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— December 19 - 21, 1983 —

**Description of a National Workshop on Maternal
and Infant Nutrition.**

by

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INTRODUCTION

This Report, by two INCS consultants (Dr. Roy Brown and Dr. Marianne Neifert), describes a National Workshop on Maternal and Infant Nutrition in Bangladesh. The Workshop was organized by a Committee composed of representatives from the Institute of Public Health/Nutrition, the University of Dhaka, the International Center for Diarrhoeal Disease Research and the Institute of Postgraduate Medicine and Research in Dhaka. The Workshop brought together maternal and infant nutrition experts from government, academic institutions, and Private Voluntary Organizations (PVOs) in Bangladesh.

The Workshop focused on the need to develop a medical curriculum. Health professionals, particularly doctors and nurses, are a major source of authority and training related to nutrition problems. Most have received training in curative medicine and lack the practical, preventive oriented skills needed to deal with problems of lactation management, weaning and the prevention and treatment of diarrhoeal disease. The Workshop recommended the establishment of a Nutrition Curriculum Committee which would coordinate the development of curriculum modules for Pediatrics, Obstetrics, and Community Medicine. The Committee would be headed by a member of the Department of Community Medicine and contain representatives from Biochemistry, Physiology, Obstetrics, Pediatrics and Community Medicine.

INCS strongly supports the establishment of such a Curriculum Committee, and, if appropriate, could provide additional technical support to help the Committee develop nutrition training materials for the medical community.

Ronald C. Israel, Director
International Nutrition Communication Service

February, 1984

Part I

by Roy E. Brown

Background

Looking through my correspondence having to do with the National Workshop on Maternal and Child Nutrition, I have found letters to Dr. Kalyan Bagchi dated 1980, in which mention was first made of a nutrition workshop to be held in Dhaka, Bangladesh. It was at the suggestion of Dr. Bagchi that INCS changed the initial contact made to Dr. Kamaluddin Ahmad, the Director of the Institute of Nutrition and Food Sciences at the University of Dhaka, to Dr. M. Habibur Rahman, Director of the Institute of Public Health Nutrition, Dhaka. The rationale for this change was that INCS should be connected through the government of Bangladesh, rather than through the University of Dhaka.

The workshop was directed towards the incorporation of maternal and child nutritional topics into the undergraduate medical school curriculum in Bangladesh and was originally scheduled for March 1983. Unfortunately, because of a number of intervening problems, it was impossible to conduct the workshop at that time. A short visit was made by me in July 1983, in order to assist the planning committee with some of the administrative and other problems related to the workshop.

The planning committee, known as the Workshop Steering Committee, was chaired by Dr. Brig Hedayet Ullah, the Director General of Health for the Government of Bangladesh, with the workshop Director being Dr. M. H. Rahman and the Vice-Chairman being Professor M. R. Kahn. The other members of the workshop

Steering Committee included Dr. M. Q. K. Talukder, the workshop Secretary, and Professor T. A. Chowdhury, Professor of Obstetrics, Dr. A. M. Molla, a pediatrician working with the International Center for Diarrhea Disease and Research, Bangladesh, Dr. H. K. A. Hye of the Manpower Development section of the government, and Dr. A. H. M. A. Rahman of the Institute of Post-Graduate Medicine and Research in Dhaka.

The initial format of didactic lectures over the three days was modified during my visit in July 1983 to having a morning plenary session followed by group discussion, then division into small groups to discuss the papers that were presented, and then a regrouping with presentations of the group reports. The opening ceremonies had to remain as originally scheduled with small addresses by a number of dignitaries and representatives.

Preparation for the Workshop

Dr. Marianne Neifert, of the University of Colorado, preceded me to Dhaka. I had one day of briefing and preparation with Dr. Neifert in New York, and she was built into the workshop as a keynote speaker on the second day. With our preliminary discussions in New York, and with her orientation by the Workshop Steering Committee in Dhaka, Dr. Neifert was able to modify her presentation to underplay the attention related to hospital practices and breastfeeding, and to incorporate certain messages that emphasize the need for early breastfeeding, the provision of colostrum, and the necessity of introducing complementary feedings sometime between the fourth and sixth month of life.

The secretaries in the Institute of Public Health Nutrition were dutifully involved in retyping and mimeographing fifty copies of all the papers that

were submitted. There are plans for having these papers assembled in a book as soon as the editing process can be completed. Invitations were sent out for the opening ceremonies that were attended by approximately 200 people. In addition, invitations were given out to the workshop attendees and their guests for a final banquet after the last day of the workshop.

We visited the workshop hall and reviewed the procedure for having an opening ceremony, followed by tea and refreshments and then commencing with the workshop's first plenary session. This necessitated a revision of the seating and table arrangements in the interim. It was decided to have a U-shaped arrangement for the tables with the participants sitting on the outside of the U and a dias, on which would sit the Chairman and Vice Chairman of each session along with the rapporteur. Microphones were available at the speaker's podium, before the Chairman, and on the tables for the participants to ask questions and make comments. There were also seating arrangements for observers around the outside of the tables.

The Workshop

At the opening ceremonies I was asked to make a short speech representing INCS. Copies of the various papers were available at the time of the opening session and these were distributed. My paper, titled "Current Status of Maternal and Child Nutrition in Developing Countries," was intended to be an overview of the MCH and Nutrition situation in the Third World. Dr. M. Q. K. Talukder of the Institute of Post-Graduate Medicine and Research then presented his remarks with reference to the situation of maternal and child nutrition in Bangladesh.

There was time for questions following the keynote addresses and then there were five papers of fifteen minutes each (see attached program). Following the papers there were comments and questions, and after lunch the entire group was broken into five small groups. This was done, at our suggestion, by actually assigning people to groups and having a group Chairman and a Rapporteur for each group that was selected by the group itself. Contrary to the initial suggestion, these groups met in five different locations in the main meeting room, and this became somewhat noisy, although it was functional. Tea was served in the afternoon, and group reports were made from the podium by each group's rapporteur.

On the second day, the keynote addresses were by Professor M. R. Khan describing nutrition teaching at the undergraduate and postgraduate levels and by Dr. Marianne Neifert describing certain considerations related to breast-feeding.

The short papers of the second day related to the teaching of nutrition at the pre-clinical level, in pediatrics, in obstetrics, in community medicine, and also maternal nutrition in rural Bangladesh. The same format with the five groups addressing a particular topic and coming out with specific recommendations were presented by the individual groups' rapporteurs at the end of the afternoon session.

The third workshop day, by which time all of the papers had been distributed from the earlier days, as well as the small group reports and comments, had a mixture of topics that were somewhat more practical. Dr. Rizvi, who had worked with the Jelliffes in U.C.L.A., presented the anthropologist's point of

view about the socio-economic factors that influence maternal and child nutrition in the rural areas. This was followed by a description of the MCH services that do exist and the problems related to child health with an emphasis on diarrheal disease in Bangladesh. Again the small group discussions went on and the reports were presented following which there was an attempt at a final formulation of the recommendations and closing.

A full listing of all of the attendees and observers was distributed, and it was planned to have a full report prepared in the near future.

Conclusions

It was my overall impression that the workshop went off much more smoothly than I had anticipated. The Steering Committee had worked very hard in getting people prepared and in developing the actual format of the workshop. The secretaries were extremely busy reproducing the papers that were being submitted all through the three days and producing the overall listing of the participants and the reports of the small groups along with the comments made. The participation of those who attended and the observers was at a very high level with enthusiasm and serious dedication to the task.

The copy of the curriculum for undergraduate medical courses for Bangladesh that was submitted with my report in August 1983 is still not in effect.

Although it is dated December 1982, it has not been finally approved by all of the medical faculties. What that curriculum does, however, is to outline the time frame and the division into the various terms of undergraduate medical education. The exact component and the specific approaches are generally left up to the individual medical faculties and to the individual department heads.

I feel strongly that follow-up activity will go on with some encouragement from this side.

I spoke with the people from NORAD who had indicated future support and found that they are all out of the country and had no representative at the workshop. However, Mr. Rolf Hultin, Director of NORAD will be returning to Bangladesh on January 6, 1984, and I am certain that his interest in supporting the on-going activities of the Workshop Steering Committee will persist.

Ms. Adriane Germaine, Director of the Ford Foundation in Bangladesh, attended the opening ceremonies, and I had an opportunity to speak with her. Her representative, Dr. Halida Hanum Akhter, attended the entire workshop and was an enthusiastic participant. Dr. Akhter also was invited to the final luncheon with Professor M. R. Khan, and she and I had an opportunity to discuss the possible role Ford Foundation might have in future activities with this group.

The person representing USAID at the workshop itself was Ms. Louisa Gomez, a nutritionist assigned to AID. On the day following the workshop, I went to see the representative from USAID, Mr. John H. (Jack) Thomas at the AID offices. I discussed with Mr. Thomas and his assistant the accomplishments of the workshop and what follow-up activities might be indicated. Although the overall thrust of USAID in Bangladesh remains population activities and family planning, it was acknowledged that there is a place for some support of the nutritional activities. I presented the basic rationale for encouraging the type of workshop that went on with the participation of members of the academic faculties of the eight medical colleges in the hope that an increased

awareness of the importance of nutrition and MCH considerations might be gained. It also was discussed that the medical leadership represents an important decision-making group and can have an influence on the attitudes of future medical practitioners in Bangladesh. For these reasons I defended the fact that the workshop had started on the road to accomplish these goals.

I do not think we should abandon the possibility of having USAID support for this type of activity. In summary, it is my impression that with the active participation of the attendees and the contributors at the National Workshop on Maternal and Child Nutrition, a number of positive gains were made. There is no question that the participation was active and enthusiastic at the workshop. Preparation was made before and during the workshop in order to have the overall effect accomplished. I believe there is a heightened awareness on the part of the medical faculties in the eight medical colleges and that those who attended the workshop will return to their home bases with an improved concern as to the importance of maternal and child nutrition within the curriculum.

As for the actual modification of the curriculum, it is anticipated that there will be four separate one-day workshops to be held in the four different divisions of Bangladesh during 1984. These workshops should take the form of identifying the specific parts of the curriculum in each of the topics that require modification. The topics include basic clinical sciences, community medicine, pediatrics, and obstetrics/gynecology. It is hoped that a consensus can be achieved through this mechanism as to the curriculum change as necessary.

There still is a desire on the part of the Workshop Steering Committee to have an inter-regional type of conference on the same subject for 1985. Planning for such a conference would, by definition, require at least a one-year lead time or more. I feel that it is the responsibility both of USAID, the other supporting agencies, and INCS to support these activities in every way possible. This would require an on-going dialogue with the Workshop Steering Committee, perhaps with future direct inputs from INCS itself. I believe with the Ford Foundation, through both Ms. Germaine and Dr. Akhter, there will be a concerned participation in these follow-up activities. My overall impression is a positive one in that what we set out to accomplish has been achieved as a first step in this process.

As a final comment, it was interesting that one of the issues that developed during the Workshop itself and was continued in further discussions afterwards was the identification by Dr. Rizvi of poverty as a major underlying factor in the malnutrition and poor hygiene that contributed very significantly to the mortality and morbidity of infants and mothers in Bangladesh. There was definite backing and support for this concept on one hand, and there was a reaction from certain of the participants that poverty should not enter the discussions since as physicians and health workers we could do nothing to modify this economic situation. The supporters of bringing the issue of poverty into the discussion felt very strongly that we must acknowledge the existence of widespread and severe poverty and that this contributed to the ill-health and malnutrition of the high risk population groups being considered. There was no resolution to the issue, but it was addressed during and after the Workshop.

Part II: WORKSHOP ISSUES AND OUTCOMES

by Dr. Marianne Neifert

INFANT NUTRITION

Present Situation

Of the 90 million people in Bangladesh, 47% are children under 15 years of age. At least 75% of young children in Bangladesh are suffering from some degree of malnutrition, and the nutritional status of children has deteriorated in the last 20 years. In a National Xerophthalmia Prevalence Study, 3% of all children suffer from overt signs of vitamin A deficiency. Cultural factors and food beliefs contribute to the delayed supplementation of the breast-fed infant, often beyond a year of age, and the use of low-nutrient watery gruels rather than the family diet. Although the majority of mothers do breastfeed for 25 months or longer, evidence exists that breastfeeding patterns are eroding among the urban elite, with declines in the initiation and duration of breastfeeding, due to cosmetic reasons, maternal illness, or "insufficient" milk. Over 40 brands of tinned milk and both commercial and home-made bottles can be found in Dhaka, and even in village stores. During my tours of the pediatric wards I saw several feeding bottles, usually with infants admitted with marasmus. At Azimpur Maternity Hospital, a C-section mother was bottle feeding, and in Dhomrai village, one mother had bottle fed from birth due to "insufficient milk." It is customary in the villages and common in the city hospitals to withhold colostrum feedings, and not begin breastfeeding until the third or fourth postpartum day. Despite a study documenting adequate growth of exclusively breastfed infants for up to 5 months, exclusive breastfeeding is seldom carried out. Rather, water, other

milks, and sometimes solids are introduced in the first few months, even though prolonged breastfeeding may occur. Often the introduction of these other food sources results in diarrheal disease. It is often speculated, but not well documented, that maternal malnutrition contributes to lactation failure. It is also believed that oral contraceptives in the first six months of lactation, inhibit milk supply. In addition to the value of breast milk for sound infant nutrition, the role of lactation in suppressing postpartum ovulation and fertility was widely appreciated.

Relevant Workshop Recommendations

1. Extensive nutrition education and propaganda for the promotion and protection of breastfeeding is required throughout the country. Newsmedia, radio, and TV should be fully utilized for the purpose.
2. Medical undergraduates and postgraduates should be educated in the physiology of lactation, advantages of breastfeeding, dangers of bottle feeding, and the practical management of breastfeeding.
3. The program for the promotion and protection of breastfeeding should be centered in the primary health care delivery system, with the family welfare centers being the focal points of these activities.
4. The international code for the marketing of breast milk substitutes should be implemented, with strict monitoring of the implementation.

5. National and regional seminars on breastfeeding issues should be held to sensitize health professionals.
6. Mothers should be motivated to breastfeed antenatally, and prenatal breast exams should be routinely performed.
7. Adequate rooming-in facilities should be provided in maternity hospitals.
8. Feeding bottles should be discouraged for use in the medical institutions and clinics in the country, as well as pacifiers.
9. Infants should be put to the breast as soon after birth as they are capable, and frequent demand feedings should be encouraged.
10. The feasibility of the establishment of breast milk banks on children's and obstetrical wards of medical institutions should be examined.
11. Exclusive breastfeeding should be encouraged for all infants for the first five months of life.
12. Studies should be undertaken to clarify the specific causes of lactation failure in Bangladesh in order to address them more effectively.
13. Oral contraceptives which may inhibit successful lactation should be avoided in nursing mothers during the first six months. When used, "low dose" pills should preferentially be prescribed.

14. Marketing of "weaning foods" should be stopped, and mothers should be taught to make freshly prepared supplementary foods from the regular family foods, beginning at approximately 5 months of age.
15. Mothers should be encouraged to continue nursing even when the baby has diarrhea or other illnesses.
16. Nutrition intervention programs should not be restricted to the pre-school age group only, but should be directed toward all children.

MATERNAL NUTRITION

Present Situation

Maternal malnutrition is widespread in Bangladesh and has a direct impact on fetal development and neonatal outcome. Over 80% of mothers suffer from anemia, and according to the National Nutrition Survey of 1975-76, the food intake of mothers is deficient in calories, protein, and other nutrients. Furthermore, the average intake of nutrients has declined over the past two decades. While the average age of marriage for the urban elite is 18.5 years, rural girls marry typically before 15 years. Rural mothers in one study gained only 5 kg during pregnancy, and none weighed over 50 kg after delivery. Up to 50% of infants are 2500 grams or less at birth, and 80% of these are growth retarded rather than preterm infants. Due to severe poverty and the unavailability of food in the home, many mothers eat only two meals a day, one of which is very light, and go as long as 10 to 12 hours without eating. A variety of socioeconomic and cultural factors contribute to this chronic malnutrition on the part of women. Some of the cultural factors include the preferential status of men and boys who are given first access to food

supplies, food beliefs such as the thought that limiting intake will produce a small baby and thus an easier delivery, and food restrictions placed on lactating mothers. However, the predominant factor underlying maternal malnutrition is the socioeconomic reality of extreme poverty, landlessness, poor buying power, and underemployment. The problem is further compounded by an illiteracy rate among rural women as high as 80%.

Relevant Workshop Recommendations

1. Further studies are warranted to determine the correlation between weight gain in pregnancy and infant birth weight, and the effects on infant outcome of nutritional intervention during pregnancy in the form of calorie, protein, and mineral content.
2. Maternal Child Health Services must be strengthened and a nutrition component added and made available at the grass-roots level. Nutrition officers should be added at the upazilla level to organize training on nutrition and nutritional education.
3. Adequate incentives should be given to MCH workers for exemplary services, as is presently provided to family planning personnel.
4. Because so little can be done in the near future about extreme poverty, it is imperative that factors which are amenable to educational intervention, and will reinforce already existing feeding practices and discard harmful ones, be identified and maximized.

5. Nutritional care of female children, as much as males, should be provided from birth, through pregnancy and lactation. Appropriate education and supplementation should be used to maintain maternal nutritional status during pregnancy and lactation.
6. Mothers should be taught to eat additional food from the available family foods she prepares during pregnancy and lactation, and to get more rest.
7. Mothers should be taught to avoid pregnancy until their infant is 12 kg or 24 months of age at least.

TEACHING OF NUTRITION IN UNDERGRADUATE AND POSTGRADUATE MEDICAL EDUCATION

Present Situation

There is no specific course on Nutrition during either undergraduate or postgraduate training. While aspects of nutrition are taught in various courses and clinical experiences, there is no coordinator of the curriculum and no integration of the subject matter, nor relevant clinical experiences. The focus of most of the educational system is one of a curative approach, rather than a preventive approach. Western texts are generally used, often with little relevancy. Exposure of students to rural settings is spotty and hampered by logistics and transportation problems. Clinical settings such as the Save the Children Nutritional Unit have offered exposure to students, but are little utilized. An attitude of futility over the extreme conditions of poverty for which no solutions are evident frequently prevails among the health professionals. Even if nutrition were emphasized among physicians, there is little mechanism to disseminate this information through the health

care delivery system to impact at the most local level. Moslem women are very modest about exposing their breasts, and routine prenatal breast exam is not even taught or performed. There is general agreement among physicians that breastfeeding practices should be preserved, but little acknowledgement that breastfeeding is beginning to erode. In addition, many physicians believe that additional water is necessary by bottle during the summer months, and others doubt that malnourished women can successfully nurse exclusively for the first 5 months. Many health professionals on maternity wards are ignorant of the value of colostrum and early breastfeeding. There is widespread support for the efforts to increase the emphasis on nutrition, although it will not likely emerge as a separate subject. Meanwhile, there are no formal test questions for undergraduates in the field of Pediatrics, nor in areas of nutrition.

Relevant Workshop Recommendations

1. A Nutrition Curriculum Committee to coordinate the syllabus for the overall nutrition curriculum should be headed by a member of the Department of Community Medicine and contain representatives from Biochemistry, Physiology, Obstetrics, Pediatrics, and Community Medicine.
2. In the clinical courses, nutrition education should include both didactic and practical experience.
3. In all instances, adequate numbers of test questions on nutrition should be included to provide proper emphasis to the subject.

4. Syllabus of Nutrition in Biochemistry and Physiology

- a) Fundamental principles of nutrition: i) to sustain life, ii) to promote growth, iii) to replace loss, iv) to provide energy.
- b) Functions: digestion, absorption, metabolism of proteins, fats, carbohydrates, minerals and vitamins, interrelationships between and balancing of nutrition.
- c) Nutritional requirements of individuals and dietary sources; influence of economic, psychologic, cultural factors, and age, occupation, sex, stage of life cycle, environment, and disease.
- d) Malnutrition: Effects of inadequate supply of nutrients both in quantity and quality. Effects of excess intake of some factors.
- e) Regional problems due to ignorance, poverty, disease, and disability.
- f) The anatomy and physiology of lactation.

5. Syllabus of Nutrition in Pediatrics

- a) Approximately 20% of the pediatric education should be devoted to nutritional issues at the undergraduate level.
- b) Didactic information should include: i) fetal nutrition, ii) dynamics of growth and development, iii) breastfeeding, iv) supplemental foods, v) maternal and child nutrition, vi) malnutrition, vii) nutrition education for the public.
- c) Practical training should include: i) inpatient (bedside, clinic), ii) outpatient, iii) community study (field practice training).
- d) Postgraduates should become proficient in supervising nutritional projects, analyzing data on nutritional problems, and conducting research activities in the field of nutrition.

6. Syllabus of Nutrition in Community Medicine

- a) Tools to measure the magnitude of nutritional problems in the community, i.e. i) diet history, ii) anthropometry, iii) height, weight, arm circumference, growth charts, iv) clinical diagnosis, v) laboratory investigations.
- b) Exposure to community data collection, descriptive epidemiology, and field exercises.
- c) Exposure to local community resources, such as immams, dais, etc. during the field practice in the 4th year.
- d) Integrated departmental teaching on a single topic, such as infant mortality, with combined Obstetrics, Pediatrics, and Community Medicine approach.
- e) Specific tools to apply in the field: i) identification of nutritional problems, ii) prevention of malnutrition clinically, socially, and environmentally, iii) treatment of nutritional problems, and iv) rehabilitation of nutritional problems. Each student during internship should spend a period of time in rural health centers and complexes.

7. Syllabus of Nutrition in Obstetrics

- a) Emphasis given to the relevant nutritional status of mothers in the country, and include preventive as well as curative aspects.
- b) Field practice should be an integral part of the experience, so that students can specifically refer to locally available foods in giving dietary advice. Rural training sites for postgraduates should also be required.

- c) Nutritional assessment should be included as part of the obstetrical risk factor assessment.
- d) Prenatal breast examination should be taught, as well as nutritional requirements for lactating mothers and effects of malnutrition on lactation.
- e) Ways to establish lactation postpartum successfully, including optimal hospital routines, should be taught.

8. Syllabus of Breastfeeding Education

- a) Anatomy and physiology of lactation should continue to be taught in the basic sciences.
- b) Advantages of human milk and comparisons with other animal species and with formula preparations should be emphasized to medical students.
- c) The benefits of colostrum feeding must be taught, as well as ways to overcome social barriers to early colostrum feedings.
- d) Students should become knowledgeable in the practical management of lactation, including early postpartum routines to foster breastfeeding.
- e) Education of the public should include all the media sources to promote the superiority of breastfeeding, and advertisement of formula feeding through the media should not be done.
- f) Education of governmental officials should include the awareness of the need for day care centers for nursing working mothers and lactation breaks during the work day.

MATERNAL CHILD HEALTH CARE DELIVERY SYSTEM

Present Situation

Maternal Child Health services as a separate entity came into existence in the health care delivery system in 1953. There is a Director for Maternal Child Health services in the Directorate General of Population Control, which is under the population control wing of the Ministry of Health and Population Control. There is a Maternal Child Health Training Institute in Dhaka with an attached hospital, and maternal and children's wards at the Institute for Postgraduate Medicine and Research and all eight medical colleges.

Specialized medical services for Maternal Child Health care are also available at the 18 district hospitals and in most of the 38 subdivisional hospitals. There is only one specialized children's hospital in the country, located in Dhaka. The newly developing system of Primary Health Care aiming to reach rural communities with appropriately trained field auxiliary workers, proper referral and supervisory systems, and community involvement does not really function effectively in practice and is fraught with many problems. Under this system, each of 4500 "unions" with a Family Welfare Center would serve several villages through Medical Assistants and Family Welfare Workers. Each of 380 "Thana Health Complexes" serves several unions, or an approximately 200,000 population, with a 31-bed hospital, out-patient services for medicine, minor surgery, MCH and family planning, home visits, record keeping, and pathology services. An upgraded Thana Health Complex is known as an "Upazilla." At present, there is no systematic reporting for nutrition assessment or surveillance, and no nutrition rehabilitation centers under the health services. There are no individual child health records and no baby weight charts or regular use. Most rural mothers deliver at home with traditional birth attendants, and only one out of 7,000 pregnant women

receives prenatal care. A large percentage of newborns continue to die of neonatal tetanus. Many mothers fail to avail themselves of services they know exist. Supervision of field workers is said to be marginally existent and the whole system corrupted by graft. Physicians in training gain little exposure to the primary care system in training. Despite a two-year mandatory post-graduate term at the Thana level, most physicians remain disinterested in the problems of rural medicine, and Bangladesh continues to export doctors.

Relevant Workshop Recommendations

1. Maternal child nutrition should receive top priority in the formulation of the health programs, especially in the functioning of the primary health care services in the rural areas.
2. The integration of health and family planning activities in the upazilla and downwards to the village level should be effective.
3. Nutritional units currently functioning in different hospitals and institutions in the country should be utilized for training doctors, nurses, and paramedics for better nutrition knowledge and the spread of nutrition education for the masses.
4. There should be mass media propaganda to convey the message to the pregnant mother to take more nutritious food to meet the increased demand for calories and nutrients during pregnancy, to motivate her to breastfeed, and to offer the infant supplemental foods after the 5th month of life.

5. Because of the relationship between maternal illiteracy and infant malnutrition, measures should be taken by the government and other organizations to reduce illiteracy rates in the country.
6. Recognizing that the Family Welfare Center at the Union level is the center of all activities of the primary health care aim, the activities of the FWC and domicillary services should be aimed to undertake extensive nutrition education of the public, including: a) increased intake of food by pregnant and lactating women, b) exclusive breastfeeding for the first 4-6 months, c) additional family food for the child beginning at approximately 5 months, d) use of oral rehydration with diarrheal disease, e) growth monitoring, f) family planning, and g) income-generating programs in the community aimed at improving nutritional status (kitchen gardening, poultry farming).
7. Additional programs at the FWC level should include deworming, supply of vitamin A capsules, improved sanitation, and safe water.
8. Registration of births and deaths within communities should be done.
9. A Nutrition Unit should be established at the Upazilla level and serve as a focal point for training, rehabilitation, and research in the care and maternal and child nutrition.
10. There must be adequate political and community commitment for strengthening the FWC activities and adequate monitoring to ensure that responsibilities are carried out.

11. The principle of GOBI (growth monitoring, oral rehydration, breastfeeding, immunization) in conjunction with family planning, sanitation, and primary health care should be endorsed and be taught to all health workers from professors to grass roots workers.
12. Nutrition Units to be established at the Upazilla level should also be introduced at the Union level, where the main focus would be preventive and educational.
13. Six of the 31 hospital beds at the Upazilla level should be reserved exclusively for severely malnourished children requiring hospitalization in order to provide effective rehabilitation and family education.
14. A national Nutrition Brigade utilizing local community health workers, school teachers, immams, etc. should be mobilized. This type of activity has proved successful in Thailand and the Philippines.

CONCLUSIONS

In my opinion, the idea for the National Workshop was timely, in fact, overdue. The ultimate workshop content was excellent and the format highly effective for group interaction and a team approach. On Friday, December 16, the National Holiday, an extremely complementary editorial appeared in the major newspaper about the upcoming workshop, and I think a very positive climate existed among governmental officials which should favor the implementation of recommendations. While there was obvious recognition of the insoluble problems of extreme poverty underlying the widespread malnutrition,

the attitude which pervaded was the desire to find those areas (maternal education, cultural and food beliefs, health professional awareness, and enhancement of breastfeeding) in which an impact could be made. There was clear recognition that breastfeeding was one tangible resource that had to be protected and could not be taken for granted, and it was agreed that health professional education in this area would be pivotal to breastfeeding promotion. The role of lack of knowledge, superimposed on lack of food supply, was felt to be another area where realistic improvements could be made. The Institute for Public Health Nutrition had just completed an educational film aimed at the public, and the mass media was acknowledged as an important tool in a public education campaign. The uniform acceptance of an in-depth, multi-disciplined nutrition curriculum throughout the course of medical training, and the enthusiasm expressed in developing the content, was most gratifying. Although physician education is a concrete level at which to interject nutrition education, it was clearly understood that this interest and commitment must trickle down to the local village worker in order for an ultimate impact to be felt by the majority of the population who will never see a physician in their lifetime. Nevertheless, I left with an optimism that the Workshop will prove to be a valid start for increasing awareness of the maternal-child nutritional problems among health professionals and governmental officials which will lead to some positive changes in both training and health care delivery.

At this time, follow-up and maintenance of the present momentum will be critical. The Workshop Task force has agreed to continue to meet, first to prepare a summary of the recommendations and printed proceedings, and ultimately to present the recommendations to the Medical Council of Bangladesh

and the Minister for Health and Population Control. Four regional meetings are scheduled for 1984 to examine the progress in implementing the medical college curriculum changes and the health care delivery changes, such as the Nutrition Units and Nutrition Brigades. These follow-up programs will be essential in monitoring any real outcomes of the National Workshop.

APPENDIX

25

NATIONAL WORKSHOP ON MATERNAL & CHILD NUTRITION

(PROGRAMME)

Time : 19, 20 & 21st December 1983
Venue : I.P.H. Auditorium, Mohakhali
Health Complex, Dhaka - 12.

ORGANISED BY THE INSTITUTE OF PUBLIC HEALTH NUTRITION, MOHAKHALI, DHAKA-12

1ST DAY - 19 DECEMBER 1983

- 1100 - 1345 : 1ST PLENARY SESSION
Chairperson : Prof. S.F. Begun
Co-Chairperson : Dr. A.M. Molla
Rapporteur : Dr. Mamunar Rashid.
- 1100 - 1140 : KEY NOTE ADDRESS
Present status of maternal & child nutrition in developing countries with particular reference to Bangladesh
By (1) Dr. Roy E. Brown of CARE and St. Joseph's Hospital
(2) Dr. M.Q.K. Talukder, IPGMR.
- 1140 - 1300 : PRESENTATION OF PAPERS
(15 minutes for each paper)
1. Maternal nutrition during pregnancy & lactation & its relation to infant health & nutritional status - the present situation in Bangladesh.
By Prof. T. A. Chowdhury, IPGMR
 2. Breast feeding practices in Bangladesh
By Dr. M.Q.K. Talukder, IPGMR
 3. Weaning practices (additional food supplements) in Bangladesh.
By Dr. M.A. Muttalib, Comm. Health Res. Assoc.
 4. Health and nutritional status of children in Bangladesh (a situation analysis)
By Prof. M.R. Khan, IPGMR.
 5. Existing manpower in M.C.H. care delivery visavis the future planning to delivery the possible services.
By Dr. Humayun K.A. Hye, Manpower Dev. of DGHS.
- 1300 - 1345 : DISCUSSION
- 1345 - 1430 : WORKING LUNCH & PRAYER
- 1430 - 1530 : GROUP DISCUSSION (5 GROUPS)
TOPICS:
Group - A : Topic - 1
Group - B : Topic - 2
Group - C : Topic - 3
Group - D : Topic - 4
Group - E : Topic - 5
- 1530 - 1550 : TEA
- 1550 - 1650 : PRESENTATION OF GROUP REPORTS & DISCUSSION.

SECOND DAY - 20 DECEMBER 1983

- 0900 - 1300 : 1ST PLENARY SESSION
Chairperson : Prof. N. Islam
Co-Chairperson : Dr. M.Q.K. Talukder
Rapporteur : Dr. Monimul Haque
- 0900 - 1000 : KEY NOTE ADDRESS
Teaching of nutrition in undergraduate & post-graduate medical education in developing countries.
By (1) Prof. M.R. Khan, IPGMR, (2) Dr. M. Neifert - Univ. of Colorado, USA
- 1000 - 1100 : PRESENTATION OF PAPERS
(15 minutes for each paper)
1. Teaching of nutrition in physiology & bio-chemistry in undergraduate & postgraduate medical education
By Prof. M. Ishaque of IPGMR
 2. Teaching of nutrition in paediatrics
By Dr. Md. Nurul Islam, IPGMR
 3. Teaching of nutrition in community medicine
By Prof. Mofakharul Islam, Mymensingh Med. College
 4. Teaching of nutrition in obstetrics,
By ~~Prof. M. Ishaque~~
Prof. Suraiya Jabeen, SSMC.
 5. Maternal Nutrition in Rural Bangladesh By Prof. T.A Chowdhury
- 1100 - 1115 : TEA
- 1115 - 1230 : DISCUSSION
- 1230 - 1330 : WORKING LUNCH & PRAYER
- 1330 - 1500 : GROUP DISCUSSION
- TOPICS:
- Group - A : Topic - 1
Group - B : Topic - 2
Group - C : Topic - 3
Group - D : Topic - 4
Group - E : Topic - Teaching in Breast Feeding.
- 1500 - 1650 : PRESENTATION OF GROUP REPORTS & DISCUSSION.
(including Tea)

THIRD DAY - 21 DECEMBER 1983

0830 - 1100 : 1ST PLENARY SESSION

Chairperson : Prof. M.R. Khan
Co-Chairperson : Prof. Mofakkarul Islam
Rapporteur : Dr. Kiewar Azad

0830 - 0850 : KEY NOTE ADDRESS

Maternal & child nutrition visavis primary health care delivery in developing countries including Bangladesh.
By Dr. M.H. Rahman, IPHN

0850 - 1035 : PRESENTATION OF PAPERS

(15 minutes for each paper)

1. Socioeconomic factors influencing maternal attitude & practices towards maternal & child nutrition in Bangladesh.
By Dr. Nazma Rizvi, ICDDR.B.
2. M.C.H. services in existing health care delivery system in Bangladesh & its scope of improvement.
By Dr. Nargis Akhter of M.C.H. Institute.
3. The impact of related health problem specially diarrhoea disease in the community in relation to maternal & child nutritional status in Bangladesh.
By Dr. A.M. Molla, ICDDR.B.
4. Present status of nutrition component in primary health care delivery system & role of primary health care workers in the care of maternal & child nutrition.
By Dr. M.H. Rahman/Dr. Mamunar Rashid, IPHN.
5. Interrelationship of maternal nutrition, breast feeding & fertility control
By Dr. Shafiqur Rahman, Fertility Res. Programme
6. Experience on maternal & child nutrition status as evident from palli shishu clinics in Bangladesh.
By Dr. T. Ahmed, Palli Shishu Foundation.
7. ~~Role of agriculture sector in relation to maternal & child nutrition~~
By Agricultural Research Council

1035 - 1050 : TEA

1050 - 1150 : DISCUSSION

1150 - 1250 : GROUP DISCUSSION

TOPICS:

- Group - A : Topics - 1 & 5
Group - B : Topic - 2
Group - C : Topic - 3
Group - D : Topic - 4
Group - E : Topics - 6 & 7

1250 - 1320 : PRESENTATION OF GROUP REPORTS

1320 - 1415 : WORKING LUNCH & PRAYER

1415 - 1700 : SECOND PLENARY SESSION

(Tea will be served)

Chairperson : Brig. M. Hedayet Ullah
Co-Chairperson : Dr. M.H. Rahman
Rapporteurs : (1) Dr. Shamsul Islam
(2) Dr. M. Nurul Islam

FORMULATION OF RECOMMENDATIONS & CLOSING.

Best Available Document

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MATERNAL WORKSHOP ON MATERNAL AND CHILD NUTRITION
ORGANISED BY I.P.H.N.- DHAKA 19-21ST DEC. 1983 .

Sl. No.	Name of participants & observers.	Designation	Place of duty	Tel.no.	Permanent address
	Dr. A.K.M. Shahabuddin	Assoc. Prof. of Midwifery	Sher-e-Bangla Medical College, Barisal.	316572 (Dhaka)	90, Kolabagan 2nd lane Dhaka.
	Ir. Sultana Khanam	Medical Director Save the Children Fund Child Nutrition Unit.	New Eskaton, Dhaka	402067 326680	8/8 Aurangzeb Road Mohammadpur, Dhaka.
	Dr. Halida Hanum Akhter	Program Associate Maternal Child Health Ford Foundation.	6, Dhanmondi R/A. Road No. 3, Dhaka-5	504685	II Dhanmondi R/A Road No. 7, Dhaka-5
	Dr. Md. Abdur Rub	Assoc. Prof. of Child Health Rajshahi, Medical College.	Rajshahi	3000/265 280	Vill-Lakshminaraynpur, P.O. Charmatur, Noakhali.
	Dr. Marianne Neifert	Assistant Professor of Paed.	C-219, Unive. of Colo. School of medicine 4200 E. 9th ave Denver, Colo. U.S.A. 80262	USA 303-394-7963	
	Dr. E. Brown, M.D.	Chairman of Community Med.	St. Joseph's Hospital: 703 MAIN ST. Poterson, N.J. 07503 USA.	(201) 977. 2448	336 Central Park West New York NY 10025, USA.
	Dr. Md. Ashrafur Hoque	Medical Consultant, CARE Medico	CARE-Tangail Ashekpur P.S. Sharker's House Tangail.	585 409020	28/4 T&T Colony, Motijheel Dhaka-2
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	Dr. Hosna Ara	Asstt. Surgeon Supy duty, IPGM, R Paed. dept.	IPGM, R	505194	92, Tejkunipara, Dhaka.
	Dr. Monimul Hoque	Asstt. Prof. of Paediatrics IPGM, R, Dhaka.	IPGM, R	505194	104/A, Rayer Bazar, Dhaka.
	Dr. Kishwar Azad	Medical Officer Dept. of Paed., IPGM, R	IPGM, R	505194 233458	10/A, Segunbagicha, Dhaka.

Sl.No.	Name of Party & City/Town	Designation	Place of duty	Tel.No.	Permanent Address.
	Dr.M.R.Khan	I.P.B.M.,R Prof. of Paediatrics	IPGM,R	(O)505258 (R)50334I	128 Dhanmondi,Road-3 Dhaka
	Dr.Md.Habibur Rahman	Asstt.Director,	IPH,Mohakhali	5335	322/A/I, East,Kakhalpara,Dhaka.
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	Dr.Quazi Emdadul Hoque	Assoc.Prof.Comm.Medicine.	Rangpur Med.College	2288	Vill-Kazipara P.O.Katigran,Dhaka.
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	Dr.T.Hoque	Clinical Nutritionist,IPHN	IPHN,Dhaka	602255	284, East Rampura,Dhaka.
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Sl.No.	Name of participants & Observer	Designation	Place of duty	Phone No.	Permanent address
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	Dr. Manawara Binte Rahman	Director, IPH,	IPH	602830(O) 403445(R)	2nd Bank house upper floor Ispahani Colony, Moghbazar, Dhaka.
	Brig. M. R. Chowdhury	Comdt. A. F., P&T	A.F. P&T	604230	Comdt. A.F. P&T, Dhaka Cantt.
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	A. I. M. Mafakkhkarul Islam	Prof. of Comm. Med. & Principal, Mymensingh Med. College.	Mymensingh	4293(O) 4208(R)	2 K.B. Ismail Road Mymensingh.
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Sl.No.	Name of Participants & Observers.	Designation	Place of duty	Tel.No.	Permanent Address
	Dr.MQ-K Talukder	Assoc.Prof.of Child Health.	National Institute of Child Health,IPGM,R	310204	Road No. 6A,House-66,DRA.
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	Dr.A.I.M.Islam	Division Chief(Lab)	IPHN,Mohakhali,Dhaka.	602233	Comilla, Sadar.
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