

LIBRARY

SEAC
61, Whitehall C.A. Dover 03

REPORT ON
ORAL THERAPY EFFICACY TRIALS (OTET)
PART - II
(October 1963 - September 1966)

November 1966

REPRODUCED FROM THE DOCUMENTS OF THE
SEAC, Whitehall, Dover 03
Dover 03

CONTENTS

1. Introduction
2. Background of Oral Therapy
3. Working Strategy & Methodology
4. Reinforcement, Special Reinforcement & Monitoring
5. Additional New Concepts & Strategies
6. Operational Achievements
7. Publicity
8. Training and Recruitment
9. Different Studies & Evaluation
10. Personnel
11. Impact Evaluation
12. Chloride Concentration
13. Usage Survey
14. Conclusion
15. Annexure

1. INTRODUCTION

Bangladesh Rural Advancement Committee (BRAC) is a non-governmental organisation (NGO) which has been at the forefront for the socio-economic uplift of the disadvantaged rural people. BRAC was established in February 1972 in response to the humanitarian needs following the War of Liberation. With more than 2200 full time staff, BRAC is now reaching a significant number of rural people with various development programmes.

2. BACKGROUND OF ORAL THERAPY

Diarrhoea is one of the most important health problems and a major cause of death of infants and young children in Bangladesh. Children under five suffers from two to five diarrhoeal episodes annually. It is estimated that some ten percent (10%) of the children die from the effects of diarrhoea before reaching their fifth year.

The scientific rationale for Oral Rehydration is firmly established. It is well known that in the treatment of diarrhoeal diseases, when a body becomes dehydrated, the only effective treatment is rehydration, replacing either intravenously or orally approximately the same volume of water and electrolytes lost.

Intravenous administration is not accessible to the rural poor because of the lack of trained personnel, inadequate supplies of saline solution and high cost involved. Similarly it is impractical to supply packets of Oral Rehydration Salts to every household in Bangladesh as tens of millions would have to be produced and distributed annually in the rural areas where 92% of the people live and where diarrhoea is an acute problem.

To combat all the above problems and difficulties and with the objective of reducing mortality and morbidity, particularly of children, BRAC felt the need to develop an alternative technique which would be safe, simple, readily acceptable and easily available to the people. Hence BRAC's oral therapy, prepared out of home ingredients was developed after a year of research and field trials.

The Lobon-Gur Saline (LGS) prepared by the pinch and scoop method is an indigenous form of oral therapy. It is an effective, safe, cheap, simple, acceptable and readily available means for treatment of diarrhoea. It can be safely used by common people in their homes whenever it is needed.

Phase-I of BRAC's Oral Therapy Extension Programme (OTEP) ended in September 1983 and OTEP phase-II began in October 1983. The experiences gained in phase-I broadened OTEP's programme scope with the inclusion of additional health approaches to enhance the usage of Lobon-Gur Saline. The objective of phase-II is similar to phase - I, ensure a higher usage rate.

3. WORKING STRATEGY AND METHODOLOGY

BRAC believes that community based programmes must be based on knowledge and activities that are easy to communicate, be understood and accepted. Thus the core of OTEP is a simple concise but comprehensive health message called "Seven Points to Remember" which is a summary of all the information that one needs to know to treat diarrhoea with home-made oral therapy.

OTEP is a community based face to face teaching programme in which one woman in every household is taught by Oral Rehydration Workers (ORW). Travelling from their temporary quarters on foot, rickshaw and /or country boat to teach the village women how to prepare LGS properly. The ORWs are women between 20 and 35 years of age, with average ten years formal education. Each ORW team consists of 7-8 ORWs, 2 Team Coordinators (TCs) and one cook. A team usually covers a union in about one and half months and then they move on to the next union in the project area.

The team coordinators (TCs) are male members of the team and are responsible for a number of activities. Their first task is the preoperation study of the concerned upazila with the objective of creating congenial ground for team operations. In this respect a Team Coordinator contacts people individually, and, through seminars and meetings. During ORW operations, Team Coordinators are mainly responsible for pre-contact, smooth working of the ORWs, patient care and follow-up school forums and more male contact. Male contact is done through the following forums;

- a) Individual contact
- b) Group meeting
- c) Male seminar
- d) Mosque forum
- e) Bazar (Market place) forum
- f) Central village workshops etc. (Representing different villages)
- g) Quacks (Traditional healers), village doctors and pharmacists seminar.
- h) Patient demonstration meeting.

Demonstrating the effectiveness of LGS by treating diarrhoeal patient is the most important factor in popularisation of LGS. It was a practice within OTEP that teams of ORWs were sent to treat patients in a diarrhoeal epidemic within an operational area, suspending the normal programme if necessary.

4. REINFORCEMENT, MONITORING & SPECIAL REINFORCEMENT

To control the quality of education as well as to determine the ORWs salary, a team consisting of 4 male programme organisers, known as Reinforcement Team visits all the unions about thirty days after the ORWs activities. Their task is three-fold:

- i) To reinforce activities in the programme including reeducation to women, individual male contact, follow-up male seminars, patient care, follow-up of patients identified by the ORW teams etc.
- ii) To monitor 5% of the taught women with a view to see the effectiveness of ORWs activities by testing the retention of knowledge and LGS practical preparation. They also used to collect the sample vials for Laboratory test.
- iii) To conduct surveys in randomly selected households and assess the usage of LGS. The rationale behind usage surveys is to ensure a quick feed-back of the results to the ORWs so they can take necessary action for the future.

Efficient use of LGS implies coverage of the entire population. As men play the leadership role in the family, their support and active participation is essential to ensure total coverage. Prior to October 1982 some 637 unions were left untouched at the end of phase I. Special Reinforcement Teams were established to contact all the men of the unions through different forums as stated in working strategy.

5. ADDITIONAL NEW CONCEPTS & STRATEGIES

A: Concentrated Reinforcement:

BRAC realised from OTEP's past performances that in order to promote a high LGS usage rate certain elements of primary health care needed to be included in the programme. To achieve this the involvement of family and the community as a whole is essential. The Concentrated Reinforcement programme (CRP) was, therefore designed in OTEP phase - II involving all the family members - as a complement to the teachings of diarrhoeal management. The objectives of CRP are :

- a) Treatment of diarrhoeal patients with LGS
- b) Creation of health cadres (village shebika) to promote health education and support the people's initiativeness.
- c) Upgrading skills of Traditional Birth Attendants (TBAs) by imparting training and follow-up
- d) Expanding teaching of public health to all households
- e) Educate mothers to feed colostrum to new born infants
- f) Promote supplementary feeding for infants aged four months and above
- g) Teach and encourage medical practitioners to treat diarrhoeal patients with LGS

- h) Organise diarrhoea control committee at upazila level to work in epidemic periods.
- i) Involve school children in personal hygiene activities
- j) Reinforcement activities on diarrhoea.

It was decided that one union in each upazila will be covered under CRP. A team consisting of 3 programme organisers (POs) and four ORVs lived in one union for 6 months for carrying out the above activities.

It is the experience that CRT programmes alone cannot substantially reduce infant mortality. And so, in addition to regular activities of CRP and with a view to cut down neo-natal, infant as well as, maternal mortality rate, immunization by Tetanus Toxoid injection to 14 - 45 years age group of women was undertaken from July 1985.

B: Group approach:

The wisdom of GTEP's one to one teaching strategy was reconsidered and another approach of teaching a group of mothers instead of a single mother at a time received serious thought. The latter approach was taught and found superior in many respects; like more coverage with same cost, less variation in transmission of message, mutual interaction and reinforcement among the women etc. The group teaching approach was found more effective and the programme was switched to this from March 1986.

C: Revision of 7 points:

Experiences necessitated the revision of 7 points again. The following changes have been incorporated in 7 points:

- a) Previously there was no mention about the use of LGS in dysenteric diarrhoeas. Mothers are now instructed to use LGS in dysentery and if it persists, they should see the doctors.
- b) In addition to asking mother to clean the breasts before giving it to a baby, the mothers are also advised to give it to the babies directly.
- c) The 7 points now instructs to wash the hands with soap or ash after defecation.
- d) Signs of dehydration are more clearly stated now.
- e) There is a clear message on referral in case of severe dehydration.

- f) There is a stronger emphasis on the necessity of mixing the right quantity of ingredients.
- g) As gur is not as widely available in all seasons, mothers are instructed to use sugar in case of non-availability of gur.

D: Pilot Testing of Child Survival Programme:

OIEP has focussed intervention in single aspect - Diarrhoea. Experience has shown the value and need to broaden OIEP's approach. To design a new health approach towards the larger goal of a more comprehensive health care system, a pilot project was undertaken from October 1985 in two unions of Sonargaon upazila of Narayanganj district. The activities are (i) LGS teaching by group approach, (ii) Immunization by DPT/Polio, TT, Measles and BCG, (iii) TBA's training, (iv) Awareness on colostrum and supplementary feeding etc.

On the basis of experience in Sonargaon, the Child Survival Programme (CSP), is scheduled to be started from October, 1986. Prior to this, 2 (two) upazilas - Santhia of panna and Sataria of Manikganj districts were undertaken from February, 1986 as a broad-based pilot testing in consonance to proposed CSP where all the elements of Primary Health Care (PHC) shall be tested. The result of pilot PHC will be the guidelines of future development of PHC programme.

E: Others:

To prevent disease, people are advised to drink Tube-Well or boiled water. Boiling is a problem to rural people, due to the cost and inavailability of fuel. Tubewells are also not always in the reach of all, or if available, are sometimes out of order. Under such circumstances, white vitroil can serve the purpose, as it kills the germs and purifies the water. Rural people are acquainted with white vitroil, as in many places they use it for cleaning. 1 (one) pinch of powdered vitroil is enough to make approximately 14 litres (15 seers) of water germ-free if kept for 4-6 hours. For preserving drinking water villagers use earthen jars, which generally hold 15 litres. Accordingly, people are advised to use this alternative.

Under the Concentrated Reinforcement Programme (CRP) women health cadres were assigned to (village shebika) promote health education. The strategy is to select one woman out of twenty households and to give her intensive training for seven days. It was found after monitoring, that most of the cadres took little initiative to promote what they had learnt, although they retained the knowledge and practised it in their own homes. The practice could be extended if more were trained, and so training of one per ten households was started which necessitated the redesigning of the training module.

Until December 1984, only professional Traditional Birth Attendants (TBAs) were given training. Only 1-2 could be trained in a village. Actually deliveries are mostly attended by near relatives

who have certain traditional skills, so a decision was taken to train non-professionals as well.

Programme Organisers (POs) in the Concentrated Reinforcement Programme were jointly responsible for overall performance. To obtain quality work and proper and constant follow-up, each ward's (a union comprises of three wards) responsibility was given to an individual PO.

6. OPERATIONAL ACHIEVEMENTS

A total of 4,983,793 households have been visited during the phase (see Annexure 2). The average number of households visited by an ORV was 11.59 per day and a total of 2,04,288 were monitored (see Annexure 2). Upto the end of the phase 166 upazilas, 1710 union and 26,922 villages under 25 districts have been covered (see annexure 2).

Because of strategic change to group teaching method as stated earlier the households originally proposed to be covered by September 1986 was actually completed three months earlier. And thus OTEP covered the additional districts of Noakhali, Laxmipur and Feni in southern Bangladesh from July to September 1986 which was funded out of savings. The households visited (in para 1) also includes the coverage of these three districts. More than 2,02,551 patients were treated. This includes also patients treated during epidemics (see annexure 6).

As primary and secondary schools were two main forums, a total of 12,634 primary and 2,749 secondary schools were brought under the programme having 1,290,580 participants (see annexure 5). 63,628 and 1,356 seminars of males and village doctors were conducted involving 8,12,238 participants. The figures in respects of all the forums can be had from annexure 6. Under CRP, 67 unions were covered. More than 327 thousand TT shots were given out of which two shots were given to 155,373 women. The activities on TT can be had from annexure 4.

More than nine thousand TBA's and 26,013 village shebikas were trained while 61,885 diarrhoeal patients were treated under CRP activities for the period July '85 to June '86 (see annexure 3).

7. PUBLICITY

The objectives of the programme publicity are:

- a. To reinforce the field activities by creating general awareness.
- b. To create favourable sentiments for OTEP. Materials have been developed from field experiences while various available media are being explored and utilised to

disseminate the information and knowledge to the population in general. Publicity activities included:

- a. Radio : two regular shots on diarrhoea and ORS and two new messages on water use and hand washing were broadcast daily.
- b. Television : similar messages were repeated on TV everyday.
- c. Posters : Approximately 2,50,000 posters at the rate of 150 per union were distributed and pasted to different institutions, schools, shops, market places, etc.
- d. Folders : About 1,02,000 folders were distributed to local elites and influentials.
- e. Leaflets : Over 9,00,000 copies of the leaflets on seven points to Remember' were distributed to the literate population and to schools.
- f. Poster Calendar Cup routine : Some 1,00,000 copies were given to students who had been involved with OTEP.
- g. Paper advertisements : OTEP placed advertisements in news papers/magazines/periodicals to disseminate information and knowledge on LGS.
- h. Slide on OTEP : A 10 minutes slides on OTEP showing all the major activities right from ORW field operation.

It has been observed that OTEP advertisement have reached a large section of the target audience and made them familiar with LGS and other relevant information. A study was conducted by M/s. Mitra and Associates, appointed by UNICEF, shows that even 78% population of non-OTEP area know the messages of LGS and can tell how to prepare the mixture.

8. TRAINING AND RECRUITMENT

The recruitment of staff for various positions to replace and open new areas continued throughout the phase.

The successful implementation of a programme depends on the worker's performance, calls for a broad-based training to provide necessary knowledge, skills and attitude. The training during the phase covers:

- 1) Principles and techniques of health communication
- 2) Planning and management
- 3) Organisational development
- 4) Scientific knowledge.

Training to all levels of workers from time to time on the above subjects are provided by BRAC's Training and Resource Centre (TARC), ICDDR,B Dhaka and Expanded programme on Immunization (EPI) Dhaka. All the Area Managers completed the course of intensive training on, Management Development from July-Dec. '85 arranged by TARC. In addition, Refreshers Course every after three months were held.

One of the largest tasks of CSP is the training of various groups of field managers and workers before the programme begins. Training needs are OIT Immunization, Vitamin -A and the primary Health Care. Training to almost all workers were imparted during OTEP period under different categories.

9. DIFFERENT STUDIES AND EVALUATION

A. Rice based ORS:

A recent innovation of ICDDR,B, Dhaka is cereal-based ORS (rice for Bangladesh) which has proved scientifically much more effective than those of Sucrose and Glucose ORS. But no research was done to see its social acceptance regarding safety, preparation, availability of ingredients, time coverage, cost effectiveness etc. BRAC, on request from ICDDR,B has undertaken a short study in 2 villages of Laxmipur district at the end of OTEP to devise teaching methodology. The detailed study will be conducted under CSP.

B. Preliminary evaluation:

A preliminary evaluation of the Concentrated Reinforcement programme (CRP) was conducted by three evaluators appointed by UNICEF in 1985. The study includes impact, staff training, performance, TBA training, sustainability, constraints to outcome, etc.

C. External Evaluation:

A 2-week evaluation of the programme was carried out in January-February 1986 at the instance of donor agencies. The conclusion and recommendations are attached. In addition, review meeting with donor's representatives and experts were held periodically to receive valuable suggestion for further improvement of the programme.

1872X10X150

10. PERSONNEL

At the start of phase - II approximately 80% of ORWs working in phase - I remained with the programme. With the recruitment of the new staff the number of ORWs and P.s increased from 750 to 1074 at the end of the phase. Details are given in annexure II.

The programme area was divided into three Regions, each region supervised by a Regional Manager. The Senior Regional Manager was promoted and redesignated as programme Manager. By the mid '85 two Medical Officers were appointed.

11. IMPACT EVALUATION

Three types of evaluation studies have been conducted during the phase II of OTEP. The programme has a built in evaluation system which assesses the programme through regular monitoring of teaching quality of ORWs and by investigating the extent of utilization of the method. These results are constantly feedback to the programme for improvement of programme quality.

The second process of evaluation which is known as "impact evaluation" was conducted by the Research and Evaluation Division, an independent unit within BRAC. The activities on impact evaluation during the period October '83 to September '86 are summarised below:

Phase - I

A draft report of the mortality impact study of phase I was prepared. This report is now being rewritten for final publication.

Phase - II

Data collection for the second phase was started in Nov. 1983 and completed as per schedule in 1986. A total of 1,25,000 households were covered during this period. The data processing is being done at BRAC's own Computer. The progress of data processing works is shown in the annexure 7.

Thirdly, an evaluation study in collaboration with the London School of Hygiene and Tropical Medicine was carried out emphasising on some implementation variables such as usage, safety, perception, cost etc. Results from this evaluation have been reported through the following:

1. Chowdhury, AMR. Evaluation of a community based Oral Rehydration Programme in rural Bangladesh. PhD thesis University of London 1986.
2. Chowdhury, AMR. Evaluation ORT Programmes: Indicators for use and safety. Health Policy and Planning 1: 250-259, 1986.

3. Chowdhury AMR and Vaughan, JP. Diarrhoea Perceptions and use of homemade ORT: a case study from Bangladesh (submitted)
4. Chowdhury, AMR Vaughan JP and Abed, FH. use and safety of homemade ORS: an epidemiological evaluation from Bangladesh (Prepared for publication)
5. Chowdhury, AMR Vaughan, JP and Abed, FH. An evaluation of the BRAC ORT Programme in Bangladesh. (prepared for publication).

In these studies it is found that the usage of LGS varied from 2 percent to 55 percent depending on how usage is defined and that the usage in severe type of diarrhoea was highest (upto 55%) which is significant as these diarrhoeas lead to dehydration and death with respect to the safety of the prepared solution, the evaluation found that the proportion of solution with sodium concentration in the "dangerous" zone increased as the time between teaching and the data collection increased. The evaluation also found that the perception of the people about diarrhoea and its treatment was not adequately studied which led to a low usage of LGS. Cost of the programme was also studied and the BRAC programme was found to be most cost effective when the number of mother taught per unit cost is considered.

Apart from these evaluation studies, the Research and Evaluation Division conducted some more studies during this period. They are as follows:

1. A note on availability of different kinds of sugar in rural Bangladesh.
2. A comparative study of diarrhoeal morbidity and LGS use pattern in BRAC's CRP and NON-CRP areas.
3. An Investigation of Motivation and Essential qualities of ORTs.
4. Programme Organisers of BRAC's Oral Therapy Extension Programme: A study on their performance.
5. Some preliminary finding from BRAC's ORT Programme.
6. Primary health care in Bangladesh : BRAC's intervention.

The above were either published from BRAC as mimeographed report or were presented in seminars.

12. CHLORIDE CONCENTRATION

Samples of lobo gur solution (LGS) by the rural women in the Programme area were analysed to assess the concentration of Sodium/Chloride and Glucose. The safe and effective range of Sodium/Chloride in LGS is about 30-99 mmol/L. Potassium, another electrolyte component lost in the stool during diarrhoea, is present in small amounts in gur.

The best range for potassium in LGS is about 15-25 mmol/L. The optimum concentration of glucose is 110 mmol/L, but the range between 60 to 160 mmol/L is considered effective.

The analysis of the LGS samples collected by the Reinforcement team were done to ensure the safety and effectiveness of the teaching.

The result of chloride analysis for the Phase II showed that 90.5 percent of the samples were within the safe and effective range of chloride concentrations (see graphs in Annexure 8 & 9). For quality control checking 9.8 per cent (16,988 samples) of the analysed samples were randomly selected for re-analysis at the Bio-chemistry Branch of the International centre for Diarrhoeal Disease Research, Bangladesh (ICDDR'B). It was found that 91.6 per cent of the samples were within 10 per cent variation. In addition, 971 samples were analysed for sodium/potassium and 850 for Glucose concentration. The result showed that 91.5 per cent of the samples were within the range of 30-99 mmol/L for sodium, 68 per cent of the samples were within the range of 15-25 mmol/L for potassium and about 75 per cent within the range of 60 to 160 mmol/L for Glucose.

Total sample analysed at Phase II.

Chloride (Cl-) at field	=	1,72,750
Chloride re-analysed at ICDDR'B	=	18,988
Sodium (Na+)	=	971
Potassium	=	971
Glucose	=	850

Distribution of chloride concentration as observed in the programme areas along with sample statistics at Phase II

Chloride concentration safe and effectiveness Period Phase II
in mmol/L

30	Safe but less effective	1.4
30-99	Safe and effective	90.5
100-119	Effective but potentially dangerous	5.7
120 and over	Dangerous	2.4
Total Sample		1,72,750
Mean (x)		68.1
S.D.		24.9

13. USAGE SURVEY

The LGS usage survey has been undertaken to monitor that pattern of usage rates. About one month after the teaching the programme areas are visited by the OTEP Re-inforcement Team. The team randomly selects about 300 households in one union to assess the extent of LGS use during the preceding 15 days. The pattern of LGS in this phase during Dec. 1983 to Aug. 1986 is shown in the annexure 10.

The highest and lowest usage rate of ORS found in this phase were 46.9% and 29.6% respectively.

14. CONCLUSION

Oral Therapy Extension Programme (OTEP) started in 1980, has completed two phases of activities in teaching a simple oral rehydration method to rural women. The six years of OTEP has taken it to the doorsteps of 7.4 million households, about two-third of Bangladesh's total households. No other programme in Bangladesh except the Malaria and Small pox eradication programme has been so successful in this respect. Evidences suggest that mothers in these households can prepare the solution and use it for their children's diarrhoeas.

The history of OTEP is an unique example of a mass health education programme. The history of its development from the pilot phase to the completion of the second phase is an example for any third world country and particularly for an LDC.

Results available so far from this programme are, however, not all optimistic. The excellent ability of mothers in preparing a "safe and effective" ORT solution is one aspect. We are aware of the problems faced by this programme in getting a higher usage rate. It is now clear that only teaching mothers about a technology is probably not enough to bring about a drastic change in their health behaviour. Other related factors such as the cultural perception, role and importance of woman in family, attitude of other players such as local practitioners, etc. are all very important.

BRAC has now realised that a change in health behaviour is constrained by so many other factors including time. In spite of that, BRAC sees the ultimate solution in that change. That is why, BRAC has now decided to include other health educations into its fold. The public sector health programme is suffering from many inadequacies and BRAC has decided to extend its strength to help the government in implementing its various health programmes such as immunization and vitamin A supplementation. All these new thoughts are being brought together into a comprehensive Child Survival Programme. This programme, if successful, can make a much greater impact on the overall health status of the community. We look forward for a successful programme.

SEVEN POINTS TO REMEMBER

1. Loose motion, watery diarrhoea, infantile diarrhoea, cholera and dysentery, all these are called DIARRHOEA in general. Water and salt contents drain out from the body with each loose motion. If such loose motions continue for sometime, symptoms like thirst, loss of appetite, vomiting, indigestion and spasms of hands - legs etc. may set in. Diarrhoea leads to malnutrition and sometimes to death. So necessary measures should be taken in time to save the diarrhoea patients.
2. To save ourselves from this disease, we should drink tubewell, tap water, in case of nonavailability of such water, water from other sources should be boiled and then cooled before use. Rotten food should not be eaten. All foodstuffs should be covered well so that flies can not sit on them. Hands and mouth should be washed by soap or pure water before eating. Hands should be washed by soap or ash after return from latrine. Remember that breast milk is harmless. The children who suck breast milk from birth rarely have diarrhoea (or suffers from diarrhoea).
3. The treatment of loose motion/diarrhoea is to replenish by any means the water and salt lost. The easiest treatment is to administer oral saline. One can easily prepare this saline at home by using water, salt, molasses or sugar. In addition oral saline should be administered in case of dysentery and consultation with doctor is advised.

contd.....P/2.

4. Oral saline is to be prepared by mixing a pinch of salt with the help of tips of three fingers and a fistful of molasses in half a seer of water well stirred. Care should be taken to mix salt, molasses and water in right proportion. A fistful of sugar can be used if molasses is not available.
5. Oral saline should be administered immediately after the first loose motion. It may be difficult to replenish the lost water and salt if saline is administered after 2/3 loose motions. As a result, patient will be more dehydrated i.e. eyes will be sunken, tongue dry, fontanelle of children sunken and the patient will become too weak. In such cases, patient should be referred to a doctor.
6. Adult patients should be given oral saline at the rate of half a seer at a time after each loose motion. The children should be given only as much as they want, but at frequent intervals. Once saline is prepared, it may be kept for 6 hours only.
7. Advice on nutrition: During the disease, the patient should be given to take plenty of water and foodstuffs like rice, curry along with oral saline. In case of children, breast milk/normal diet should be continued. Increased amount of food at least for seven days after recovery should be given. This will prevent malnutrition and weakness of the patient and minimise him/her falling victim to the disease again.

DIARRHOEA IS A DANGEROUS DISEASE, PREVENT IT.

Coverage by Area, Upazila, Union, Village and household-wise
from October '83 to Sept. '86

Area	No. of Upazilas covered	No. of Unions covered	No. of villages covered	No. of rural household	No. of rural households visited	% of rural households visited	No. of households monitored
1. Comilla	11	142	3,133	5,59,721	4,39,126	78.45	20,711
2. Narsingdi	6	70	1,061	2,28,068	1,97,278	86.49	9,579
3. Tangail	11	100	2,221	4,01,780	3,49,326	86.94	16,785
4. Mymensingh	12	144	2,304	5,62,456	4,75,196	88.11	20,083
5. Barisal	9	78	972	3,03,191	2,29,398	75.66	11,804
6. Dhaka	6	55	320	2,04,370	1,65,789	81.13	04,521
7. Patuakhali	6	61	813	1,87,949	1,54,232	82.06	7,946
8. Kishoregonj	13	105	1,222	3,32,790	2,81,756	84.66	14,302
9. Brahmanbaria	7	97	1,245	2,82,716	2,42,448	85.76	12,752
10. Gazipur	5	44	1,010	1,83,667	1,58,877	86.50	7,936
11. Barguna	5	40	447	1,22,477	1,05,481	86.12	5,366
12. Pirojpur	7	59	602	1,94,985	1,52,561	78.24	7,300
13. Hanikgonj	7	65	1,561	1,80,813	1,43,147	79.17	7,225
14. Dhaka	5	61	1,354	1,77,609	1,42,884	80.44	6,800
15. Jhalokati	4	30	457	94,816	72,156	76.01	4,361
16. Chandpur	7	75	1,039	3,13,330	2,06,757	65.99	7,292
17. Netrakona	9	87	1,772	2,61,943	2,18,650	71.50	5,473
18. Munshigonj	6	70	830	1,71,424	1,41,508	82.55	3,726
19. Jamalpur	7	67	925	2,64,140	2,32,868	88.16	8,486
20. Sherpur	5	43	516	1,63,064	1,56,815	96.17	7,203
21. Narayanganj	5	44	1,127	1,65,156	1,55,309	94.04	4,812
22. Ganthi	-	-	-	-	-	-	-
23. Noakhali	6	80	955	3,06,110	2,50,080	81.69	2,094
24. Laxmipur	4	48	477	1,96,872	1,60,594	81.57	668
25. Feni	5	45	559	1,53,204	1,33,556	87.18	2,610
Total:	168	1,710	26,922	60,12,651	49,83,793	82.89	2,01,268

Statistical report on CRP from Jan '84 to June '86

Area	<u>Dai trained</u>	<u>Shebika trained</u>	<u>Colostrum feeding</u>	<u>Patient treated</u>	<u>Health meeting number</u>	<u>participants</u>	<u>Chula</u>	<u>Supplementary diet</u>
1. Gomilla	795	2564	1178	7086	8553	68569	1052	1081
2. Harsingdi	224	402	952	2066	78	1759	969	1137
3. Tangail	586	2757	906	5168	3115	39028	1237	3163
4. Mynensingh	859	3006	1878	2529	1079	15294	1240	1639
5. Barisal	892	2552	1137	3102	2540	83726	797	1837
6. Ishla	355	812	817	2417	429	5998	335	3855
7. Patuakhali	397	754	1015	3444	1998	21199	1148	1074
8. Kishoregonj	767	3281	1409	5020	1713	27709	1461	1323
9. Brahmanbaria	311	1221	1095	7899	8354	155635	696	1352
10. Gazipur	346	733	538	1435	1863	17403	1215	989
11. Barguna	615	1395	507	3192	786	13248	1030	710
12. Pirojpur	449	1544	836	2641	361	4871	769	567
13. Barikgonj	354	2106	811	5991	1048	17466	1118	818
14. Dhaka	151	1164	342	900	1332	12686	1187	458
15. Jhalokati	217	1327	529	733	558	6960	133	350
16. Chandpur	266	1295	564	4288	8504	81684	389	445
17. Netrakona	518	-	792	1568	1845	21465	-	1514
18. Munshigonj	185	-	120	362	770	8307	-	204
19. Jamalpur	308	-	620	684	2909	31218	-	1146
20. Sherpur	292	-	589	334	1216	15958	2	920
21. Narayanganj	275	-	437	1026	1419	30216	27	541
Total :	9162	26913	17072	61885	50470	680379	14805	25123

Area-wise Immunisation Coverage Report
from July '85 to June '86

Area	No. of Upazila	No. of Union	1st shot Covered	2nd shot Covered	Other		Total shot
					1st	2nd	
1. Comilla	3	3	7,537	7,171	-	-	14,708
2. Chandpur	7	7	20,282	19,942	380	366	40,970
3. Manikgonj	3	3	7,463	7,126	-	-	14,589
4. Kishoregonj	4	4	10,420	9,313	125	97	19,955
5. Tangail	2	2	3,491	3,262	-	-	6,753
6. Dhaka	3	3	7,554	7,129	47	47	14,777
7. Nymensingh	3	3	6,710	6,309	370	298	13,687
8. Ferojpur	4	4	8,320	6,727	26	5	15,078
9. Jhalokati	4	4	7,217	6,089	80	67	13,453
10. Barguna	2	2	3,853	3,518	-	-	7,401
11. Metrokona	10	10	23,596	22,775	2,393	2,093	50,857
12. Sherpur	5	5	13,101	12,654	-	-	25,755
13. Jamalpur	6	6	16,887	16,310	-	-	33,197
14. Munshigonj	6	6	13,796	13,356	533	307	27,992
15. Narayanganj	5	5	14,374	13,662	7	7	28,050
Total :	67	67	1,64,601	1,55,373	3,961	3,287	3,27,222

Areswise School Coverage Report
from October '83 to September 1986.

Area	No. of School Covered		No. of participants		No. of Cadre Selected
	Primary	High	Students	Teacher	
1. Coimbla	944	174	95,321	28,742	12,753
2. Narsingdi	509	98	35,663	9,416	6,191
3. Tangail	771	201	90,405	4,591	11,682
4. Mymensingh	911	184	76,185	4,450	11,792
5. Barisal	830	256	91,386	4,986	10,119
6. Bhola	352	64	24,218	1,665	4,354
7. Patuakhali	532	133	40,034	3,009	6,873
8. Kishoregonj	653	111	48,106	3,095	6,817
9. Brahmanbaria	590	101	58,370	2,949	7,783
10. Jhalpur	484	150	67,426	3,329	6,389
11. Baruana	256	68	19,312	1,336	2,583
12. Pirojpur	380	134	35,517	2,149	4,036
13. Hanikgonj	417	77	37,510	2,255	5,241
14. Dhaka	416	72	53,699	1,526	4,730
15. Jhalokati	350	111	34,481	2,190	3,737
16. Chandpur	528	87	74,008	3,013	6,340
17. Hatrakona	391	44	27,664	1,555	3,958
18. Hanahigonj	421	55	43,039	1,652	3,765
19. Jamalpur	498	135	51,594	2,507	5,131
20. Dharpur	375	77	30,591	1,707	3,397
21. Narayngonj	523	68	42,831	2,254	3,315
22. Kawkhali	676	158	95,339	3,788	7,039
23. Lakshimpur	428	88	54,347	2,381	5,093
24. Feni	399	103	63,534	2,204	4,803
Total	12,634	2,749	12,90,580	94,778	1,47,926

Report on different forums
from October '83 to Sept. '86

Annexure 6

Area	Male seminar		Quack seminar		Number	Mosque forum		Patient Cared		Total
	Number	Participant	Number	Participant		Participant	Epidemic	General		
1. Comilla	5,482	70,142	78	2,301	618	26,819	452	25,351	25,806	
2. Narsingdi	2,749	36,938	73	775	576	19,338	233	11,506	11,739	
3. Tangail	10,324	1,15,556	141	2,493	874	48,345	838	26,375	27,213	
4. Mymensingh	3,072	46,088	120	1,518	2,680	30,308	148	12,773	12,921	
5. Barisal	2,549	22,162	85	1,182	405	13,140	522	12,042	12,564	
6. Bhola	3,113	39,091	62	832	615	31,555	299	9,629	9,928	
7. Patuakhali	2,782	34,830	52	790	511	16,645	406	10,102	10,508	
8. Kishoreganj	2,882	47,945	91	1,597	518	18,602	60	9,812	9,872	
9. Brahmanbaria	7,656	84,647	70	1,302	609	30,715	115	10,818	10,933	
10. Gazipur	2,411	31,246	31	639	304	13,720	18	10,151	10,169	
11. Barguna	1,222	16,371	33	634	194	5,926	-	5,614	5,614	
12. Pirojpur	958	10,434	46	556	237	7,314	-	2,996	2,996	
13. Manikgonj	504	8,185	47	588	312	9,008	50	7,128	7,176	
14. Dhaka	967	12,355	45	436	80	6,210	-	5,853	5,853	
15. Jhaloka I	424	4,776	20	256	64	2,211	244	1,789	2,033	
16. Chandpur	2,953	29,024	37	555	188	9,835	-	4,322	4,322	
17. Netrokona	2,222	27,727	57	1,199	268	10,137	7	3,714	3,721	
18. Munshigonj	699	3,460	43	616	67	2,183	43	3,345	3,303	
19. Jamalpur	2,890	34,970	56	1,065	311	13,599	-	8,134	8,134	
20. Sherpur	2,469	30,153	29	483	119	5,552	-	5,280	5,280	
21. Narayanganj	391	8,465	38	504	211	8,289	-	3,846	3,846	
22. Noakhali	2,624	33,208	54	1,381	404	23,507	-	3,354	3,354	
23. Laxmipur	955	12,637	24	587	150	9,928	-	2,954	2,954	
24. Feni	1,330	29,052	21	487	45	2,527	-	2,225	2,225	
Total	63,628	7,89,462	1,356	22,776	10,360	3,65,413	3,435	1,99,116	202,551	

H O U R L Y L I T T E R A T U R E
STATUS OF DIFFERENT OPERATIONS AT A GLANCE AS ON NOV.83 TO OCT.'86

Annexure-7

Upazila	Barisal (Kotwali)	Chandpur (Kotwali)	Kasba (Brahmanbaria)	Melandah (Jamalpur)	Madhupur (Tangail)	Araihazar (Dhaka)	Dabidwar (Comilla)	Islampur (Jamalpur)
one	DC	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
	E	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
	C	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
	CE & C	XXXXXXXXXX	XXXXXXXXXX	////////////////	////////////////	////////////////	////////////////	XXXXXXXXXX
low-up 1	W	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
	DC	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
	E	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
	C	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
low-up 2	CE & C	////////////////	////////////////	////////////////	////////////////	////////////////	////////////////	XXXXXXXXXX
	W	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
	DC	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
	E	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
low-up 3	C	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
	CE & C	////////////////	////////////////	////////////////	////////////////	////////////////	////////////////	XXXXXXXXXX
	W	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
	DC	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
Follow-up 4	E	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
	C	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
	CE & C	////////////////	////////////////	////////////////	////////////////	////////////////	////////////////	XXXXXXXXXX
	W	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX

W Writing
 DC Data Collection
 E Editing
 C Coding
 CE & C Computer Entry & Cleaning.

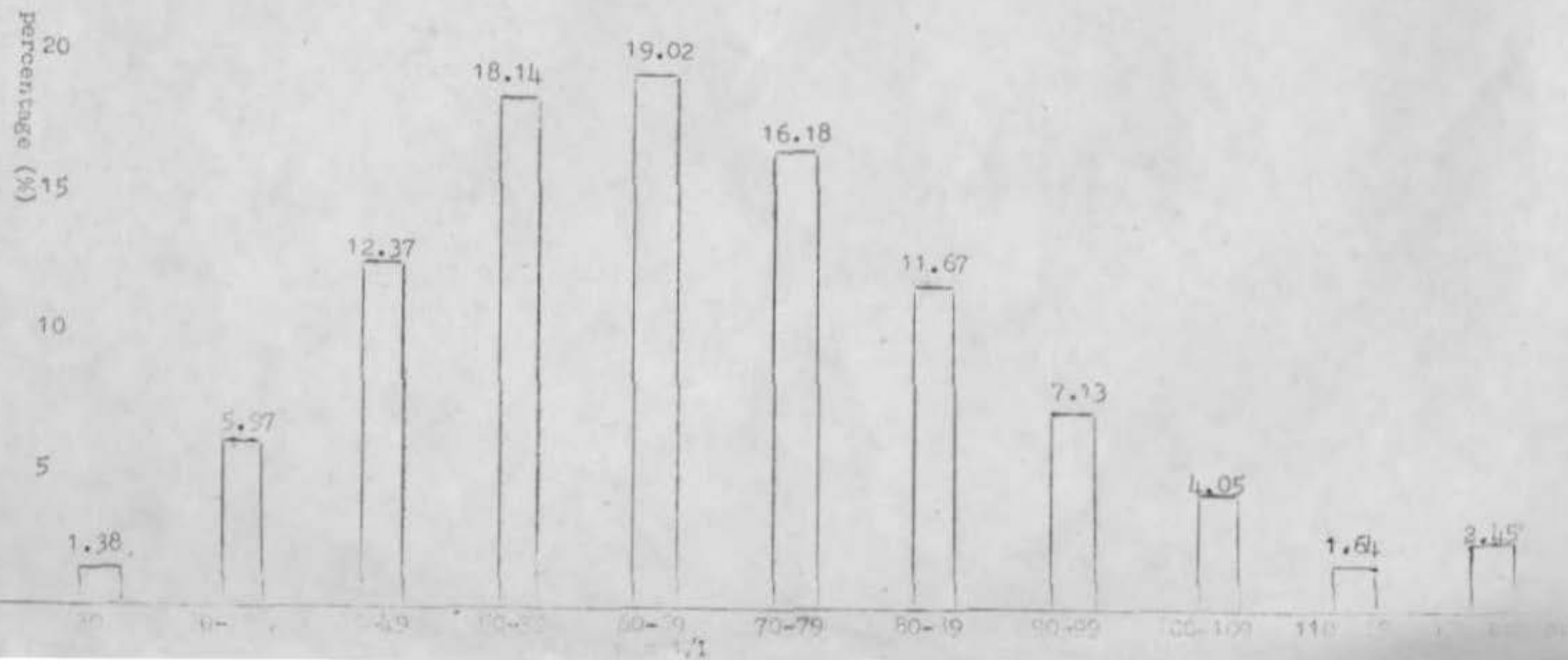
XXXX Completed
//// Under Process
 Not Yet Started

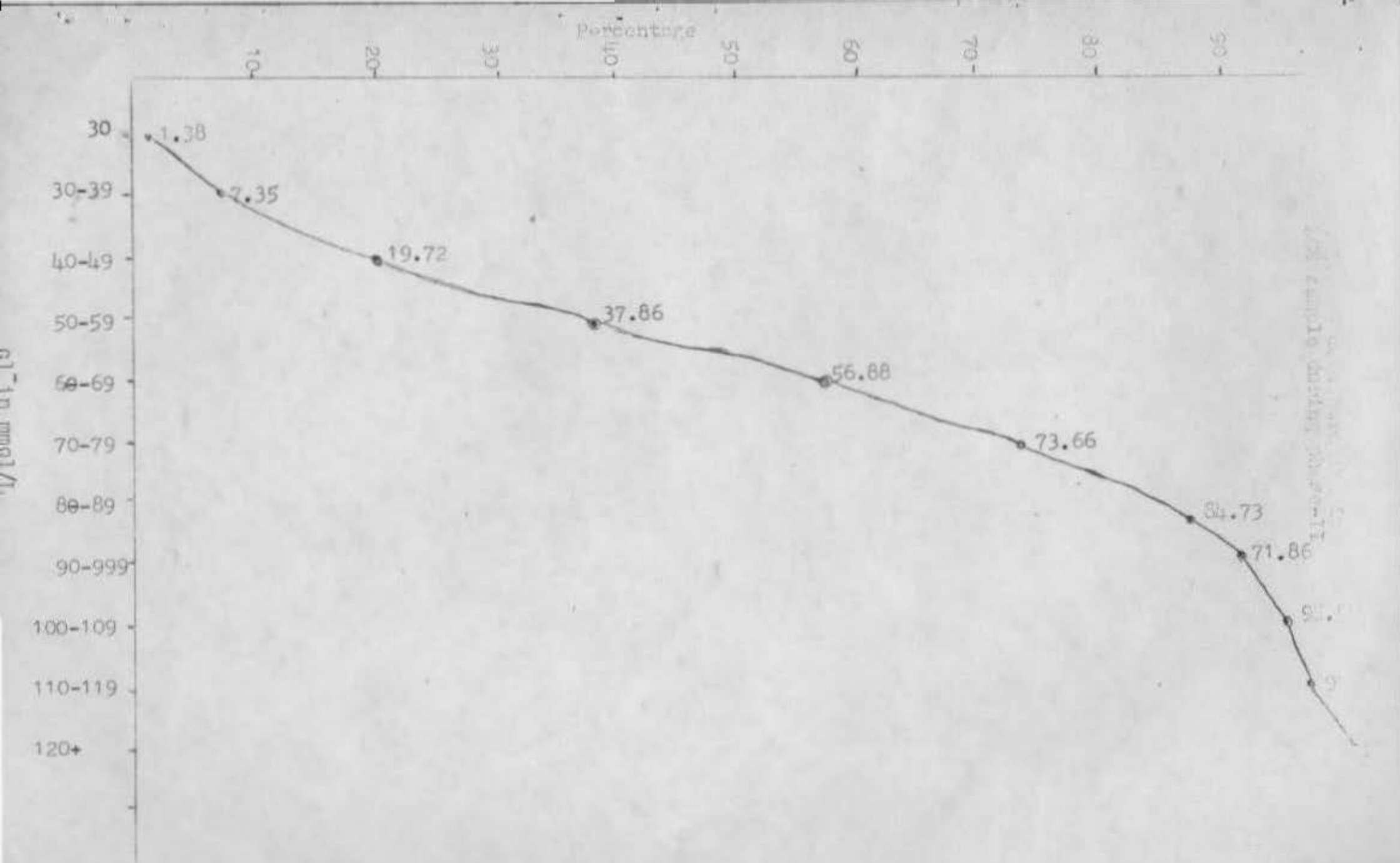
DIAGRAM SHOWING CHLORIDE CONCENTRATION IN LGS SAMPLE PHASE II

Total No. of Sample = 172750

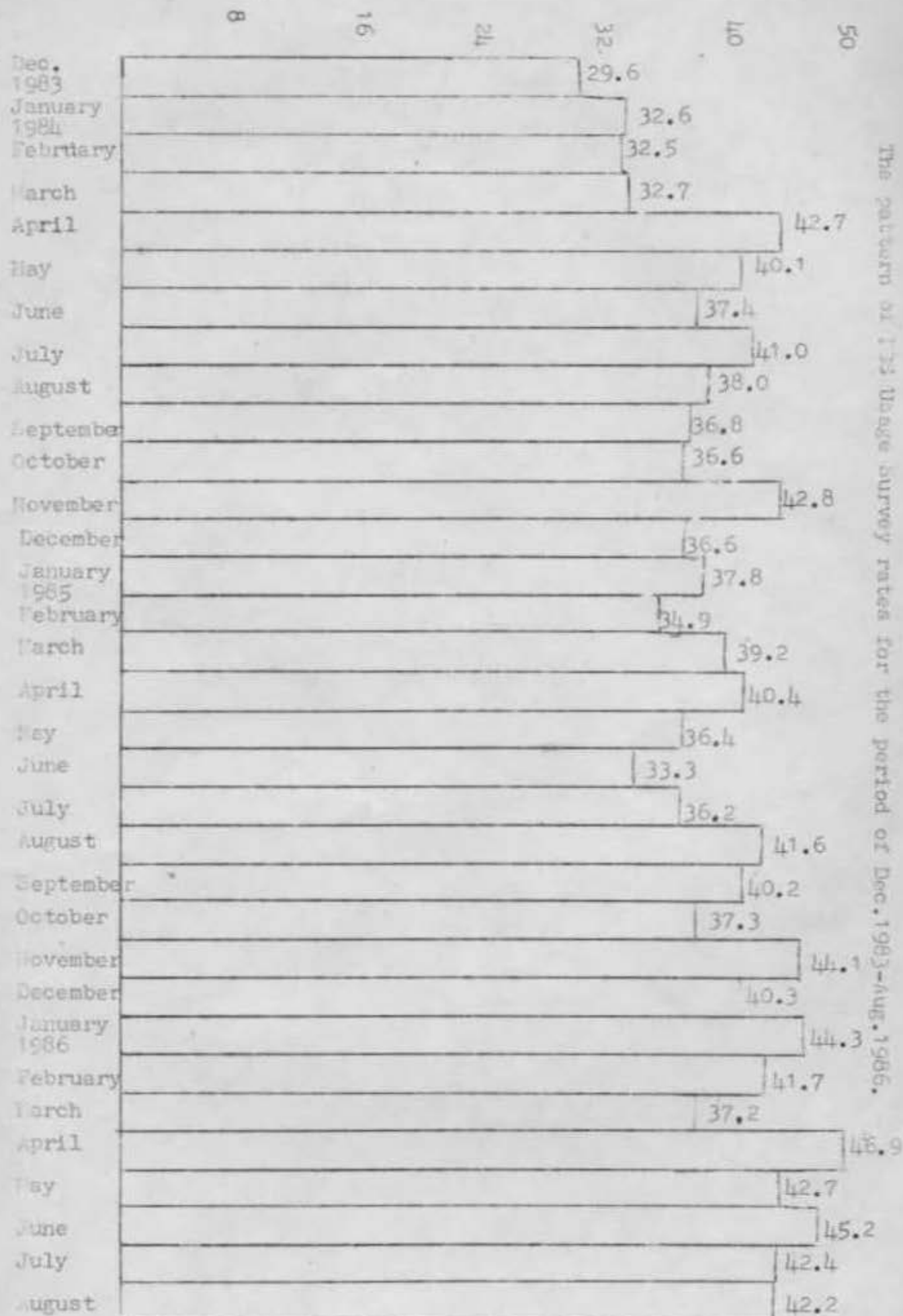
Mean(X) = 68.11

Standard deviation = 24.68





USAGE SURVEY RESULTS (%)



The pattern of 125 Usage survey rates for the period of Dec. 1983-Aug. 1986.

Field Personnel and Staff Position as on September 1986.

1. No. of ORMS	679
2. No. of Programme Organizer	395
3. No. of Area Manager	11
4. No. of Accountant	11
5. No. of Laboratory Assistant	5
6. No. of Office Assistant	11
7. No. of Service Staff	138

Total 1250

1. CONCLUSION AND RECOMMENDATIONS

We were requested to look at the achievements of OTEP and at the reasons for its positive results or possible short-comings as well as to look at the proposed programme for the future. Thanks to the helpful cooperation of BRAC staff we gained many insights. However, we were not in a position to cover all relevant aspects, especially since the new programme raises complex questions. The observations, readings and discussions lead us to make the following concluding remarks and recommendations. We are well aware that several of our recommendations are on the way to being implemented.

1.1 The BRAC - OTEP approach

1.1.1 What could be called the "OTEP Method" - the concerted delivery of a clear message in a few points, with a strong emphasis on interpersonal contracts with the mothers, and motivation of the male community backed up by mass media - has shown remarkable effectiveness in teaching the LGS - OTEP (oral rehydration therapy based on lobo-gur solution). We strongly feel this method has great potentialities in other fields as well.

1.1.2 The managerial skills, the strong commitment of its permanent staff and of its female project staff, the organization has been able to build as well as its capacity for self-evaluation and its innovative approach account for the good results of OTEP and offer favourable conditions for the implementation of a new programme built upon the experiences of OTEP Phase I and II.

1.2 ORT Teaching

1.2.1 The planned revision of the "7 points" should allow to :

- . reintroduce in an appropriate manner the stress on the right proportion of salt;
- . indicate when referral is necessary (see also below on the recognition of signs of dehydration) without introducing the suspicion that LGS is not efficient;
- . avoid possible confusion in the understanding of loose motion, diarrhoea and dehydration;
- . promote the use of LGS for all types of diarrhoea.

1.2.2 BRAC should examine how it could introduce the recognition of a dangerous state of dehydration in order to ensure timely referral if necessary.

1.2.3 Particular attention should be paid to the following aspects during the follow-up activities:

- . timely and proper use of LGS;
- . correct amount of ORS, correct frequency of its use;
- . the message on continuous breastfeeding and normal feeding as well as the message on good feeding after the illness;
- . prevention (see also below point 5).

1.2.4 It is suggested that BRAC seek contacts with pharmacists and physicians in order to sensitize them on prescription practices for diarrhoeas.

1.3. Rice powder-based ORS

Methods of introducing rice powder-based ORS in the programme should be developed and tested in view of a possible generalization.

1.4 Usage of ORT

Particular attention should be given to find out what factors favour usage of ORT and what factors prevent the families from using ORT, and if possible ORT teaching should be adapted accordingly.

1.5 Prevention

Increased attention should be given to the promotion of preventive methods which rural families can practice, including possibly handwashing with soap.

1.6 CSP (Child Survival Programme)

1.6.1 We are convinced that other critical child and maternal health aspects should be added to the ORT teaching. The choice of the proposed interventions seems appropriate under certain conditions stated below.

1.6.2 In order to adapt the activities and the methods and to be able to promote the behavioural changes, BRAC, with the help of RED and using such techniques as the focus group method, should strengthen the capacities and capabilities of OTEP-CSP to assess the anthropological and socio-cultural aspects in the fields of CSP, in particular child birth, child care, child nutrition and maternal nutrition.

1.6.3 BRAC should use the contacts of the GRWs with the families to assess the local situations in order to adapt the messages and the methods to be promoted to the specific conditions, beliefs and practices prevailing in the different regions.

1.6.4 Since the behavioural changes and the institutionalization which are needed cannot be achieved in a short period, sufficient time must be allowed for the CSP team to prepare these changes while working in the respective villages. Moreover the team's workload is heavy. We feel that four months is too tight. We strongly recommend, therefore, that BRAC, with the advice of experienced people in Bangladesh, develop and test the methods of approach as well as find the optimum duration of the active presence of the CSP teams in the unions while giving due attention to the preparation of the follow-up. It is suggested that the initial phase of the full CSP be restricted to one district which would be an intensive learning experience. The activities of the other CSP areas would be restricted in the meanwhile to ORT and, if EPI collaboration can be expected, immunization.

1.6.5 Particular attention must be given to process and institutional development issues, both at the community level and with government infrastructure.

1.7 Definition of messages

1.7.1 We feel that the method developed by OTEP for ORT should be used especially for maternal health care (maternal nutrition, pregnancy and delivery) and for child nutrition.

1.7.2 The possibility of supporting the interpersonal delivery of the messages by mass communication should be explored, particularly for maternal and child nutrition, safe delivery and immunization (and possibly other subjects related to child survival such as the age of the girl at marriage).

1.8 Nutrition

It is suggested that nutrition messages be promoted in the dai training as well as in other contacts, and that they be focused on the following 3, possibly 4, points:

- . maternal nutrition;
- . breastfeeding and colostrum;
- . supplementary feeding (timely introduction and quality of food given), dai training;
- . possibly also feeding after illness.

1.9 Vitamin 'A'

It is suggested that BRAC, with the help in particular of Helen Keller International, actively investigate the possibilities to promote the daily use of leaf vegetables, while limiting the distribution of Vitamin 'A' capsules to actual cases of xerophthalmia and to mothers after child birth.

1.10 Dai Training (Traditional Birth Attendant)

We are convinced of the crucial importance for child survival of the mother's health especially during pregnancy and delivery. Dais can play an important role in this respect. Rather than having a one shot training of the dais without follow-up, we suggest that BRAC examine the possibility of setting up a system of dai training and follow-up together with the extension of the functions of the dais. The extended functions would include, besides the delivery, some elements of pre and post-natal care (e.g. pre-natal care: mainly risk detection with simple indicators and advice for nutrition of the pregnant mother; delivery: improvement of hygiene and breast-feeding in the first hours after birth; post-natal care: child care, nutrition of mother, advice in case the mother has insufficient milk). The remuneration of the dais by the families and possibly by CSP (later on upazila) may have to be considered, or another way of recognition of their services.

1.11 Immunization

- 1.11.1 Follow-up action should be ensured, preferably by EPI, possibly with the help of BRAC for monitoring.
- 1.11.2 Quality of the vaccines has to be ensured, including the checking of the storage.
- 1.11.3 The feasibility of using immunization jets in the initial (backlog coverage) phase of the immunization campaign should be investigated and, if appropriate, tested.

1.12. Contacts with village doctors (and possibly dais)

It is suggested that BRAC strengthens the contacts with village doctors (quacks and pollichikāsaka) on the different health aspects including ORT, and through intensive follow-up with them. A similar method may be effective also with dais as a complement to their training.

1.13. Training

OTEP has already started the training for the trainers of the CSP health assistants and the POs with a well designed programme. Besides the questions of communication (including the collaboration with the government workers), proper attention should be given to the technical and medical aspects of the programme and the teaching material should be reviewed by knowledgeable persons in the respective fields.

1.14 Monitoring and Research

1.14.1 Monitoring systems will have to be developed for the new components of CSP, allowing to

- assess the performance and correct possible errors or failures;
- give supportive supervision to the CSP workers and to the other people concerned, such as the dais;
- prepare the future monitoring after BRAC has left the area;
- if possible assess the impact.

1.14.2 CSP itself should be responsible for the monitoring, the Research and Evaluation Division (RED) however should help define the indicators and the methods for their assessment.

1.14.3 RED can have an important role to play in designing and implementing studies to allow CSP to have a better knowledge of the fields it is going to work in, as such knowledge is indispensable for CSP to have an impact.

1.15. Female staff

1.15.1 We very much welcome the proposal to post HA's in integrated BRAC projects.

1.15.2 We also appreciate the thought given to providing the ORMs/HAs project staff with full benefit of the financial entitlements of male BRAC staff members institutionalizing this valuable human capital resource that has been developed in OTEP.

1.16. Technical Advice and Coordination

1.16.1 The Technical Advisory Committee (TAC) should be reactivated and restructured to reflect the multi-sectoral nature of the CSP. As it did for the development of OTEP, BRAC should ensure to have sound technical advice in the various fields covered by CSP.

1.16.2 Coordination should be ensured among the various agencies involved in the different fields of CSP.

Statement of Expenditure for 36 months
ended on 30th September 1986Needs of expenditure

Recruitment and training	24,20,941
ORW Teams	4,87,70,070
Regular Reinforcement	77,18,768
Special Reinforcement	16,02,228
Concentrated Reinforcement in selected areas	1,37,48,212
Area field support	56,32,431
Organisational Requirement :	
a) Central office	14,89,019
b) Area office	1,08,000
Publicity	34,90,270
Laboratory	5,97,152
Evaluation :	
a) Data collection	15,18,688
b) Data processing	17,34,713
Administration	57,30,140
Total Expenditure	9,45,60,632

