M. R. CLIENTS IN A VILLAGE BASED FAMILY PLANNING PROGRAMME

Shushum Bhatia
Lado T. Ruzicka

INTERNATIONAL CENTRE FOR
DIARRHOEAL DISEASE RESEARCH, BANGLADESH
Dacca, Bangladesh
April, 1979

Scientific Report No. 23

M.R. CLIENTS IN A VILLAGE BASED FAMILY PLANNING PROGRAMME

Shushum Bhatia[1]
Lado T. Ruzicka[2]

INTERNATIONAL CENTRE FOR
DIARRHOEAL DISEASE RESEARCH, BANGLADESH
G.P.O. Box 128, Dacca - 2
Bangladesh

---

1 Research Physician, Cholera Research Laboratory, Dacca. Visiting Fellow, Department of Demography, Australian National University.

2 Senior Fellow, Department of Demography, Australian National University.

PREFACE

The International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) is an autonomous, international, philanthropic and non-profit centre for research, education and training as well as clinical service. The Centre is derived from the Cholera Research Laboratory (CRL). The activities of the institution are to undertake and promote study, research and dissemination of knowledge in diarrhoeal diseases and directly related subjects of nutrition and fertility with a view to develop improved methods of health care and for the prevention and control of diarrhoeal diseases and improvement of public health programmes with special relevance to developing countries. ICDDR,B issues two types of papers: scientific reports and working papers which demonstrate the type of research activity currently in progress at ICDDR,B. The views expressed in these papers are those of authors and do not necessarily represent views of International Centre for Diarrhoeal Disease Research, Bangladesh. They should not be quoted without the permission of the authors.

ABSTRACT

In October 1977, the Cholera Research Laboratory introduced a village based family planning programme along with certain selected Maternal and Child Care services in 70 villages of Matlab thana. A wide range of family planning methods were made available together with facilities for M.R. (menstrual regulation). The M.R. services were available at the 4 Sub-centre Clinics dispersed within the 70 programme villages and at the central clinic in Matlab.

This report concentrates on the social and demographic characteristics of the rural women who opted for M.R. in the first year of the programme operation. It appears that it was predominantly younger women spacing their child bearing, who took that course. The occupational distribution of the women's husbands suggests that they come from better-off families. A large majority of women claimed that they did not desire any more children. Although the majority of them had never used contraception before, most of them did so following M.R. 90% were found to be continuing use of contraception at the time of the follow-up survey.

The introduction of the M.R. as a part of the integrated village based MCH/FP programme may be viewed as having been a successful addition to the options offered. It has not only

provided women with a safe and simple solution to unwanted pregnancies, but has also served to educate and motivate women to prevent such pregnancies by using effective modern contraceptive methods.

INTRODUCTION

In October 1977, the Cholera Research Laboratory in Dacca introduced a village based family planning programme integrated with maternal and child care in 70 villages of its field station in Matlab thana.[1] The programme was designed on three principles: (i) delivery of maternal and child health care along with family planning; (ii) services to be based in the village and delivered by the trained female village workers (FVW) backed-up by four sub-centre clinics staffed by better-trained and experienced Lady Family Planning Visitors (LFPV) and by the centrally located clinic with physicians and para-medical personnel; (iii) make a wide variety of family planning methods available and management of side-effects and complaints to be given proper attention at all levels of service delivery.

One of the FP methods made available within the programme was menstrual regulation (M.R.). Facilities for this procedure were located at the four sub-centre clinics and at the central clinic in Matlab Bazaar. Six LFPVs were trained and performed most of the M.R.s at both places.

This report concentrates on the social and demographic characteristics of the M.R. clients. Although the number of observations is relatively small, it has to be realized that the procedure, equivalent to an induced abortion early during the pregnancy, is being offered in a cultural setting in which induced abortion is prohibited culturally and on religious grounds and socially associated with illicit relationships.[2] There is, however, no doubt that many women who want to terminate their pregnancies seek help from the quacks and village dais (traditional birth attendants). According to the data of the gynaecology ward of the Dacca Medical College Hospital 10 per cent of the cases admitted in 1976 were complications (mainly acute damage to the uterus) due to induced abortion by such persons.[3]

DATA

During the first year of the programme (October 1977-September 1978) there were 212 M.R.s performed. For each woman reporting for M.R. a clinical record was filled out containing social and demographic data, information on previous use of contraception and on the family planning method accepted after the M.R. Each woman was asked to report at the clinic a week after the procedure, but most of them failed to do so. Consequently, a follow-up survey was conducted in October 1978

during which 158 of the clients were interviewed by the FVWs about any side-effects subsequent to the M.R., treatment sought for such side-effects and the current contraceptive status.[4] The remaining 54 women could not be contacted as a few lived in villages outside the study area and the rest were absent from their homes during the follow-up visit.

SOCIAL AND DEMOGRAPHIC PROFILE OF THE M.R. CLIENTS

In this and subsequent sections comparisons will be made wherever possible with data drawn from a baseline survey conducted in the programme villages in December 1977[5] and from information on acceptance of other forms of family planning drawn from the service statistics of the programme.

About 1.6 women per 100 married fecund women appeared for M.R. during the first year of the programme. The relative frequency was slightly higher for those under 35 years of age (1.7 - 1.8 per 100) than for the older ones (1.4 for women aged 35-44 years and 0,7 for those aged 45 years and over).

The distribution of the M.R. clients by age was only marginally different from that of the eligible female population in the villages. Women younger than 35 years of age were slightly over-represented among the clients and those over 35 years of age sought M.R. less often than their numbers in the population would suggest (Table 1).

TABLE 1

AGE DISTRIBUTION OF THE CLIENTS OF M.R. AND OF THE ELIGIBLE WOMEN IN THE PROGRAMME AREA

Age group	Number of Women		Percentage Distribution	
	Programme area	M.R. Clients	Programme area	M.R.clients
15-24	868	81	35.7	38.2
25-34	900	83	37.1	39.2
35-44	604	46	24.9	21.7
45-	56	2	2.3	0.9
Total	2,423	212	100.0	100.0

Many of the older women may be sub-fecund, some have opted for terminal methods (tubectomy) and others may be practising family planning using modern methods (lately, for instance, injectable contraceptives have gained a rather wide acceptance in the project villages).

By comparison, the women appearing for M.R. were not only considerably younger than those opting for sterilization (which was expected) but also younger than those who accepted injectable contraceptives (Depo-Provera). Table 2 sets out the age distribution of acceptors of the three parts of the programme. Women seeking M.R. were, on average, five years younger than those using injections Depo-Provera or those that had a tubectomy operation performed. The age distribution of

TABLE 2

AGE DISTRIBUTION OF ACCEPTORS BY METHOD:
M.R., STERILIZATION, INJECTIONS

Age group	M.R. Clients		Sterilization (tubectomies)		Injectable Contraceptives (Depo-Provera)	
	Number	%	Number	%	Number	%
Under 20	26	12.3	-	-	4	0.9
20-24	55	25.9	19	3.9	32	7.5
25-29	36	17.0	88	18.3	87	20.5
30-34	47	22.2	189	39.0	107	25.3
35-39	35	16.5	138	28.5	119	28.2
40-	13	6.1	50	10.3	74	17.6
Total	212	100.0	484	100.0	423	100.0
Average[a]	28.7	(7.3)	33.7	(5.0)	33.7	(6.1)
Cumulative percentage under 30		55.2		22.2		28.9

[a] Average age was calculated from the grouped data. The figure in brackets () is standard deviation.

the acceptors of the three methods shows that just over half of the M.R. clients were under 30 years of age while three-quarters of sterilized women and those using the injectable contraceptives were above that age.[6] One may thus surmise that the majority of the former used M.R. as a method of spacing their childbearing

whereas the latter most likely sought contraception to terminate it.

The base-line survey did not provide detailed occupational categories of the women's husbands. It only stated that 51.3 per cent of the husbands of all eligible women were engaged in non-agricultural occupations and the rest were farmers or in occupations associated with agriculture, (such as agricultural labourers). For the M.R. clients the categorization of husbands' occupations was available in greater detail and is set out in Table 3. It would appear that women whose husbands were better-

TABLE 3

CLIENTS OF THE M.R. BY HUSBAND'S OCCUPATION

Occupation of husband	Number of women	Per cent
Farmer (owing land)	59	27.8
Agricultural labourer	7	3.3
Landlord	2	0.9
Fishermen and boatmen	3	1.4
Skilled service	59	27.8
Skilled worker (factory or jute mill)	20	9.4
Unskilled service	10	4.7
Established business	23	10.9
Petty trader and cottage industries	9	4.3
Student	7	3.3
Other and unemployed	10	4.7
Unknown (not stated)	3	
Total	212	99.9

off than is generally the case in the villages of this area such as those in established business and skilled services, and farmers owning land, are more than proportionately represented among the clients appearing for M.R.

As regards education, it would appear that the M.R. clients were distributed through various categories of formal schooling in about the same proportions as other eligible women in the villages serviced by the programme.

TABLE 4

EDUCATION OF THE M.R. CLIENTS

Educational category	M.R. clients		Baseline survey
	Number	%	%
No formal schooling	93	43.9	41.7
Primary* 1-5	60	28.3	35.4
Minor secondary* 6-9 (Madrasa)	39	18.4	12.4
Secondary 10	15	7.0	7.0
Higher than secondary 11-12 (Matriculation, SSC)	5	2.4	3.5
Total	212	100.0	100.0

* Includes incomplete education; five years of primary school was reported by 36 women.

Menstrual regulation is an important asset to programmes delivering family planning services in two ways. Firstly, it can be used as a back-up for contraceptive failures, and inappropriate users of F.P. methods, and secondly, it provides an opportunity to motivate women to use effective methods to plan their families. Our data suggest that a large majority of women accept effective family planning methods following M.R. and also become more determined users of contraception.

After the procedure all clients were advised to use contraception. The women were allowed to select from a wide range of methods, but appropriate suggestions were made with respect to age, number of surviving children and reproductive intentions (spacing or termination). In most instances, IUD and injectable contraceptives were suggested (Table 5). In the follow-up only 158 women were available for interview. Of these, 140 still continued using contraception and 100 of them were on the method originally prescribed. Ten per cent discontinued use and 26 per cent switched over to another, most often more effective, method. Not surprisingly, oral pills and IUD had the highest drop-out rates; most of the method-shifters were among condom and IUD users, the latter choosing injectables and tubectomy instead.

The continuation rate was higher among women aged 30 years and over. Four women of the 158 interviewed became pregnant again after the M.R.; one of them chose to have her pregnancy interrupted again and three were still pregnant at the time of the interview.[7]

TABLE 5

METHOD PRESCRIBED AND ACCEPTED AFTER M.R. AND AT THE FOLLOW-UP INTERVIEW

Method used at follow-up interview	Method originally prescribed and used after M.R.						Total women	
	None	IUD	Oral	Condom	Injection	Tubectomy		
-	7	80	34	13	54	24	212	Per 100 Women
per cent	3.3	37.7	16.0	6.1	25.5	11.3	100.0	
None		8	3	1	4	-	16	10.3
IUD		36	1	1	2	-	40	25.6
Oral		4	11	3	2	-	20	12.8
Condom		1	-	1	1	-	3	1.9
Injection		11	-	1	28	-	40	25.7
Tubectomy		6	3	1	3	24	37	23.7
Total women		66	18	8	40	24	156	100
Per cent		42.3	11.5	5.1	25.6	15.4	100.0	

NUMBER OF CHILDREN AND DESIRE FOR ADDITIONAL CHILDREN

Almost 6 per cent of the M.R. clients had no surviving child at all and 15.6 per cent had no surviving son. Those two findings may appear to be surprising and contrary to the strongly held views in the rural society of Bangladesh that the most important role of the married woman is to become a mother, start bearing children as soon

after marriage as possble, and produce sons - in her own as well as the family's interest.

The childlessness of the M.R. clients was, however, limited to those who were under 25 years of age: almost 31 per cent of those below the age of 20 years and over 7 per cent of those aged 20-24 years decided for interruption of their current pregnancy while they were without issue. In terms of the number of surviving sons, the figures were higher; almost 58 per cent of those under the age of 20 years and 27 per cent aged 20-24 years were without a surviving son when they appeared for M.R. Relatively small proportions of women in their late twenties and early thirties who decided for M.R. were also without male offspring, but none of those aged 35 years and beyond (Table 6).

Probing into the matter further, it may be noted that six women claimed the present pregnancy to be their first one and an additional 23 and 30 women to be the second and third pregnancy, respectively. In other words, almost 28 per cent of the clients asked for interruption of the current pregnancy at a relatively early stage of their reproductive life cycle. In contrast over 30 per cent of the clients claimed that the current pregnancy was their eighth or even higher order one (Table 7).

Of those six women who claimed no previous pregnancy, five were under 20 years of age and one in the 20-24 years age bracket.

TABLE 6

THE M.R. CLIENTS BY THE NUMBER OF (A) LIVING SONS AND (B) LIVING CHILDREN

Age group	Number of M.R.	Percentage with no living son	Mothers of living sons			Average number of living sons per mother
			1-2	3-4	5-	
Under 20	26	57.7	11			1.0
20-24	55	27.3	38	1	1	1.5
25-29	36	5.6	29	4	1	1.9
30-34	47	2.1	25	19	2	2.6
35-39	35	0.0	11	16	8	3.4
40-	13	0.0	6	5	2	2.9
Total	212	15.6	120	45	14	2.3

Age group	Number of M.R.	Percentage with no living children	Mothers of living children				Average number of living children per mother
			1-2	3-4	5-6	7-	
Under 20	26	30.8	18				1.2
20-24	55	7.3	37	12	1	1	2.1
25-29	36	0.0	7	18	9	2	3.7
30-34	47	0.0	2	18	22	5	4.8
35-39	35	0.0	0	6	18	11	5.9
40-	13	0.0	0	2	5	6	6.3
Total	212	5.7	64	56	55	25	3.9

TABLE 7

PERCENTAGE DISTRIBUTION OF THE M.R. CLIENTS BY THE PREGNANCY ORDER (INTERRUPTED PREGNANCY INCLUDED)

Pregnancy order	First	Second Third	Fourth Fifth	Sixth Seventh	Eighth Ninth	Tenth & higher
Percentage of M.R. clients	2.8	25.0	17.9	24.1	17.0	13.2

N = 212

Of the 53 women who claimed one or two previous pregnancies, 19 were under the age of 20 years, 30 were 20-24 years and four were 25-29 years old.

Half of the women aged 30-34 years and two-thirds and three-quarters of those aged 35-39 and 40 years and over respectively when they appeared for the M.R. procedure had experienced at least seven previous pregnancies. Even among the younger women, there were a few clients who have experienced as many as seven pregnancies (one woman under 25 and five 25-29 years of age).

REASONS FOR TERMINATION OF PREGNANCY

In the light of this and of the prevalent high value of children in the rural society in Bangladesh it would thus appear that a large proportion of women, particularly the younger ones, sought interruption of an unwanted pregnancy for at least one of

the following reasons:

(i) the pregnancy came too early after the preceding one and the mother thought she could not cope with it. This conjecture is supported by the data in Table 8.

TABLE 8

BREASTFEEDING AND THE AGE OF THE YOUNGEST CHILD

Age of the youngest child	Total mothers	Breastfeeding	Proportion breastfeeding per 100 mothers
Under 6 months	18	14	78
6-11 months	27	21	78
12-17 months	23	22	96
18-23 months	25	21	84
Under 2 years	93	78	84
2-3 years	32	14	44
3-4 years	29	9	31
4- years	35	5	14
Total	189	106	56

Of the clients with at least one surviving child 56 per cent were still breastfeeding the child. Among those, however, whose child was less than two years old, 84 per cent were nursing it.

(ii) Secondly, some of the pregnancies may have been unwanted because of marital problems. The divorce rate is relatively high in rural Bangladesh in particular during the early stages of marriage. We have no direct information whether and how often the women's decision to seek M.R. procedure was prompted by marriage breakdown.

(iii) Thirdly, economic hardship may have been at the roots of some decisions to have a pregnancy terminated. Economic problems were not infrequently mentioned as reason for the decision during the informal discussion with the client. In one case, the woman sought an M.R. for the first pregnancy because her husband was a student; in a few other instances the woman was seeking a job and the pregnancy would have made her ineligible for the job.

(iv) In some instances the pregnancy resulted from inappropriate use of F.P. methods, especially the pill and condoms.

It would thus appear that the women, in particular the younger ones, are not only becoming more aware of the possibility of controlling their fertility but also of the responsibility to properly time their wanted pregnancies and childbirths. The latter in particular appears to be a very positive outcome of the programme, hopefully signalling an incipient change in reproductive behaviour of at least some women of the younger generation.

Although among the women who appeared for the M.R. many more claimed that they did not want any more children than the opposite, relatively few tried to avoid an additional pregnancy by using contraception.[8]

Only one woman with no surviving son did not want additional children in contrast to 32 who wished to have more. M.R. clients who had one surviving son were almost equally distributed among those who did want (54 per cent) and did not want (46 per cent) an additional child. With the increasing number of surviving sons the percentage not wanting additional children rose rapidly to 93 and 100 per cent among M.R. clients with three and four or more sons respectively.

Not unexpectedly, no childless woman - M.R. client - would want no children and only one (out of 34) with one surviving child said she would not want any more. With increasing number of surviving children the proportion wanting no more rose but approached 100 per cent at first for women with parity four and higher.

The 74 women who apparently used M.R. as a method of spacing (73 who answered 'yes' to the question whether they wanted more children and one who answered 'don't know') were predominantly younger women; conversely, those who did not want any more children were older women. Obvious as this may appear,

it is surprising how relatively early in the reproductive life cycle the desire for no additional children comes among the M.R. clients:

TABLE 9

PROPORTION OF WOMEN ACCORDING TO DESIRE FOR MORE CHILDREN

Age group	Under 20	20-24	25-29	30-34	35-39	40-
Proportion (%) of M.R. clients:						
(i) wanting more children	96	67	28	4	-	-
(ii) not wanting any more children	4	33	72	96	100	100

already one-third of those aged 20-24 years and close to three-quarters of those aged 25-29 years did not want any more children.

The high continuation of contraceptive use after the M.R. reported earlier is an encouraging sign of their determination in this respect.[9] This is in sharp contrast to the findings of the base-line survey of December 1977, according to which only 4 per cent of women aged 15-24 years and 32 per cent of those aged 25-34 years said they did not want any more children. At first among the women aged 35 years and over more than two-thirds took such a view.

The discrepancy, once again, gives some support to the suggestion made earlier that the women seeking M.R., particularly the younger ones, are moving towards conscious planning of their pregnancies and childbearing.

CONCLUSIONS

The study of the 212 village women in Bangladesh who opted for interruption of their pregnancy by M.R. procedure suggests that it was predominantly younger women spacing their childbearing who took that course. In terms of education they did not differ considerably from the other women in the villages under the MCH/FP programme. However, it would appear that they may have come from better-off families; this, at least, is the impression from the occupational distribution of the women's husbands. The majority of them have never used contraception before, but most of them did so after being given such advice following the M.R.; 90 per cent were found to be continuing use of contraception at the time of the follow-up survey.

The majority declared that they did not want any more children when they first appeared for the M.R. In this context the high continuation rate of contraceptive use after the M.R. is an encouraging sign.

From the data presented here it would appear that the younger women are becoming increasingly conscious of controlling

their childbearing and spacing of pregnancies. Economic hardship also may have contributed in some instances to postpone subsequent pregnancy or even to defer the birth of the first child.

In all those respects the introduction of the M.R. as a part of the integrated village based MCH/FP programme may be viewed as having been a successful addition to the options offered. It has not only provided women with a safe and simple solution to unwanted pregnancies but has also served to educate and motivate women to prevent such pregnancies by using effective modern contraceptive methods. Further input into the programme, particularly in the field of MCH care, may hopefully reduce the "desired family size" norm held at this time in the programme villages.

FOOTNOTES

1. The programme is described in "The Demographic Impact of Sterilization in the Matlab Village-based MCH-FP Program." Cholera Research Laboratory, Working Paper No. 10.

2. Rafiqul Huda Chowdhury, Attitudes toward Legalization of Abortion among a Cross-section of Women in Metropolitan Dacca (mimeographed). According to Chowdhury, induced abortion is permitted if the pregnancy threatens the life of the mother and she is not 'quick with the child'; in such instances, the consent of the mother and concurrence of two medical consultants has to be obtained. In all other instances to induce abortion is a crime punishable under the Bengal Penal Code (1860).

3. Ibid., p.1.

4. For details see S. Bhatia, A.S.G. Faruque "An Assessment of the Menstrual Regulation procedures performed by Paramedics" (mimeographed).

5. For source see reference in footnote 1. The tabulations from the "baseline survey" were made from a stratified sample of about 20 per cent of respondents. The stratification used proportionate allocation according to the size of the village.

6. The age of 30 years was taken here as a benchmark as by that time most women would have had on average four children ever born and those who had married young, say between ages 15 and 17 years, close to five children ever born.

7. See Bhatia, op.cit. footnote 4.

8. Out of the 138 not wanting children 81 (58.7 per cent) had never used any contraception before, 34 used the pill in the past (24.6 per cent), 13 (9.4 per cent) had used other methods (mainly injectable contraceptive) and 10 were using condoms, IUD or foam tablets in the past. Among those desiring more children, 42 women (56.8 per cent) had never used any family planning method, 19 (25.7 per cent) used the pill, 10 (13.5 per cent) condom and one each either IUD, foam tablets or withdrawal.

9. Only four women were found in the follow-up interview to have become pregnant. One had another M.R. performed and three continued the pregnancy.

ICDDR,B (CRL) publications can be obtained from Publications Unit, International Centre for Diarrhoeal Disease Research, Bangladesh, G.P.O. Box 128, Dacca - 2, Bangladesh.

List of current publications available:

A. CRL Annual Report 1976.

CRL Annual Report 1977.

B. Working Paper:

No. 1. The influence of drinking tubewell water on diarrhea rates in Matlab Thana, Bangladesh by George T. Curlin, K.M.A. Aziz and M.R. Khan.

No. 2. Water and the transmission of El Tor cholera in rural Bangladesh by James M. Hughes, John M. Boyce, Richard J. Levine, Moslemuddin Khan and George T. Curlin.

No. 3. Recent trends in fertility and mortality in rural Bangladesh 1966-1975 by A.K.M. Alauddin Chowdhury, George T. Curlin.

No. 4. Assessment of the Matlab Contraceptive Distribution Project - implications for program strategy by T. Osteria, Makhlisur Rahman, R. Langsten, Atiqur R. Khan, Douglas H. Huber and W. Henry Mosley.

No. 5. A study of the field worker performance in the Matlab contraceptive distribution project by Makhlisur Rahman, T. Osteria, J. Chakraborty, Douglas H. Huber and W. Henry Mosley.

No. 6 Constraints on use and impact of contraceptives in rural Bangladesh: Some preliminary speculations by R. Langsten, J. Chakraborty.

No. 7. The demographic impact of the contraceptive distribution project by T. Osteria, W.H. Mosley and A.I. Chowdhury.

No. 8. Development of milk teeth in rural Meheran children of Bangladesh by Moslemuddin Khan and George T. Curlin.

No. 9. A follow-up survey of sterilization acceptors in Matlab, Bangladesh by Makhlisur Rahman, Douglas Huber and J. Chakraborty.

No. 10. The Demographic Impact of Sterilization in the Matlab Village-Based MCH-FP Program by T. Osteria, S. Bhatia, J. Chakraborty and A.I. Chowdhury.

No. 11. Parental dependency on children in Matlab, Bangladesh by Makhlisur Rahman.

C. Scientific Report:

No. 1. Double round survey on pregnancy and estimate of traditional fertility rates by A.K.M. Alauddin Chowdhury.

No. 2. Pattern of medical care for diarrheal patients in Dacca urban area by Moslemuddin Khan, George T. Curlin and Md. Shahidullah.

No. 3. The effects of nutrition on natural fertility by W. Henry Mosley.

No. 4. Early childhood survivorship related to the subsequent inter-pregnancy interval and outcome of the subsequent pregnancy by Ingrid Swenson.

No. 5. Household distribution of contraceptives in Bangladesh - the rural experience by Atiqur R. Khan, Douglas H. Huber and Makhlisur Rahman.

No. 6. The role of water supply in improving health in poor countries (with special reference to Bangladesh) by John Briscoe.

No. 7. Urban cholera study, 1974 and 1975, Dacca by Moslemuddin Khan and George T. Curlin.

No. 8. Immunological aspects of a cholera toxoid field trial in Bangladesh by George T. Curlin, Richard J. Levine, Ansaruddin Ahmed, K.M.A. Aziz, A.S.M. Mizanur Rahman and Willard F. Verwey.

No. 9. Demographic Surveillance System - Matlab. Volume One. Methods and procedures.

No. 10. Demographic Surveillance System - Matlab. Volume Two. Census, 1974 by Lado T. Ruzicka, A.K.M. Alauddin Chowdhury.

No. 11. Demographic Surveillance System - Matlab. Volume Three. Vital events and migration, 1975 by Lado T. Ruzicka, A.K.M. Alauddin Chowdhury.

No. 12. Demographic Surveillance System - Matlab. Volume Four. Vital events and migration, 1975 by Lado T. Ruzicka, A.K.M. Alauddin Chowdhury.

No. 13. Demographic Surveillance System - Matlab. Volume Five. Vital events, migration, and marriages - 1976 by Lado T. Ruzicka, A.K.M. Alauddin Chowdhury.

No. 14. Ten years review of the age and sex of cholera patients by Moslemuddin Khan, A.K.M. Jamiul Alam and A.S.M. Mizanur Rahman.

No. 15. A study of selected intestinal bacteria from adult pilgrims by M.I. Huq, G. Kibryia.

No. 16. Water sources and the incidence of cholera in rural Bangladesh Moslemuddin Khan, W. Henry Mosley, J. Chakraborty, A. Majid Sardar and M.R. Khan.

No. 17. Principles and prospects in the treatment of cholera and related dehydrating diarrheas by William B. Greenough, III.

No. 18. Demographic Surveillance System - Matlab. Volume Six. Vital events and migration 1977 by Aporn Samad, Kashem Sheikh, A.M. Sarder, Stanley Becker and Lincoln C. Chen.

No. 19. A follow-up survey of sterilization acceptors in the modified contraceptive distribution projects by Shushum Bhatia, Trinidad Osteria, J. Chakraborty and A.S.G. Faruque.

No. 20. Cholera due to the El Tor biotype equals the classical biotype in severity and attack rates by Moslemuddin Khan and Md. Shahidullah.

No. 21. An estimation of response bias of literacy in a census of rural Bangladesh by M. Shafiqul Islam, George T. Curlin and K.M.A. Aziz.

No. 22. Vibrio cholerae by William B. Greenough, III.

D. Special Publication:

No. 1. Management of cholera and other acute diarrhoeas in adult and children - World Health Organization.

No. 2. Index to CRL Publications and Scientific Presentations 1960-1976 by Susan Fuller Alamgir, M. Shamsul Islam Khan, H.A. Spira.