - 1989 (Dr Jacques Myaux).

27. Geographic Information System in Matlab (Dr Jacques Myaux).

28. The effect of retinol and B carotene supplementation in lactating women on Breastmilk quality and vit A status in infants (Ms Amy Rice).

29. Maternal immunization with pneumococcal polysaccharide vaccines (Dr Nigar Shahid).

30. Retinol content in Breastmilk and the reflection of these levels in infants' serum (Dr Nigar Shahid).

31. B-carotene content in Breastmilk and the reflection of these levels in infants's serum (Dr Nigar Shahid).

32. Epidemic Control Preparedness Programme (ECPP) (Dr A.K. Siddique).

33. Anemia during pregnancy in an urban community of Bangladesh: a study of prevalence, validation of simple screening methods and impact of iron folic acid supplementation (Dr Anna-Maria Vanneste).

34. Calcium supplementation in prevention of pregnancy induced proteinuric hypertension, low birth weight and prematurity (Dr Anna-Maria Vanneste).

35. Identifying the barriers to timely treatment for acute respiratory infections in infants and young children (Dr K. Zaman).

COLLABORATIVE STUDIES

1. Effects of dietary fat and infection on Vit A status and dietary intake methodology. PIs - G Fuchs, KMA Aziz, DS Alam, M Yunus and MA Wahed.

2. Surveillance and associated studies on antimicrobial resistance in S. pneumoniae and H. influenzae in Bangladeshi children. PIs - Mahbubur Rahman, Nigar Shahid.

POPULATION AND FAMILY PLANNING DIVISION
LIST OF PUBLICATIONS
(April 1995 - September 1995)

MANUSCRIPTS PUBLISHED

1. **Ahmed S.** "Knowledge and Attitude of the Bangladeshi Rural Mothers Regarding Breastfeeding and Weaning". The Indian Journal of Paediatrics, 1995;62(2): 213-217.

2. **Baqui AH, de Francisco A, Arifeen SE, Siddique AK, and Sack RB.** "Bulging Fontanelle after Supplementation of 25,000 IU Vitamin A in Infancy. Acta Paed Scand 1995;84:863-6.

3. **Maru RM, and Haaga JG** (1994). "Strategies to Improve Accessibility of MCH and Family Welfare Services in Bangladesh: Experience from the MCH-FP Extension Project." In Social Dimensions in Health: A South East Asia Perspective (Eds. J.P. Gupta, P.L. Trakroo, and Gita Bamezai), National Institute of Health and Family Welfare, New Delhi, 1994;82-102.

SPECIAL PUBLICATIONS

1. **Bairagi R, Shuaib M, and Hill A** (1995). "Progressive Estimation of Childhood Mortality: The Preceding Birth Technique in Bangladesh." Harvard Center for Population and Development Studies, Harvard School of Public Health. Working Paper Series Number 95.01.

2. **Wirzba H, and Junker T** (1995). "Disease Patterns, Treatment Practices and Drug Requirements in Rural MCH-FP Government Facilities of Bangladesh." ICDDR,B Special Publication No. 41.

3. A brochure on "The Urban MCH-FP Initiative - A Partnership for Urban Health and Family Planning in Bangladesh" was produced in May 1995.

MANUSCRIPTS IN PRESS

1. **Bairagi R, and Rahman M.** "Contraceptive Failure in Matlab, Bangladesh." International Family Planning Perspectives 22(1).

2. **Hasan Y, Maru R, Simmons R, and Ashraf A.** "Supply Side Determinants of Sterilization Trend in Bangladesh." Indian Political and Economic Weekly (Forthcoming).

3. **Mauldin WP, Ross JA, Kekovole J, Barkat-e-Khuda, Barkat A.** "Direct and Judgemental Measures of Family Planning Program Inputs," Studies in Family Planning.

WORKING PAPERS UNDER PREPARATION

1. **Ashraf A, Maru R, Hasan Y, and Dunston A.** Strengthening Front-line upervision to Improve Performance of Family Planning Field Workers in Bangladesh.

2. **Khanum PA, Wirzba H, Haque I, Mirza T, and Juncker T.** Service Delivery at the Union Health and Family Welfare Centres: The Clients' Perspective.

3. **Mozumder ABMKA, Rahman DMM, and Hossain, AH.** Trends of Contraception and Gender Composition of Surviving Children: Evidence from Two Rural Areas of Bangladesh.

4. **Khan MMA, and Rahman M.** Determinants of Contraceptive Methods Choice in Rural Bangladesh.

5. **Hossain MB, Barkat-e-Khuda, and Phillips JF.** The Effects of Outreach Worker Visits on Perceived Quality of Care in Two Rural Areas of Bangladesh.

6. **Rahman MM, Hossain A, and Das SC.** Prevalence and Continuation of Injectable Contraceptives: Evidence from Extension Project Areas.

7. **Mirza T, Ashraf A, Kabir H, Wazed A, and Ahmed J.** Clinic Waste Disposal in the Rural Family Planning Programme of Bangladesh.

8. **Mirza T, Ashraf A, Kabir H, and Ahmed J.** Training Experience in Domiciliary Injectable Contraceptive Services in the National Family Planning Programme.

9. **Barkat-e-Khuda, and Hossain MB.** Fertility Decline in Bangladesh: Toward an Understanding of Major Causes.

10. **Roy NC.** Effect of Birth Spacing, Breastfeeding and Diarrhoea on Nutritional Status of Children (1-4) in Matlab, Bangladesh.

11. **Rahman M.** Excess Female Child Mortality in Matlab: The Role of Birthspacing and Public Health Interventions".

12. **Rahman M.** Child Mortality and Fertility Regulation Behavior in Bangladesh: Implications for Family Planning Programs.

13. **Jamil K, Streatfield K, and Salway S.** Modes of family planning service delivery in the urban slums of Dhaka: effects on contraceptive use. ICDDR,B FP/MCH Working Paper no. 16.

14. **Salway S, Nahar Q, Ishaque I.** Alternative Ways to Feed Infants: Knowledge and views of men and women in the slums of Dhaka city. ICDDR,B FP/MCH Working Paper no. 17.

15. **Salway S, Nahar Q, Ishaque I.** Women, Men and Infant feeding in the slums of Dhaka city: Exploring sources of information and influence. ICDDR,B FP/MCH Working Paper no. 18.

INTERNATIONAL PRESENTATIONS

1. Alam A, and Bairagi R. Excess Female Child Mortality in Bangladesh: Its Levels, Trends, Determinants and Association with Health Intervention. Presented at the PAA Annual Meeting, San Francisco, USA in April.

2. Bairagi R. A Note on Matlab Demographic Surveillance System and Record Keeping System. Presented at the Workshop on Household Monitoring for Health in Egypt, The Population Council and Suez Canal University, Ismailia, June 10-13, 1995.

3. Bairagi R, and Barua MK. Contraceptive Use Dynamics in Matlab, Bangladesh: Does the Quality of Workers Make Any Difference? Presented at the PAA Annual Meeting, San Francisco, USA in April.

4. Bairagi R, Becker S, Kantner A, Allen KB, and Dutta A. A Validation Study of the DHS in Matlab (DSS). First Results. Presented at the PAA Annual Meeting, San Francisco, USA in April.

5. Barkat-e-Khuda. The Road from Cairo. Perspectives from Participants. Presented at the PAA Annual Meeting, San Francisco, USA in April.

6. Barkat-e-Khuda, and Barkat A. The Bangladesh Family Planning Program. Key Programmatic Challenges and Priority Action Areas. Presented at the PAA Annual Meeting, San Francisco, USA in April.

7. Hossain MB, Barkat-e-Khuda, and Phillips JF. Effects of Outreach Worker Visits on Perceived Quality of Care in Two Rural Areas of Bangladesh. Presented at the PAA Annual Meeting, San Francisco, USA in April.

8. Khan MA, and Rahman M. Determinants of Contraceptive Method Choice in Rural Bangladesh. Presented at the PAA Annual Meeting, San Francisco, USA in April.

9. Rahman M, and DaVanzo J. Impact of the Grameen Bank on Women's Status and Fertility in Bangladesh. Presented at the PAA Annual Meeting, San Francisco, USA in April.

10. Rahman M, and Barkat-e-Khuda. Does Family Planning Program Influence Desired Fertility in Bangladesh? Presented at the PAA Annual Meeting, San Francisco, USA in April.

11. Rahman MM, Sarkar AH, and Das SC. Prevalence and Continuation of Injectable Contraceptives: Evidence from Extension Project Areas. Presented at the PAA Annual Meeting, San Francisco, USA in April.

12. Shuaib S, and Bairagi R. Preceding Birth Techniques for Estimating Childhood Mortality: An Application in EPI Sites in Bangladesh. Presented at the PAA Annual Meeting, San Francisco, USA in April.

13. Ahmed S, Shrestha PK, and Jabind D. Support for Successful Breastfeeding in Bangladesh. Presented at the British Paediatric Association's Annual Meeting, York, in April.

14. Barkat-e-Khuda and Hossain MB. Fertility Decline in Bangladesh: Toward an Understanding of Major Causes. Paper presented at The Continuing Demographic Transition Seminar in honour of Professor John C. Caldwell, The Australian National University, Canberra, Australia in August.

ON-GOING PROJECTS

1. Contraceptive Failure in Matlab: Levels, Trends and Correlates.

2. Child Mortality in Matlab: Levels, Trends, Correlates and Cause of Death.

3. An Evaluation of the Bangladesh Demographic and Health Survey Data.

4. Proximate Determinants of Fertility.

5. Special Study: Socio-economic Impact of Matlab MCH-FP Project.

6. Maternal morbidity and choice of Delivery Service Provider in the Urban Slums of Dhaka.

7. The Determinants of Birth Weight, Gestational Age, and Perinatal Mortality Among the Urban Poor in Dhaka.

8. Birth Weight and Infant Mortality in the Slums of Dhaka City.

The following operations research studies have been developed. Upon further review, these studies will be carried out within the next three months.

1. Strengthening Quality of Family Planning Services will attempt to increase contraceptive continuation through side-effect management.

2. Management of RTI will attempt to diagnose and treat reproductive tract infections for overall improvement of reproductive health. In the long-run this may lead to higher usage of contraceptives.

3. MCH-FP Systems Development at Micro Level will attempt to improve the efficiency of the national MCH-FP service delivery system.

4. Networking of Government Organizations' Community-level Service Providing Agencies for Family Welfare is being developed to enhance accessibility and utilization of health, family planning, agricultural, cooperative, credit, education, and social welfare services which may increase contraceptive use in the long run.

APPENDIX - B

STAFF MEMBERS WHO LEFT FOR OVERSEAS TRAINING
(April 1 to September 30, 1995)

Sl. # Name & designation	Type of training	Place of training
01. Dr. K A Talukder Assistant Scientist Laboratory Sciences Division	Orientation training in laboratory techniques	All India Institute of Medical Sciences, New Delhi, India.
02. Dr. Shams El Arifeen MCH-FP Programme Specialist, Urban MCH-FP Extension Project Population & FP Division	Workshop on Quality Assurance Management Methods in Developing Countries	The Johns Hopkins University, USA
03. Mrs. Manakhushi Mondal Senior Staff Nurse Clinical Sciences Division	Post-diploma in Paediatric Nursing	College of Nursing, Christian Medical College & Hospital Vellore, India.
04. Mr. G.M.N.I. Faisal Research Investigator Social & Behavioural Sciences Programme Community Health Division	Training course on Reproductive Health Research	The Centre for Population Studies, Department of Epidemiology & Population Sciences, LSHTM, UK.
05. Ms. Lazeena Muna Research Investigator Social & Behavioural Sciences, CHD	-do-	-do-
06. Ms. Kamrun Nahar Research Investigator Social & Behavioural Sciences, CHD	-do-	-do-
07. Dr. Rokeya Begum Medical Officer CSD	Master's programme in Medical Science in Primary Health Care	University of Western Australia, Australia
08. Mr. Md. Nazimuddin Librarian, DISC Director's Bureau	Training course on CD-ROM database	The Asian Health, Environmental Allied Database (AHEAD), New Delhi, India.

Sl. # Name & designation	Type of training	Place of training
09. Mr. M. M. Hassan Sr. Secretary DISC, Director's Bureau	-do-	-do-
10. Dr. Rukhsana Haider Associate Scientist CSD	Doctoral studies (to complete the enrolment and finalize dissertation research)	Department of Public Health & Policy, LSHTM UK
11. Mr. J. Chakraborty Manager, Health Services Matlab Health & Research Centre, CHD	Regional Refresher seminar on the state of community Nutrition activities in the region of South and South-East Asia.	National Institute of Nutrition (NIN), Hanoi Vietnam
12. Ms. Shahan Ara Begum Sr. Research Officer Laboratory Science Division	Clinical Biochemistry laboratory techniques and quality control.	Hospital Universitaire Saint-Pierre, Belgium.
13. Ms. Ferdous Jahan Research Officer Biochemistry & Nutrition Laboratory LSD	Advanced techno-logies for retinoids /carotenoids estimation in food and biological samples.	University Hospital Leuven, Belgium
14. Mr. Zahidul Quayyum Sr. Operation Reseacher, Urban MCH-FP Extension PFPD	Master's programme in Health Policy, Planning and Financing.	London School of Hygiene & Tropical Medicine, UK
15. Mr KM Nasirul Islam Sr. Scientific Animal Resources LSD	Genetic monitoring of laboraotry animal breeding programme.	National Institute of Health, USA.

STAFF ON OVERSEAS TRAINING/STUDY
(As of 30 September 1995)

Sl. No.	Name, designation and area of work of staff	Funding Agency		Support Level	Period	Area of training/study	Remarks
01.	Dr Chowdhury H Ahsan #3391-0/12.04.87/Core Medical Officer Clinical Research & Service Centre (CR&SC) Clinical Sciences Division (CSD)	Commonwealth Scholarship	(a)	III	27-Sep-88 10-Jul-92	Ph. D. in Clinical Pharmacology; University of Southampton, UK.	No guarantee of employment on return
			(b)	III	11-Jul-92 31-Jul-93 31-Jul-94 28-Feb-95	MRCP; Royal College of Physicians & Surgeons, UK.	
02.	Dr Md Ashraful Hannan #3401-7/01.06.87/Core Medical Officer Medical Officer, CRC, CSD	-do-	(a)	III	01-Oct-88 30-Apr-92	Ph. D. in Gastroenterology; University of Birmingham, UK	No guarantee of employment on return
			(b)	III	31-Dec-94	MRCP; Royal College of Physicians & Surgeons, UK.	
03.	Ms Dilara Islam #3487-6/20.12.87/Proj. Research Officer LSD	Karolinska Institute Sweden		III	26-Sep-89 25-Sep-93 25-Sep-95	Doctoral study in Serodiagnosis of Shigellosis at the Karolinska Institute,Sweden.	
04.	Ms Rubhana Raqib Research Student LSD	-do-		III	26-Sep-89 25-Sep-93 25-Sep-95	Doctoral study in Immunology techniques of Shigellosis at the Karolinska Institute,Sweden.	

Sl. No.	Name, designation and area of work of staff	Funding Agency	Support Level	Period	Area of training/study	Remarks
05.	Dr Tahmeed Ahmed #2989-2/25.02.85/Core Medical Officer CRC/CSD	MONBUSHO Government of Japan	II	01-Oct-90 30-Apr-92 06-Apr-96	Doctoral studies in Gastroenterology at the Tsukuba University, Japan	
06.	Mr Sheikh Jalal Uddin #2641-9/22.11.84/Core Sr. Lab. Technician LSD	BADC (a) Belgium	II	04-Apr-92 03-Jan-93	Training in Clinical Bacteriology at the St. Pierre Hospital, Free University of Brussels, Belgium	
		(b)	II	04-Jan-93 31-Dec-95	Training and study in for an M.Sc. degree in Clinical Microbiology at the Free University of	
07.	Dr. Amal Krishna Mitra #2067-7/10.12.81/Core Associate Scientist CRC, CSD	ICDDR,B:SDC(a) & UAB	I	23-Aug-92 22-Aug-93	Master level study at the University of Alabama at Birmingham, USA.	
		(b)	II	23-Aug-93	Doctoral Programme	Conducting dissertation research at the Centre
08.	Mr. M A Kashem Shaikh Employee #249-3/C Assoc. Scientist & Head Data Archiving Unit DSS, PFPD	ICDDR,B: UNFPA DSS grant	I	19-Apr-93 for 2 years [1]17-Feb-94	Doctoral studies in Demography at the International Institute of Population Sciences (IIPS), Bombay, India.	
09.	Dr. Hasan Ashraf Employee # 2927-2, C Assistant Scientist Clinical Research & Service Centre, CSD	SDC	II	06-Aug-93 05-Aug-94 05-Aug-95	Training in Gastroenterology at the Kantonsspitals Liestal and Basel, Switzerland	

Sl. No.	Name, designation and area of work of staff	Funding Agency	Support Level	Period	Area of training/study	Remarks
10.	Mr. Arifuzzaman Khan Employee # Grants Administration Officer & Public Relations Officer, Director's Bureau	John Crawford/ University of Queensland, Australia	III	01-Feb-94 for 46 months	Doctoral study in Economics: University of Queensland, Australia.	No guarantee of employment on return.
11.	Dr. Rubina Shaheen Employee # 3993-3 Sr. Medical Officer Matlab MCH-FP Program, CHD	AIDB	III	14-Jun-94 initially for 1 year.	Master of Medical Science in Community Nutrition; the University of Western Australia.	Extendable to complete M.Sc. degree
12.	Ms. Fazilatun Nessa Research Fellow Rural MCH-FP Extension Project, FPPD	ODA	II	29-Jul-94 28-Aug-95 30-Sep-97	Applied Population Research; University of Exter, UK for an M. Phil. degree.	Approved for Doctoral studies
13.	Dr. M. Mujibur Rahman Sr. Medical Officer CR&SC, CSD	University of Alabama/ ICDDR,B:SDC	I	10-Aug-94 10-Aug-95	MPH; University of Alabama, USA.	
14.	Dr. Syed Samiul Hoque Senior Medical Officer CSD	The World Bank	II	26-Sep-94 25-Sep-95	Training/study for the M. Med. Sc. degree; University of Birmingham, UK.	
15.	Dr Quamrun Nahar Employee # 4303-4 Research Investigator Urban MCH-FP, PFPD	ASTS scholarship	III	02-Jan-95 Initially one year	Masters in Primary Health Care; University of Western Australia.	
16.	Dr. Md Shahadat Hossain Sr. Med. Officer, Gr. I CR&SC, CSD	ICDDR,B	I	12-Feb-95 Initially one year.	Masters of Medical Science (Clinical Epidemiology); University of Newcastle, Australia.	
17.	Mrs. Manakhushi Mondal Sr. Staff Nurse, CR&SC Clinical Sc. Division	ICDDR,B (SDC)	I	13-Jun-95 12-Jun-96	Post Diploma in Paediatric Nursing, College of Nursing Christian Medical College & Hospital, Vellore, India.	

Sl. No.	Name, designation and area of work of staff	Funding Agency	Support Level	Period	Area of training/study	Remarks
18.	Dr. Rokeya Begum Employee # 4326-5/C Medical Officer CR&SC, CSD	AusAID	III	25-Jul-95 3 years	Masters programme in Primary Health Care at the University of Western Australia, Australia.	
19.	Dr. Rukhsana Haider Associate Scientist CSD	ICDDR,B/SDC	I	01-Sep-95 for 4 months	Doctoral studies at the LSHTM (Department of Public Health & Policy), UK (to complete the preliminary requirement).	
20.	Ms. Shahan Ara Begum Employee # 1685-7 Sr. Research Officer Clinical Biochemistry Section, LSD	BADC	II	18-Sep-95 for 3 months	Clinical Biochemistry Laboratory Techniques and Quality Control; Hospital Universitaire Saint-Pierree, Belgium.	
21.	Ms. Ferdous Jahan Employee # 1839-0 Research Officer Biochemistry & Nutrition Laboratory, LSD	BADC	II	18-Sep-95 3 months	Advanced technologies for retinoids/ carotenoids estimation in food and biological samples, technologies for other micro and macro nutrients analyses and their quality control monitornings; University Hospitals Leuven, Belgium.	
22.	Mr. Zahidul Quayyum Sr. Operation Researcher Urban MCH-FP, PFPD	ODA	III	22-Sep-96 24-Sep-96	Master's Programme in Health Policy, Planning and Financing; LSHTM, UK.	
23.	Mr. A. K. Nasirul Islam Sr. Scientific Officer Animal Resources Branch LSD	ICDDR,B/SD	I	28-Sep-95 27-Nov-95	Genetic monitoring of laboratory animal breeding programme at the National Institute of Health, USA	

INTERNATIONAL CONFERENCE/WORKSHOPS ATTENDED BY ICDDR,B STAFF
(April 1 to September 30, 1995)

Sl #	Title, venue and duration of conferences/workshops	Staff members attended		
		Sl. #	Name and designation	Division
01.	Annul Meeting of the Population Association or America (PAA) held in San Francisco, USA during 6-8 April.	01.	Prof. Barkat-e-Khuda Project Director Rural MCH-FP Project	PFPD
		02.	Dr. R. Bairagi Acting Division Director	PFPD
		03.	Dr. Mizanur Rahman Consultant Rural MCH-FP Project	PFPD
		04.	Mr. Md. Mafizur Rahman Sr. Operations Researcher Rural MCH-FP Project	PFPD
		05.	Mr. Mian Bazle Hossain Assistant Scientist/ Demographer, Rural MCH-FP Extension Project	PFPD
		06.	Mr. Md. Mehrab Ali Khan Assistant Scientist Rural MCH-FP Project	PFPD
		07.	Dr. Michael A. Strong Former Division Director	PFPD
		08.	Mr. Md. Nizam Uddin Khan Research Officer Population Studies Centre	PFPD
02.	Federation of American Societies for Experimental Biology (FASEB) held in the USA during 09-13 April	09.	Dr. A.K.M. Iqbal Kabir Scientist	CSD
		10.	Mr. M. A. Wahed Associate Scientist & Head, Biochemistry & Nutrition.	LSD

Sl #	Title, venue and duration of conferences/workshops	Staff members attended		
		Sl. #	Name and designation	Division
03.	Annual Meeting of the British Paediatric Association held in New York, USA during 20-24 April	11.	Dr. Shameem Ahmed Health Scientist Rural MCH-FP Project	PFPD
04.	Workshop on Communication Strategies and Techniques for Sexual Behaviour Change held at the Dhurakijpundit University, Thailand, during 17-28 April.	12.	Dr. Suraiya Begum MCH-FP Training Specialist Urban MCH-FP Project	PFPD
05.	Qualitative Methods workshop of London School of Hygiene & Tropical Medicine held in Nepal during 20-30 April.	13.	Dr. James L. Ross Senior Scientist	CHD
		14.	Dr. Sandra Laston Anthropologist	CHD
06.	30th Anniversary of Bengal Studies Conference held in Chicago, USA during 28-30 April.	15.	Dr. K.M.A. Aziz Scientist	CHD
07.	Annual Diagnostic Diseases Conference of American Gastroenterology Association held in San Diego, USA during 14-18 May.	16.	Dr. P. K. Bardhan Associate Scientist	CSD
		17.	Dr. Shafiqul Alam Sarker Associate Scientist	CSD
08.	VII Congresso Argentino De Microbiologia held in Buenos Aires, Argentina during 8-11 May.	18.	Dr. John Albert Acting Division Diretor	LSD
09.	Conference of American Society of Microbiologists held in Washington, USA during 21-25 May	19.	Dr. Zia Uddin Ahmed Senior Scientist	LSD
10.	Meeting of the WHO Operation and Maintenance Working Group held in Geneva, Switzerland during 1-2 June.	20.	Dr. Bilqis Amin Hoque Senior Scientist	LSD

Sl #	Title, venue and duration of conferences/workshops	Staff members attended	
		Sl. # Name and designation	Division
11.	International Vitamin A Consultative Group, Vitamin A Task Force Meeting held in Baltimore, USA during 1-2 June.	21. Dr. Andres de Francisco MCH-FP Physician	CHD
12.	8th International Congress of Mucosal Immunology in San Diego, USA during 16-20 July.	22. Dr. F. Qadri Senior Scientist	LSD
		23. Dr. T. Azim Associate Scientist Immunology Laboratory	LSD
13.	Seminar on the Continuing Demographic Transition organised in honour of Professor John C. Caldwell at the Australian National University, Canberra, Australia during 14-16 August.	24. Prof. Barkat-e-Khuda Project Director Rural MCH-FP Project	PFPD
14.	Intercountry meeting on Prevention and Control of New, Emerging and Re-emerging Infectious Diseases, WHO-SEARO held in New Delhi, India during 21-25 August.	25. Dr. John Albert Acting Division Director	LSD
15.	Conference at the University of San Paulo, Brazil during 28-30 August.	26. Dr. John Albert Acting Division Director	LSD
16.	Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC) and Conference of Infectious Diseases Society of America (IDSA) held in San Francisco, USA during 15-20 September.	27. Dr. M. A. Salam Chief Physician CRSC	CSD
		28. Dr. Wasif Ali Khan Medical Officer CRSC	CSD
		29. Dr. Ujjal Dhar Medical Officer CRSC	CSD

Sl #	Title, venue and duration of conferences/workshops	Staff members attended		
		Sl. #	Name and designation	Division
17.	XXIst International Congress of Paediatrics held in Cairo, Egypt, during 10-15 September.	30.	Dr. A. K. Siddique Senior Scientist & Head Epidemic Control Preparedness Programme (ECPP)	CHD
		31.	Dr. K. Zaman Assistant Scientist Matlab Health & Research Centre	CHD
18.	Editing meeting of Case Control Book and GARNET activities held in London, UK during 18-20 September.	32.	Dr. Bilqis Amin Hoque Scientist	CHD
19.	Australian Tropical Health & Nutrition Conference held in Brisbane, Australia during 18-20 September.	33.	Dr. Nigar S. Shahid Associate Scientist	CHD
20.	International Society for Trace Element Research in Humans held in Sicily, Italy, during 25-28 September.	34.	Dr. S.K. Roy Scientist	CSD
21.	Third International Conference on HIV/AIDS held at Chiang Mai, Thailand, during 17-24 September.	35.	Dr. S.N.M. Chowdhury HIV Coordinator	CHD

APPENDIX C

THE CENTRE FUND CAMPAIGN
Progress Report - 1995

The Centre Fund team in the United States is comprised of Ms. Waimar Tun, ICDDR/B Desk Officer and Mr. Brent Berwager, Senior Development Officer. Mr. Robert Smith, formerly head of the University of Maryland Foundation, serves as a consultant to the campaign. Brent Berwager joined The Centre Fund in late January 1995 to lead the campaign in North America.

The priorities for The Centre Fund Campaign staff in the United States have been as follows:

- to obtain a leadership level gift from USAID;
- to build foundation support;
- to build corporate support;
- to recruit a Centre Fund volunteer committee;
- to maintain and build linkages with U.S., and international institutions; and
- to build a constituency for the Centre in the U.S., particularly among the Centre's alumni, the Bangladeshi community and U.S. government leaders.

In response to US First Lady Hillary Clinton's April visit to The Centre, a seventh priority emerged for the U.S.-based staff:

- to develop an opportunity for Hillary Clinton to promote ICDDR,B and The Centre Fund to current donors and donor prospects.

In the initial nine months of the Centre Fund campaign, much has been accomplished. Some of the accomplishments are reflected in this report. The U.S. office has not only made significant progress in the above priority areas, but it has also helped in raising the profile of the Centre in the U.S. One of the side benefits of the U.S. office is that many of the U.S. organizations are pleased to have a U.S. office with whom they can have easier contact. The Child Health Foundation is particularly happy to house the U.S. office. The CHF Board has been helpful and supportive. We would like to express our appreciation for the support provided by both Dr. Demissie Habte and Mr. Graham Wright, whose involvement in the campaign, both from Dhaka and during their visits to the U.S., has been particularly valuable. We would like to recognize Dr. William Greenough and Dr. Norbert Hirschhorn, who have accompanied us on a number of important visits and who have opened doors to key people and institutions/organizations/companies. Organizational issues between CHF and ICDDR,B have been resolved and we have a strong and cooperative relationship between the two organizations.

PROGRESS TO DATE

Early in the year, both Brent Berwager and Waimar Tun visited the Centre for two weeks for a comprehensive orientation to facilitate their work in the U.S. Not only did they get a full overview of the Centre but they also had a chance to meet many of the Dhaka leaders, including staff of USAID, SDC and Rhone Poulenc.

I. Involvement of ICDDR,B Leaders

In cooperation with ICDDR/B, particularly Dr. Demissie Habte and Mr. Graham Wright, we have accomplished the following. Both Dr. Habte and Graham Wright have been actively involved in the Centre Fund activities since the beginning. In the past year, they have made several visits and have given their time for meetings and strategic planning. It has been especially critical in helping to build a constituency for the Centre.

II. Fund Raising

- USAID has obligated $1 million for the endowment. (The U.S. office plans to request additional funds in subsequent years). The $1 million has been obligated under the current 5-year cooperative agreement. Key leaders have been very supportive of the endowment efforts, including the Administrator, Brian Atwood, whom the U.S. office arranged for Dr. Habte to meet in September 1995.

- The Ford Foundation informed us that as much as $1 million would be contributed in this stage of the campaign if ICDDR,B could increase USAID's initial pledge and obtain additional support from other sources. (A minimum commitment of $500,000 is expected based on USAID's commitment of $1 million.)

- The Rockefeller Foundation has committed a gift of $150,000 in unrestricted funds.

III. Centre Fund Committee

- The U.S. office is building a prestigious and influential CF Committee. The Committee is currently comprised of:

Mr. Azmat Ali, Chairman and CEO, NYMA (a U.S.- based aerospace company);
Dr. John Evans, Chairman, Rockefeller Foundation;
Dr. William B. Greenough, Johns Hopkins University (ex officio);
Dr. Demissie Habte, ICDDR,B (ex officio);
Dr. D.A. Henderson, Johns Hopkins University;
Dr. Joshua Lederberg, President Emeritus, Rockefeller University;
Mr. A.K.M. Shamsuddin, Managing Director, Rhone-Poulenc Bangladesh;
Mr. Abu Solaiman, President, Data Flow Corporation (a U.S.-based data processing, software and systems analysis company).

- The following have been approached and are considering roles on the Centre Fund Committee:

Dr. G. Gordon Douglas, President, Merck Vaccines, Merck & Company;
Dr. Leon Rosenberg, President, Bristol-Myers Squibb Pharmaceutical Research Institute.

- We are also working to obtain the participation of the following:

Prof. Rita Colwell, President, Univ. of Maryland, Inst. of Biotechnology;
Ms. Peggy Curlin, President, Center for Development and Population Activities;
Mr. Hugh Downs, National TV News anchor and personality;
Ms. Peggy Dulaney, President of Synergos;
Ms. Robin Chandler Duke, Nat'l Chair of Pop. Action International;
Mr. William Foege, Executive Director, Task Force on Child Survival, Carter Center;
Ms. Jane Fonda, Actress and officer for Turner Foundation;
Mr. William Draper, former CEO of UNDP;
Mr. Samuel Johnson, CEO of SC Johnson Wax;
Mr. John E. Pepper, Chairman of Procter & Gamble;
Senator Joseph Tydings;
Mr. Robert Wallace, Nat'l co-chair of Population Action Int'l and head of Wallace Global Fund.

IV. Foundation Support

- Approaches to the following foundations have been developed and are currently being implemented:

Carnegie Corporation of New York - Dr. Joshua Lederberg is assisting us in approaching Carnegie. We hope to meet with Dr. David Hamburg (President) and Dr. Patricia Rosenfield (Program Officer) in October 1995.

The William & Flora Hewlett Foundation - John Haaga has offered to help us approach Population Director, Dr. Joseph Speidel, at Hewlett. We have gained endorsements of officers of the Population Action International, where Dr. Speidel was recently the President.

The W.K. Kellogg Foundation - Dr. D.A. Henderson will help us introduce the Centre to the new President of Kellogg, Dr. Bill Richardson, the former president of Johns Hopkins.

The Mellon Foundation - Given that they recently awarded the Population Council $3 million for an endowment, Mellon presents definite opportunities. A former Ford representative and the current Haverford College President, Dr. Tom Kessinger, will help us introduce the Centre to the President of Mellon.

The Turner Foundation - Brent Berwager and Bob Smith met with Peter Bahouth to explore the possibility of receiving a contribution from them. While no immediate source of support was identified it was a good initial approach to the foundation which will be of value when we make a second appeal for support.

The following foundation prospects have been identified for solicitation:

- Edna McConnell Clark Foundation
- MacArthur Foundation
- David & Lucile Packard Foundation
- Pew Charitable Trusts
- Wallace Global Fund

V. Corporate Support

- Discussions were held with the following corporations for their participation in the campaign:

American Express Bank - AMEX recently funded the Training of Trainers seminar at the Centre and we plan to build on this relationship to obtain support for the endowment.

Bristol-Myers Squibb - Dr. Leon Rosenberg (President, BMS/Pharmacology Research Institute) has been asked to be on the CF Committee and to explore with the BMS Foundation the possibility of contributing to the Centre Fund. We will follow up in the fall.

Coca-Cola Company - Brent Berwager and Dr. Habte have had an initial meeting with Dr. Michael Bivens, a program officer at the foundation. An additional contact has been developed with Senior Vice President, Alex Malaspina, who made $10,000 available for CHF's Rwandan relief efforts.

Levi Strauss & Company - Brent Berwager has made contact with the Asia Regional Director, Mr. Richard Woo, and has introduced the Centre to him. Brent Berwager plans to visit the foundation when he visits other foundations in the San Francisco area.

Merck & Company - We are working to obtain the participation of Dr. Gordon Douglas (President, Merck Vaccines). Dr. Greenough and Brent Berwager have made a presentation to executives at Merck including Dr. Douglas and Dr. Tom Vernon (Exec. Director, Medical Science & Public Health Affairs).

VI. US First Lady Hillary Clinton

The US First Lady has been invited to be the guest speaker at an event to be held in early December to highlight the achievements of ICDDR,B and to recognize USAID for its many years of support to be held in early December. The invited guests would include embassy officials from donor country prospects, corporate and philanthropic leaders and USAID officials. The staff at The Centre Fund's U.S.-based office would manage this event.

VII. Constituency Building

The U.S. office has worked to make the Centre more influential in governmental, political, foundation and corporate circles over the past nine months. Among the introductions to the Centre which the U.S. office facilitated are:

J. Brian Atwood, Administrator, USAID
Congressman Tony Hall
Hugo Hoogenboom, President, Population Action International
Carol Lancaster, Deputy Administrator, USAID
Jan Piercy, Director, World Bank
Senator Joseph P. Tydings
Robert B. Wallace, President, Wallace Global Fund

The U.S. office has been working to obtain the support of Congress. We have met with the staff of some Congressmen and Senators to brief them on the value of foreign aid and highlighting the Centre as a foreign aid success story. Our Congressional contacts are particularly supportive of the child survival work that the Centre does (population is a sensitive issue on the hill). The House and the Senate are considering a child survival earmark of $275 million, a portion of which we hope to channel to the Centre.

The U.S. office has also been working to introduce the Centre Fund campaign to the Bangladeshi community in North America with the help of Bangladeshi-Americans whom we have involved in the campaign. We are also keeping the Bangladeshi Embassy apprised of our activities.

Also of importance in building a constituency is the Centre's alumni. We are in the process of building a complete database of the Centre's alumni. We have had a couple of receptions in the Baltimore/Washington area and have invited area alumni to raise their awareness of the Centre Fund activities.

In addition to constituency building, we have also been working to strengthen and develop linkages with U.S. and international institutions and NGO's, including UNICEF, UNFPA, UNDP, NIH, The World Bank, CDC, Emory University, the Carter Center, Centre for Development and Population Activities and Population Action International.

VIII. Public Relations/Communications

Pat Hamilton (Director, Employee Communications Worldwide, SC Johnson Wax) and Susan Lisovicz (Journalist, CNBC Business News) also visited the Centre to explore ways in which the Centre can improve its communications activities and raise its profile in the U.S. Susan Lisovicz made recommendations for improving the Centre's Glimpse and wrote press releases for Mrs. Clinton's visit. Pat Hamilton developed a Communication Strategy for the Centre. SC Johnson Wax has printed a brochure, documenting the partnership between CHF and ICDDR/B. We are still in contact with them and plan to use their assistance in improving our public relations.

4/BT/NOV. '95

PROGRAMME COMMITTEE REPORT

(including review responses)

Report of the Programme Committee Meeting of the ICDDR,B Board of Trustees held at ICDDR,B (Sasakawa Training Lecture Room I) on November 4, 1995

Present:

Committee Members

Prof. P. Helena Makela (Chairperson)

Maj. Gen. (Retd) M.R. Choudhury

Prof. Peter F. McDonald

Prof. Fred S. Mhalu

Dr. Maureen Law (ex-officio)

Dr. D. Habte (Director, ICDDR,B) Ex-officio

Board Members

Mr. Syed Ahmed

Dr. Ralph H. Henderson

Prof. Fehmida Jalil

Mr. J.O. Martin

Dr. Jon E. Rohde

Dr. Yoshifumi Takeda

ICDDR,B staff and invited donors and other guests.

1. Approval of Agenda

The Agenda was approved.

2. Accomplishments in the last 6 months

Presentations by the directors of the four Divisions (Drs. G. Fuchs, P. Vaughan, J. Albert and R. Bairagi) and the Head of the Training Coordination Bureau (Dr. A.N. Alam) were followed by a discussion on specific issues arising from the presentations.

2.1. Clinical Sciences Division (CSD): The patient load in the Clinical Service Centre continued to be high and is expected to pass 100,000 by the end of 1995. Seasonal epidemics occurred in May-June and August-September, caused by Vibrio cholerae 01, with very few cases of 0139. The hospital surveillance system showed that a high percentage of the patients were malnourished (44% of in-patients had severe malnutrition). The number of staff in the Division has remained at the same level. As part of the staff development programme, eleven members were undertaking training programmes abroad and one in Dhaka (post-graduate training). A large number of research protocols are in progress, encompassing pathophysiological research on various aspects of

diarrhoea, measles, and nutrition, and research on improved case management and prevention. Besides weekly scientific meetings, administrative committees, a nursing committee and the Hospital Strategy Planning Committee operate to manage the Division. The Division has a comprehensive programme of research.

The discussion raised concerns in respect of the etiological surveillance system. For example, the non-inclusion of E.coli was queried as these are an important group of enteropathogens. One of the reasons given was the high cost of testing; however, this could be reduced by selective use of the most essential probes. It was pointed out that the surveillance program in its present form may give misleading information even while acknowledging that the original purpose of the surveillance was to monitor bacterial pathogens with epidemic potential. The Committee recommended a further analysis of the various aspects of the surveillance programme.

The HIV testing included in a research protocol on malnourished children with diarrhoea raised again the need to carefully evaluate the advantages and disadvantages of starting HIV testing in the Centre. However, in the protocol in question this testing is to be

Centre. However, in the protocol in question this testing is to be done in the collaborating institute in USA.

The lack of a pathologist and its consequences was raised again, as in the previous committee report (June 1995). The Centre responded by stating that cost and difficulty of recruiting a suitable person were the cause of this, however, arrangements were in place to employ a consultant for autopsy.

The Community Health Division (CHD): The research of this Division focuses on public health interventions to prevent disease or improve disease detection and management. It is administered through five scientific programmes, and two scientific interest groups. In the Matlab Health and Research Centre, research focuses mainly on diarrhoea and ORS use for clinical management and in the community. The Matlab MCH-FP programme has active research in reproductive tract infections, for which laboratory and field capabilities have been established in Matlab, and the study is well accepted in the community; and other areas are maternal supplementation with vitamin A, acute respiratory tract infections, and geographical distribution of diarrhoea. The

pneumococcal vaccine, and epidemiology of ARI. The Social and Behavioural Sciences Programme has focused on staff development and training and concept papers for future work; the HIV/AIDS coordinator has been active in GOB and NGO activities. The Environmental Health Programme's research has focused on the impact of flood control embankments and on community interventions for water, sanitation and hygiene education. Health Services Research Interest Group has focused on determinants and patterns of health care use; the Social Sciences Interest group has research projects on dietary sources of vitamin A, on health care seeking behavior in the area of women's reproductive health, on self help for health, and on impact of rural development on health and well-being.

The discussion showed special interest in the projects on reproductive health and sexual behavior; the establishment of laboratory facilities in Matlab was noted with satisfaction. The environmental and geographic studies on cholera may shed light on the origin of the 0139 epidemic.

2.3. Laboratory Sciences Division (LSD): The Division runs a large service laboratory for both the ICDDR,B clinical service centre

and for outside clients. The latter has become an important source of income and is still expanding including new tests and further automation. A large number of research projects include development of diagnostic methods based on monoclonal antibodies, research on aetiology of diarrhoea (role of CLDT+ Escherichia coli, Aeromonas spp. and astrovirus), on cholera (ribotyping; structure of the capsule in 0139), on shigellosis (transmission in the home; and cytokines and inflammatory cells), on immune response to oral, killed ETEC vaccine and on nutrition (vitamin A). Future plans for 1996 included, in addition to the ongoing studies, development of diagnostic methods based on PCR, and studies on immune response to V. cholerae (disease and vaccine), and antimicrobial resistance.

Discussion highlighted the importance of studies on antimicrobial resistance, which is currently a major concern worldwide. The need of developing low cost, diagnostic tools was stressed.

2.4. Population and Family Planning Division (PFPD): The Demographic Surveillance System has continued its activities with its new director commencing last week. The Population Studies Centre reported results on gender preference, and on contraceptive

failure. The MCH-FP Rural & Urban Extension Projects continued to work in collaboration with GoB, local agencies and NGOs.

The discussion raised a question of the internal organization of the division. The Director of the Centre informed the committee of possible restructuring of the division and other extension projects.

The research result based on contraceptive failure rates in Matlab and concluding that 25% of all births in the country were a result of contraceptive failure, started a lively discussion. The extrapolation from the Matlab findings to the national level was questioned and a need to carefully examine the basis of all the calculations was stressed.

2.5. The Training Coordination Bureau (TCB) reported on a very large number of activities, including research training (Health Research training fellowships, an international workshop on research methodology, a national course on epidemiological methods in public health, project-based fellowships, and training and supervision of students from local universities), a training-of-trainers programme with several international courses, courses on

diagnosis and management of diarrhoea, training programme in management of family planning directed to the South-East & South Asian region, and an international workshop on epidemics during emergencies, based on the experience in Goma and directed to NGOs.

Discussion applauded the development of this impressive scope of activities, which were seen as extremely important and relevant both nationally and internationally. The regional need of the training offered continues to be large, and the contribution of ICDDR,B in this area is unique.

Special attention was paid to the need of further developing and expanding the international training related to disaster situations. The need of educational materials on diarrhoea treatment and prevention is clearly great. Collaboration with UNICEF and WHO was encouraged and the use of Internet for dissemination should be explored.

3. Centre's Response to the Programme Committee's Review on the PFPD

The committee was provided with a very thorough response to all the points raised in the review. The committee was pleased to see the care

with which the review report had been studied, and considered the response adequate.

4. Report of the Programme Committee's Review of the CSD

The review had just concluded, and the report of the review team was distributed to the committee in a draft form. The main findings and conclusions of the review team were presented to the Committee by Prof. Graeme L. Barnes on behalf of the team.

The report stressed the importance of the clinical services as an essential basis for research. However, it noted that the resources required for this are competing with those available for research. It pointed out the need to deal soon with this problem and discussed alternatives to do so. The report stated that nursing is under-resourced, and stressed the need for an increase in the tenured nurse establishment, as well as for improvements in the working conditions of nurses and creation of professional liaisons between groups of nurses and clinical units.

The report commended the quality of the research of the Division in general, and the enthusiasm of its staff in carrying out research in addition to the clinical service duties. It also noted that the recently established rotation of staff allowing protected time for research was a very important

measure to facilitate clinical research, and greatly appreciated by the staff.

The Committee recommended that work in diarrhoeal diseases retain a high priority for the foreseeable future.

The report suggested that a more explicit coordination of the many research projects into defined research programmes with identifiable team leaders would further improve the quality of the research and focus it on major research questions relevant to health.

Since the report will be studied by the Centre and especially by the CSD, and their response communicated to the committee at its next meeting, a more thorough discussion was deferred to that time. While it commended the division for hiring a nurse consultant as an important first step, the urgency to attend to the situation of the nurses was stressed by the committee.

5. Update on the Integrated Institutional Review

The Director of the Centre informed the committee of the progress towards the execution of the Institutional Review in 1996. This Review will be fully external and coordinated by the Donor Support Group.

6. Other Business - Nutrition Working Group

The committee was informed of the establishment of cross-divisional working groups along priority issues set out in the Strategic Plan as suggested in the committee's previous reports. The Nutrition Working Group consists of researchers from all divisions working on different aspects of nutrition. The report of the Nutrition Working Group highlighted the large amount of nutrition-related research being carried out at the Centre.

In the discussion, the need of collaboration and coordination of work carried out in the divisions was emphasized. Highlighting nutrition research in this manner was seen as especially appropriate in view of the central importance of nutrition to the health and well-being of children, and of its direct relation to the major diseases, diarrhoea and respiratory infections in this age group. ICDDR,B is indeed one of the few places in the world where nutrition can be addressed along this broad basis combining social, environmental, clinical and laboratory approaches. Unfortunately, this advantage is being threatened by the fragmented, project-based funding policies imposed by several donors.

7. Next Committee Meeting and Review of the Laboratory Sciences Division

The next meeting of the committee will take place during the next meeting of the Board of Trustees, June 1-3, 1996.

The Programme Committee Review of the Laboratory Sciences Division is scheduled for the two days before the BOT meeting, however, the committee considered it important to extend the time for the review to 3 days to make it possible for the review team, in addition to examining the research output and plans, to carry out interviews of the staff of the Division and to also look at the relation of the Division to other Divisions of the Centre.

The composition of the review team was also discussed, noting that there is considerable expertise in this field among the members of the BOT, who could help the Director of the Centre to identify two external reviewers.

8. Conclusions

8.1. General

Coordination and organization of research within Divisions:

Research is the main emphasis in the Centre's work, and this emphasis appears to be well perceived at all levels of the staff who actively participate in the development of research protocols. This is to be commended. However, the current large number of individual small projects may not be an ideal way of forwarding the research agenda of the Centre.

The committee pointed out the need for scientific leadership to guide and channel this activity to address research questions of major importance. It suggests that the Divisions consider defining their research agenda in terms of a relatively small number of research programmes. The recently prepared planning papers of the Centre (the Strategic Plan Towards the Year 2000 and the Biennial Work Plan 1995-96) form an excellent basis for this activity.

Furthermore, attention should be paid to the adoption of research protocols within these programmes, directing the research activity to questions of major importance rather than small scale or repetitive

protocols. The committee believes that this approach would lead to contributions that are relevant and likely to have health impact.

Collaboration among the divisions. The need of cross-divisional collaboration and coordination was emphasized to make the best use of existing capabilities and to avoid duplication of facilities and effort. Coordination of activities across the divisions serves to strengthen research in problem areas carried out in more than one division. The activity of the recently established cross-divisional working groups, such as the Nutrition Research Working Group, was noted with satisfaction as an example. Interdivisional forums for presenting and discussing ongoing research need to continue to be supported.

Strategic choices. The involvement of the Centre in any new area of activity should be considered in context of the national scene, to collaborate when appropriate, and to avoid duplication. For example, National Programmes for Tuberculosis and Leprosy (in operation) or for HIV/AIDS (under planning) may be a good reason for the Centre not to be active in these areas. The committee furthermore reiterates its previous recommendation that the Centre should not start HIV testing before carrying out a thorough and broad-based discussion of all the implications.

Training. Training is the special responsibility of the Training Coordination Bureau, an essential function of the Centre and a concern across the Divisions. The Committee was very impressed by the scope and commends the national and international training activities carried out. It recommends they be continued and expanded.

8.2. Specific Observations

Clinical Sciences Divisions.

The just concluded review and the Division's response will allow a more thorough discussion on this Division's activities at the next meeting of the Board of Trustees. The committee stresses the pressing need to examine the nurses' work load and working conditions, and to make a plan for improvement and to initiate its implementation as soon as possible. The committee also raised questions regarding the etiological surveillance system (4% of all patients), and recommends that an analysis of the goals, scope, execution, costs and value, both scientific and practical, of this surveillance be made.

Community Health Division:

The committee expressed concern at the relatively small number of research publications of this Division, in comparison to previous years.

It noted this may be related to the fact that the Division has been without a full-time Director. The Committee expects the situation to improve now that a new Director has taken office. The committee commended the progress on research on reproductive tract infections including sexually transmitted dissaes in Matlab.

Laboratory Sciences Division:

The committee noted that a Review of the Division is pending, which will give a basis for a more thorough appraisal at its next meeting. The plans of the Division to address questions of antimicrobial resistance among various pathogens (both diarrhoea- and ARI-related) were commended in the context of the current international concerns of increasing resistance.

Population and Family Planning Division:

The Committee awaits with interest a report on the possible reorganization and restructuring of this Division.

The Committee emphasized the need for further analysis and broad-based discussion on the contraceptive failure research findings reported by the Population Studies Centre.

5/BT/NOV. '95

FINANCE COMMITTEE REPORT

PROGRAMME COMMITTEE MEETING

4 NOVEMBER, 1995

ACCOMPLISHMENTS

AND

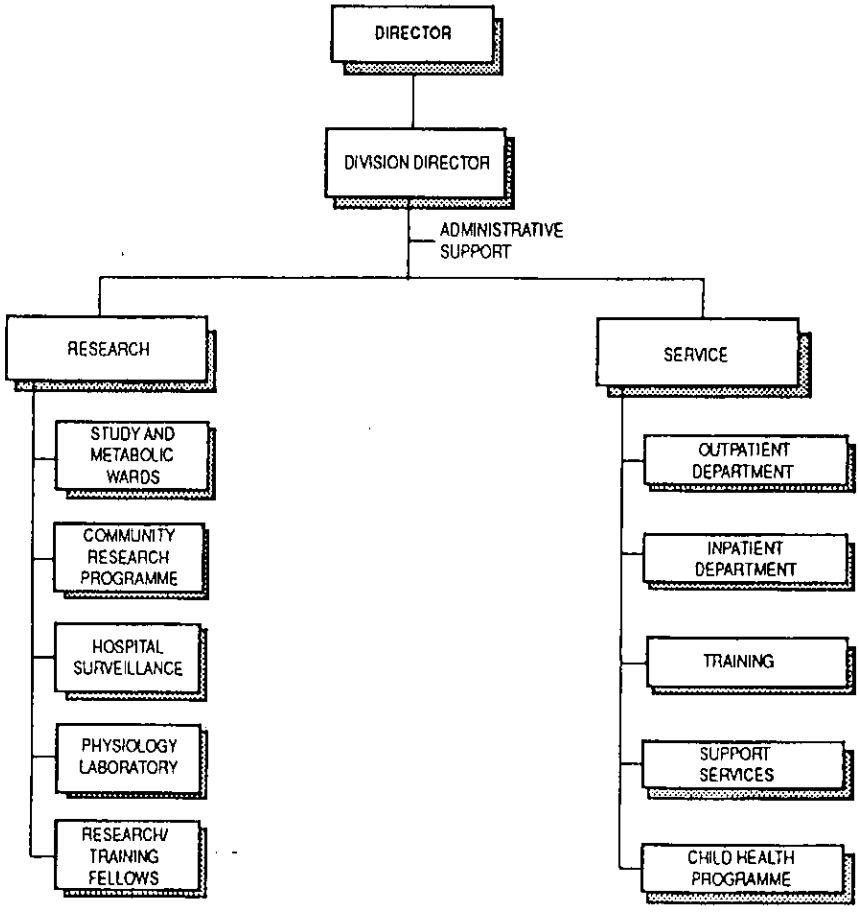
REPORT OF THE PROGRAMME COMMITTEE'S REVIEW

CLINICAL SCIENCES DIVISION REPORT TO THE PROGRAMME COMMITTEE

George Fuchs, MD

NOTES

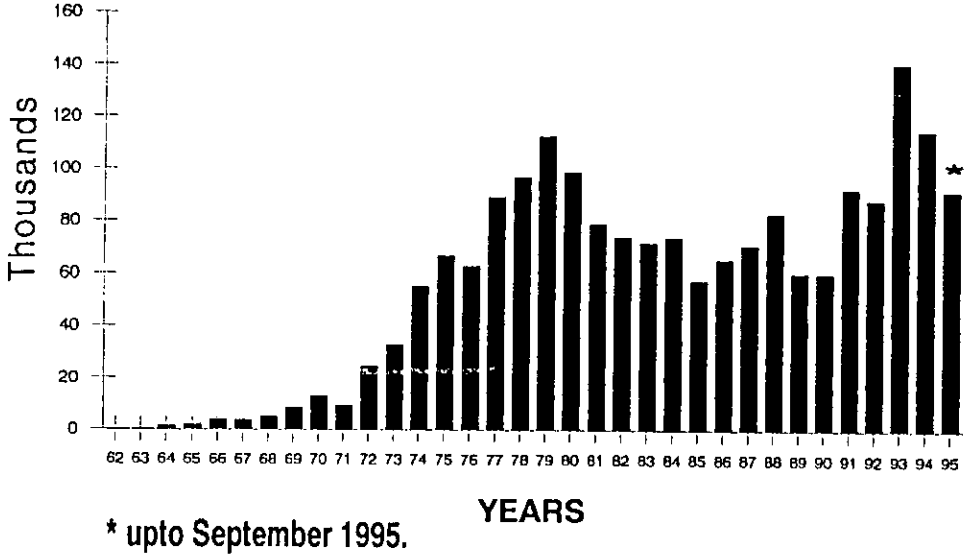
ORGANOGRAM : CLINICAL SCIENCES DIVISION



Bar Chart (patient visit)

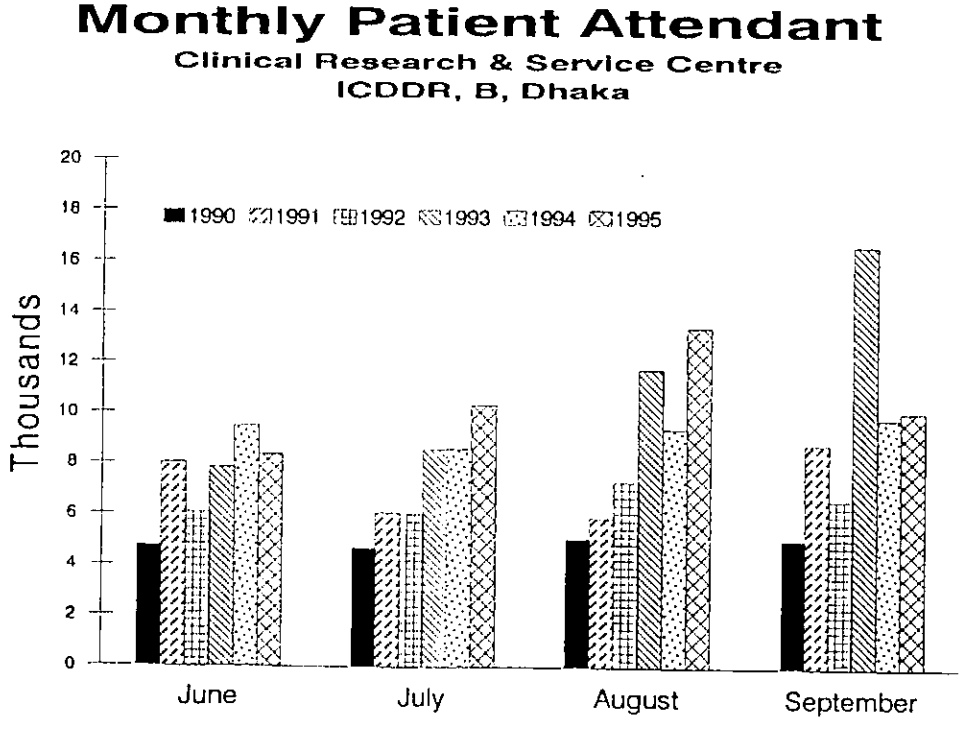
YEARLY PATIENT VISITS

CILINICAL RESEARCH & SERVICE CENTRE, ICDDR,B, DHAKA
(FORMERLY CHOLERA HOSPITAL)



*** upto September 1995.**

June to September Patient Visits (Figure)

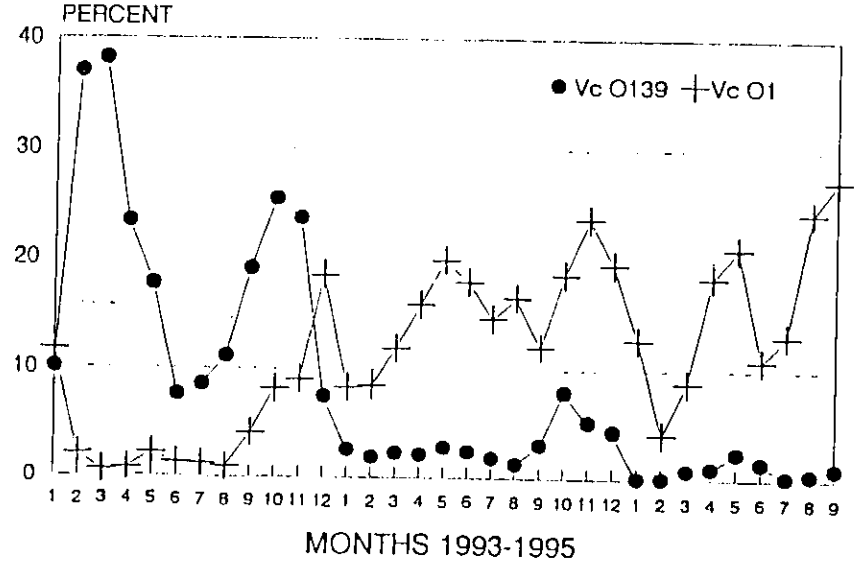


NOTES

Etiology of Diarrhoea-Surveillance
June-September, 1995

Etiology	All patients		Under 5 Yr	
	%	Extrapolated	%	Extrapolated
Pathogen Identified				
*V. cholerae*01	20%	8250	12%	2650
V. cholerae 0139	1%	300	<1%	100
Other Vibrios	12%	5075	8%	1875
Shigellae	9%	3650	6%	1425
Rotavirus	10%	4375	18%	4000
Campylobacter	10%	4200	13%	2900
Salmonella	2%	900	3%	600
E. histolytica	1%	475	<1%	50
Giardia lamblia	2%	625	<1%	50
Cryptosporidium	<1%	150	1%	150
Other	1%	425	2%	400
No pathogen identified	45%	18,800	49%	11,075

SEASONALITY
Vc O139 vs Vc O1



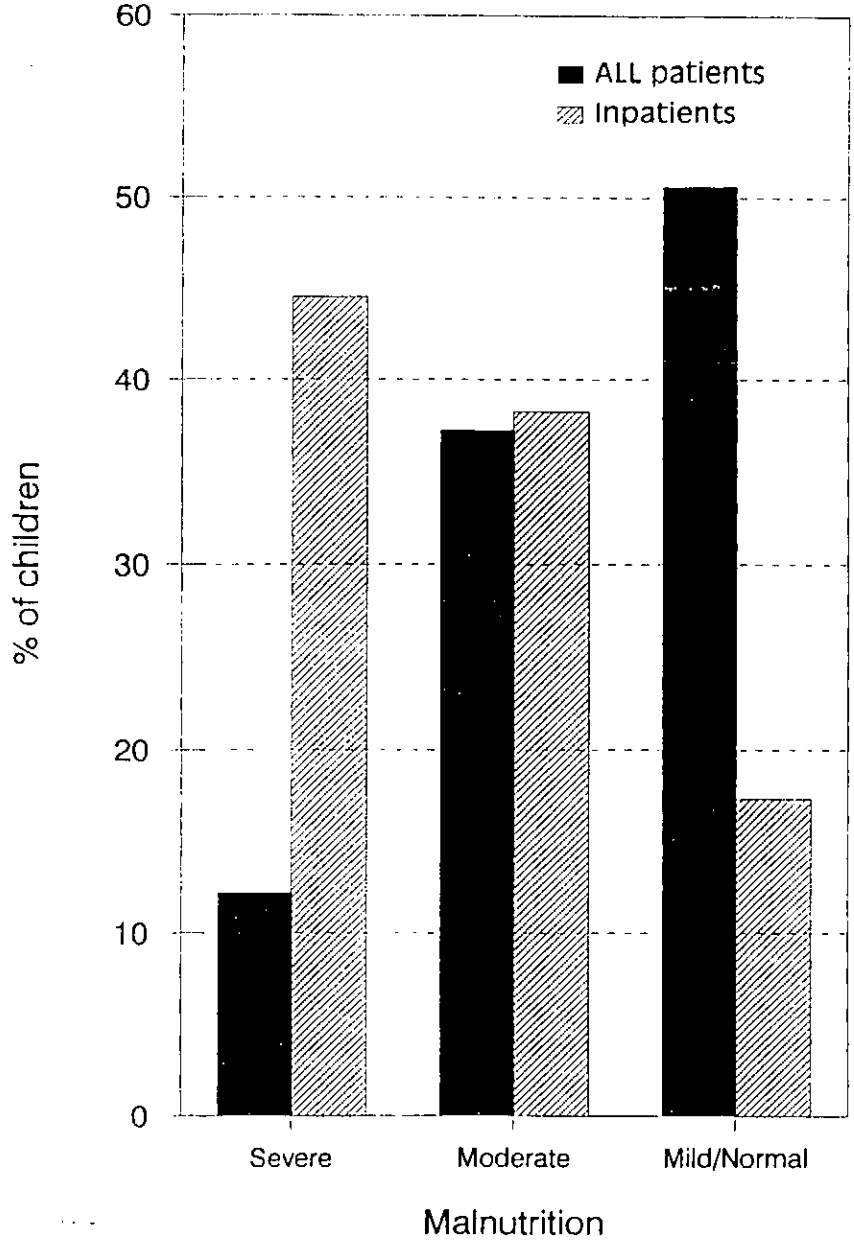
SURVEILLANCE SYSTEM

NOTES

CRSC Surveillance System

Nutritional status of children <5 Yrs.

1994



Hospital Surveillance System

CLINICAL SCIENCES DIVISION STAFFING STATUS

INTERNATIONAL (seconded)	2
NATIONAL OFFICERS	31
GENERAL SERVICES	146
TOTAL (NO & GS)	177
CONSULTANT (local)	4

Staffing position (1990-1995)

Clinical Sciences Division

Dec, 1990		Dec, 1991		Dec, 1992		Dec, 1993		Dec, 1994		Sept, 1995	
Core	Project	Core	Project	Core	Project	Core	Project	Core	Project	Core	Project
145	28	143	24	140	38	139	41	138	39	137	40
173		167		178		180		177		177	

CSD STAFF UNDERGOING TRAINING

NO. OF STAFF PRESENTLY UNDERGOING TRAINING UNDER THE STAFF DEVELOPMENT PROGRAMME = 11

Dr. Md. Akramuzzaman (PhD), London School of Hygiene and Tropical Medicine

Dr. Mujibur Rahman (MPH), University of Alabama at Birmingham, USA

Dr. A.K. Mitra, (DRPH), University of Alabama at Birmingham

Dr. Hassan Ashraf (MD, Gastroenterology), University of Basel, Switzerland

Dr. Tahmed Ahmed, (PhD in Gastroenterology), University of Tsubkuba, Japan

Dr. Syed Samiul Hoque, (Med Sc), Univ. of Edinburgh

Dr. Ahsan Chowdhury, (MRCP), Univ. of Southhampton, UK

Dr. Ashraful Hannan, (MRCP), University of Birmingham, UK

Dr. Shahadat Hossain (Master of Med. Science, Clinical Epid.), University of Queensland, Australia

Dr. Rokeya Begum (Masters in PHC) Univ. of WA, Perth, Australia

Dr. Rukhsana Haider, (PhD) London School of Hygiene and Trop. Med.

CSD Publications/Protocols (6 Month Period 5/95 - 10/95)	
Protocols	
Completed 5/95 - 10/95	4
In-progress	28
Publications	
Published	14
In-press	19

INSTITUTIONAL COLLABORATION (INTERNATIONAL)

University of Alabama in Birmingham, USA

Louisiana State University Medical Centre, USA

University of Edinburgh, UK

University of Basel, Switzerland

Karolinska Institute, Sweden

London School of Hygiene and Tropical Medicine, UK

Wageningen Agricultural University, The Netherlands

CSD ADMINISTRATIVE ACTIVITIES

DIVISION MEETINGS (monthly)

ADVISORY COUNCIL (weekly)

RESEARCH SEMINARS (bimonthly)

RESEARCH MEETINGS (bimonthly)

NURSING COMMITTEE: Review and make recommendations re all aspects of nursing services, education.

MEDICAL AUDIT COMMITTEE

RESEARCH QUALITY ASSURANCE PROGRAM: Establish guidelines and requirements for investigators and ancillary staff, auditing of studies, quality control and standardization of procedures, etc.

PHARMACY COMMITTEE, CRSC MANAGEMENT COMMITTEE

HOSPITAL STRATEGY PLANNING COMMITTEE

CSD OBJECTIVES

Case Management

Nutritional treatment

Fluid Therapy

Pharmacological Therapy

Others

CSD OBJECTIVES

Pathophysiologic Research

- Metabolic cost of diarrheal disease
- Oxidative Stress in PEM
- SCFA's in experimental enteritis
- Measles and immunity, post-measles morbidity
- Nutritional rehabilitation and body composition
- Gastric acidity/H. pylori/persistent diarrhea
- Others

CSD OBJECTIVES

Other Research Areas

- Preventative Strategies
- Maternal Child Health
- Miscellaneous

CSD OBJECTIVES

Training

Development of scientific staff
International and national fellows,
doctoral students, other health
personnel

Clinical management workshops

CSD OBJECTIVES

Service

Maintain quality of care within
context of research objectives

Nursing administration/education

IMMEDIATE PRIORITIES

Proposals For Competitive Grants

Facilitate and Promote Institutional
Linkages

Pathophysiology Laboratory

Promote Interdivisional Collaboration

International Staff

Hospital Strategy Planning

Administration of Research Wards

Division Retreat

CLINICAL SCIENCES DIVISION

On-going Research

1. ICDDR,B Surveillance Programme, Clinical Research Centre (G. Fuchs/ASG Faruque, UNDP-WHO).

2. Double-blind, randomized study of the safety and efficacy of ciprofloxacin in the treatment of childhood shigellosis (M.A. Salam, Bayer AG)

3. Impact of ready-to-use packaged rice ORS on morbidity and nutrition of infants and young children, and response of mothers when provided as an antidiarrhoeal medicine in rural Bangladesh (ASG Faruque, SDC)

4. Role of micronutrient mixture in reducing the incidence and severity of acute diarrhoea and acute respiratory infections. (ASG Faruque, SDC)

5. The role of Entamoeba histolytica in the dysenteric syndrome in children and adults (D. Mahalanabis, USAID)

6. Oral 5-ASA treatment of shigellosis (Dr. R.Islam, USAID)

7. H. pylori as a risk factor for acute diarrhoea and persistent diarrhoea (P.K. Bardhan, USAID)

8. A study on the immunological effect of Vitamin A and Zinc in a placebo controlled 4-cell trial (S.K. Roy,USAID)

9. A new non-invasive test to assess gastric acid output in children (Shafique Sarker, SDC)

10. Nosocomial transmission of measles and diagnostic salivary IgM assay (S.M. Akramuzzaman, SDC)

11. Fiber (guar gum) in the treatment of acute non-cholera diarrhoea in children (N.H. Alam, WANDER AG)

12. Immune disruption caused by measles (S.M.Akramuzzaman, LSHTM)

13. Infuso-feed balloon in the management of children with diarrhoea and malnutrition (P.K. Bardhan, AIDAB)

14. Vitamin A loss in urine during acute infection (A.K. Mitra,Univ of Alabama/ICDDR,B

collaborative, UAB/USAID)

15. Evaluation of hyperimmune bovine colostrum (HBC) in the treatment of E.Coli and rotavirus diarrhoea and H.pylori infection in children (S.A. Sarker, SAREC/Karolinska, Sweden)

16. Single-dose ciprofloxacin vs doxycycline in the treatment of cholera (W.A. Khan/M.A. Salam ,BAYER AG)

17. Vegetable protein sources for refeeding malnourished children with shigellosis (I. Kabir,Collaborative IAEC, SDC)

18. Multicentre clinical trial to evaluate the efficacy/safety of reduced osmolarity ORS solution in children with acute diarrhoea (R. Majumder/G. Fuchs,WHO/UNICEF/ADDR)

19. Multicentre clinical trial to evaluate the safety/efficacy of reduced osmolarity ORS solution in adult patients with cholera (N.H. Alam/G. Fuchs,WHO/UNICEF/ADDR)

20. Impact of peer counsellors on feeding practices of mothers in the urban community (R. Haider, SDC)

21. Effect of dietary fat and infection on vitamin A status and dietary intake methodology (G. Fuchs, OMNI)

22. Oxidative stress in bacterial translocation (M.A. Khaled, Project Development Funds)

23. Short chain fatty acids and the treatment of acute diarrhoea (G. Rabbani/G. Fuchs, Project Dev. Funds)

24. Short chain fatty acids and the treatment of persistent diarrhoea (G. Rabbani/G. Fuchs, Project Development Funds)

25. Hypotonic ORS in children with persistent diarrhoea (S.A. Sarker, Project Development Funds)

26. Surveillance of HIV-seropositivity in Bangladeshi children with persistent diarrhoea and malnutrition (G. Fuchs/Sten Vermund (Univ. of Alabama collaborative)

27. Effect of recurrent infections on vitamin A stores in children with adequate vitamin A levels" (G. Fuchs/Chris Makris, UAB Collaborative)

28. Effect of Zinc supplementation during pregnancy on infant birthweight, growth, morbidity, and cell-mediated immune function (Saskia Osendarp/G. Fuchs, Wageningen Agr. University collaborative)

Protocols awaiting funding:

1. Stable Isotopic based breath tests by the Fourier Transform Infrared spectroscopy (FTIR) method (M.A. Khaled)

2. Fiber and short chain fatty acids in treatment of persistent diarrhoea. (G. Rabbani/G Fuchs).

3. Diagnosis of the Lower Respiratory Tract Infection in diarrhoeal diseases(M.A. Salam)

4. Clinical Trial of dietary fibre (Isogel) in the treatment of symptomatic shigellosis (G. Rabbani)

5. Stable isotopic zinc balance and bioavailability in children with acute and persistent diarrhoea (S.K. Roy)

6. Hypotonic ORS in the treatment of adult cholera. (N.H. Alam)

7. Efficacy of bismuth sub-salicyclate in children with acute diarrhoea (P.K. Bardhan)

8. Efficacy of bismuth sub-salicyclate in children with persistent diarrhoea (P.K. Bardhan)

9. Azithromycin in the treatment of adults with shigellosis (M.A. Salam)

10. Salt and water homeostasis and renal function in children with shigellosis (M.A. Salam)

11. Antioxidative effects of breastfeeding (M.A. Khaled)

12. The effect of iron status on intestinal integrity and growth (G. Fuchs, Simon Ling, Aminul Islam, MA Wahed)

13. Direct comparison of different Oral Rehydration Solutions proposed for the treatment of dehydration due to watery diarrhoea in children (R.N. Mazumder)

14. Effect of zinc supplementation during pregnancy on infant birth weight, growth, morbidity, and cell-mediated immune function (Saskia Osendarp, G. FuchS)

15. Macrophage function and endotoxemia in the malnourished child (G. Fuchs, T. Azim)

16. Vitamin A, intestinal integrity and growth (G. Fuchs, M.A.Islam)

17. Whey-protein supplement on growth, immunity and oxidative stress (G. Fuchs, M.A. Islam, M.A.Khaled)

18. Clinical trial to determine the efficacy and safety of hypotonic glucose based ORS with low sodium (60 mmol/l) concentration in the treatment of neonates and young infants with acute dehydrating diarrhoea (A.M.Khan, M.K. Bhattacharya)

COMMUNITY HEALTH DIVISION

Research protocols are administered through 5 Scientific Programmes:

Matlab Health & Research Centre	Dr Md Yunus
Matlab MCH-FP	Dr Andres de Francisco
Epidemiology and Epidemic Control and Preparedness	Dr Kassim Siddique
Social and Behavioural Sciences	Dr James L Ross
Environmental Health	Dr Bilqis Amin Hoque

And two Scientific Interest Groups in:

Social Sciences	Dr. KMA Aziz
Health Systems Research	Dr. Martinus Desment

ACHIEVEMENTS FROM APRIL TO SEPTEMBER 1995

Publications:

Manuscripts published	6
Accepted and in press	10

"Failure of treatment centres to prevent cholera deaths in Goma".
Siddique et al. Lancet 1995;345:79

Research studies:

Active protocols	37

International conferences attended:

Congress of Paediatrics, Cairo, Egypt

Tropical Health and Nutrition, Brisbane, Australia

AIDS in Asia and Pacific, Chiang Mai, Thailand

30th Anniversary of Bengal studies, Chicago, USA

MATLAB CLINICAL RESEARCH CENTRE:

- Diarrhoea treatment centres:

patients treated, April-Sept.	8669
From DSS area	23%
V. cholerae 01	11%
0139	1%
Shigella	13%.

- V. cholerae 01 and protection against 0139:

  Does 01 infection protect against infection by cholera 0139?. Research protocol RRC approved and ready. (With National Institute of Child Health and Human Development, NIH, USA).

- Children's fluid intake during diarrhoea:

  Comparison and validation of WHO questionaires for ORS household use, by observation of sick children. Protocol to RRC December 1995.
  (WHO/CDD, Geneva).

MATLAB MCH-FP PROGRAMME

- Reproductive tract infections (RTIs):

  Clinical and population studies now underway.
  Laboratory established at Matlab, field staff recruited and trained. Male clinics started.
  Study well received by community.
  (With LSHTM; ODA UK).

- Maternal supplementation with Vitamin A:

  Study completed and laboratory estimations on serum and breast milk samples being completed.
  (With Johns Hopkins; USAID).

- Severe ALRI cases in Matlab:

  Investigation of 303 inpatients and 303 controls admitted to hospital, including xray, pulseoximetry, and viral and bacterial isolations.
  (With University of Basle; SDC).

- GIS for spatial distribution of diarrhoea in Matlab:

  Production of maps, development of managerial techniques and ability to demonstrate disease clustering, eg of watery diarrhoea.
  (BADC and ICDDRB).

EPIDEMIOLOGY AND ECPP PROGRAMME

- ECPP collaboration with GoB CDD programme:

  Field investigations of outbreaks of watery diarrhoea in 29 thanas in 10 districts.
  V. cholerae 0139 isolated in only 2 districts.
  V. cholerae 01 isolates sensitive (>80%) to tetracycline.
  (NORAD).

- Maternal immunization with pneumococcal polysaccharide vaccine:

  Trial completed, showed high levels of antibodies transferred to infant, half life of 35 days.
  (With Johns Hopkins and Harvard; NIH).

- Epidemiology of diarrhoea and ARI in young children:

  Cohort study and laboratory investigations on 288 newborns in Mirzapur, followed up to 24 months of age. Oldest children now being dropped from study since October.
  (With Johns Hopkins; USAID).

- Network analysis training workshop:

  Training conducted in use of computer software packages for analysis of social networks in qualitative studies.
  (With Universities of South Carolina and Connecticut, USA; Ford Foundation).

- Reproductive and sexual health:

  Fifteen concept papers developed for future work on the post-Cairo agenda (some included in the European Union proposal).
  (Ford Foundation).

- Centre's HIV/AIDS Coordinator:

  New appointee has been active in GoB STD/AIDS Network and in NGO National Concensus Workshop. ICDDR,B staff education has continued and 3 workshops were held, supported by CARE Bangladesh and University of Alabama.
  (Ford Foundation and French Embassy).

ENVIRONMENTAL HEALTH PROGRAMME

- Socio-environmental impact of Matlab embankments:

  Impact of flood control embankments was monitored, inside and outside, by water quality and health indicators. Final report to be submitted. (Asian Development Bank).

- Community interventions for water, sanitation and hygiene education:

  Action research and impact assessments are being conducted in Singair Thana (rural) and in three wards in Dhaka, together with Ministry of Local Government. Needs assessment and baseline studies completed. (Rural, SDC; urban, USAID).

- Global applied research network (GARNET):

  Programme provides support in Bangladesh and organises national meetings with GoB, NGOs, UN agencies and donors, eg disaster preparedness. (UNICEF and others).

HSR INTEREST GROUP

- **Matlab diarrhoea treatment centres:**

  Alternative proposals formulated for community centres to handle increasing patient-load at the Matlab and subcentre diarrhoea treatment centres.
  (Request of Director, ICDDR,B).

- **Health care utilisation in urban Dhaka:**

  Survey data collected on the determinants and patterns of health care use, separately for slum and non-slum residents. Analysis and report writing are ongoing.
  (IDRC, BADC, UNICEF, GK, Dhaka Urban Community Health Programme Project, ICDDR,B).

- **Health care in Gono Shashthya Kendro (GK):**

  Surveys for evaluation of household utilisation and costs of health services, comparing insured and non-insured populations.
  (IDRC, BADC, UNICEF, GK).

SOCIAL SCIENCES INTEREST GROUP

- **Dietary sources of Vitamin A:**

  Availability and use of B-carotene rich foods by households in Matlab. Field work completed and analysis in progress.
  (USAID, SDC).

- **Women and reproductive health:**

  Qualitative studies completed on the determinants of antenatal and postnatal health seeking behaviour in 70 families in Matlab.
  (IDRC).

- **BRAC-ICDDR,B Matlab project:**

  Impact of rural development on health status and human well-being. Baseline completed. Quarterly surveys on nutrition, family income and status, and contraception.
  (Ford Foundation, Aga Khan Foundation, USAID).

- **Chakaria community health project:**

  Self help for health in 60 thousand people, with health education by village school volunteers and strengthening of local self-help organisations. Focussing on diarrhoea, water, sanitation and impregnated malaria bednets.
  (Swiss, Dutch and German Red Cross Societies).

INTERNATIONAL STAFF AND STUDENTS

Left:	None	
Arrived:	Patrick Vaughan	Division Director
	Peter Eppler	Chakaria Project
	Margaret Leppard	PhD student (LSHTM)
	Michael Emch	PhD student (Michegan)
Vacancies:	Epidemiologist	(P5, ICDDRB)
	Health economist	(P3/4, ODA Dhaka)

CHD STAFFING

Total staff:	394
International:	8
National officers:	30
Support staff:	225
Community health workers	124
International students:	7

NEW CHD OFFICE SPACE

Additional space allocated	580 square metres

CHD INTERNAL PRIORITIES FOR NEXT SIX MONTHS

- Pneumococcal vaccine controlled trials:

  a) immunisation with conjugated vaccine of infants born to mothers given polysaccharide vaccine.
  (With Johns Hopkins; Probably Thrasher Foundation).

  b) phase 2 and 3 efficacy trials for morbidity and mortality reduction in infants in Matlab. Preliminary proposal requested by WHO/CDR, Geneva.
  (With LSHTM; USAID/NIH).

- Ecology and epidemiology of cholera in Bangladesh:

  Transmission to be studied in four sentinel districts, which have shown different patterns.
  Proposal completed and submitted.
  (With Johns Hopkins; Submitted to NIH).

- Strengthening Matlab's scientific capacity:

  Strategic planning of new scientific proposals for the clinical research centre, and MCH/FP and DSS projects, involving greater integration, more rational use of resources and the strengthening of Matlab management.

- Increase capacity in epidemiology and health economics:

  a) Recruit two international staff to the vacant posts.
  b) More collaboration with other centres of excellence.
  c) Improve publication and dissemination of findings.

Workplan of LSD for 1996

Aetiology of diarrhoea

Analysis of case-control study data on the aetiological association of *Providencia alcalifaciens* with diarrhoea.

Characterization of rotavirus according to the minor neutralizing antigen (P typing) Studies of untypeable rotaviruses

Further studies on the association of astrovirus and persistent diarrhoea

Diagnostic techniques

Development of multiplex PCR for multiple pathogens

Comparison of PCR with monoclonal antibody ELISA for diagnosis of amoebiasis

Development of PCR for *V. cholerae* 0139 Bengal

Production of monoclonal antibodies to intimin of EPEC and development of ELISA

Pathogenesis

Immunopathogenesis of reactive arthritis following shigellosis

Immunopathology of complications of shigellosis (HUS, leukemoid reaction)

Immunology

Immune response to *V. cholerae* antigens in lymphocytes from gut biopsies - antibody secreting cells and cytokines

Vaccinology

Reactogenicity and Immunogenicity of killed bivalent oral cholera vaccine in adult volunteers

Antimicrobial resistance

Studies in:

Salmonella, Shigella,
V. cholerae, H. influenzae,
S. pneumoniae

Epidemiology

Molecular epidemiology and biochemical fingerprinting of bacterial diarrhoeal pathogens

Environmental Microbiology

Monitoring the influence of physicochemical changes in surface water and climatic changes on plankton growth and cholera epidemics

Nutrition and Biochemistry

Role of infection on vitamin A loss

Development of tests for antioxidative stress

Clinical Laboratories

Expansion of serological tests - markers for hepatitis and cancer

Clinical chemistry - monitoring of levels of anti-microbial drugs, cardiac glycosides, hormones etc.

Molecular diagnostics - PCR for hepatitis viruses, enteric fever and *M. tuberculosis*

Other supports

Microbiological support for birth cohort study on diarrhoea and respiratory infection in Mirzapur; and sexually transmitted diseases in Matlab

Training

Staff, students

Short-term training of laboratory personnel in clinical labs

International course on laboratory diagnosis of diarrhoeal pathogens

Administration

Linkup with overseas institutions for training, collaborative research, funding.

LABORATORY SCIENCES DIVISION

DEPT. OF LAB. RESEARCH

DEPT. OF LAB. SERVICES

INTERNATIONAL LEVEL STAFF	=	2
NATIONAL OFFICER LEVEL STAFF	=	31
GENERAL SERVICES LEVEL STAFF	=	117

ACHIEVEMENTS OF LSD IN 1995

Monoclonal antibodies (MAbs) produced to:

1) Enterotoxin of *Bacteroides fragilis* (BF)
2) Bundle forming pilus (BFP) antigen of enteropathogenic *E. coli* (EPEC)

MAb-based ELISA developed for BF
MAb-based test being developed for EPEC

MAb-based ELISA evaluated for *E. histolytica* antigen from serum and pus of patients with amoebic liver abscess
Test sensitive for pus

Polymerase chain reaction (PCR) assay established for detection and differentiation of pathogenic and non-pathogenic amoeba from stool

Aetiologic role of cytolethal distending toxin (CLDT) producing *E. coli* in diarrhoea

CLDT *E. coli* isolated from:

3.1% of patients with diarrhoea 0.93% of controls	P=0.082

Majority of CLDT *E. coli* belonged to EPEC

Aetiologic role of *Aeromonas* spp. in diarrhoea

Role controversial
Immune response of infected patients and controls studied
Several patients produced immune response

Chemical structure of capsule of
V. cholerae 0139 Bengal determined.
It is made up of hexasaccharide
repeating units and also includes
a D-galactose - 4,6 - cyclosphosphate.

Identified water isolates of
Aeromonas trota cross-reacting
with *V. cholerae* 0139 Bengal
Antiserum to *A. trota* cross-protected
suckling mouse to challenge with
V. cholerae 0139 Bengal

Molecular epidemiology of *V. cholerae* 01

Fingerprinted (ribotyped) isolates from epidemic and non-epidemic periods

Some ribotypes more frequently isolated during epidemic periods

Association of astrovirus with persistent diarrhoea

Astrovirus detected in 2% of children with acute diarrhoea and 18% of children with persistent diarrhoea

Transmission studies on *Shigella*

Contamination of home environment
Emphasis on personal and domestic
hygiene for interruption of disease

Volunteer studies on enterotoxigenic *E. coli* (ETEC) vaccine

Killed oral vaccine containing B subunit of cholera toxin (CT) and three colonization factor antigens (CFAs) tested in 27 adult volunteers
Vaccine well tolerated
Immune response to CT and CFAs

Microbiological studies of duckweed and fishes fed on duckweed.

Waste-water grown duckweed a safe fish feed

Biochemistry and Nutrition

Tests related to assessing vitamin A status established - MRDR/RDR
60% of Bangladeshi infants vitamin A deficient

Sundrying is an adequate way to preserve ß-carotene in leafy vegetables

Tests for ß-carotene, acute phase reactants and antioxidative stress developed

Clinical Laboratories

Autoanalyzer installed for rapid assay of increased number of parameters

Specimen reception and report delivery computerized

Publications

41 papers published
21 papers in press

Research Protocols

16 projects in progress

Conferences/Workshops attended

1. U.S.-Japan Cholera Conference. Fukuoka,Japan, December, 1994

2. Experimental Biology meeting, Atlanta, USA, April, 1995

3. Argentine Society for Microbiology, Buenos Aires, May 1955

4. American Society for Microbiology, Washington, USA, May, 1995.

5. Eighth International Congress of Mucosal Immunology, San Diego, USA, July, 1995

6. Intercountry meeting on Prevention and Control of New, Emerging and Re-emerging Infectious Diseases, WHO, SEARO, New Delhi, India, August, 1955

Staff Training

Overseas training:

One obtained Ph.D.
One submitted thesis for Ph.D.
Two undergoing training for M.Sc.
One received short-term training on special techniques
Three undergoing short-term training

Training of students and fellows

Local:

16 Students from Dhaka University using laboratory facilities for MSc./M. Phil degrees..

Overseas:

Two PhD students from overseas Universities using the facilities for research work.

One International health research fellow completed training

Training Course

International training course on laboratory diagnosis of common diarrhoeal disease agents, 13-24 August, 1995.

Clinical Laboratories provided short-term training to 24 professional staff from Bangladesh and neighbouring countries

Services

Clinical laboratory services to:

- Hospital patients
- Outside paying patients

Microbiological quality of food and water

Supply of reference cultures and antisera

Supply of small animals and animal blood to IPH, GoB

Quality assurance of I.V. fluid and ORS for GoB

Biomedical engineering support

Institutional Linkages

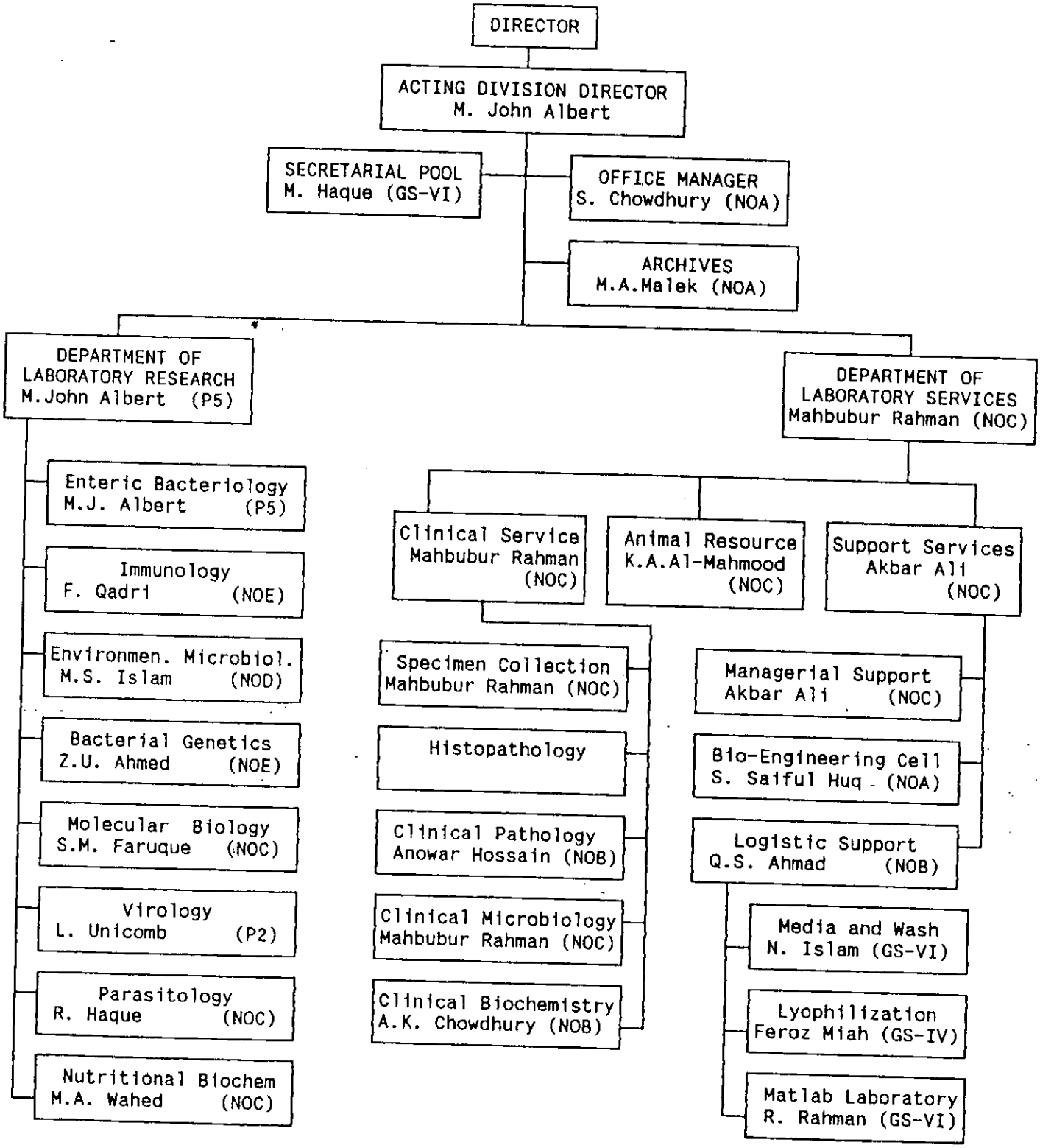
Country	No. of Institute	No. of Collaborative projects
U.S.A.	7	8
Sweden	3	4
Finland	1	1
Australia	1	1
Japan	2	2
India	2	2
U.K.	1	1
Germany	1	1
Belgium	1	1

Administration and Personnel

Recruitment of Division Director

Several biomedical equipment repaired and salvaged

ORGANOGRAM: LABORATORY SCIENCES DIVISION



RBS:mh/02:ORG-A2.95

November 2, 1995

October 1995

Response to the review of the Population and Family Planning Division (PFPD) conducted from 12-16 March 1995 by the Programme Committee

Introduction

The review is generally complimentary of the work of the division, and the staff are encouraged by the positive tone of the report. However, the review does point out areas of weakness. We interpret the major message in this regard to be concern of the 'science' component of this action-oriented research project. As detailed out below, steps have already been taken to address this issue as well as several of the other concerns mentioned in the report.

Specific Comments

The responses are given in sequence to the points as they appeared in the report of the Review Team. Some of the points appeared more than once in the report and hence will be mentioned only once.

1. Page 2, line 4 and page 10 recommendation B.6

"...[A] *full assessment needs to be done to ensure that division of households are being identified appropriately. The DSS can be an important source of information on household dynamics."*

A big shortcoming of the DSS data is that socioeconomic status (SES) information of the DSS population is not available since 1982. However, a rolling census to collect SES data in the DSS area will begin within the next few months. Expert opinion on the rolling census has been obtained.

The division or splitting of a household and the change in the headship of a household have been recorded and computerized since the 1993 census. In the 1993 census, only the households were recorded and no SES information was collected. The Review Team correctly pointed out that proper identification of the division of a household is very important in understanding household dynamics which is also necessary in collecting SES data for the rolling census. Based on the Review Team's suggestion, a team of four persons took an extensive review of the division of households and the recording of change in the headship and the relationship among members of the split households in Matlab office as well as in the field. This work is proceeding satisfactorily.

2. Page 2, line 13 and page 8, line 4

"There has been a substantial addition to behavioural and social scientific research, although, perhaps surprisingly, the major new additions in this area are located in the Community Health Division."

Presently, the behavioral and social science activities are carried out at the Centre mainly in three projects: Chakoria Project on "Improvement of Health Through Community Development Oriented Programme in Bangladesh," "Women's Reproductive Health Project" and the "BRAC-ICDDR,B Project". Except for the BRAC-ICDDR,B Project, the other two projects deal more with community health issues than population and family planning issues. So the new additions are in the Community Health Division. Moreover, among the scientific divisions of the Centre, the PFPD is the largest and addition of those projects will make its size disproportionately large.

3. Page 2, line 16

"The programmes have continued to give emphasis to the management aspects of family planning, but it is unclear whether the requested greater attention to demand issues has taken place."

The MCH-FP Extension Projects appreciates the need to address the demand side of the family planning programme and are exploring ways to address this point. Some activities on demand issues (desired family size) are being carried out by the Population Studies Centre. Additionally, we plan to investigate whether SES interventions affects women's empowerment and demand aspects from the BRAC-ICDDR,B Project.

4. Page 2, line 23

"The review process for research undertaken in the PFPD needs to be re-evaluated. It is felt that the population science does not receive the full benefits of peer review, as in the case of other divisions, and the possibility of a separate review of research protocols within the division should be considered."

A number of steps have been taken since the Review Report. All research proposals are discussed and reviewed within the individual programmes. The proposals are further reviewed by the Division, where full-scale scientific presentation is made by the PIs in the presence of all the research staff of the Division. The above review process are made mandatory in the Division in addition to the Centre's established review process with the Research and Ethical Review Committees. Further attention will be given to this issue including institution of external review.

5. Page 4, second para

"...[T]he possibility of including all extension project demographic and socio-economic data in the data archives."

The recommendation is being implemented now.

6. Page 4, third para and page 11, recommendation F.1

"...[T]he Team was somewhat surprised that the number of researchers in the Centre (PSC) had not grown in accordance with the recommendations of the 1991 Review and the 1992 Follow-up Review."

This is related to scarcity of core funds, and the inability of PSC to attract outside grants.

7. Page 4, para 4 and page 11, recommendation F.3

"The Team is concerned that the Division is becoming too narrowly focussed on the collection and analysis of DSS data and extension projects. It believes that field population research projects should be carried out, often in the Matlab area because of the framework DSS provides."

The Division is funded to a very great extent by two MCH-FP Extension Projects. The Centre is committed to fulfill the obligations to undertake the terms of the Cooperative Agreement.

We concur that field population research projects should be carried out in the Matlab area but this again requires funds. At present there is no resident population expert in Matlab. Still some activities have been undertaken in the past including a project on "Validation of Bangladesh DHS in Matlab, and a Grameen Bank project in Tangail area.

8. Page 5-6, and page 11 recommendation F.3

"...it [Team] also felt the need to maintain high level research and publication... Intervention in the extension areas should be based, to the extent possible, on sound research findings... It is important that the extension project work should remain experimental and that interventions should be tested, and reported publicly, in a fully scientific way".

A point to note regarding publication output of the Rural Extension Project is that the period since the middle of 1994 till the first half of this year has been largely spent in catching up with a sizeable backlog in Project activities, opening up of a new laboratory area at Mirsarai, designing of several interventions, initiation of implementation of seven new interventions and

streamlining the Project. This involved a considerable time of most Project staff. However, the project presented 13 papers at ASCON IV and 6 papers at the 1994 PAA Meeting. Several of these papers are currently being reviewed for publication in the Centre's Working Paper Series. Also, the Project staff are involved in data analysis on a number of research topics. By the end of the year, several of these will be presented at seminars, and subsequently, many of these will become part of the Working paper Series. Above all, staff are being strongly encouraged to prepare articles for publication in peer reviewed journals.

Each intervention being implemented by the Projects has been designed, keeping in view the need to maintain the highest scientific standards regarding its experimental design, sampling, implementation plan, and evaluation. The process of designing an intervention is quite rigorous, involving extensive review of literature and all available existing information to ensure that interventions are based on sound research findings, intensive discussion at all levels from the field to the headquarters in Dhaka, designing of proposal, and finally seeking approval of all concerned authorities. No intervention is finalized, until proposal goes through a process of intensive review and discussions, both within the project at various meetings and with the concerned Government authorities, to ensure that each intervention is appropriate and relevant in the context of the national program.

It might be also useful to point out the nature of the Project work. Working with the Government for the national programme entails different approaches and involves a considerable amount of time of the Project staff in different meetings, etc. to sensitize the policy makers and program managers on various aspects of the national program.

The Extension Projects interventions follow experimental designs, and are tested to assess the effectiveness of such interventions. However, we agree with the need to report results of such interventions with more scientific rigor.

The Division has made the following modifications recently to improve the quantity and quality of the scientific output of the Extension Projects:

- All the administrative responsibilities of the Projects have been delegated to the Administrative Director to enable the Project Directors to provide the needed attention and scientific leadership to Projects' research work.

- Any new intervention or research proposal are required to be discussed and reviewed at the Division level in addition to its review and discussion at the Project level.

- Guidelines including Review Process for any Working Papers have been developed for immediate implementation.

9. Page 5, line 15

"While the project workplan conforms to the need to test alternative approaches to improve the effectiveness and efficiency of possible modifications to the NFPP working procedures, it should also incorporate adequate flexibility to allow experimental trials of novel interventions which emerge from its own studies and from observations in Matlab or other trial areas."

The Projects are a collaborative effort of the Ministry of Health and Family Welfare (MOHFW), Government of Bangladesh (GOB), and the ICDDR,B to further strengthen the national program in three critical areas: (a) management improvements, (b) quality of care, and (c) sustainability. And, accordingly, the Project Workplan identifies various interventions to implement its mandate. However, the Project Workplan is not rigid; rather, it allows for some degree of flexibility to reflect changing national priorities. The review process is undertaken every year, and changes are made reflecting current priorities. The Projects may also undertake innovative interventions. The cluster approach and Satellite Clinic combined with EPI session in Mirsarai and Abhoynagar thanas are two such interventions. Thus, there is room for some degree of flexibility to allow experimental trials of novel interventions.

10. Page 5, line 20 and page 8, recommendation A.3

"Project research staff should be expected to spend some time involved in ICDDR,B work outside the extension project to enable them to draft in new ideas and approaches. Similarly, the project should invite part-time involvement of investigators from other parts of the Centre and even other institutions."

Yes, this is a useful suggestion and we are trying to implement it. Rural Extension Project staff are quite extensively involved in the analysis of data from the Matlab MCH-FP Project of the Community Health Division. Staff spend a good deal of their time in interacting and providing technical assistance to various government agencies and the NGOs.

Also, as members of the Centre's different working groups involved with the development of the Centre's biennial work plan, the Rural Extension Project staff share experiences across disciplines. In addition, there is meaningful interaction, on an ongoing basis, between the Rural and Urban Extension Projects on various issues, including assistance provided to the Urban Project in establishing initial contacts with the Government, design of surveillance system, development of fieldworker registrar, etc.

A number of Extension Projects staff participate in Centre's training activities. Senior staff members of the Urban Projects are official advisors to a number of projects of the Environmental Health Program of CHD.

11. Page 6 second sentence

"Many features of interventions to be tested may be best perfected in Matlab or other more closely controlled settings before being moved and adapted to the government health system".

In fact, given the issue of replicability of the Matlab Project in the national program, the MCH-FP Extension Project (Rural) was set up in 1982 with the objective of testing the Matlab interventions in selected government settings, to determine whether such interventions work in the government setting, and if not how they can be modified in the context of the national program. Thus, going back to Matlab to test any intervention would negate the rationale as to why the Rural Extension Project was set up in the first place. Also, trying them out in Matlab first and subsequently in the Rural Extension Project sites would be not only time-consuming but would also place additional demands on limited resources of the Project. At the current stage of the program, time is a major factor; also, knowledge base is already quite wide. Furthermore, the Rural Extension Project has now grown beyond Matlab, testing a number of innovative approaches(e.g., cluster visitation, increased number of satellite clinics and having them combined with EPI sessions) not being tried or tested in Matlab and elsewhere. However, it should be emphasized that, whenever appropriate, lessons learned from Matlab are taken into consideration (e.g., emergency obstetric care, RTI, etc.) in designing various interventions.

12. Page 6, para 1 and page 12, recommendation F.6

"The team expressed some disquiet about the different base-line indices for the intervention and control areas in the Mirsarai Thana."

The control area has already been changed.

13. Page 7, recommendation A.1

"The team believes that consideration should be given to the splitting of PFPD a Population division and a Special Extension Programme."

This is an issue which is in the purview of the Centre and the BOT.

14. Page 8, line 3 and page 10, recommendation C.1

"Consideration might be given to incorporating the Matlab RKS in the Population Division as well."

The RKS is an indispensable component of all health intervention studies conducted by staff of CHD. This does not preclude PFPD staff from having access to RKS.

15. Page 8, recommendation A.4

"The team believes that care should be taken to ensure that the ICDDR,B Board of Trustees should at all times have among its members two population or family planning scientists."

This is an issue for the BOT and the Centre's Director to consider.

16. Page 9, recommendation A.5

"Much more emphasis should be given to examining how ICPD recommendations on women's reproductive health can be applied to family planning programmes."

We concur. Individuals projects are trying to address this in their own way. For example, Urban Extension Project is planning to undertake studies in RTI, (as part of Dutch funded studies), male involvement in reproductive health (as part of USAID funded project), CHD has undertaken a large project in Matlab on ODA funds. However, the Centre is planning to form an Inter-divisional Working Group to examine ICPD recommendations more systematically and determine what is feasible for the Centre.

17. Page 9, recommendation A.6

"More of the research should target the position of women and the nature of changes."

We agree.

18. Page 9, recommendation A.7

"Given the persistence of higher female than male mortality over a wide age range, further social research and ensuing intervention programmes are highly desirable."

The Social & Behavioural Science Programme in CHD is probably best equipped to address this problem.

19. Page 9, recommendation A.8

"More accommodation is needed at Matlab for participants in workshops."

This is an issue for the Centre's management to consider.

20. Page 9, recommendation B.1

"The move from surveillance every two weeks to every four weeks should be carried out and the freed labour should be employed in obtaining greater demographic surveillance of the Comparison Area."

We agree and this will be implemented during 1996.

21. Page 10, recommendation B.3

"It should be noted that Dr. Strong's resignation will leave a gap in the area of computer expertise..."

This requires to be addressed.

22. Page 10, recommendation B.4

"Consideration should be given to the inclusion of more socio-economic indices in DSS or in the rolling census linked to the DSS..."

Yes, we are working on it. We have made a list of socioeconomic variables to be included in the Rolling Census. The list will be finalized in a workshop where we are planning to invite representatives from important organizations of the city.

23. Page 10, recommendation B.5

"Consideration should be given to the possibility of changing the definition of migration in DSS, possibly to three months."

We will have to give more thoughts on this point. A change in the definition may create some problems for investigating migration dynamics in the area as is the case for the cause of death, for which the last new classification was done in 1987. That make the comparison with the previous time period problematic.

24. Page 11; recommendation E.2

"Both ICDDR,B and PSC should attempt to convince donors that they should fund PSC core money."

Much effort has been made and we continue to explore all possible sources. PSC mainly does basic work which is only possible with the ICDDR,B data and field setting. This type of work is difficult to do elsewhere. Unfortunately, donors usually like action oriented work. However, we will continue pursuing funds for PSC.

25. Page 11, recommendation E.4

"The Centre should consider including a financial item in all extension projects to support the PSC's analysis of aspects of the research."

USAID is expected to make a cut in the existing budget. So such a proposal, for the time being, is not feasible. In the next Cooperative Agreement with USAID, the Centre will attempt to include this component if USAID agrees to such a proposal.

26. Page 12, recommendation F.4

"It should be recognized that the extension projects have an action component and that this demands considerable staff time. Scientific work and publication is expected of extension project staff. However, they should not necessarily be assessed by identical publication volume criteria to the rest of the ICDDR,B scientific staff."

This point was given sufficient consideration for preparing the Guidelines for Scientific Ranking. For example, to be promoted from NO-B to NO-C, obtaining funds on competitive basis is a must for the staff of the other divisions and units, but for the Extension Projects staff, this condition will be relaxed.

27. Page 12, recommendation F.5

"The extension projects must play an important role, both in terms of Bangladesh and globally, in translating ICPD's reproductive health recommendations into field procedures which can be adopted in poor countries."

Yes. Probably, the Extension Projects are the most appropriate projects in the country to field-test some of the ICPD recommendations for its application in other developing countries. However, the Projects' existing research agenda does not provide for all of this, although through provision of Emergency Obstetric Care the Rural Extension Project has already attempted to reduce maternal morbidity and mortality. Nevertheless, plans are currently underway to test some of the ICPD recommendations, both independently as well as collaborately with other organizations.

28. Page 12, Recommendation F.7

"The Rural Extension Project needs to keep in mind that Mirsarai was selected because it is a low performance area and not necessarily representative of the entire country. Lessons learnt from there may not necessarily apply to the country as a whole."

Lessons learned from Mirsarai can be replicated throughout Chittagong Division, the lowest performing division in the country, with over one-quarter of the country's population. Also, lessons learned from Mirsarai can be replicated to other low-performing areas of the country. That is, the intervention tried in the low-performing Mirsarai Thana can be, if found effective, successfully introduced in the other low-performing areas. Thus, the catchment area for possible replication of Mirsarai interventions is quite large. Furthermore, interventions being tried at Mirsarai are also being tried at Abhoynagar, another field site, which is a high-performing area. Thus lessons learned from the Project's high-performing and low-performing field sites will help identify whether some interventions may be more easily replicable in the high-performing than in the low-performing areas. Also, such a comparative study would indicate what, for example, needs to be changed or done differently in the low-performing setting to make the intervention work as effectively as in the high-performing setting.

29. Page 12, recommendation F.8

"The extension projects might consider the introduction of more nutritional interventions."

Under-nutrition in both mothers and children is a big problem in this country. Thus, nutritional interventions would definitely be very important.

The Extension Projects work with the GOB and NGOs partners. The current nutrition interventions are VAC distribution, breast feeding and weaning education, appropriate feeding information to pregnant mothers and sick children. The Projects are exploring the feasibility of introducing new interventions, although the scope of the Projects to add such intervention is limited. The Urban Extension Project is conducting a number of special studies in the area of nutrition. These are:

1. Determinants of birth weight, gestational age and perinatal age mortality among the urban poor in Dhaka.

2. Birth weight and infant mortality in the slums of Dhaka city: a prospective study.

The project is also planning an intervention study in which pregnant mothers will be supplemented with zinc to test the hypothesis that maternal zinc supplementation during pregnancy will reduce the incidence of LBW, morbidity and improve growth of infants.

30. Page 12, recommendation F.9

"The Team is concerned that the cluster approach should continue to be regarded as experimental and attention should be given as to whether maternal and child health and outcomes other than family planning are adequately catered for by this approach."

Cluster visitation is a substitution of the existing home-based delivery offered by family planning field workers, Family Welfare Assistants (FWAs). Indeed, the cluster approach is an intervention being implemented as an alternative to the existing service delivery approach with the objectives of both expanding coverage as well as promoting programme sustainability. It is regarded as an experiment, and based on the lessons learned from at least one and a half year of its field test recommendations will be made as to its scaling-up to other rural thanas of Chittagong District as part of the "district approach" of the Project. Subsequent to its scaling-up to other thanas of Chittagong and lessons learned from those thanas, decision can be taken regarding its replicability in the national programme. Thus, the experimental nature of the intervention will be strictly adhered to.

Services provided under this approach (including family planning and selected MCH) are exactly similar to the one provided under the home-based service delivery system, and therefore, attention given to MCH is the same under both the approaches.

Review of the Population and Family Planning Division, ICDDR,B, 12-16 March, 1995 for the ICDDR,B Board of Trustees

The members of the Programme Committee Review Team were Professor John C. Caldwell (Chairman), Australian National University, Canberra, and Board Member; Dr. Sajeda Amin, The Population Council, New York; Dr. Halida Hanum Akhter, BIRPERHT, Dhaka; Major Gen. (Retd.) M.R. Choudhury, Dhaka, and Board Member; Dr. Nirmala Murthy, Foundation for Research in Health Systems, Ahmedabad; and Dr. Jon Rohde, UNICEF, New Delhi, and Board Member.

The team met on 12-13 and 15-16 March. Site visits were made by the various members of the team on 14 March to Matlab, the Urban Extension Project in Dhaka, and to two rural extension project areas, Abhoynagar and Mirsarai (Chittagong). In addition Professor Caldwell had spent the period 5-11 March on site visits and discussions in ICDDR,B Headquarters.

Previous Reviews

These programmes had been subject to a Board Review on 7-10 November, 1991, which had resulted in the setting up of the Population and Family Planning Division, and that Review had been succeeded by a follow-up Review on 25-26 November, 1992. In addition, the Review Team also had access to a February 1995 Programme Committee External Review of the MCH-FP Urban Extension Project. It was noted that the great majority of the recommendations of the previous Reports had been carried out satisfactorily. Expert reassurance had been received about the

feasibility of the rolling census at Matlab; the rolling census has not yet been carried out but will be done at the most economical time. The division of households in the DSS system is now recorded when they actually occur, but a full assessment needs to be done to ensure that households are being identified appropriately. The DSS can be an important source of information on household dynamics. DSS is now classified as a core activity. The registration samples for the Extension Areas have been subject to expert assessment and have been found to be representative. The Rural Extension Project staff have been brought into the main ICDDR,B building complex. The experience of the Extension Project has been brought more to the government's attention, especially in the recent period. There has been a substantial addition to behavioural and social scientific research, although, perhaps surprisingly, the major new additions in this area are located in the Community Health Division. The programmes have continued to give emphasis to the management aspects of family planning, but it is unclear whether the requested greater attention to demand issues has taken place. The recommended move to a thana in the Chittagong District has occurred, and the retention for at least one year of the Sirajganj field site has been converted to a limited continuing operation to measure the impact of the withdrawal of the major Extension Project services. The review process for research undertaken in the PFPD needs to be reevaluated. It is felt that population science does not receive the full benefits of peer review, as in the case of other divisions, and the possibility of

a separate review of research protocols within the division should be considered.

Changes Since the Last Review

Three major changes or projected changes had to be considered by the Review Team: (1) Dr. Michael Strong will be leaving his post as Head of the Division in August, 1995, and no steps have been taken to date to appoint a successor. (2) Dr. Barkat-e-Khuda, on leave from the position of Professor of Economics at the University of Dhaka, took up the position of Project Director, MCH-FP Extension Project (Rural), on secondment from the Population Council, in May 1994 (and the Associate Project Director, Dr. Rushikesh Maru resigned in October 1994). (3) It is almost certain that Dr. Jeroen van Ginneken will be seconded later in 1995 by the Dutch Government to be Project Director of DSS.

Overview

The Demographic Surveillance System (DSS) continues to be unique and an indispensable tool for studying population and health change. At present it is carrying out a function of global importance that could not have been undertaken elsewhere. A Demographic and Health Survey (DHS) has been held in its area and compared with the DSS to test the suspicion that the DHS is now underreporting fertility levels in the recent period. Because DHS now serves as the major measuring instrument for both fertility and mortality levels and trends throughout developing countries, this

is a matter of world importance. It was noted that the Record Keeping System, which is linked with the DSS and once came under the old Population Science and Extension Division, now falls within the Community Health Division.

The Review contained no member with sufficient expertise to be able to review adequately the Computer Information System, but the team expressed confidence in the changes being undertaken that were explained by Dr. Strong and in the support and advice given by the United Kingdom Overseas Development Administration. The team felt no need this time to review the Data Archiving Unit, except to note the possibility of including all extension project demographic and socio-economic data in the data archives.

The Population Studies Centre has met the hopes of the previous review committee in the quality of its research and in its acceptance for publication by major journals. However, the team was somewhat surprised that the number of researchers in the Centre had not grown in accordance with the recommendations of the 1991 Review and the 1992 Follow-up Review.

The Team is concerned that the Division is becoming too narrowly focussed on the collection and analysis of DSS data and extension projects. It believes that fieldd population research projects should be carried out, often in the Matlab area because of the framework DSS provides.

The team took note of major changes occurring in the Rural Extension Project since the appointment of Dr. Khuda last May. The programme has become more action oriented and works more closely

with the Government of Bangladesh and the National Family Planning Programme. There is a possibility that the programme in Mirsarai Thana will be employed as a base for spreading innovations through the whole Chittagong District. Work on satellite clinics is proceeding and experiments are being carried out to see if smaller groups or clusters can replace the house visits. It is possible that the Rural Extension Project, and perhaps the Urban Project as well, will become the cutting edge of the National Family Planning Programme. The team welcomed the increased involvement with the Bangladesh Programme and the enhancement of channels of communication between ICDDR,B and GOB. However, it also felt the need to alert the project to the need to maintain high level research and publication, and especially to the necessity for the scientific measurement and assessment of all new interventions. While the project workplan conforms to the need to test alternative approaches to improve the effectiveness and efficiency of possible modifications to the NFPP working procedures, it should also incorporate adequate flexibility to allow experimental trials of novel interventions which emerge from its own studies and from observations in Matlab or other trial areas. Project research staff should be expected to spend some time involved in ICDDR,B work outside the extension project to enable them to draft in new ideas and approaches. Similarly, the project should invite part-time involvement of investigators from other parts of the Centre and even other institutions.

Intervention in the extension areas should be based, to the extent possible, on sound research findings and need not, indeed in general should not, start from zero. Many features of interventions to be tested may be best perfected in Matlab or other more closely controlled settings before being moved and adapted to the government health system. Obstetric care is an obvious example. Field interventions might also be compared in the setting with other inputs beyond those of the NFPP, looking for additionality or system overload. The effects of rural credit (Grameen or BRAC banks) or other NGO activities or the new World Bank nutrition intervention provide important modifying conditions for the basic MCH-FP studies. Planned experiments including these variables would be useful. The team expressed some disquiet about the different base-line indices for the intervention and control areas in the Mirsarai Thana. The team believes it is possible that the control area should be supplemented or even replaced, and more in-depth consideration given to explaining the differential baseline estimates between the intervention and comparison areas.

The team noted that the Urban Extension Project is now similar to the Rural Extension Project in terms of staff employment conditions and in terms of the demographic surveillance system. The Project has changed radically and no longer promotes the earlier volunteer system. The Programme carries out surveillance of the NGO, Concerned Women, and a smaller government group which directs patients to Government, NGO or private health facilities. Because there is no urban equivalent of the rural government

family planning programme, those requiring family planning are directed to the appropriate facilities, most commonly local clinics run by Concerned Women. The Urban Project reported that it too was working more closely with government, and was considering an extension of its work to urban areas beyond Dhaka.

The Divisional work load is heavily skewed towards the two extension projects, which together now employ over 300 staff and expend about 80% of the Division's budget. The extension work is an important contribution of the Centre, both to Bangladesh as well as to the dissemination of Centre research findings. The nature of extension research, its pace and necessary close relationships to both government and donor are substantially different from the normal scientific clearance procedures and working pattern of a research division at the Centre. Consideration of separating the extension project from the rest of the Division has merit from both scientific and administrative view point.

Recommendations

A. General

(1) The team believes that consideration should be given to the splitting of PFPD a Population Division and a Special Extension Programme. The Population Division would be concerned specifically with surveillance in the Matlab area, population research and publication carrying out ICDDR,B's international mandate. This would comprise DSS, CIS, PSC, and DAU. It would be focused on the

DSS data but would have access to Extension Programme data and the right to work on population questions anywhere in the world. Consideration might be given to incorporating the Matlab RKS in the Population Division as well. The inclusion of social science in this Division might also be considered. The other programme, perhaps called the Special Extension Programme would work closely with the Bangladesh National Family Planning Programme. It would include both the Rural and Urban Extension Projects. Nevertheless, it should be noted that the urban extension work is probably still in a more experimental stage and safeguards should be put in place to prevent the early complete merger of the two programmes. One of these safeguards would be the retention of the present posts of director of the Urban Extension Project and director of the Rural Extension Project under a Special Programme Director. The Special Extension Programme would report directly to the ICDDR,B Director.

(2) The team believes that such new arrangements would not necessarily mean the appointment of directors from outside.

(3) The team suggests that all investigators should be expected to spend some time (say 5% or so) working across divisional lines to better ensure meaningful sharing of experiences across disciplines and between projects. More than informal contact, a clear mandate of such interdivisional staff sharing, would substantially enrich research design and outcomes.

(4) The team believes that care should be taken to ensure that the ICDDR,B Board of Directors should at all times have among its members two population or family planning scientists.

- (5) Much more emphasis should be given to examining how ICPD recommendations on women's reproductive health can be applied to family planning programmes. Perhaps a special research programme either in Matlab or the extension areas could determine the current situation and how to overcome the problems of complying with the ICPD recommendations both with regard to the identification and treatment of RTIs and the follow-up of women provided with contraception. Research on other ICPD recommendations, such as those on increasing women's education, should also be considered.

(6) More of the research should target the position of women and the nature of changes.

(7) Given the persistence of higher female than male mortality over a wide age range, further social research and ensuing intervention programmes are highly desirable.

(8) More accommodation is needed at Matlab for participants in workshops.

B. Demographic Surveillance System

(1) The move from surveillance every two weeks to every four weeks should be carried out and the freed labour should be employed in obtaining greater demographic surveillance of the Comparison Area.

(2) Plans should be prepared for changes in work patterns as retirement ages are reached first for the Matlab male labour force and subsequently for the female labour force.

(3) It should be noted that Dr. Strong's resignation will leave a gap in the area of computer expertise with relation to surveillance data. This situation will need watching, even though such skills need not reside with the director.

(4) Consideration should be given to the inclusion of more socio-economic indices in DSS or in the rolling census linked to the DSS, especially in order to evaluate changes occurring in the society.

(5) Consideration should be given to the possibility of changing the definition of migration in DSS, possibly to three months.

(6) The current method of enumerating households should be reassessed particularly in view of the planned collection of socio-economic data that will most likely be at the household level.

C. Record Keeping System

(1) Consideration should be given to returning the RKS to the Division, especially in view of the appointment of Dr. van Ginneken to head DSS.

D. Computer Information System

(1) The Review Team supports implementing the changes needed in the CIS irrespective of what proportion of the cost ODA meets.

E. Population Studies Centre

(1) It is strongly recommended that the staff of PSC be built up to the previously recommended levels.

(2) Both ICDDR,B and PSC should attempt to convince donors that they should fund PSC core money.

(3) PSC should also promote its own field research at Matlab and in other areas.

(4) The Centre should consider including a financial item in all extension projects to support the PSC's analysis of aspects of the research.

F. MCH-FP Extension Project

(1) Even if the separation of the PFPD into two components takes place, these components should retain much closer formal and informal links than is usual between divisions. There will be the need for data access and for joint activities.

(2) Even if the two extension projects are placed together in a Special Programme, they should not be amalgamated and the different challenges of the urban situation should be clearly recognized.

(3) It is important that the extension project work should remain experimental and that interventions should be tested, and reported publicly, in a fully scientific way. The highest standards should be maintained with regard to experimental design, sampling, the monitoring of implementation, and the documentation of input, process and outcome evaluation.

(4) It should be recognized that the extension projects have an action component and that this demands considerable staff time. Scientific work and publication is expected of extension project staff. However, they should not necessarily be assessed by identical publication volume criteria to the rest of the ICDDR,B scientific staff.

(5) The extension projects must play an important role, both in terms of Bangladesh and globally, in translating ICPD's reproductive health recommendations into field procedures which can be adopted in poor countries.

(6) The Review Team is concerned by the difference in average contraceptive prevalence levels between the action areas and the control areas in Mirsarai. It believes that the control areas should be either supplemented or replaced.

(7) The Rural Extension Project needs to keep in mind that Mirsarai was selected because it is a low performance area and not necessarily representative of the entire country. Lessons learnt from there may not necessarily apply to the country as a whole.

(8) The extension projects might consider the introduction of more nutritional interventions.

(9) The Team is concerned that the cluster approach should continue to be regarded as experimental and attention should be given as to whether maternal and child health and outcomes other than family planning are adequately catered for by this approach.

Nutrition Research At ICDDR,B

1. INTRODUCTION

An array of nutritional deficiencies are widely prevalent in Bangladesh. Deficiencies of macronutrients (protein energy malnutrition) as well as micronutrients (vitamin A, zinc, iodine, iron, etc.) have an enormous impact on health and productivity due to primary effects as well as their effects as critical co-factors in a variety of conditions including gastrointestinal and other infections, low birthweight, psychomotor and cognitive development, among others.

Nutrition research is therefore one of the priorities of the ICDDR,B. Areas of investigation include the nutritional impact and management of diarrhoeal disease, maternal nutrition, child nutrition, micronutrient deficiencies, nutrient metabolism, body composition, and other aspects of clinical and community nutrition.

A Nutrition Working Group (NWG) has been established with the following objectives:

1. Facilitate interdivisional collaborative nutrition research.

2. Assist in capacity building in the field of nutrition.

3. Help identify priority areas for future work.

2. ICDDR,B NUTRITION BI-ANNUAL WORKPLAN FOR 1995-1996

Research Objectives

1. *To ensure nutritional improvement of women during adolescence and during pregnancy with interventions aimed at reducing low birth weight.*

Activities to meet this objective will have two principal components: i) the characterization of nutritional (general and micronutrient) status as well as the development of practical field tests and improved laboratory methodologies to assess nutritional deficits in these populations, and ii) the design and testing of nutritional intervention strategies.

The inter-relationships between maternal nutritional status and gestational age, birth weight, perinatal/infant mortality, and infant cognitive and motor development are to be investigated in urban Dhaka. The effect of maternal supplementation with selected micronutrients (eg., iron, zinc, vitamin A, iodine) and macronutrients on maternal (health, nutritional) and infant outcomes (birthweight, infectious morbidity/mortality, development) will also be assessed in Matlab and northern districts of Bangladesh.

Approaches to improve the bioavailability of dietary carotenoids and provitamin A as a means of sustainable improvement of maternal vitamin A status will be tested in Matlab. Dietary assessment methodology as a precise, inexpensive, and noninvasive field method to characterize maternal vitamin A status will be validated. The impact of increased dietary intake and a reduction of workload in the third trimester on low birthweight will be defined.

Studies will be undertaken to determine the prevalence and the principal etiologies of anemia in rural and urban pregnant women, and to determine the impact of a home-gardening strategy to improve the vitamin A and iron status on women of childbearing age. Studies are to be implemented to establish the relationship of hemoglobin level to birthweight and to determine the effect on birthweight (beneficial vs adverse) of iron supplementation of disadvantaged pregnant women.

2. *To improve the vitamin A status of infants and children with emphasis on dietary interventions.*

The efficacy of increasing dietary ß-carotene-rich foods through the promotion of home gardening and modified cooking procedures as means to improve vitamin A status of infants and children will be evaluated in Matlab. Enhancement of breastmilk vitamin A content and ultimately improved infant vitamin A status by two different strategies is to be assessed. One strategy is to supplement lactating women with a large dose of medicinal vitamin A or ß-carotene, and the other is a trial to enhance the bioavailability of dietary carotenoids and vitamin A in pregnant and lactating women.

3. *To define the role of anti-oxidants in reducing morbidity and mortality from diarrhoea and ARI.*

The role of reactive oxidative species (ROS) and nitric oxide species in the pathophysiology of diarrhoeal diseases as well as acute respiratory tract infection will be investigated at the ICDDR,B Clinical Research and Service Centre (CRSC) in Dhaka. Both human and animal research is planned. The capabilities to indirectly measure ROS activity and to directly measure nitric oxide metabolites are to be established at the ICDDR,B laboratories. Quantitation of tissue nitric oxide synthase (NOS) activity and inducible NOS RNA expression in affected tissue will help to define their role in intestinal inflammation. Initial efforts will focus on infectious colitis and persistent diarrhea. It is expected that further definition of the role of ROS and nitric oxide species in gastrointestinal and respiratory tract infections will lead to the development of innovative therapeutic strategies. The impact of specific interventions with anti-oxidants such as α-tocopherol, ß-carotene, selenium among others on illness severity and duration will also be studied.

4. *To develop low cost, high energy foods for infants and children for use during episodes of infectious disease.*

Enteric protein loss, anorexia, and poor catch-up growth are characteristic in children with shigellosis and result in, or exacerbate, severe malnutrition which is associated with increased morbidity and mortality. Further studies addressing nutritional strategies to improve the nutritional status and growth in children with acute shigellosis are planned. The efficacy of vegetable protein sources in improving weight gain and height velocity will be tested in children with shigellosis.

An inexpensive, energy-dense pre-cooked weaning food and food supplements as well as amylase energy-dense food is to also be evaluated in children recovering from severe protein-energy

malnutrition. Tests to study the impact of various dietary interventions in the treatment of persistent diarrhoea are planned including the efficacy of short chain fatty acids produced by dietary fiber, amino acids, hormonal growth factors, among others.

5. *To develop an appropriate strategy to promote and re-establish breast feeding particularly for children presenting with diarrhea at health facilities.*

The breastfeeding practices of mothers of infants presenting with diarrhea are far from optimal. Strategies for modifying mothers' perceptions and behavior regarding infant feeding will be developed. These will focus on the introduction and promotion of exclusive breastfeeding in the hospital and the continuation of the practice at home till babies are five months old, followed by complementary feeding. Lactation counsellors will be trained to implement these strategies. A study of the efficacy of promotion of exclusive breastfeeding using peer-counsellors and timely complementary feeding in the community will also be performed, to prevent diarrhoeal morbidity and mortality in this age group.

6. *To understand the metabolic cost of, and body composition changes in, acute infections and recovery.*

Certain infections (measles, diarrheal disease, among others) are known to result in depressed vitamin A status for poorly defined reasons and ultimately increased morbidity and mortality. Vitamin A loss in the urine and its mechanisms as a principal cause will be investigated in children with acute infectious illnesses (shigellosis, enteric fever, sepsis/pneumonia). Complementary studies in investigational animals assessing the role of cytokines in promoting urinary retinol excretion are also planned.

In other studies, micronutrient bioavailability (zinc, vitamin A, etc) and trace element losses during diarrhea will be evaluated. The effect of zinc, retinol, and iron deficiency and supplementation on growth in malnourished and recovering children will be determined by measures of metabolites of bone formation and specialized anthropometric techniques. The impact of vitamin A and zinc supplementation on persistent diarrhoea and small bowel structure function will also be investigated. The energy cost of shigellosis and its effect on growth will be another area of research.

Malnourished animal models are to be used to refine body composition techniques to assess fluid volumes in body compartments and fluid shifts during diarrheal disease, rehydration, malnutrition, etc. It is expected that this will enable the characterization of these events in children and adults at the CRSC and ultimately lead to the development of improved and safer therapeutic regimens. The energy cost of infections complicating malnutrition will be quantitated for the purpose of defining the optimal quantity and rate of delivery of nutritional therapy. New techniques are to be applied to the evaluation of energy intake and energy costs to enhance catch-up growth in children with malnutrition and infectious diseases. The use of stable isotopes to measure protein turnover during catch-up growth and infection will be initiated. Isotope techniques will also be used for a *H. Pylori* study and to study vitamin A status and total body water in different states of health and disease.

3. NUTRITION RESEARCH PROTOCOLS IN-PROGRESS

- Role of micronutrient mixtures containing zinc, selenium, iron, copper, folate in reducing the incidence and severity of acute diarrhoea and acute respiratory infections, and in improving nutrition in children: a randomized community intervention trial. Dr. ASG Faruque (August 1991-June 1995), Swiss Development Corporation.

- Development and implementation of nutrition education strategy for promotion of ß-carotene rich foods as a source of vitamin A in children. Dr. KMA Aziz (April 1992 - December 1995), Swiss Development Corporation.

- Promotion of exclusive breastfeeding in infants aged 1-10 weeks in a diarrhoeal disease hospital: how effective can it be? Dr. R. Haider (April 1993 - July 1995), World Health Organization.

- Retinol and ß-carotene content in breastmilk and the reflection of these levels in infant's serum. Dr. N. Shahid (March 1995-October, 1995), UNICEF.

- The effect of retinol and ß-carotene supplementation in lactating women on breastmilk quality and vitamin A status in infants. Ms. Amy Rice (June 1994-June 1995), USAID.

- Anemia during pregnancy in an urban community of Bangladesh: prevalence, validation of simple screening methods, and impact of iron-folic acid supplementation. Dr. T. Juncker/Dr. A. Vanneste. (July 1993-January 1996), Belgian Aid Development Cooperation.

- Calcium supplementation in prevention of pregnancy induced proteinuric hypertension, low birth weight and prematurity. Dr. A. Vanneste (April 1994-August 1996), Belgian Aid Development Cooperation.

- Vegetable protein sources for refeeding malnourished children during recovery from shigellosis. Dr. Iqbal Kabir (April 1994-April 1996), Swiss Development Cooperation.

- Volatile fatty acids in experimental cholera and shigellosis. Dr. G.H. Rabbani (May 1992-June 1995), USAID.

- Birth weight and infant mortality in the slums of Dhaka city: a prospective study. Dr. Shams-El-Arifeen (December 1993-December 1995), USAID

- Determinants of birth weight, gestational age, and perinatal mortality among the urban poor in Dhaka, Bangladesh. Ms. Gretchen Antelman (November 1993 - June 1995), USAID

- Vitamin A loss in urine during acute infection. Dr. AK Mitra (April 1995-March 1997), University of Alabama,Birmingham.

- Zinc balance and bioavailability from three different dietary regimes for children with acute and persistent diarrhoea syndrome in Bangladesh using stable isotope. Dr. S.K. Roy (April 1995 - March 1996)

- Evaluation of the Infuso-feed balloon in the management of children with diarrhoea and malnutrition. Dr.P.K. Bardhan (February 1995-June 1995), Australian Aid (AUSAID).

- Immunological effect of vitamin A and zinc in a placebo controlled four-cell trial. Dr. S.K. Roy (November 1994-December 1995), USAID.

- Assessment of vitamin A status by Deuterated Retinol Dilution Technique. Dr. A. Islam/R.N. Mazumder (February 1993-June 1995), Univ. of California/USAID.

- Effect of dietary fat and infection on vitamin A status and dietary intake methodology. Dr. G. Fuchs, (August 1995-August 1997), Opportunities for Micronutrient Research (OMNI).

- Assessment of glucose absorption/malabsorption in children with acute diarrhea. Dr. G. Fuchs/R. Mazumder (July 1995-December 1996), UNICEF.

- Intracellular and extracellular fluid compartments in children and adults with acute watery diarrhea: effect of standard vs reduced osmolarity ORS. Dr. Khaled/R. Mazumder/N.H. Alam/G. Fuchs, (July 1995-December 1996), ICDDR,B Project Development Funds.

- Dietary fiber and short chain fatty acids in the management of persistent diarrhea. Dr. GH Rabbani/G. Fuchs, (July 1995-December 1996), ICDDR,B Project Development Funds.

- Water quality and health impacts of Meghna-Dhanagoda flood control and drainage irrigation project. Drs. Bilquis A Hoque/A.H. Baqui/R.B. Sack (Sept 1994 - December 1995) Asian Development Bank.

- To determine the influence of nutritional status of cohort of new born children from birth to 24 months of age on incidence, etiology and clinical feature of diarrhoea and lower RTI. Kh. Zahid Hassan (July 1993-Dec 1996) USAID.

4. COLLABORATION

National
Bangladesh National Nutrition Council
College of Home Economics, Dhaka
Dhaka Shishu Hospital
Institute of Public Health and Nutrition
Institute of Nutrition and Food Science, Dhaka Univ.
Institute of Post-graduate Medicine and Research
Ministry of Health & Family Welfare
UNICEF, Bangladesh
University of Dhaka

International
All India Institute of Medical Sciences (AIIMS), India
Institute of Child Health, London (UK)
International Atomic Energy Agency (IAEA)
Johns Hopkins University (USA)
Karolinska Institute (Sweden)
Louisiana State University (USA)
London School of Hygiene and Tropical Medicine (UK)
National Institute for Science and Technology (USA)
National Institute of Cholera and Enteric Diseases, Calcutta (India)
University of Edinburgh, Department of Child Life and Health, Edinburgh (UK)
University of California, Davis, (USA)
University of North Carolina at Chapel Hill, (USA)
University of Alabama, Dept. of Intl. Health, Alabama-Birmingham (USA)
Wageningen University (Netherlands)

Agencies Supporting Nutrition Research at ICDDR,B
Australian Aid (AUSAID)
Belgian Aid Development Cooperation
OMNI (Opportunities for Micronutrient Research)
Swiss Development Cooperation
UNICEF
USAID
World Health Organization

5. PERSONNEL AND RESEARCH INTERESTS

Clinical Sciences Division

Personnel	Research Interests
ASG Faruque, MBBS,MPH	Vitamins and micronutrients, impact on growth, morbidity and mortality.
George Fuchs**,MD	Vitamin A, iron, nutrition and immunity, short chain fatty acids and diarrhoeal disease, PEM, nutrition rehabilitation, maternal nutrition, infant nutrition, LBW.
R. Haider,MSc	Infant feeding, breastfeeding, complementary feeding, caring practice and infant growth.
Aminul Islam,MBBS,MSc	Child and maternal health, Vitamin A, zinc, behavioural research, cost benefit analysis.
Asma Islam,MBBS,MPH	Maternal morbidity and nutrition, nutritional aspects of persistent diarrhoea.
A.K.M. Iqbal Kabir,MD,PhD	Dietary management of diarrhoea, infant feeding, Vit. A, antioxidants, micronutrients, stable isotopes,growth, body composition, energy expenditure.
M.A. Khaled,PhD	Antioxidative and Metabolic Nutrition.
A.K. Mitra,MBBS	Vitamin A and infection, zinc, iron.
G.H. Rabbani,MD,FACG	Short chain fatty acids and diarrhoeal disease.
S.K. Roy*,MBBS,MSc,PhD	Micronutrient absorption, balance, zinc, Vitamin A, Mg, persistent diarrhoea; maternal nutrition, low birth weight, nutritional rehabilitation.
Telahun Teka,MD	Short chain fatty acids/dietary fibre and persistent diarrhoea.

**Head, Nutrition Working Group (NWG)

*NWG Division Coordinator

Laboratory Sciences Division

Personnel	Research Interests
Tasnim Azim,MBBS,PhD	Nutrition and immunity.
Rashidul Haque,MBBS,PhD	Parasitic disease, malnutrition, Vitamin A.
Mujibur Rahman,MSc	Trace elements and ß-carotene.
M.A. Wahed*,BSc	Micronutrient analysis, weaning food, trace element, nutritional biochemistry.

Community Health Division

Personnel	Research Interests
D. S. Alam, MBBS,MedSc	Nutritional epidemiology, maternal, infant and child nutrition.
K.M.A. Aziz,PhD	Nutrition anthropology.
J. Chakraborty	Nutrition interventions.
Andres de Francisco*,MD, PhD	Neonatal infant, child and maternal nutrition, Vitamin A.
Kh. Z. Hassan,MBBS,MPH	Community nutrition.
Bilquis A. Hoque,PhD	Relation of malnutrition to environmental issues
Shamim A. Khan,MBBS,MSc	Antibiotic use in malnourished children.
Amy Rice,BS	Vit. A and lactation, assessment of nutritional status.
Nigar S. Shahid,MBBS,MD	Nutritional epidemiology, nutrition and immunity.
A-M Vanneste,MD	Economic, cultural and nutritional status in women.
K. Zaman,MBBS,MPH	Nutritional status, cell-mediated immune status, ARI.
Terese Juncker	Anemia.

*NWG Division Coordinator

Population and Family Planning Division

Personnel	Research Interests
Riti Ibrahim Ahsan,MS	Relation between mothers' earning and participation in family decision making and nutritional status of their children
Selina Amin,MBBS,MS	Operations research on nutrition services offered by the Govt. at present.
Gretchen Antelman,Sc.D	Effects of birthweight on perinatal mortality among the urban poor of Bangladesh.
S. Ahmed,MBBS,FCPS,MSc,PhD	Infant growth and weaning, adolescent nutrition, menarche and growth.
A-H Baqui,MBBS,MPH,DrPH	Maternal nutrition, malnutrition and energy
R. Bairagi,D.Sc	Comparison of the use of international and local standards for anthropometric indices of nutritional status.
Shams El-Arifeen,MBBS, MPH	Birth weight and infant mortality in the slums of Dhaka city.
Saskia Osendarp,Sc.D	Maternal nutrition, zinc, LBW.
Aye Aye Thwin,MBBS,MPH,ScD	Intra-household resource allocation, health and nutrition behavior
Henry Perry*,MD,PhD	Relation of malnutrition to infant/child mortality
Abdur Razzaque, PhD	Effects of family size on childhood nutritional status

* NWG Division Coordinator

6. ASSAYS AND MAJOR EQUIPMENT FOR NUTRITION RESEARCH AT ICDDR,B

Tests	Assays And Major Equipment
A. Micronutrients and Trace Elements	
Vitamins: retinol A_1 + A_2, retinyl acetate, α-tocopherol, ß-carotene.	HPLC (with Lab-cal + Millennium software), spectrophotometer.
Trace elements (in biological, environmental, and dietary samples): zinc, copper, iron, selenium, mercury, calcium, magnesium, others.	Atomic absorption spectrophotometer (flame and flameless using graphite furnace), muffle furnace, digestion set.
B. Macronutrients	
Proteins: nitrogen, TTR, CRP, RBP, Transferrin, α1-AT, alanine, glutamine, ß-2-microglobulin.	Micro-Kjeldahl set, protein electrophoresis, reflux set, autotitration set, thin layer chromatography, radial immunodiffusion.
Carbohydrates: glucose, fructose, xylose, lactose, lactulose, mannitol.	
Fat: total fat	
Enzymes: amylase, lipase, lipid peroxidase, chymotrypsin, trypsin.	
C. Others	
Energy	
Viscosity, osmolality	Bomb calorimetry, viscometer, spectrophotometer.
Markers: polyethylene glycol (PEG), BSP, others.	
Fluid space by dilution: bromide, Evansblue, others.	
D. Physiology Laboratory	
Bioelectrical impedance analysis.	Various types of impedance analyzers.

ICDDR,B participates in international and internal comprehensive quality control programmes.

7. ICDDR,B BIBLIOGRAPHY IN NUTRITION FOR MOST RECENT TWO YEARS (1993-1994)

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TRAINING ACTIVITIES AT THE CENTRE

As part of its mandate, the Centre is charged with providing training Bangladeshi and other nationals in its areas of competence in collaboration with national and international institutions. This training activity is a key strategy to disseminate the knowledge and information within the Centre to health practitioners and researchers throughout the world.

The Training Coordination Bureau (TCB) offers training programmes aimed at the development of global human resources in child survival (particularly diarrhoeal diseases) and population programme management.

The Centre's new Sasakawa International Training Centre with its 192 seat auditorium, seminar rooms and laboratory facilities, together with the Matlab and other field areas and the two hospitals, offer an invaluable environment for training programmes that combine the theoretical with the practical.

A. OBJECTIVES

1. To develop global human resources in child survival (particularly diarrhoeal diseases) and population programme research, planning and implementation. Many of the Centre's training programmes will be aimed at higher-level trainees in order to influence future policy makers from all over the world.

2. To redirect the Centre's efforts towards the training of trainers to maintain and improve the quality of national and international diarrhoeal disease control programmes.

3. To organize international training workshops for policy-makers and programme managers on management of MCH-FP programmes drawing on the rich experience from Matlab and Extension projects.

4. To enhance the research capability of developing countries in support of the Essential National Health Research (ENHR) movement.

5. To establish a Training Resource Centre containing education materials and videos and transcriptions.

B. ONGOING ACTIVITIES

1. Two international training courses on Clinical Management of Diarrhoea (with emphasis on cholera) for clinicians and CDD programme managers from the developing world.

2. Sixteen fellowship (4 to Bangladesh and 2 each to other 6 SAARC countries) to SAARC countries for intensive training in clinical management of diarrhoeal diseases/laboratory skills for identification of diarrhoeal pathogens.

3. Sixteen fellowships to Bangladeshi medical graduates for one-year intensive training in clinical management of diarrhoeal diseases, and an insight on research methods.

4. Two international courses on Laboratory Diagnosis of Common Diarrhoeal Disease Agents for microbiology technologists from the developing world.

5. Two international workshops on Research methodology.

6. Four courses on Epidemiological Methods in Public Health.

7. Six health research training fellowships.

8. `Hands-on' training to Bangladeshi nationals on research and management of diarrhoeal diseases and malnutrition, through on-going research projects.

9. Providing facilities and supervision to 20-30 post-graduate students (from universities in Bangladesh) for completion of dissertation work to fulfil requirement for M.Sc., M. Phil. & Ph.D degrees.

10. Twenty fellowships to Bangladeshi nurses for practical training on nursing care of diarrhoeal patients at the Clinical Research & Service Centre of CSD.

11. Providing facilities and supervision for training of students from different universities of developed world for their electives and dissertation work.

12. Strengthening Centre's relationships with research and academic institutions of Bangladesh and other countries.

New Initiatives:

13. Four-six international workshops on Family Planning Programme Effectiveness and Quality of Care through Operations Research for programme managers and policy makers from the developing countries of Asia and Africa.

14. Two international training workshops on Emergency Response to Cholera and Shigella Epidemics for the international NGOs.

15. Two international training courses for Nurse Trainers in the Prevention and Treatment of Diarrhoeal Diseases.

16. Two national workshops on `Writing Effective Grant Proposals' designed to provide training in writing of effective research proposals for external funding.

17. Workshop on `Presentation Skills' to improve skills of scientists of the Centre for presentation of scientific results, research proposals etc.

18. Four national courses on Disaster Preparedness and Environmental Health Management in Rural Areas.

19. Initiate plan to set up Training Resource Centre at the TCB.

C. EXPECTED OUTCOMES

1. Thirty clinicians and health professionals from developing countries will be trained on Clinical Management of Diarrhoeal Diseases.

2. Thirty-two fellows (16 from SAARC countries, and 16 fresh Bangladeshi medical graduates) will be trained on current practices in treating diarrhoeal diseases with an insight into research methods.

3. Twenty-eight microbiologists will be provided training on laboratory diagnosis.

4. Thirty health professionals from developing countries of the world will be provided training in fundamentals of formulation and implementation of clinical research proposals along with critical analyses of data sets.

5. About 80 health professionals from national institutions will receive training in planning, designing, and undertaking epidemiological studies.

6. Six persons from developing countries will be provided training on research methodology.

7. Forty Programme Managers from developing countries of Asia and Africa will gain experience from Matlab Family Planning and Extension projects on improving Family Planning Programme Effectiveness and Quality of Care through Operations Research.

8. About 40 physicians and graduates in other disciplines will be provided opportunities for `hands-on' training in research methodology through the Centre's on-going research projects.

9. Twenty-thirty students from Dhaka and other universities of Bangladesh will receive training in laboratory techniques and facilities for conducting dissertation research to fulfill the requirement of M.Sc., M. Phil., and Ph.D. degrees.

10. Twenty Bangladeshi nurses will receive intensive `hands-on' training on management of diarrhoeal patients, and the diarrhoeal treatment units.

11. About 40 students from different universities from abroad will receive training to fulfil the requirements for electives and post-graduate dissertations.

12. Twenty health and biomedical professionals from Bangladesh will receive training on `Writing Effective Grant Proposals'.

HEALTH RESEARCH TRAINING ACTIVITIES 1993-1995

Sl #	Activities	Participants (n = 341)
1	Health Research Training Fellowship	5
2	International course on Research Methodology	43
3	National course on Epidemiological Methods in Public Health	145
4	Research Traineeship	66
5	Project-based fellowships	54
6	Training of post-graduate students for supervision of dissertation work	28

TRAINING OF TRAINERS

1993 - 1995

Activities	Participants n=100
■ International Course on Clinical Management of Diarrhoeal Diseases	67
■ International Course on Laboratory Diagnosis of Common Diarrhoeal Disease Agents	33

CENTRE'S RESPONSE TO GLOBAL REQUESTS

- EMERGENCY RESPONSE TO CHOLERA AND SHIGELLA EPIDEMICS (OFDA)

- FP PROGRAMME EFFECTIVENESS AND QUALITY OF CARE THROUGH OPERATIONS RESEARCH (COMMONWEALTH SECRETARIAT)

- TRAINING OF NURSE-TRAINERS (CHF & AMEX FOUNDATION)

CLINICAL FELLOWSHIP PROGRAMME

- Clinical Fellows
- GOB Fellows
- Nursing Fellows
- SAARC Fellows

MAJOR COMPONENTS OF TRAINING PROGRAMME

- HEALTH RESEARCH TRAINING
- TRAINING OF TRAINERS
- TRAINING PROGRAMMES ON FAMILY PLANNING

TRAINING OF TRAINERS

- Clinical Management of Diarrhoeal Diseases

- Laboratory Diagnosis of Common Diarrhoeal Disease Agents.

CONSTRAINTS

- COST INVOLVED FOR ADDITIONAL TRAINEES/FELLOWS AND SPECIALIST CONSULTANTS

- INADEQUATE TRAINING FACILITIES (MATLAB)

- VOLUME OF WORK (9 INT'L AND 7 NATN. COURSES) vs MANPOWER AT TCB

FILE: GLB/ICDDR/REPORT 22/11/95

EXTERNAL REVIEW OF THE CLINICAL SCIENCES DIVISION

INTERNATIONAL CENTRE FOR

DIARRHOEAL DISEASE RESEARCH

DHAKA, BANGLADESH

November 1-3, 1995

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EXECUTIVE SUMMARY

1. A formal review of the Clinical Sciences Division was undertaken on November 1-3, 1995.

2. The CSD's objective is to carry out research directed at diarrhoeal diseases, with the aims of improving case management and prevention, and investigating disease mechanisms. Knowledge obtained is for the benefit of the international community.

3. An essential basis for the research is an excellent clinical service. This service has become so well known in the community, that resources required to respond to the demand are eating into those available for research. Methods to support this service or to reduce the clinical demand must be found.

4. Nursing is especially under-resourced. Urgent attention is required. The Centre has the opportunity to set the standards of nursing and the appreciation of the nursing profession in Bangladesh.

5. Medical staff have greatly benefited from the clinical/research rotation system providing them with protected research time. This is vitally important to them because publication is perceived as the only criterion for promotion. Consideration needs to be given for high quality clinical care (appropriately audited) to also be taken into account within the career structure. Satisfied and skilled staff are the key to a successful enterprise.

6. Research of the CSD is currently a collection of individual projects. International success requires development of programmes around certain themes with identifiable team leaders. Such programme oriented development is recommended.

7. Physical facilities in the ward and outpatient areas require upgrading. Crowding and lack of handwashing facilities must be addressed. They are inevitably leading to cross infection. Examination of patients in private is not possible. Piped oxygen and suction should be available. The working environment requires improvement with simple pictures, health education charts and decorations. The courtyard should be roofed so that it can be used during epidemics.

8. Specialised (but standard) clinical investigation facilities need to be upgraded to enable progression of research beyond descriptive studies. In particular, new endoscopy equipment is required to obtain intestinal biopsies large enough for research.

9. Collaboration between Divisions is to be encouraged and the establishment of the Inter-divisional Forum is commended. Links with the Laboratory Sciences Division are particularly strong. However the growth in size of some divisions gives them their own critical mass, which may inhibit cross-fertilisation.

10. Funding agencies must be made aware of the critical need for core funds to support the clinical services which are an essential basis for research.

INTRODUCTION

A formal review of the Clinical Sciences Division (CSD) of the International Centre for Diarrhoeal Disease Research, Bangladesh was conducted on November 1-3, 1995. Prior to the visit the reviewers received for information the 1994 Annual Report of the Centre, a report of the last review conducted in 1992 and the Division Director's reaction to this report, the "Strategic Plan to the Year 2000" of ICDDR,B, the Biennial Work Plan 1995-1996 of ICDDR.B, description of the activities of the CSD over the past three years prepared by the Division Director, and updated curriculum vitae of the research staff of the Division, as well as other related material. At the beginning of the review, the Division Director, Dr George Fuchs welcomed the reviewers and introduced them to the Director of the Institute, Dr Demissie Habte, who provided a brief overview of the activities of the Centre, and responded to specific questions. In the afternoon, the reviewers visited a poster presentation set up by the research staff of the Division, and discussed the research displayed. After the poster session, the review team was taken through all the hospital facilities of the Clinical Sciences Division, and also the laboratories of the Laboratory Sciences Division.

Responses of the CSD to the 1992 report were expected to take up a considerable portion of the committee's time. However other issues surfaced early in the process, with the result that more attention was paid to the clinical care services. These provide the essential base for all of the research undertaken by the CSD, and also for much of the research in the Laboratory Sciences Division. The career paths for medical staff, and the need to arrange research projects into a limited number of defined programmes, were two other significant items which needed to be addressed.

CLINICAL SCIENCES DIVISION

According to the Strategic Plan of the Centre and the Biennial Work Plan 1995-96, the primary objective of the Clinical Sciences Division (CSD) is to carry out research directed at diarrhoeal diseases, with the primary aim of improving case management, and at nutritional aspects related to diarrhoea. As a basis for all its research, the CSD runs a diarrhoea hospital in Dhaka, and carries out training activities of its own staff and other health professionals, as well as health education of the patients and their attendants. The hospital contains an out-patient department, and an in-patient department, including a clinical research ward, a metabolic research ward, a special care unit, a nutritional rehabilitation unit and a nutrition follow-up clinic. As a new feature, a physiology laboratory was established in 1994. The CSD also maintains a small community research programme to carry out population-based research in a semi-urban area of Dhaka, and a child health programme to offer selected health packages like nutritional rehabilitation and health education to the patients discharged from the hospital. Much of the research is done in close collaboration with the Laboratory Sciences Division.

The hospital continues to be in great demand by the population, as shown by the continuously increasing patient load (annual average >100,000 in 1992-94). Special arrangements with temporary shelters have been made and additional nurses employed on a temporary basis during epidemics of diarrhoea and cholera. Approximately 6-7% of patients are admitted to the In-patient Department. The majority of the research protocols in the Division use the wealth of clinical material seen at the Centre. In addition to patients entering specific research protocols, 4% of all patients (i.e. 1 in 25 patients seen) are entered into an ongoing surveillance data base.

A system of rotation of the medical officers and scientific staff has been started in 1995 to provide for protected time for research for each staff member. New written principles for

promotion for the Centre staff have been issued in 1995, and emphasize the value of research. The Division has continued to be active, as judged by its output of research, reported in international peer-reviewed journals. Its role as a world leader in clinical research on various aspects of diarrhoea, especially cholera and shigellosis - two disease entities of great importance in Bangladesh - and oral rehydration, is shown by the review articles and book chapters that the Division members have been asked to write.

Educational opportunities are provided to clinical fellows (13 per year) and to nurses (10 to 11 per year) in one-year training programmes. In addition, national and international case management training workshops are held by the Division throughout the year.

MEETING WITH MEMBERS OF CSD AND DIVISION DIRECTORS

The review committee met the Director of the CSD for a thorough discussion covering all activities of the Division. Following this, six members of the research staff of the CSD presented their recent research in a seminar session with intensive discussion of the research issues. In the afternoon, the review committee interviewed a number of senior and junior research staff and the nurse consultant, Mrs Nafiza Anwar. The committee also had the benefit of obtaining a glimpse of the position of the CSD in relation to the other Divisions of ICDDR,B through discussions with the heads of the three other Divisions. All these discussions were very open and informative, and the committee felt that this gave it a good view of the Division seen from different angles.

As a whole, working in CSD is seen as a privilege and a great opportunity to learn and carry out clinical research in an excellent international setting. Division members felt that overall the hospital provided good clinical care. The systems in place for triage of patients and responsibility within individual clinical teams were seen as appropriate. Some problem

areas were identified and further discussed in closed session of the committee. On several points the Director of the Division provided further clarification.

ISSUES FOR THE FUTURE

The Strategic Plan of the Centre has, over the years, expanded to encompass a range of topics, diseases and health issues. However, the research of the Clinical Sciences Division remains confined to studies of diarrhoeal diseases and related aspects of nutrition.

In this facet of its work, the Centre remains a vital and highly productive force in global terms. Continuation of high quality clinical research in these subjects is essential, and we strongly recommend that work in diarrhoeal diseases retains a high priority for the forseeable future. Issues that will be addressed in this section of our report relate to clinical service activities, the range, scope, organization and funding of research activities, aspects of staff development, and relationships with other divisions.

CLINICAL SERVICE ACTIVITIES AND CLINICAL STAFF

1. Increase in patient numbers

   The increase in patient load, reflecting the great success of the Centre, without commensurate increase in resources, has resulted in an extremely serious situation and decisions must be made as to how this is to be addressed.

   In theory, there are three options:

   (i) more staff and space

(ii) less patients (by refusing access or diverting cases elsewhere)

(iii) reduce the standard of care delivered to patients with diarrhoea.

None of us, and none of the people we interviewed, has been willing to contemplate option (iii). However, it must be recognized that quality of care is already seriously compromised by the high patient load. Indeed the pressure on nursing staff is such that it is currently often impossible for nurses to take holiday leave.

In relation to (ii), we have been informed that several options for funding of satellite 24-hour community-based treatment centres are being explored. This would be an ideal solution and should have the desired effect of reducing numbers of patients attending the Centre.

Medium-term benefits could be obtained from collaboration with existing facilities for diarrhoea treatment (e.g. the teaching hospitals in Dhaka).

2. Nursing Staff

a) We commend the recent initiative of employment of a nurse consultant, as an excellent first step in addressing the need for improvements in nursing services. We note that nurses are currently carrying out duties which would be performed by doctors in many other countries, clearly illustrating how cost-effective the suitable deployment of nurses in the Centre can be. There is now an opportunity to use the Centre's nurses to set standards for the role of nurses in the country.

b) There is, however, an absolute need for an increase in the tenured nurse establishment, as well as for improvements in the working conditions of nurses and creation of professional liaisons between groups of nurses and clinical units.

c) Consideration should be given to separate recruitment and training of nurses for the research wards and for general service wards.

d) The techniques which have been used in the Centre to investigate delivery of health care, could be applied to address a number of aspects of nursing staffing and work, e.g. research is needed on the perceived role of the nurse and how to raise the profile of nursing as a profession in countries such as this.

Comment

After a distinct cadre of research ward nurses has been defined and trained, there will then be the opportunity for those with aptitude for research to be developed further. For example, such nurses could have additional training in research design methods, statistics, use of library, etc., and perhaps also in English. They would then be in a position to be co-investigators in appropriate studies, and indeed to initiate and execute some audit and research projects themselves.

Senior nurses from all areas, and the majority of nurses from the research wards, should join in research seminars and similar discussions.

Nurses in the Centre should have a clear professional structure with one or more of them clearly identified as the most senior, with commensurate responsibilities re the training and organization of the nurse teams, and to act as the spokesman for the

nurses and related workers within the Centre (this is a role which is complementary to that of the nurse consultant, and which should be permanently built into the administrative structure).

3. Physical Environment and Ward Design

Several aspects of the physical condition of the out-patient and in-patient areas contribute to low staff morale and clinical standards - for example, crowded beds, general state of disrepair, lack of hand-washing facilities. Some significant improvements could be made at fairly low cost and should be implemented as soon as possible. We suggest that a full programme for improvements, redecoration and repair, be set in place (involving nurses in the plans), even if the time scale will be over 2-3 years. Specifically:

a) As a highest priority, the so-called special care room should be enlarged, and piped oxygen and suction made available

b) Facilities for proper clinical examination of adults are inadequate. Men and women should be separated, or a closed-off cubicle should be created to allow doctors to examine patients thoroughly, incuding, if appropriate, rectal examination.

c) Simple, colorful wall pictures and charts should be used to deliver health messages and simple education interspersed with cheerful pictures and decorations.

d) The courtyard should be roofed.

4. Medical Staff - Clinical Fellows

The Division is to be complimented on the recently introduced unit system, and the monthly duty rotations, which have been well received by the staff and are already demonstrably successful policies. These arrangements have freed up time for research by medical officers and scientists. However, the consequence is that medical care is being delivered by fewer and less experienced doctors. The gap in medical provision which has been created, must be filled. We recommend:

a) An increase in the number of posts of clinical fellow with a proportion of them being for 2 years.

b) Proper definition of the in-training and clinical programme: aims, objectives, setting of standards of clinical skills, treatment protocols, regular reviews of performance, more clinical support and consultation by tenured medical staff. Note that time must be allocated for such educational activities. Currently the pressure of work prevents activities such as teaching rounds.

c) Within each clinical unit, the team leaders should designate one individual as responsible for clinical training and education of fellows in the team. This activity should receive credit in the promotions structure.

5. Medical Staff - Post-Graduate Training

In view of the high proportion of infants and children treated in the Centre, the lack of trained paediatricians or staff is regrettable. We note that one medical officer is currently seconded for paediatric training in Dhaka and recommend that this policy of

arranging for advanced clinical training of suitable doctors be continued and expanded when appropriate.

6. Medical Audit

Resources and facilities for audit need to be increased further, and the range of issues to be examined, widened. However the committee was impressed by the efficacy of general interventions which resulted from the first main audit project which has been completed (reasons for delay before a doctor assesses out-patients).

RESEARCH

There is strong support throughout the Division for the Unit structure and rotation of responsibilities which gives each member protected time for research. Enthusiasm for research is exemplified by the profusion of proposed projects. Although it is recognized that the varied menu is partly necessary to have a range of topics available to suit potential donor support, the committee felt that the image and impact of the Division's research would improve from more focusing of resources on a few areas where it has special advantage.

In the present arrangement, research ideas are generated, protocols are developed, funds obtained and results written up, by a defined principal investigator (PI), along with several other individual co-investigators. This model works reasonably well for case management and intervention trials, when the primary outcome measure is essentially clinical morbidity or a simple nutritional measure. The PI concept is also an efficient way of delivering results of commissioned studies, such as the current low sodium ORS studies.

However, the "single project, single PI model" is completely inappropriate for the inter-disciplinary research programmes on pathogenesis or disease mechanisms which should now be being developed in the Centre. Weeks and months are spent by staff and by International Fellows developing projects and awaiting scientific approval, and then allocation of funds. Many of these projects are never carried out, which is dangerously wasteful of the time and talents of the vital resource of the Centre, its scientific staff. It has become evident to us that there is considerable competition between members of staff for limited core research funds, and even, we suspect, for the right to develop an obvious line of research. The system encourages small-scale projects rather than the ambitious and high impact research agenda which the Centre is in a position to deliver.

A key issue for the future must be the recognition by directors, scientists, physicians and fellows that today, internationally competitive research is achieved by an interdisciplinary, carefully guided and managed team, not by individual effort. Promotions and other rewards must reflect this. A structure should be set in place to develop overall research priorities for the work on pathogenesis and disease mechanisms, with defined and agreed short and long term scientific goals, and to monitor the progress being made by the research teams. Decisions and prioritisation as to the general lines of this research must be made within the Centre, i.e. by the directors and the Board. Thereafter, the research teams should define their research strategies, and agree on a series of scientific questions (some of which will already be being addressed), which are relevant to diarrhoea and which the unique nature of the Centre will facilitate answering.

The "critical mass" of investigators needed for specific research programmes may be large or small, with members of both the Clinical and Laboratory divisions of the Centre and collaborators from other institutions. In the long run, each team must be led by an individual who has not only the necessary knowledge, research skills and talents, but who

also has transparent and generous leadership qualities. He (or she) would need to be perceived by colleagues as working for, and developing the team's achievements, rather than a personal agenda and promotion. Thus, it will be essential that promotions and rewards reflect the contributions by all members of the team.

Programme-orientated teams of present members of staff will need considerable help and support from external advisors if they are to develop testable hypotheses, short and long term aims and plans of investigation, and to prepare and submit competitive grant proposals. We do not anticipate that external advisors would be paid consultants - rather, they should be invited (or more precisely, requested) to help, because of their spheres of research and the likelihood that they will find the role interesting and challenging.

Research Programme

1. Research groups

The review committee considers that the team model for the clinical units might be useful also in the organization of the research work. Individual protocols could be coordinated and arranged into three or four major themes, each with a leader who is responsible to the Director for overall management of the programme. Examples of such programmes are surveillance, oral rehydration, nutrition, etc. The programme of oral rehydration for example, would include researchers involved in both case management and in the pathophysiology of dehydration. Individual project protocols would be primarily developed, reviewed and prioritized within the programme, with the team leader giving logistic support (in fact research training) and ensuring that questions of methods, controls, statistics and required collaborations are adequately considered at an early stage. The team work-structure also requires a new evaluation of credit given from authorship in research reports: the investigator doing

most of the work should naturally be the first author, and the team leader, who has taken much responsibility, in the planning (and funding) of the research, in the final evaluation of the results and in editing the report, the last author, and these two positions given the highest credit.

Such a structure would imply that the programme leader had a discretionary budget available for seed funding of projects within the programme. This would reduce inefficiencies identified by the committee, including months of waiting by international fellows for funding after protocol approval, and likewise for local staff. Such teams should soon be in a strong position to attract funds within their programme, to be less dependent on individual project protocol funding.

It may be necessary to include a "miscellaneous" programme to attract opportunistic funds. In that event, the team leader could have discretion in some cases to direct funds and to second staff to a more appropriate division.

2. Statistical Support

It is appreciated that certain individuals have expertise in biostatistics. However, an institution of this size and reputation should have a formal statistical advice mechanism, readily available to researchers when they begin to design projects. Such advisors should usually be seen as associate investigators.

3. International Colleagues

Each programme leader should identify 2-3 international experts willing to collaborate and give advice within the field of the programme. Dr Khaled's appointment is an excellent example of this process, which will inevitably lead to long term links with Birmingham, Alabama, although it includes a much greater time commitment than would usually be the case.

4. Technology of Investigation

Specialized clinical investigation must be made available if further advances are to be made in understanding the disorders dealt with at the Centre. Research into gastrointestinal and nutritional function requires endoscopy, permeability tests, breath hydrogen tests, etc. to advance beyond descriptive studies.

A particular need is for modern endoscopic equipment to enable collection of biopsies of adequate size for research studies. The current equipment is inadequate and new equipment will be required. This is an example of clinical facilities required to underpin research.

5. Publication Policy

The committee compliments the staff on their achievements in publishing their research in international peer-reviewed journals and encourages them to continue to do so. The emphasis in the future should be on high impact journals. The acceptance of a manuscript in such journals, as a rule requires not only high quality research with interesting results, but also a well written presentation. High profile publications may be facilitated by links established with International colleagues as mentioned above.

6. Funding

ICDDR,B has donor search mechanisms in place. It does not appear to have similar information regarding international bodies granting support to specific research projects on a peer-reviewed basis. It is suggested that a register of potential grant sources be established. This is also an area where international colleagues could be helpful.

STAFF AND CAREER STRUCTURE

The criteria for promotion were raised spontaneously by many of the CSD staff. There was a strong feeling that clinical activities were undervalued in relation to research publications. It was their view, shared by this committee, that high quality clinical care is an essential base for virtually all the clinical research undertaken on campus, and deserves credit.

Promotion criteria accepted in August 1995 are accepted as reasonable for new staff entering the system, knowing the ground rules. However, a few senior staff, who entered under different rules, may be disadvantaged. Special consideration for some of these would reduce the likelihood of frustration and unhappiness for them.

Clincial staff involved in training of clinical felllows could reasonably receive credit towards promotion for that activity. Inclusion of clinical post-graduate qualifications such as MRCP, FCPS and Board Certificate, etc., as equivalent to research degrees (e.g. PhD) for promotion purposes is commendable, and should encourage recruitment of qualified paediatricians and physicians in the future.

PhD programmes overseas may often suit the host institution rather than the Centre's needs, and careful consideration should be given to the choice of the host. Local programmes should be considered as an alternative, with a post-doctoral study/training period giving additional competence and credit. Publicity from Administration about the value of FCPS and other local degrees, would be well received.

CROSS-DIVISIONAL STRUCTURE

Establishment of the Inter-divisional Forum has been a significant advance and is seen in a very positive light by those who attend. The Centre benefits greatly from the cross-feritization between some of the divisions.

The links between CSD and the Laboratory Sciences Division are especially strong - indeed each could not function without the other. Some examples of separate development of laboratory activities within the CSD were hinted at. It would be prudent to avoid duplication. It should be acknowledged that efficiencies in laboratory work in the future could result from CSD staff physically working in the Laboratory Sciences Division. In this event, the issue of authorship will need to be addressed to make the arrangement acceptable to staff.

The Director of the Community Health Division (CHD) perceived that collaboration had in the long term been decreasing, partly from the separate interests of the parties and partly from the increasing scale of operations. This trend deserves review to identify the pros and cons of this process. For example, an early involvement of the special expertise of the CHD in epidemiology and socio-economic research methods might have benefitted several of the current research projects of CSD.

MEETING THE INCREASING COSTS OF CLINICAL SERVICES

We understand that some donors and research funding bodies are unwilling to include full overheads, including all hospital costs, as a component of awards being made to the Centre. This may be based on a misunderstanding of the nature of these costs. The committee finds it necessary to emphasize that the hospital costs are an equally necessary

prerequisite for the existence and research capability of the Centre, as are e.g. the library costs or computer services. The research patients will not be available, and clinical research is not possible, unless the Centre offers an essential service to the population, and likewise, the Laboratory Sciences Division could not exist in the hospital if the hospital was not there to provide material and motivation for its research.

It is also important to note that ICDDR,B is both an international and a local Centre. It would be completely impossible for the internationally recognized research activities in diarrhoeal diseases to continue at the present high level, were it not for the existence of the patients. They come here from the local community to receive care and, when requested, they voluntarily participate in research protocols which are of benefit to the global society as a whole. If grants and contributions do not pay for the clinical services as well as for a specified project, in effect the project is being subsidized by this community and other donors, including the Government of Bangladesh.

We recommend that an information pamphlet be prepared for potential donors, which clearly identifies the need for high quality services as the basis for clinical research. This should include facts about numbers of patients needed to support the studies, emphasising that 100 patients must be seen and treated in order to find one patient suitable for research studies, and that indeed without those 100 patients, no volunteers could be recruited. The need for core funds (no strings attached), or the absolute necessity for research grants to include a substantial contribution to infrastructure costs, should be emhasised (30% is accepted as appropriate by many research institutions and granting bodies).

FINAL NOTE

The Review Committee members wish to thank ICDDR.B for the opportunity to take part in this very interesting exercise which we all found to be a stimulating experience. The overall impression is a Division in good heart, with committed and enthusiastic staff. Several significant issues emerged, including resources required for the large service load, credit in the promotions scheme for high quality clinical activity, logical grouping of research interests, and resources for nursing care.

We confidently expect that the suggestions for change will be seriously considered and acted upon where appropriate and possible.

REVIEWERS

Prof Helena P. Makela

Prof Md Nurul Islam

Prof Anne Ferguson

Dr Graeme Barnes

Appendix

On going research: suggested grouping into programmes.

1. SURVEILLANCE

    1.1 ICDDR,B Surveillance programme (Fuchs/Faruque)

    Comment: This programme should be expanded with strong input from the Laboratory Sciences Division.

2. ORAL REHYDRATION

    2.1 Impact of ready-to-use packaged rice ORS on morbidity and nutrition of infants and young children, and response of mothers when provided as an antidiarrhoeal medicine in rural Bangladesh (Faruque).

    2.2 Fibre (guar gum) in the treatment of acute non-cholera diarrhoea in children (Alam/Wander).

    2.3 Multicentre clinical trial to evaluate efficacy/safety of reduced osmolarity ORS in children with acute diarrhoea (Majumder/Fuchs).

    2.4 Multicentre clinical trial to evaluate safety/efficacy of reduced osmolarity ORS in adut patients with cholera (Alam/Fuchs).

    2.5 Hyptonic ORS in children with persistent diarrhoea (Sarker).

3. NUTRITION

    3.1 Role of micronutrient mixture in reducing the incidence and severity of acute diarrhoea and acute respiratory infections (Faruque).

    3.2 A study on the immunological effect of vitamin A and zinc in a placebo controlled 4-cell trial (Roy).

    3.3 Infuso-feed balloon in the management of children with diarrhoea and mulnutrition (Bardhan).

    3.4 Vitamin A loss in urine during acute infection (Mitra).

    3.5 Vegetable protein sources for refeeding malnourished children with shigellosis (Kabir).

3.6 Impact of peer counsellors on feeding practices of mothers in the urban community (Haider).

3.7 Effect of dietary fat and infection on vitamin A status, and dietary intake methodology (Fuchs).

3.8 Effect of recurrent infection on vitamin A stores in children with adequate vitamin A levels (Fuchs/Makris).

3.9 Effect of zinc supplementation during pregnancy on infant birthweight, growth, morbidity and cell mediated immune function (Saškia/Fuchs).

4. SPECIFIC INFECTIONS

4.1 Double-blind, randomized study of the safety and efficacy of ciprofloxacin in the treatment of childhood shigellosis (Salam/Bayer).

4.2 The role of Entamoeba histolytica in the dupenteric syndrome in children and adults (Mahalanabis).

4.3 Oral 5-ASA treatment of shigellosis (Islam).

4.4 H. pylori as a risk factor for acute diarrhoea and persistent diarrhoea (Bardhan).

4.5 Evaluation of hyperimmune bovine colostrum in the treatment of E.coli and rotavirus diarrhoea and H. pylori infection in children (Sarker).

4.6 Single dose ciprofloxin vs doxycycline in the treatment of cholera (Khan/Salam).

4.7 Surveillance of HIV-seropositivity in Bangladeshi children with persistent diarrhoea and malnutrition (Fuchs/Vermund).

4.8 Nosocomial transmission of measles and diagnostic sallvary IgM assay (Akramuzzaman).

4.9 Immune disruption caused by measles (Akramuzzaman).

5. PATHOPHYSIOLOGY

5.1 All projects listed under "Physiology Laboratory of the Clinical Sciences Division".

5.2 A new non-invasive test to assess gastric acid output in children (Sarker).

5.3 Oxidative stress in bacterial translocation (Khaled).

5.4 Short chain fatty acids and the treatment of acute diarrhoèa (Rabbani/Fuchs).

5.5 Short chain fatty acids and the treatment of persistent diarrhoea (Rabbani/Fuchs).

REPORT OF THE MEETING OF THE FINANCE COMMITTEE

HELD ON NOVEMBER 5 1995 AT ICDDR,B.

PRESENT

Finance Committee Members

Dr. M. Law - Chairman of the Board
Dr. J.E. Rohde - Chairman
Mr. Md. L. Majid
Mr. J.O. Martin
Prof. D. Habte - Director - ex-officio member

Board Members

Maj. Gen. M.R. Choudhury (Retd.)
Dr. R.H. Henderson
Prof. F. Jalil
Prof. P.H. Makela
Prof. P.F. McDonald
Prof. F.S. Mhalu
Dr. Y. Takeda

Division Directors, invited Staff and Observers

The Committee convened at 8.40 a.m. on November 5 in the Sasakawa Training Lecture Room number 1

1. APPROVAL OF THE AGENDA

The draft agenda was approved with the inclusion of Change in Presentation of Forecast and Budget as item 2 with subsequent renumbering of the remaining agenda items, the inclusion under miscellaneous of e) ICDDR,B Hospital Endowment Fund Investment Operational Status and f) Formalising the legality of The Centre Fund and the composition of its Management Committee and Item 6, Salaries of National Employees.

2. CHANGE IN PRESENTATION OF FORECAST AND BUDGET

In conformity with the approach taken by similar organizations and to give better information ICDDR,B has changed the format for presentation of income and expenditure. The main change is that income and expenditure are now split into restricted and unrestricted categories (as opposed to central/core and project). Restricted refers to contributions (and subsequent expenditure) that are earmarked by a donor for a specific activity. (Projects belong to this category). Unrestricted applies to contributions that are provided by a donor for broad institutional support to be used at the discretion of the Centre. Institutional support is used for one or more of the following:

1. To support key scientific positions .
2. To meet the cost of the treatment centres in Dhaka and Matlab.
3. To support other essential activities, including DSS, the Matlab MCH-FP program, Training and Dissemination, and the Library.
4. Administration and management of the Centre.

An additional feature is the provision of more information on the use of unrestricted funds. A distinction is made between "programs" that refer to institutional support for the four scientific divisions and technical support and expenditure directly attributable to administration and management. This information is now attached as Table 4.

3. 1995 FORECAST

INCOME

Donor Contributions (Table 2 for summary and Table 3 for individual donor amounts) which were budgeted at $12,930,000 are expected to decrease to $12,159,000 of which $269,000 from unrestricted contributions remains unconfirmed. This decrease of $771,000 (6.3%) is explained by the following table.

	1995 BUDGET	1995 FORECAST	DIFF.
Restricted			
Projects/Programs	7,048,000	6,226,000	822,000
Fixed Assets	296,000	538,000	(242,000)
	7,344,000	6,764,000	580,000
Project Overhead	1,283,000	1,317,000	(34,000)
Total Restricted	8,627,000	8,081,000	546,000
Unrestricted	4,303,000	4,078,000	225,000
Total Contributions	$12,930,000	$12,159,000	$771,000

Restricted contributions have fallen in line with expenditure and are commented on under expenditure below.

The causes of the expected decrease in unrestricted contributions are:

a) Unanticipated Loss of Income

Arab Gulf Fund - 1994 and 1995 (reduced)	500,000	
Canada - CIDA	142,000	
UNFPA	214,000	
All Others - net	94,000	950,000

b) Unanticipated Income

Disaster relief	285,000	
Bangladesh - increased contribution	236,000	
Netherlands - increased contribution	204,000	725,000
		$225,000

Because of the uncertainty of receiving the contributions from Arab Gulf Fund and UNFPA it is considered prudent not to recognize the full income. Nevertheless these two donors are being vigorously pursued which may result in some reduction of this anticipated income loss.

EXPENDITURE

Operating Cash Cost (Tables 2 and 4) which was budgeted at $12,828,000 is forecast to decrease by $281,000 (2.2%) to $12,547,000. This decrease is explained by the following table.

	1995 BUDGET	1995 FORECAST	DIFF.
Restricted			
Projects/Programs	7,048,000	6,226,000	822,000
Fixed Assets	296,000	538,000	(242,000)
Total Restricted	7,344,000	6,764,000	580,000
Unrestricted			
Programs	3,797,000	3,931,000	(134,000)
Management	1,687,000	1,852,000	(165,000)
Total Unrestricted	5,484,000	5,783,000	(299,000)
Total Operating Cash Cost	$12,828,000	$12,547,000	$281,000

Restricted costs will decrease because of underspending, late start of protocols and non implementation of projects (mainly Bayer, Ford Foundation, Netherlands and USAID). This is partially offset by increased spending on existing or new projects (mainly LSHTM and Switzerland - SDC). Details of all variations are shown in Table 3.

Unrestricted costs will increase mainly as a result of the delay in implementing restricted projects and the costs associated with the recent diarrhoeal epidemic. The savings in the late or non hiring of Divisional Directors partially offsets this. Details of unrestricted costs by area of activity are shown in Table 4.

Depreciation, which was budgeted at $746,000, is forecast to increase by $61,000 (8.2%) to $807,000. The increase results from depreciation on fixed asset acquisitions.

Total Expenditure including depreciation was budgeted at $13,574,000 and is anticipated to decrease by $220,000 (1.6%) to $13,354,000.

BALANCE

Net Operating Deficit after depreciation was budgeted at $644,000. This is anticipated to increase by $551,000 (85.6%) to $1,195,000 because of the net effect of changes in income and expenditure.

Net Cash Surplus before depreciation was budgeted at $102,000. This is now anticipated to decrease by $490,000 to a deficit of $388,000. Success in the ongoing efforts to collect contributions from Arab Gulf Fund and UNFPA will completely alter this picture.

Management appreciates that **Deficits** of this magnitude are **unsustainable**. However sudden and unexpected curtailment of contributions or reduction of promised contributions

by donors makes it exceedingly difficult for the Centre to avoid such deficits, particularly when these occur towards the end of the year

Discussion

Management responded to various questions and gave more details on what constituted restricted and unrestricted costs and the source of funding to support unrestricted costs. The change in presentation of Table 4 was generally agreed to give more information on the unrestricted costs of the Centre. It was suggested that a least part of the contribution from the Government of Bangladesh be considered as a recovery against hospital running costs.

The Committee recognised the difficulty of meeting budgets when donors failed to fulfil expectations and urged the Centre to pursue these donors for some contribution to help reduce the forecast deficit.

While they still may be some costs to be saved in the Management area the Committee was fully aware that the Centre's essential programs must be continued and urged its members to actively search for more funding.

4. 1996 BUDGET

INCOME

Donor Contributions (Tables 2 for summary and Table 3 for individual donor amounts) are budgeted at $13,208,000 (1995 $12,159,000) of which $1,465,000 is unconfirmed. This increase of $1,049,000 (8.6%) is explained by the following table.

	1996 BUDGET	1995 FORECAST	DIFF.
Restricted			
Projects/Programs	7,444,000	6,226,000	1,218,000
Fixed Assets	256,000	538,000	(282,000)
	7,700,000	6,764,000	936,000
Project Overhead	1,407,000	1,317,000	90,000
Total Restricted	9,107,000	8,081,000	1,026,000
Unrestricted	4,101,000	4,078,000	23,000
Total Contributions	$13,208,000	$12,159,000	$1,049,000

Restricted contributions have risen in line with expenditure and are commented on under expenditure below.

Unrestricted contributions are anticipated to remain at approximately the same level as 1995 and, if new donors are not identified, will include a portion of the investment income of the ICDDR,B Hospital Endowment Fund.

EXPENDITURE

Operating Cash Cost (Table 2) is expected to be $13,190,000 (1995 $12,547,000). This increase of $643,000 (5.1%) comprises:

	1996 BUDGET	1995 FORECAST	DIFF.
Restricted			
Projects/Programs	7,444,000	6,226,000	1,218,000
Fixed Assets	256,000	538,000	(282,000)
Total Restricted	7,700,000	6,764,000	936,000
Unrestricted			
Programs	3,689,000	3,931,000	(242,000)
Management	1,801,000	1,852,000	(51,000)
Total Unrestricted	5,490,000	5,783,000	(293,000)
Total Operating Cash Cost	$13,190,000	$12,547,000	$643,000

Restricted costs will increase in line with higher expenditure mainly on Ford Foundation and United Kingdom - ODA and the commencement of proposed new projects with the National Institute of Health, the European Union and others. Management realizes that the increase of $1,218,000 in the non fixed asset component of restricted projects/programs is a high target but believes it is attainable if the new projects commence on the anticipated start dates.

Unrestricted costs will decrease as staff are moved into new projects. In formulating the budget the patient load at the Dhaka hospital was based on 90,000 (1995 120,000) patients and if this number is exceeded it will increase unrestricted costs. Details of unrestricted costs by area of activity are shown in Table 4.

Depreciation is expected to be $829,000 (1995 $807,000) which is an increase of $22,000 (2.7%).

Total Expenditure including depreciation is budgeted at $14,019,000 (1995 $13,354,000). This is an increase of $665,000 (5.0%).

BALANCE

Net Operating Deficit is expected to be $811,000 (1995 $1,195,000) which is a decrease of $384,000 (32.1%).

Net Cash Surplus before depreciation is expected to be $18,000 compared to the forecast deficit of $388,000 for 1995.

Discussion

The Committee commented that the 1996 budget was extremely tight and contained some proposed projects and contributions which were still to be funded. Concern was expressed as to what the Centre would do if the first review of the budget in 1996 indicated a year end deficit and it was suggested that alternative financial plans be prepared for both shortfall and full financing positions. Management responded that new donors must be pursued if the Centre's essential programs are not to be reduced.

Draft Resolution FIN:01

The Committee resolved to present the following draft resolution to the Board for it's approval:

The Board resolved to approve the 1996 Budget.

MISCELLANEOUS

a) Cheque Signatories

As required by the Board resolution of November 22 1994, the Director advises that Prof. Vaughan - Division Director Community Health Division, Mrs. Moin - Controller Budget & Costing and Mr. Hassan - Controller Finance have been appointed as cheque signatories.

For the information of the Finance Committee the procedure on cheque signatories was last issued in 1985. Since then some of the positions have had name changes and others have been collapsed. Accordingly it is considered necessary to reissue but not change the basic internal controls of this procedure.

Cheque signatories will be divided into 4 groups:

Group 1	Division Director - Finance, Controller - Finance and Controller - Budget & Costing.
Group 2	Administrative Division Directors with one of the Controllers acting as alternate for the Division Director, Finance in his absence.
Group 3	Scientific Division Directors
Group 4	Director with capacity to act as either a group 1, 2 or 3 signatory.

All cheques in excess of US$1,000, or other currency equivalents, must be signed by two persons of which one must be the Division Director, Finance or his alternate with the second signatory from Group 3. Only in exceptional emergencies may a cheque be signed without one Finance Division signature and, if this occurs, the circumstances must be noted and the Division Director, Finance or his alternate be advised in writing immediately upon their return.

Cheques under US$1,000, or other currency equivalents, may be signed by two persons from group 1 of which one must always be the Division Director, Finance.

In the event that all expatriate signatories are evacuated, cheques may be signed by any two of the remaining signatories.

These signing procedures shall also apply to negotiable instruments and fund movements.

b) ICDDR,B Hospital Endowment Fund

The balance of the Hospital Endowment Fund at December 31, 1994 was $3,163,953. Receipts for the first nine months of 1995 were $189,023 giving a balance at September 30, 1995 of $3,352,976. No hospital expenditure has been charged to the fund since inception.

The ICDDR,B Hospital Endowment Fund Council of Investment Advisors, comprising leading Bangladeshi business persons and one international banker, was brought into operation and the Council has formulated an initial investment strategy which aims to place 50% of the Fund in US dollar term deposits with the balance to be targeted for investment in "blue chip" Bangladesh companies in the form of both ordinary shares and high yielding debentures.

c) ICDDR,B Hospital Endowment Fund Investment Operational Status

As the ICDDR,B Hospital Endowment Fund does not have a corporate nature it may not be possible for it to re-register equities. In Bangladesh, trust bodies are not presently permitted to invest in shares. Moreover many companies have provisions which preclude such institutions from acquiring shares.

The current investment strategy as recommended by the Council of Investment Advisors of the Fund includes the investment of up to 50% of available resources in shares and debentures of Bangladesh companies. Subject to the determination of the legal status of the Fund, this plan may now be in jeopardy but could continue if we consider the adoption of one of following two approaches.

Route all investments through a foreign bank offering local custodial services or

Form a company to hold the shares and debentures.

Opinions and advice in the exact current legal status of the Fund and the various implications of forming a company are being sought from our legal and financial advisors so as to determine how we can best proceed with the investment strategy.

If the advice recommends that we use custodians it is proposed to use the services of either Banque Indosuez or Standard Chartered Bank. If the advice is to form a company we are considering the name "ICDDR,B Investments and Securities Corporation Limited". Custodial services are quite common throughout the financial world and this will be a simple mechanism to set in place. However the formation of a company will take some time and raises such questions as income tax, ownership and distribution of profits.

Currently we believe that we can pursue the investment strategy through the use of custodial services, however, if this proves not to be the case, Management recommends the formation of an investment company at this stage.

Discussion

Management stressed that the use of custodial services was the most likely way that investment in Bangladesh shares and debentures would be handled and would only consider the formation of a company if it was absolutely necessary to pursue to investment objectives. The Committee were of the general opinion that formation of a company may add more problems than it would solve and did not support the formation of an ICDDR,B investment company.

d) Fixed Asset Acquisition and Replacement Fund

Capital expenditure committed up to the end of August 1995 totalled $305,816 comprising:

Laboratory and Hospital Equipment	82,157
Motor Vehicles	98,247
Buildings	74,403
Computers	16,786
Other Equipment	34,223
	$305,816

The balance remaining in the fund at August 31 1995 was $276,606.

Discussion

Management advised that the increase in the balance of the Fund was due to $250,000 given by the Government of Bangladesh for hospital improvements and that all future reports on the Fund are to include the full movements for the period under review.

e) Centre Fund Washington Office

At the November 1995 Board meeting it was resolved to use $230,000 as a loan from the Reserve Fund to finance the Centre Fund activities in 1995. While no funds were found for the campaign itself, around $3,150,000 has been added to the Centre Fund during the year. On the basis of this success, the Centre proposes to continue its North American based operations in 1996 with a budget of $221,000.

As no funding was found for the 1995 activities the amount of $230,000 advanced by the Reserve Fund will (subject to Board approval) be written of against that Fund in the 1995 annual accounts.

Discussion

Management and Mr. Robert Smith advised the committee on the activities of the Washington office stressing the need that "to raise money, money must be spent".

The Reserve Fund, established in 1981 to enable the Centre to have more stable and assured funding, stood at $2.4 million on June 30 1995 of which $1.1 million was earned interest. The use of the Fund for raising money is entirely in keeping with the intention of the original donor and subsequent Board resolutions.

Draft Resolution FIN:02

The Committee resolved to present the following draft resolution to the Board for it's approval:

The Board resolved to approve that the amount of $230,000 advanced to Child Health Foundation to cover the costs the Centre's North American based operations be written off against the Reserve Fund.

Draft Resolution FIN:03

The Committee resolved to present the following draft resolution to the Board for it's approval:

The Board directs the Centre to continue to explore avenues to find funding for the next phase of the Centre Fund campaign. However, in recognition of the importance of this campaign, should no funds be found the Board resolved that the Centre use up to a maximum of $221,000 to finance the 1996 campaign activities.

f). **The Centre Fund Legal Status**

Management advised that the document necessary to create a formal legal structure for the Centre Fund was under preparation and needs to be completed within the near future to enable donations to be received. The formation of the Centre Fund Management Committee would be contained in such a document.

Draft Resolution FIN:04

The Committee resolved to present the following draft resolution to the Board for it's approval:

The Board resolved that the Centre, in consultation with the Chair of the Board, prepare the documents necessary to give legal status to the Centre Fund.

6. SALARIES OF NATIONAL EMPLOYEES

The Finance Committee met jointly with the Personnel and Selection Committee in a closed session to consider any revision to the emoluments of National Staff.

Draft Resolution FIN:05

The Committee resolved to present the following draft resolution to the Board for it's approval:

The Board resolved, subject to the availability of funds, to allow the Director, at his discretion, to raise the salaries of National Staff by an amount not to exceed 2% of the salaries in existence on November 4 1995.

6/BT/NOV. '95

PERSONNEL & SELECTION COMMITTEE REPORT

DRAFT

6/Bd/Nov.95

REPORT OF THE PERSONNEL & SELECTION COMMITTEE MEETING
SATURDAY 4 NOVEMBER 1995

1. STAFFING

1.1 Overview of the Staffing Situation

Attention was drawn to Tables 1-9. It was noted that the Board's instructions on recruitment have continued to be followed although there has been a net increase in staff of 37, most of whom were in projects. At 30 September 1995 the total staff numbered 985 compared to 948 at 31 March 1995. However, core staff has gone down from 606 to 603.

The Committee complimented the Centre's management on their continued actions to reduce staff and recommended a continuation of the current policy.

1.2 Contract Renewal - Division Director, Administration & Personnel

The meeting noted that Mr M.A. Mahbub, Division Director, Administration & Personnel will complete his three years employment contract with the Centre on June 30, 1996.

It was agreed to recommend to the Board that Mr Mahbub's current contract be extended by another term of three years effective July 1, 1996.

1.3 Status of Recruitment of International Staff

a. Division Director, Population & Family Planning Division

The Director informed the meeting of the discussions on the possible restructuring of the division. The meeting encouraged the Director to continue with this, including to continue considering options with respect to the Division Director, recognising the importance of having strong activities in these fields.

b. Director, ICDDR,B

Mr. Syed Ahmed commented to the meeting on the decision of the Government of Bangladesh to amend the ordinance regarding the tenure of the Director. He reported that it now reads as follows:

Ord. LI of 1978 Section 13 sub-section (1) The Centre shall be administered by a Director who shall be selected and appointed by the Board for a term of three years which may be renewable for another term, provided that, the Board may in exceptional case, extend the tenure of the Director for a period maximum of which shall not exceed a period equivalent to another term.

Dr. Henderson expressed to Mr. Ahmed the thanks of the Committee for his considerable work in this matter.

c. Division Director, Laboratory Sciences Division (LSD)

The meeting noted that the position of the Division Director LSD fell vacant after the departure of Dr R. Bradley Sack in June 1994. Dr John Albert has been acting as the Division Director, LSD since then.

It was noted that the management's efforts to identify a suitable person with research, fund raising and administrative capabilities have not yet succeeded. After discussion the meeting agreed to recommend to the Board the continuation

and extension of the search process with the expectation that a firm decision could be taken at the next Board of Trustees meeting.

d. MCH-FP Physician

It was reported to the meeting that Dr L.A. de Francisco Serpa, MCH-FP Physician will complete his six years employment contract with the Centre on 6th November 1996. He has indicated willingness to extend his stay. As per the Centre's rule however, the position has to be advertised and he will be eligible to apply.

It was agreed to recommend to the Board that approval be given to advertise the position.

e. Health Economist, CHD

The meeting noted that the position of Health Economist, CHD was advertised on July 7, 1995 in two national newspapers. The advertisement has been sent to all the prominent Universities in the UK, USA, BOT members, Donors, UN Agencies etc. The last date for receiving applications was 15 August 1995.

Eight applications were received but none were found to be suitable. The search for a suitable applicant will continue.

f. Epidemiologist, CHD

The meeting noted that the position of Epidemiologist, CHD was advertised on July 7, 1995 in two national newspapers. Copies of the advertisement have been sent to all the prominent Universities in the UK, USA, BOT members, Donors, UN Agencies etc. The last date for receiving applications was 15 August 1995.

Twenty applications have been received and are being processed.

g. Communications Specialist, MCH-FP

As reported in the June 1995 BOT meeting, Ms Marsha McCoskrie was offered the position of Communications Specialist in P4 level. She declined the offer.

The committee noted that due to anticipated funding cuts for the Extension Projects, recruitment has to be postponed until funding is assured.

h. Demographer, MCH-FP

As reported in the June 1995 BOT meeting, Dr Mizanur Rahman was offered the position of Demographer. The meeting was advised that Dr. Rahman assumed the position on July 16, 1995.

i. Health Economist/Cost Analyst, MCH-FP

As reported in the June 1995 BOT meeting, Dr Ann Levin was offered the position of Health Economist/Cost Analyst, MCH-FP. The meeting was advised that Dr. Levin assumed the position on July 16, 1995.

1.4 Information on Seconded Staff

a. Division Director, Community Health Division (CHD)

It was reported to the meeting that Professor J. Patrick Vaughan joined the Centre on September 26, 1995 as Director of the Community Health Division under a reimbursible secondment agreement between the London School of Hygiene and Tropical Medicine and the Centre.

b. Division Director, Clinical Sciences Division (CSD)

It was reported to the meeting that Dr George Fuchs-III, seconded by the

Louisiana State University for a period of 3 years, has acted as the Division Director, CSD from February 1995.

On the approval of the Board of Trustees at its meeting in June 1995, Dr George Fuchs-III has been appointed Division Director, CSD effective July 1, 1995.

Dr. Fuchs is on a reimbursable secondment from LSU. The meeting was advised that Dr. Fuchs accepted the arrangement and joined the position accordingly.

c. Senior Scientist, MCH-FP

The meeting noted that this position will not be filled due to the financial constraints of USAID.

d. Senior Scientist, CHD

It was reported to the meeting that Dr Jim Ross, Senior Scientist (Social & Behavioural Sciences) has been working at the Centre since January 15 1994, on a reimbursable secondment from the LSHTM. It was agreed to recommend to the Board that this arrangement be terminated and Dr Ross converted to a fixed term employee of the Centre.

1.5 Upgrading the Position of Assistant Director ER&ID to P-5

The following case for upgrading the position of Assistant Director ER&ID to P-5 was presented to the meeting:

The office of External Relations and Institutional Development (ER&ID) is responsible for resource development, strategic planning, management strengthening, organizational development, fund-raising, publications, mandatory committees and grant administration. The office is headed by an Assistant Director (P4).

His responsibilities include:

i. to coordinate the design and implementation of the Centre's resource development strategy including the preparation for, and launch of, capital fund drives in North America and Bangladesh for the two endowment funds: for the hospital (target $10 million - achievement to date: $3.4 million) and for the institution (target $20 million - achievement to date: $3.0 million).

ii. to prepare project proposals for funding by bi-lateral and multi-lateral donor agencies, foundations and corporations: total value exceeding $5-6 million p.a., and encourage, facilitate and assist with the preparation of many of the other project proposals that make up the Centre's $12.5 million annual budget.

iii. to represent the Centre throughout the world in a planned programme of liaison, coordination and negotiation with donor and UN agencies, and Non Government Organizations.

iv. to develop communication materials, including videos and publications, to influence policy-makers and promote the Centre and its work. In the last two years alone, the Assistant Director ER&ID coordinated the preparation for the celebration of "25 Years of ORS", where the Prime Minster of Bangladesh distributed awards to the heads of BRAC, UNICEF, UNDP, USAID, and WHO, and to the Minister of Health, GoB, and the visits of Mrs. Hillary Clinton, Mr. James P. Grant, many other dignitaries and their media entourages.

In addition to the above responsibilities, the Assistant Director, ER&ID, has been assisting the Director in supervision of the Audio Visual Unit, the Dissemination and Information Service Centre, and the Training Coordination Bureau. The Centre proposes to formalize this arrangement by appointing the Assistant Director ER&ID as Head of these units and bring them under the ER&ID Office with the title of Associate Director, ER&ID.

It was agreed to recommend to the Board that the post description for this position be graded following the UN system and if it qualifies for a P5 position,

the Director be given the authority to approve a personal promotion for Mr Graham Wright, Assistant Director, ER&ID, to level P5 with effect from January 1996.

2. Selection of Trustees

a. It was agreed to recommend to the Board that Dr. Cesar G. Victora (Brazil) be invited to join the Board of Trustees effective from 1 July 1995 to complete the 3 year term of Professor J.J. Frenk which concludes on 30 June 1996.

b. It was reported to the meeting that Professor Fehmida Jalil's first term as a Trustee concludes on 30 June 1996.

It was agreed to recommend to the Board that Professor Fehmida Jalil (Pakistan) be reappointed as a Board Trustee for another period of three years from 1 July 1996.

c. It was reported to the meeting that Professor P. Helena Makela's first term as a Trustee concludes on 30 June 1996.

It was agreed to recommend to the Board that Professor P. Helena Makela (Finland) be reappointed as a Board Trustee for another period of three years from 1 July 1996.

d. The Personnel and Selection Committee recognised the high desirability of the next selection of a Board Trustee to be from the field of social sciences, also noting the desirability of striving for an equitable gender balance in the consideration of all appointments.

e. It was reported to the meeting that Professor Fred S. Mhalu concludes his second term of service in June 1996.

The Personnel & Selection Committee requested the Director to obtain as many nominations as possible for potential candidates for a Board of Trustees position from a developing country in the African region effective from 1 July 1996.

3. Staff Salaries

3.1 International Professional Categories

It was agreed to recommend to the Board that there be no change in the remuneration of international level staff.

3.2 NO & GS Categories

The meeting was advised that after the implementation of salary increase (7%) effective January 01, 1995, the current ICDDR,B NO&GS salaries fell behind the prevailing local UN scales by 33.13% for the NO (ICDDR,B: 66.87% of the UN) and 33.69% (average) for the GS categories (ICDDR,B: 66.31% of the UN)

ICDDR,B		% of UN	Average (%)
GS	1	66.82	33.69
	2	65.82	
	3	65.82	
	4	65.84	
	5	66.93	
	6	67.58	
NO	A	66.87	33.13
	B	66.87	
	C	66.87	
	D	66.87	

The meeting noted that the Taka has been devalued by 1.01%. As per previous BOT decision it was agreed to convey to the Finance Committee that from a perspective of personnel policy, a salary adjustment appeared warranted. It was noted that the expanding gap in salaries is eroding the Centre's capability to recruit able national talent, and this is likely to have a negative impact on the Centre's performance.

The meeting closed at 5.20 p.m.

DRAFT RESOLUTIONS

1/BT/Nov.95 The Board resolved to accept the Report of the Personnel and Selection Committee.

2/BT/Nov.95 The Board resolved that the current contract of Mr. M.A. Mahbub, Division Director, Administration & Personnel, be extended by another term of three years effective July 1, 1996.

3/BT/Nov.95 The Board resolved that the Director be urged to continue his consultations with a view to filling the position of Division Director, Laboratory Sciences Division, with the expectation that a firm decision could be taken at the next Board of Trustees meeting.

4/BT/Nov.95 The Board agreed to approve the placement of advertisements for the position of MCH-FP Physician.

5/BT/Nov.95 The Board agreed that the search continue for a suitable applicant for the position of Health Economist CHD.

6/BT/Nov.95 The Board noted that recruitment for the position of Communications Specialist MCH-FP is postponed until funding is assured.

7/BT/Nov.95 The Board resolved to accept the appointment of Dr. George Fuchs III (United States) as Division Director, Clinical Sciences Division, effective July 1, 1995, on secondment from the Louisiana State University.

8/BT/Nov.95 The Board resolved that the employment contract for Dr. James Ross, Senior Scientist (Social and Behavioural Sciences), be converted to a fixed term contract.

9/BT/Nov.95 The Board resolved that the post description for the position of Associate Director ER&ID be graded following the UN system and that if it qualifies for a P5 position, the Director be given the authority to approve a personal promotion for Mr. Graham Wright to level P5 with effect from January 1996.

10/BT/Nov.95 The Board resolved that Dr. Cesar G. Victora (Brazil) be appointed to the Board of Trustees to complete the term of Professor J.J. Frenk.

11/BT/Nov.95 The Board resolved that Professor Fehmida Jalil (Pakistan) be reappointed as a Trustee for another period of three years from 1 July 1996.

12/BT/Nov.95 The Board resolved that Professor P. Helena Makela (Finland) be reappointed as a Trustee for another period of three years from 1 July 1996.

13/BT/Nov.95 The Board resolved that there be no change in the remuneration of international level staff.

7/BT/NOV. '95

SELECTION OF TRUSTEE

SELECTION OF TRUSTEES

A. At its June 1995 meeting the Board of Trustees:

- recognized that the Board of Trustees is under-represented in the area of demography and population sciences and that this needs to be a priority for the Board to address as soon as possible.

- requested the Director to obtain as soon as possible a confirmation that Professor Frenk was withdrawing as a member of the Board.

- requested the Director to obtain as many nominations as possible for potential candidates for a Board of Trustees position from the South America and Caribbean region for a decision to be made at the November 1995 Board of Trustees meeting.

- noted that the Board of Trustees positions occupied by members appointed by organizations (Government of Bangladesh, UNICEF, and WHO) do not have a specific time limit.

B. According to the suggestion made in November 1987, election procedures should commence one year beforehand (June) and, whenever possible, finalized at the November meeting. Listed below are those members who will complete their terms on 30 June 1996.

Outgoing Board Members (to 30 June 1996)

#	Replacement for Prof. J.J. Frenk
#	Prof. P.H. Makela
#	Prof. F. Jalil
*	Prof. F. Mhalu

* Unable to serve another term without a break

\# Eligible for re-election for a second term

LIST OF MEMBERS (AS AT OCT. 1995) WITH NATIONALITY, DISCIPLINE, JOINING AND ENDING DATES

Name	Country	Discipline	Joined Bd/ end date
Mr. S.S. Ahmed	Bangladesh	Civil Servant	1994/1997
Prof. Chen Chunming	China	Public Health	1992/1998 *
Maj. Gen. (Retd) M.R. Choudhury	Bangladesh	Pathology	1994/1997
Prof. R.R. Colwell	U.S.A.	Microbiology	1995/1998
Dr. D. Habte	Ethiopia	Paediatrics	1989/1998
Dr. R.H. Henderson	WHO	Scientific Admin.	1990/1996
Prof. F. Jalil	Pakistan	Child Health	1993/1996
Dr. T.A.M. Khoja	Saudi Arabia	Public Health	1995/1998
Dr. M. Law	Canada	Int. Health/Hlth. Policy & Admin.	1991/1997 *
Prof. P.F. McDonald	Australia	Demography	1995/1998
Mr. Md. L. Majid	Bangladesh	Civil Servant	1993/1996
Prof. P.H. Makela	Finland	Microbiology/ Vaccine dev.	1993/1996
Mr. J.O. Martin	Switzerland	Finance/manage-ment	1994/1997
Prof. F.S. Mhalu	Tanzania	Microbiology/ Immunology	1990/1996 *
Dr. J. Rohde	UNICEF	Public Health/ Paediatrics/Hlth Planning	1990/1996
Prof. Y. Takeda	Japan	Microbiology	1994/1997

* Unable to serve another term without a break

INTERNATIONAL CENTRE FOR
DIARRHOEAL DISEASE
RESEARCH, BANGLADESH

Phone : 600171-78
Telex : 675612 ICDD BJ
Fax : 880-2-883116, 880-2-886050
Cable : Cholera Dhaka
Mail : GPO Box 128, Dhaka-1000
Bangladesh

21st June 1995

Dr. Julio Frenk
Executive Vicepresident and
Director of the Center for Health Systems Analysis
Fundacion Mexicana Para La Salud
Periferico Sur No. 4809
Col El Arenal Tepepan Deleg. Tlalpan
14610 MEXICO, D.F. FAX: 00 52 5 655 8211 (2 pg)

Dear Dr. Frenk,

The Board of Trustees meetings were held last week and the members have asked me to write to you.

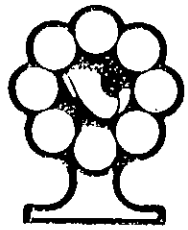
You will recall my earlier correspondence regarding your continued membership of the Board. I do appreciate that you are very busy with your work but would be grateful to receive your reaction to my letter of 18th May as soon as possible.

I look forward to hearing from you by 23rd July. If no reply has been received, I will presume you have been forced under pressure of work to withdraw from your membership of the ICDDR,B Board.

If you would like to discuss this further with me please feel free to write or call.

Yours sincerely,

Demissie Habte, M.D.
Director and
Secretary of the Board



July 3, 1995

Demissie Habte, M.D.
Director
International Centre for Diarrhoeal
Disease Research, Bangladesh
Dhaka, Bangladesh
FAX: 880-2-883116, 836050

Dear doctor Habte:

I greatly appreciated the opportunity to speak to you by telephone yesterday. As I told you then, I feel extremely sorry that I have been unable to attend the Board meetings. When you were so kind as to explore my availability to serve on the Board, I was enjoying a sabbatical year at Harvard and the horizon of my commitments looked sufficiently clear as to allow me to accept such a serious responsibility. Then, shortly after the Board honored me by approving my appointment, I was asked to direct a large policy review in Mexico that would help to design a health system reform. This radically changed my situation. That is why I immediately informed you about my new circumstances. While we discussed the possibility of my stepping down from the Board, I calculated that once the final report was issued my life would return to normal.

That has not been the case. On the bright side, the report has been very well accepted. (Actually, I would like to share with you the English-language version of the *Overview* of the report, so I will mail a copy today.) This means that I have continued to be actively involved in the design of health reform options. On the dark side, my country has been affected, as you know, by a series of economic and political shocks that have added complexity to the reform process.

FUNDACION MEXICANA PARA LA SALUD
INSTITUCION PRIVADA AL SERVICIO DE LA COMUNIDAD
Periférico Sur No. 4809 Col. El Arenal Tepepan Deleg. Tlalpan 14610, México, D.F. Tel. 655 90 11 (con 12 líneas) Fax. 655-82-11

NOMINATIONS FOR TRUSTEES - NOVEMBER 1995
CANDIDATES FROM SOUTH AMERICA AND CARIBBEAN REGION

Name	Nationality	M/F	Discipline	Present Occupation	Nominated By
Dr. Ana Maria AGUILAR		F	Paediatrics	BASICS rep. Bolivia Country rep Management Sciences for Health Bolivia Postgrad lecturer in Paed.	PAHO
Dr. Ellen E. HARDY		F	Soc. & Behav. Sciences	Asst Prof. Dept. Obs/Gynae State Uni. Campinas Director Dept. Socio-Medical Research	Ford
Dr. Maria Isabel PLATA		F	Soc. & Behav. Sciences		Ford

DATES OF NEXT BOARD MEETING

DATES FOR 1996 MEETINGS

At the November 1994 Meeting of the Board of Trustees it was agreed that after June 1995 the Board Meetings should be held on the **first Saturday, Sunday, and Monday of June and November** each year.

Accordingly, the following programme for 1996 was agreed to at the June 1995 meeting:

PROGRAMME COMMITTEE REVIEW OF LSD, JUNE 1996

Wednesday 29th May	Reviewers arrive
Thursday 30th May and Friday 31st May	Review of the Laboratory Sciences Division and write-up of report

BOARD OF TRUSTEES MEETING - JUNE 1996

Friday 31st May	Trustees arrive
Saturday 1st June	Programme Committee Meeting Personnel & Selection Committee Meeting
Sunday 2nd June	Finance Committee Meeting Report Writing
Monday 3rd June	Full Board Meeting

9/BT/NOV. '95

REPORT FROM STAFF WELFARE ASSOCIATION (SWA)

9/BT/NOV.'95

ADDRESS OF PRESIDENT, STAFF WELFARE ASSOCIATION, ICDDR,B AT THE BOARD OF TRUSTEES' MEETING TO BE HELD IN NOVEMBER, 1995

INTERNATIONAL CENTRE FOR DIARRHOEAL DISEASE RESEARCH, BANGLADESH
MOHAKHALI, DHAKA - 1212, BANGLADESH

October 11, 1995

agency offices. But the Centre's Ordinance No. LI of 1978 clearly states " salaries and emoluments of non-international level positions should be comparable to those paid by the United Nations Organisations in Bangladesh ". Table - 1 (enclosed) clearly shows the salary differences in support of my statement.

2. Dependant Children Allowance : In other UN agency offices, the employees get dependant children allowance upto 6(six) children. The Centre (ICDDR,B) on the contrary gives us dependant allowance for maximum of 2(two) children only. The Centre's employees have however accepted it on the plea that this Centre is also involved in population research. But unfortunately there has been no raise of dependant children allowance even for 2(two) dependant child since 1988 although there was very little salary adjustment in 1993-94 and a meagre salary raise in 1995.

At present the Centre's employees are getting Tk. 330.00 only per month per dependant child whereas the employees of other UN agency offices are getting Tk. 691.00 per month per dependant child (maximum No. 6). It is quite clear that we are now getting 109% less children allowance in comparison to other UN agency offices. This is also shown in Table - 1 (enclosed).

3. Employees affected due to Taka devaluation and Dollar inflation : I am enclosing herewith Table - 2 and 3 which gives us a clear picture of Taka devaluation compared to US dollar during the period 1990-95. Even in September and October, 1995 there has been a taka devaluation by 1.01% against US dollar. What to speak of salary raise even if the BOT and the Centre's management would have protected the employees loss due to devaluations since 1990, the Centre's employees salary and emolument to some extent would have been comparable to other UN agency. With these devaluations the Centre's employees have not only been loser in terms of their pay only. Since the BOT and the Centre's management have not protected the devaluations since 1990 the employees have been greatly affected

personality and leadership of our present Director Prof. D. Habte. To the best of our knowledge under his able guidance the present financial condition has far far improved than that it was in late 80's.

I do not like to lengthen my address further and conclude with emphasis based on discussions and resolutions in the SWA, Dhaka and Matlab Executive Committee and General Meetings that :

a) Despite financial constraints there should/must be positive decision in this BOT meeting for salary increase of the GS and NO level staff upto a reasonable percent so that it becomes an honourable "comparable" salary structure with other UN organisations as per ordinance, effective January 1, 1996.

b) Dependant Children Allowance per child per month should be increased and make equal with other UN agency offices with immediate effect.

c) Retirement age should be revised as has been done in other UN agency offices in Bangladesh.

d) Empower the Director of the Centre to protect our employees from losses that might arise in future due to currency devaluation and other such important issues related to staff welfare without waiting for the BOT meeting decisions.

Last but not the least, the SWA expresses its deep gratitude and thanks to the honourable Chairperson and Members of the Board of Trustees once again for the opportunity given to us for presenting our views before this forum of representatives from various countries of the world. We assure you of our best cooperation to uphold and enhance the Centre's prestige, reputation and scientific productivity. We hope you will give us the opportunity to discuss with you directly other minor issues those might have not been mentioned in this address.

Thanking you all.

Sincerely Yours,

11/12/95

Dr. K. A. Al-Mahmud
President, SWA
Enclo: as stated above

TABLE - 1

COMPARISION OF PAY SCALES BETWEEN U. N. AND ICDDR,B (IN TAKA)

10-Apr-95

CATAGORY: LEVEL/1ST STEP	NET PAY U.N	NET PAY ICDDR,B	NET PAY DIFF.	NET PAY % TO UN	NET PAY ICDDR,B TO INC.%	GROSS PAY U.N	GROSS PAY ICDDR,B	GROSS PAY DIFF.	GROSS PAY % TO UN	GROSS PAY ICDDR,B TO INC.%
NATIONAL PROFESSIONAL										
NO-A	380,070	254,170	125,900	66.87	49.53	351,830	238,840	112,990	67.89	47.31
NO-B	456,060	304,980	151,080	66.87	49.54	424,900	282,680	142,220	66.53	50.31
NO-C	570,090	381,230	188,860	66.87	49.54	535,570	356,020	179,550	66.47	50.43
NO-D	729,710	488,010	241,700	66.88	49.53	692,150	460,030	232,120	66.46	50.46
NO-E	0	606,700	(606,700)	0.00	(100.00)	0	569,660	(569,660)	0.00	(100.00)
NO-F	0	757,830	(757,830)	0.00	(100.00)	0	719,210	(719,210)	0.00	(100.00)
GENERAL SEVICES										
GS-1	96,470	63,500	32,970	65.82	51.92	101,370	66,460	34,910	65.56	52.53
GS-2	109,930	72,360	37,570	65.82	51.92	115,890	76,020	39,870	65.60	52.45
GS-3	133,040	87,570	45,470	65.82	51.92	140,840	92,440	48,400	65.63	52.36
GS-4	161,010	106,020	54,990	65.85	51.87	171,540	112,340	59,200	65.49	52.70
GS-5	206,100	139,290	66,810	67.58	47.96	221,420	149,000	72,420	67.29	48.60
GS-6	267,810	181,010	86,800	67.59	47.95	290,500	195,390	95,110	67.26	48.68
GS-7 (EXTENDED)	305,320	0	305,320	0.00	0.00	332,930	0	332,930	0.00	0.00
GS-8	380,070	0	380,070	0.00	0.00	351,830	0	351,830	0.00	0.00

U. N. EFFECTIVE DATES		INCREASE
NO	Rivision # 9 = 01 October 1992	-
	Rivision # 10 = 01 January 1994	(23.2%)
GS	Rivision # 16 = 01 August 1992	-
	Rivision # 17 = 01 October 1993	(21.9%)

Dependant child Tk.8,292/ P.A. (Max # 6)
Language allowance Tk.10,308/ P.A.
(Only for G.S.)

ICDDR,B EFFECTIVE DATES	
NO	Revision # 9 = 77% implemented 01 Jan 1994
	Revision # 10 = Yet to implement
GS 1-4	Revision # 16 = 75% implemented 01 Jan 1994
GS 5&6	Revision # 16 = 77% implemented 01 Jan 1994
	Revision # 17 = Yet to implement

Dependant child Tk.3,960/ P.A. (Max # 2)
Language allowance - Nil

SAL1.WK3/sa.

TABLE - 2

As per Bangladesh Bank circular percentage of devaluation of Taka compared to US dollar during the period 1990-1995

Devaluation date	Percent devaluation
Mar - 04, 1990	5.00
Apr - 25, 1990	1.00
May - 20, 1990	1.96
Aug - 01, 1990	1.98
Sep - 09, 1990	0.22
Nov - 24, 1990	0.28
	10.44
Jun - 30, 1991	0.56
Jul - 07, 1991	1.39
Aug - 19, 1991	1.10
Sep - 12, 1991	2.17
Nov - 09, 1991	1.06
Dec - 01, 1991	0.39
Dec - 08, 1991	0.42
Dec - 21, 1991	0.47
	7.56
Jan - 01, 1992	0.57
Mar - 31, 1992	0.50
	1.07
Apr - 24, 1993	2.13
	2.13
Feb - 24, 1994	0.68
Mar - 27, 1994	0.30
	0.98
Sept - 10, 1995	0.38
Oct - 01, 1995	0.63
	1.01
Total devaluation since 1990	23.19

The Bottom Line

	Cur. acct. balance	Exports 12 mths	Inflation CPI	Per-cap. GDP (PPP)	GDP (PPP)	GDP growth	Per-cap. GNP (nom.)	Savings % of GDP	Reserves excl. gold	Foreign debt
Japan	$119.7b. ▼	$433b. ▲	0.1%	$21,328	$2,662b.	3.1% ▲	$38,750	34%	$155.4b.	0§
Switzerland	$18.6b.	$84.1b.	2.1%	$24,483	$171b.	1.4% ▼	$40,350	28%	$31.9b.	0§
Italy	$15.6b.	$190b.	5.8%	$18,070	$1,045b.	4.0%	$17,780	20%	$37.8b. ▲	$88.0b.
France	$11.0b.	$221b.	1.9% ▲	$19,774	$1,147b.	4.1% ▲	$24,150	21%	$26.6b.	0§
China	$7.7b.	$135b.	14.5%	$2,660	$3,172b.	10.3%	$435	36%	$62.7b.	$100.0b.
Singapore	$6.5b.	$96.5b.	1.5%	$21,493	$66b.	8.1%	$22,520	48%	$58.7b.	0§
Hong Kong	$3.5b.	$160b.	8.3% ▼	$22,527	$137b.	5.9%	$21,558	30%	$53.6b.	0§
Turkey	$2.6b.	$17.4b.	86.5%	$5,550	$330b.	13.4%	$2,140	22%	$11.3b.	$59.8b.
Egypt	$2.3b.	$3.9b.	9.9%	$3,670	$208b.	2.0%	$700	7%	$13.8b.	$40.6b.
Nigeria	$2.3b.	$10.9b.	49.9%	$1,480	$139b.	1.3%	$340	20%	$1.8b.	$33.0b.
Taiwan	$2.2b.	$88.7b.	3.9%	$13,235	$279b.	6.5%	$11,236	27%	$99.0b. ▼	0§
Macau	$1.8b.	$1.9b.	8.6%	$16,840	$6.4b.	4.0%	$15,010	28%	$1.6b.	0§
Brunei	$1.5b.	$2.6b.	2.5%	$15,580	$4.4b.	3.0%	$18,500	35%	$30.0b.	0§
Russia	$1.0b.	$44.0b.	206%	$5,050	$754b.	-6.0%	$2,100	32%	$5.0b.	$83.1b.
P.N. Guinea	$0.4b.	$2.2b.	6.1%	$2,470	$10b.	0.8%	$1,249	28%	$0.04b.	$4.2b.
Bangladesh	$0.2b.	$2.5b.	3.7%	$1,290	$151b.	4.5%	$220	7%	$3.4b.	$14.8b.
Kenya	$0.2b.	$1.5b.	8.6%	$1,377	$38b.	-0.2%	$270	21%	$0.5b.	$6.4b.
Fiji	$0.06b.	$0.5b.	1.5%	$5,220	$4.0b.	3.2%	$2,100	19%	$0.3b.	$0.4b.
Mongolia	$0.03b.	$0.4b.	73.0%	$2,115	$4.9b.	2.1%	$335	3%	$0.1b.	$7.1b.
Cambodia	-$0.04b.	$0.3b.	18.0%	$1,266	$11b.	4.9%	$215	8%	$0.1b.	$1.6b.
Bhutan	-$0.05b.	$0.1b.	7.8%	$1,475	$1.0b.	5.1%	$415	17%	$0.1b.	$0.1b.
Maldives	-$0.05b.	$0.1b.	3.1%	$1,373	$0.3b.	5.5%	$470	11%	$0.04b.	$0.1b.
Afghanistan	-$0.1b.	$1.0b.	56.7%	$720	$14b.	2.0%	$150	10%	$0.2b.	$5.4b.
Laos	-$0.1b.	$0.3b.	6.7%	$2,071	$8.9b.	8.0%	$325	4%	$0.08b.	$1.2b.
Myanmar	-$0.2b.	$0.8b.	30.3%	$676	$30b.	6.4%	$890	12%	$0.6b.	$5.3b.
Nepal	-$0.3b.	$0.4b.	8.2%	$1,165	$24b.	7.0%	$180	10%	$0.7b.	$1.9b.
Sri Lanka	-$0.6b.	$3.6b.	8.5%	$3,030	$53b.	5.7%	$550	16%	$2.1b.	$6.4b.
Vietnam	-$0.8b.	$4.3b.	18.4% ▼	$1,263	$91b.	8.5%	$220	7%	$0.6b.	$24.7b.
Brazil	-$1.5b.	$43.6b.	26.8%	$5,675	$921b.	5.8%	$2,800	21%	$38.0b.	$132.7b.
New Zealand	-$1.5b.	$12.0b.	4.6%	$17,045	$60b.	6.0%	$14,950	24%	$3.7b.	$35.0b.
Pakistan	-$1.5b.	$7.2b.	12.2%	$2,235	$282b.	4.7%	$440	14%	$2.6b.	$26.1b.
Britain	-$1.6b.	$204b.	3.5%	$18,138	$1,054b.	2.8% ▼	$16,600	15%	$42.6b.	0§
South Africa	-$2.3b.	$25.6b.	9.0%	$3,810	$153b.	2.5%	$2,900	19%	$1.9b.	$17.2b.
India	-$2.7b.	$26.2b.	8.4% ▼	$1,280	$1,180b.	5.3%	$310	24%	$19.0b. ▼	$85.2b.
Philippines	-$3.3b.	$14.6b.	8.4%	$2,660	$173b.	4.9%	$1,010	15%	$6.7b.	$37.3b.
Indonesia	-$3.6b. ▼	$40.1b.	9.2%	$3,388	$651b.	7.4%	$780	38%	$13.0b.	$90.0b.
Malaysia	-$4.4b.	$58.1b.	3.6% ▲	$8,763	$171b.	9.3%	$3,530	34%	$25.4b.	$23.3b.
Iran	-$4.7b.	$14.9b.	31.5%	$5,280	$325b.	2.0%	$2,320	30%	$5.0b.	$20.6b.
South Korea	-$7.4b.	$111b.	3.5%	$10,534	$468b.	9.9%	$8,550	35%	$27.3b.	$17.3b.
Thailand	-$8.5b.	$43.5b.	6.2%	$6,816	$405b.	8.5%	$2,315	37%	$32.2b.	$62.1b.
Saudi Arabia	-$9.0b.	$39.0b.	5.1%	$11,176	$197b.	-2.0%	$7,150	27%	$8.9b.	$16.7b.
Canada	-$18.2b.	$164b.	2.5%	$21,268	$619b.	2.5% ▲	$18,900	19%	$14.7b.	$237.0b.
Australia	-$19.3b.	$48.6b.	4.5%	$19,007	$340b.	3.7%	$17,500	19%	$12.4b.	$121.8b.
Germany	-$23.1b.	$405b.	1.7%	$20,165	$1,619b.	2.2%	$23,975	22%	$82.1b.	0§
Mexico	-$28.0b.	$60.8b.	41.7%	$7,490	$634b.	-10.5%	$4,195	17%	$13.5b.	$118.0b.
U.S.	-$165.2b.	$503b.	2.6%	$25,900	$6,738b.	1.1%	$25,900	15%	$79.5b.	$555.7b.

Changes this week

▲ UP ▼ DOWN

Compiled from latest available data. Gross Domestic Product (GDP) is the value of all goods and services produced in [illegible] Purchasing Power Parity (PPP) takes into account [illegible] between countries to provide a more accurate picture of national wealth. GDP growth is adjusted for inflation. Gross National Product (GNP) is GDP plus payments from abroad from investment, labor and [illegible] payments to foreigners. Per-capita GNP is converted to U.S. dollars using average exchange rates. § Net creditor [illegible] ASIAWEEK

TABLE - 4

LEVEL/STEP	PENSIONABLE SALARY (TAKA P.A.)	Monthly Centre's Contribution <----------> JULY'95	SEP'95	OCT'95
GS-1/Step-1	66,460	US $ 20.58	US $ 20.49	US $ 20.37
GS-2/Step-1	76,020	US $ 23.54	US $ 23.44	US $ 23.30
GS-3/Step-1	92,440	US $ 28.63	US $ 28.51	US $ 28.33
GS-4/Step-1	112,340	US $ 34.79	US $ 34.64	US $ 34.43
GS-5/Step-1	149,000	US $ 46.15	US $ 45.95	US $ 45.66
GS-6/Step-1	195,390	US $ 60.52	US $ 60.25	US $ 59.88
NO-A/Step-1	233,840	US $ 72.42	US $ 72.11	US $ 71.66
NO-B/Step-1	282,680	US $ 87.55	US $ 87.17	US $ 86.63
NO-C/Step-1	356,020	US $ 110.27	US $ 109.79	US $ 109.10
NO-D/Step-1	460,030	US $ 142.48	US $ 141.86	US $ 140.98
NO-E/Step-1	569,660	US $ 176.43	US $ 175.67	US $ 174.58
NO-F/Step-1	719,210	US $ 222.75	US $ 221.78	US $ 220.41

10/BT/NOV. '95

ANY OTHER BUSINESS