CONTRACEPTIVE DISTRIBUTION PROJECT

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General Background

This project was devised to assess the effectiveness of a simple but intensive contraceptive distribution project. To address this issue, the project provides oral contraceptives and, to a lesser extent, condoms to all married couples in the fertile age range who will accept the supplies. A system of field workers familiar with the study area is utilized for the major part of the distribution, follow-up, and data collection. Local village women (CRL dais) will then serve as depot supply sources for each village.

Project Objectives as stated in the Contract

The objective of this project is to carry out research in family planning to assess a household delivery system of oral contraceptives (OCs) and condoms in rural Bangladesh. The feasibility of the delivery system, the total demand for these contraceptives, and the demographic impact will be measured under conditions where contraceptives are readily available to all married women of reproductive age.

The study seeks to help determine a cost effective delivery system and appropriate fertility control methods for use in developing countries.

Continued Relevance of Objectives

The objectives as originally described are very relevant to the problems of fertility control programs, particularly in Bangladesh. The Government workers provide oral contraceptives and condoms on a household basis in rural areas and this effort is currently being expanded in a mass information, motivation and contraceptive delivery campaign. Therefore, the Matlab study is currently viewed by several Government officials as an effort that could help assess what the Government service delivery system might achieve.

Accomplishments to Date

1. Pilot Villages

Two villages were initially visited in August 1975 to determine receptivity of the household distribution approach. One was a conservative Muslim village containing a Muslim school and the other was a mixed Hindu-Muslim village. Discussions with local leaders and village members suggested no strong resistance would be met. The work then proceeded immediately on a house-to-house plan providing basic knowledge of the oral contraceptives, how OCs were to be used, and a few particulars about common side effects. In the two villages 101 women were present at the time of distribution, August 22, 1975, and none was using any method. Fifty two (52%) accepted pills and 49 declined. Of those not accepting, 6 were pregnant, 17 declined because the husband was absent and the woman felt he might object, 8 were menopausal, 6 had no pregnancies for several years, (ranging from 4 - 14), 1 was mad, 1 claimed her husband had lost his potency and 1 had no pregnancy since marriage. Nine refused because they were not interested in contraception, but on re-interview of five

only one stated no interest in contraception either then [illegible]ure. No organized resistance developed although a few women were negat[illegible] distribution activities when initially approached. A few women tol[illegible] the time of distribution that the pills would be harmful, although these women had no familiarity with the contraceptives.

Because oral contraceptives were totally new to virtually all women and the instructions were difficult to understand, the distribution of condoms along with additional instructions did not seem generally appropriate during the first phase. In addition, the husband was present for only 20-25% of the visits.

The male field workers had little difficulty talking to Muslim or Hindu women about contraception, menstrual periods, etc, with the assistance of the CRL village dai. The relatively high rate of accepting the supplies and the reasons for non-acceptance gave us encouragement that household distribution would be acceptable even in conservative Muslim villages. This impression was in contrast to the hostile reaction in 1969 by organised Muslim youths who attacked and damaged the Government family planning facilities at Matlab.

2. KAP Survey

In-depth knowledge was needed on a small sample of women regarding their practice of all methods and desires for fertility control. A knowledge-attitude-practice survey was completed on a random sample of 1077 women from the Field Surveillance Area, half from the treatment and half from the control areas. The questionnaires are currently being coded for analysis, however, a preliminary hand count was completed for all contraceptive methods ever used and currently used. Reported use of modern methods was 26 (2.4%) compared with (1.5%) reported from the prevalence survey. All reported methods, including rhythm, douche, withdrawal, abstinence, and unknown methods provided by village traditional healers brought the prevalence of current use to 7.7%, the largest fraction being contributed by rhythm (3.6%). However, rhythm was overreported and this rate will be lower when a correction is made. A traditional or modern method being used at some time in the past was reported by 14.4% of the women. All these data are provisional and therefore are subject to change when counter-sorter analysis is complete.

The KAP survey is expected to give some estimates of the social demand for contraceptives. Desires for additional children and stated preferences for contraception can be used to guide future efforts in fertility control.

3. Baseline Contraceptive Use-Prevalence Survey

From the May 1974 census, each of the 250,000 individuals has basic information recorded on IBM cards. Using local facilities a computer printout of all women 15-44 based on the May 1974 census was prepared for each of the 234 villages in the Matlab Field Surveillance Area (FSA). These printouts are now in bound volumes and the marital status was updated in the field to determine the target group of married women 15-44.

The distribution area was selected from the villages further away from the Matlab field hospital where the Johns Hopkins Fertility Research Project (FRP) is located. Roughly 125,000 population is included in the distribution villages which are generally less influenced by a semi-urban center, Chandpur, and are more distant from the Government health center and family planning offices. The area serviced by the FRP clinic and a "buffer zone" between the FRP area and the distribution area will each serve as control areas for study. For purposes of this report the entire area outside the distribution area will be treated as a unit.

The computer sheets have been used to record the prevalence survey and contraceptive distribution information. The printout information given for each woman included the following:

Census Number
Age
Marital Status
Religion
Education of Household Head
Occupation of Household Head
Education of Woman
Size of House (square feet)
Household Indicators of Wealth and Modernity
(kerosene lamp, quilt, watch, radio, remuneration from outside the household)
Number of Cows owned
Ownership of Boat (and type).

The baseline prevalence survey included six questions (see attachment A).

a. Parity
b. Date of last pregnancy termination
c. Current menstrual status
d. Current contraceptive use
e. Contraceptive use in past 3 months
f. Source of any contraceptive used

Only the code numbers are recorded in the survey books to facilitate direct key punching.

Preliminary hand tally information is available from the baseline survey, (Tables 1 and 2). Slightly less than 1% of the women contacted in the treatment area were currently using a contraceptive method (traditional methods of rhythm, coitus interruptus, and abstinence not included in this survey). Roughly twice as many Hindus as Muslims were practicing, although the rates are extremely low by most standards. A 3% use rate overall for Bangladesh is the estimate used by some Bengalee authorities.

The overall use rate of 2.07% in the control area most likely reflects the activities of the Johns Hopkins Fertility Research Project (FRP) Clinic located at Matlab and the proximity of the control area to the Government facilities also

located at Matlab. Again, Hindus had roughly double the use rates reported by Muslims and oral contraceptives accounted for the majority of methods used by all groups.

Between 19 and 21% of women in the treatment and control areas (Table 2) were absent during the initial prevalence survey. During the distribution phase, which followed the first round of the prevalence survey by 1-2 months, an additional 8.2% of the eligible women were contacted for a completion rate of 88.6% of the women selected from our census. Intensive follow-up from the KAP survey suggested that many of the women absent on two consecutive survey rounds have moved away during the 18 months following the census. The women contacted on the follow-up visit reported roughly the same low use rate (0.86%) as did women present for the first round of the survey (0.98%).

A consistency check for completeness of reporting was conducted by comparing our results first with those of an independent survey investigating the natural determinants of fertility using women interviewers and second with the records of the FRP clinic. Only "known users" at the time of both surveys were used for this exercise. The criteria for "known use" were that a woman had accepted a method at the FRP clinic before the surveys and had been confirmed as a continuing user by follow-up visits to the clinic after the survey.

Among 64 "known users" 57 were contacted by the prevalence survey and 17 (30%) failed to indicate they were using. For 63 of this same group surveyed independently on one or more occasions by female interviewers, 28 (44%) did not report contraceptive use. Nine (16%) failed to report use on either survey. Additional follow-up of these nine indicated they were using at the time of the surveys. Thus under-reporting seems to be a problem with both surveys, although the male interviewers (with the assistance of the CRL dai) may have obtained slightly more complete information. This under-reporting bias is consistent with survey results from Comilla District in 1968 as reported by Stoeckel et al. They found roughly 50% of a small sample of clinic acceptors reported never using contraceptives. The general magnitude of under-reporting in the baseline survey we do not believe will create serious problems in assessing the fertility control behaviour in the Matlab area since a corrected rate would still give a very low level of use, particularly in the treatment area.

Under-reporting is not anticipated to be the primary problem in prevalence surveys after the distribution phase. Our experience from the pilot villages and a special survey of side effects indicates over-reporting of contraceptive use (Presumably attempting to please the interviewers) is a greater problem. We believe this bias can be obviated in large part by requesting that the woman produce her used packet(s) of pills and comparing her statements with the observed use pattern. The number of reported active users in the two pilot villages declined from 23 to 14 on repeat survey when the women were requested to display their pill packets. Asking the women to produce the pill pages has caused no difficulty in the field and this procedure will be used in future surveys.

4. Contraceptive Distribution

a. Training

Instruction sheets containing the minimum information necessary for the field assistants and CRL dais were prepared from the pilot village experience. Field assistants (FAs) are matriculate (literate) men who have conducted a wide variety of field work, including demographic surveillance, vaccine field trials and other surveys. They were given three hours didactic instructions and discussion for the distribution activities (see instructions, Appendix 1). One day of field training was conducted by having two men (and the dai) work together and being checked by the supervisors. This was followed by discussions of the work that evening. Thereafter the FAs worked independently, their efforts being checked each evening by the supervisors and spot checked in the field to ensure a proper understanding was given to women receiving oral contraceptives.

The eight FAs principally responsible for the distribution and eight other FAs doing demographic surveillance in the treatment area were given this brief training, one evening didactic and one day field work.

The dais are usually elderly women all of whom live in their village and are responsible for reporting births, deaths, migrations, marriages, divorces and cases of diarrhea for their villages (population approximately 1,000). The term "dai" is somewhat a misnomer for this category of worker because only 15% are traditional birth attendants, although convention has dictated the continued use of the title "dai". Most are illiterate and these women keep simple records with the help of a literate member of the community.

Training for dais consisted of one afternoon didactic training similar to that given the FAs and the field experience acquired while accompanying the FA during the house-to-house distribution in her village. The dai is expected to play an increasingly important role in her village for determining which women are using, correcting mistakes of pill users, counseling women having complaints or side effects, and providing supplies for absentees and continuing users. Following the distribution all the dais have had two additional training sessions in small groups to discuss the handling of side effects and instructions for correcting women who use the pills improperly.

Some of the older widowed dais are being replaced by middle-aged married women who have some education and writing ability. These latter women seem to be grasping the concepts and instrcutions more quickly and they generally pursue their work more vigorously. The result appears to be somewhat better acceptance of contraceptives where the younger women are working, and the relationships between individual dais and contraceptive use will be evaluated. A profile of the most effective workers will be developed.

The dais did not begin taking a fully active role in supply and follow-up immediately after the distribution. Additional instruction was needed and we believe more active field training will be essential. Therefore, additional

field training will be given during the second prevalence survey. The dai will take the active role in obtaining information about contraceptive use and advising on problems. The FA will record the information and will intervene only when the dai is confused or needs assistance. Three days supervised activity generally will be used for the dai to cover her village in this fashion.

b. Contraceptive Distribution Phase

~~Eight to ten FAs were working on the~~ house-to-house distribution, and this work was completed within 62 days, one month ahead of schedule. As the work ~~progressed~~, less effort was needed because word of the activities often had spread ahead of the workers. Many women had gained some information about the contraceptives before being contacted, although the concept was otherwise totally new to most women. As a natural consequence of this advance information spread, in many baris the FA and dai were greeted by 4-8 women (particularly those most interested in accepting) to whom instructions could be given in a group. In other circumstances the dai might go ahead to gather the interested women in each bari. (Baris vary greatly in size, but average 5-6 households, 25-35 persons). Persons living in a bari are blood-related, although food and dwellings are separate for each household. The other women were contacted individually at their houses.

In this manner 23,395 elegible women (all married women 15-44 updated from the 1974 CRL census) were canvassed, of which 19,027 were contacted on the initial visit (Table 3). Of those contacted, 13,087 (68.8%) accepted the supplies, usually 6 cycles of oral contraceptives. This number of contraceptive recipients in two months with nine workers compares rather favourably with the 66,000 OC acceptors reported for 1974 in all of Bangladesh covered by 12,000 multi-purpose field workers. However, these workers had primary duties in malaria control and other health programs with part-time devoted to family planning. (Dorothy Nortman, Population and Family Planning Programs: A Factbook, Reports on Population/FP, The Population Council, October 1975).

However, in our effort pregnant women and those in the early post-partum period were given supplies, as well as those at immediate risk of pregnancy. Pregnant and less than 6 months post-partum women were instructed not to begin the pills until their infant was at least 6 months old. In case of a miscarriage or infant death, the woman may begin within one to two months of the termination or death. Assurance that the woman would begin using the contraceptives was not required. Therefore, these contraceptive recipients are somewhat different from the conventional understanding of an "acceptor" as one who initiates contraceptive use. One staff person suggested the term "receptor" as a more appropriate descriptive term for the Matlab women receiving supplies. However, the introduction of new family planning jargon may be more confusing than helpful and we will continue to use "acceptor" to describe contraceptive recipients, with the qualification that the meaning is somewhat different from conventional use.

Little resistance was encountered in any of the villages, somewhat to our surprise. In a few villages an older man or woman would indicate that family planning was against God's wishes, but younger individuals invariably disagreed

and the work proceeded. In only four instances in the 140 villages did a person actively work against our distribution such that work was delayed for a day. A few women thought the pills would be bad for the community and in another case a Government worker was concerned about the contraceptive distribution interfering in his area. In each case the problems were resolved and the work proceeded smoothly the next day.

The non-acceptor rate of 31% among all women contacted was surprisingly low and even this was in part a function of the field worker. The workers were instructed not to provide any motivation or family planning propaganda except to indicate that we believe longer child spacing can improve the mothers' health. However, it is difficult to separate "motivational" efforts from the "educational" information being imparted to all women about the contraceptives and the reasons CRL believes the product is a good one. Such an innovative program cannot proceed in the Bengali setting without a good deal of discussion; and our field staff quite naturally responded with the reasons contraceptives can be good for women and families. All the field workers agreed that the distribution work required a good deal more talking than any of the previous field trials, demographic surveillance, or special surveys. Having no intent to "motivate" couples, we find motivation seems an integral part of the work.

Roughly 20-25% of husbands were present at the time of distribution and they were included in the discussions, before the wife was approached. The absence of husbands made some women hesitant to take the supplies without the husbands' prior approval, particularly in Muslim villages. Howevever, as the distribution moved along most everyone, men and women, knew of our activities in advance of the visit.

c. Post-Distribution Phase

Many women indicated a basic suspicion of something new. There may be an additional element of reservation about family planning efforts in particular. Even during the distribution, some women would speculate that the pill caused permanent sterility or death due to excessive bleeding or other causes. Following the distribution, several reports were received each day about women with severe side effects, particularly bleeding. When visiting the women these problems were of little consequence by medical standards, although the complaint was important to the woman, and news of such events was presumably disruptive to contented pill use by others.

In the pilot villages we also found a large number of women waiting to observe what happened to their neighbors before they themselves began the pills. In addition, there seemed to be a fair number of women taking the pills incorrectly, despite the fact that instructions for proper pill use were one of the main points stressed by the field workers. Subsequent prevalence surveys will detect any accumulation of users as time passes.

Pill taking was sometimes a co-operative affort. The woman's 10-13 year old daughter would not only remind her mother to take the pill, but would also punch it out and bring it to the mother. Occasionally the daughter had not been

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instructed adequately by the mother in the proper sequence of pill use and the packet had a shot-gun pattern of missing pills. Although everyone from small children to grandmothers in each bari was generally present for the distribution of something as unique as oral contraceptive packets, it did not initially occur to us that instructing the young daughter would be important. This oversight is now being corrected, and the daughters are now given proper instruction by the dai when they have been selecting an incorrect pill sequence for their mothers.

No problems have yet been encountered where children were consuming the pills, although one husband has been taking the iron tablets to build up his blood, while the wife takes the 21 white pills.

Irregular bleeding seemed to be one of the most common complaints, and this was dealt with initially by instructing the woman to take two pills (the second one from a separate strip) per day for four days. This usually provided satisfactory control of the inter-menstrual spotting, but women not consulted by the dai often stopped the pills for several days, which naturally resulted in more bleeding. Accompanying the bleeding was often the complaint of increasing weakness due to blood loss and/or rumours that someone died due to blood loss. Other women had taken a few pills and then stopped due to complaints of dizziness, weakness and burning sensations. Faced with these reported problems we wished to gain more objective information from a large number of women to determine which symptoms were most common and whether any particular one was principally responsible for women discontinuing the pill. Our initial impression was that irregular bleeding would be the most important reason causing women to discontinue although this supposition now appears to be incorrect.

5. Study of Side Effects and Contraceptive Usage

To investigate the problems being reported from the distribution villages and to help formulate any remedial actions which should be taken, a survey of contraceptive acceptors was undertaken. A draft manuscript (Appendix 6) by two Australian senior medical students, Margaret Phillips and David Everett, who conducted the survey, and Douglas Huber of CRL is attached. The major findings are as follows:

a. A substantial proportion of the acceptors were using oral contraceptives at the time of interview, 24% for Hindus and 22% for Muslims. The average duration since distribution was 10 weeks.

b. Thirty percent of those beginning contraception had stopped and significantly more of those discontinuing complained of side effects than those continuing to use. Sixtytwo percent of those initiating use reported one or more side effects they related to pill use.

c. Dizziness (head spinning or light-headedness) was the most common complaint and this was more common among women discontinuing (53%) than those continuing to use (39%), p 0.01. Inter-menstrual bleeding, prolonged or heavy periods, and burning sensations were the next most common complaints, but these were no more common among the discontinuers than among continuing users.

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d. Women accepting the supplies but not yet starting indicated lactational amenorrhea of greater than 6 months (12.1%) was the reasons for not using. The temporary infertility associated with post-partum ammenorrhea is generally recognized and some women presumably elect this course. "Husband not giving permission" was a reason for 18.1% of Muslims and 8.4% of Hindus not using.

e. Rumours about adverse effects of oral contraceptives were not associated with discontinuation, and most of the information passed from woman to woman related closely to the reported frequencies of side effects among users.

f. Obvious incorrect pill usage was noted for 12.5% of women using at any time and the rate was higher for those having discontinued.

Considerable variation among villages in rates of contraceptive use was observed, suggesting fertile ground for investigating group or aggregate community factors related to higher levels of contraceptive use.

6. Problems

Side effects of the pill in this population seem to be a significant problem, particularly as relates to dizziness. This symptom is described as severe enough to interfere with daily activities and is significantly associated with discontinuation. The field staff indicates that alleviation of side effects would give the program greater success.

Consultants have raised the possibility that oral contraceptive use in our program may lead to higher fertility resulting from women in lactational amenorrhea becoming fecund sooner if they start and then stop oral contraceptives. The thesis states that lactation will be reduced on oral contraceptives and that following the discontinuation of OCs the period of lactational amenorrhea will be shortened. This has become an important concern among many and therefore the possibility should be assessed. The data soon forthcoming from the prevalence survey contains information on menstrual status which may assist in investigating this concern.

The Government program has begun more vigorous efforts to distribute contraceptives and this is being done in the treatment and control areas of the project. Although there might be an impact on contraceptive use in the control area, our periodic surveys should adequately assess the impact and permit evaluation of the Government impact. We do not believe our research design will be jeopardized and the added spin-off might be gained of obtaining useful information for the Government fertility control activities. The Government distribution phase is similar to our project, but less intensive at this time.

7. Case Examples for Contraceptive Distribution and Follow-up

Appendix 2 includes some examples of typical situations and problems and how they might be faced. This work can be expanded if there is a desire for additional information on this topic.

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8. Changes in Design

The second prevalence survey (at three months following the distribution) will combine a redistribution to women needing supplies and additional training for the dai. Some of the dais had not become active in distributing to the absentees and in answering questions about side effects and incorrect use. Therefore, on this survey, the dai will be answering the questions related to pill use and the FA will record the survey information and correct the dai when necessary.

Although a training and resupply activity was not planned to be part of the prevalence survey, one cannot avoid considerable discussion about the pills, correct usage and side effects when entering a bari for survey purposes. Also, because the pill packet is observed during the survey, correction of usage errors is appropriate. Future supplies will be obtained from the village dai.

A 100% sample prevalence survey may not be necessary at each 3 month prevalence survey. A 10-20% representative sample can probably provide us with adequate information for program evaluation. However, smaller but more intensive investigations with certain aspects of the program may be necessary to adequately explain differential levels of contraceptive use and to give us new information for improving program performance.

The Government of Bangladesh has requested that we provide some information on the programmatic implications of adding injectable contraceptives to a limited area. The Government program is contemplating the use of injectables, and added field experience is needed to judge the acceptability and problems with administering this method at the village level.

9. Dissemination and Utilization of Results

1. Keen interest has been demonstrated in the project by Bangladesh Government officials, other international organizations and visitors. Formal presentations of the project and the preliminary findings have been made to the following:

a) Seminar sponsored by AID mission for Government officials, Bengalee researchers, and heads of other agencies

b) Director General of the Family Planning Board - site visit

c) Secretary of Health - site visit

d) Secretary of Population Control and Family Planning and Ambassador Marshall Green - site visit

e) Deputy Secretary of State, Spike Dubbs - site visit

f) Seminar - Voluntary Agencies in Bangladesh

g) Seminar - Ford Foundation Research Luncheon

h) Site visits for 12-15 other interested groups.

2. The Government of Bangladesh has conducted a nation-wide canvass to provide information and contraceptive supplies to all elegible couples on a house-to-house basis. The belief that the house-to-house approach is replicable for the Government is based on the fact that a pre-existing system is in operation for visiting all households on a regular basis. The fact that the Matlab project was able to distribute contraceptives in all villages to a large proportion of the couples may have contributed to the Government's plan for expanded distribution.

3. Periodic reports on the level of effort needed to maintain resupply and handle contraceptive problems should be useful information for Government activities.

10. Plans for Next Six Months

Collection of supply data along with contraceptive use and vital events registration will continue. Analysis of the baseline and second prevalence survey will be conducted and an interim report provided.

Additional fertility control services might be considered in the project area and the feasibility of such an extension will be assessed.

TABLE 1

DISTRIBUTION OF ORAL CONTRACEPTIVES IN CRL FIELD SURVEILLANCE AREA, MATLAB
OCTOBER 9 -- DECEMBER 10, 1975

Working Period	Eligible Women Contacted*			Eligible Women Absent	Total Eligible Women In Area	Man-days Effort
	Acceptors	Non-Acceptors	Total			
9-10 Oct.	287	247	534	179	713	17
11-15 Oct.	1146	576	1722	547	2269	37
17-20 Oct.	940	500	1440	256	1696	32
23 Oct-3 Nov.	2460	1205	3665	703	4368	80
6-10 Nov.	1103	405	1508	264	1772	35
13-17 Nov.	1445	604	2049	423	2472	42
20-24 Nov.	1255	494	1749	370	2119	40
27 Nov-1 Dec.	1586	823	2409	627	3036	59
4-10 Dec.	2865	1086	3951	999	4950	101
Total	13,087	5,940	19,027	4,368	23,395	443
Percent	68.8%	31.2%	(100.0%)	18.7%	(100.0%)	

* All married women 15-44 were considered eligible, regardless of pregnancy or post-partum amenorrhea status.

TABLE 2

BASELINE CONTRACEPTIVE USE-PREVALENCE SURVEY
MATLAB, SEPTEMBER - OCTOBER, 1975

	Distribution Area			Control Area			Combined Areas		
	Hindu(%)	Muslim(%)	Total(%)	Hindu(%)	Muslim(%)	Total(%)	Hindu(%)	Muslim(%)	Total(%)
Eligible Women*	2946	20223	23169	2223	19258	21481	5169	39481	44650
Women Contacted	2388(100)	16246(100)	18634(100)	1758(100)	15225(100)	16983(100	4146(100)	31471(100)	35617(100)
Current Use:									
Oral Contraceptives	24(1.0)	95(0.58)	119(0.65)	48(2.7)	235(1.54)	283(1.67)	72(1.74)	330(1.05)	402(1.13)
Condoms	0	1(0.006)	1(0.005)	1(0.06)	9(0.06)	10(0.06)	1(0.02)	10(0.03)	11(0.03)
IUD	4(0.2)	10(0.06)	14(0.08)	11(0.6)	25(0.16)	36(0.2)	15(0.36)	35(0.11)	50(0.14)
Injection	1(0.04)	4(0.02)	5(0.03)	1(0.06)	5(0.03)	6(0.04)	2(0.05)	9(0.03)	11(0.03)
Sterilization	8(0.3)	25(0.15)	33(0.18)	2(0.1)	15(0.10)	17(0.1)	10(0.24)	40(0.13)	50(0.14)
Other	4(0.2)	4(0.02)	8(0.04)	0	0	0	4(0.1)	4(0.01)	8(0.02)
Unknown	1(0.04)	2(0.01)	3(0.02)	0	0	0	1(0.02)	2(0.006)	3(0.008)
Total	42(1.8)	14(0.87)	183(0.98)	63(3.6)	289(1.90)	352(2.07)	105(2.53)	430(1.37)	535(1.50)

* All married women 15-44.

FOLLOW-UP* BASELINE CONTRACEPTIVE USE-PREVALENCE SURVEY
MATLAB, OCTOBER - DECEMBER, 1975

	Contraceptive Distribution Area			Control Area			Combined Areas		
	Hindu(%)	Muslim(%)	Total(%)	Hindu(%)	Muslim(%)	Total(%)	Hindu(%)	Muslim(%)	Total(%)
Eligible Women	2946	20223(100)	23169(100)	2223(100)	19258(100)	21481(100)	5169(100)	39481(100)	44650(100)
1st Round Absentees	558(18.9)	3977(19.7)	4535(19.6)	465(20.9)	4033(20.9)	4498(20.9)	1023(19.8)	8010(20.3)	9033(20.2)
Contacted on 2nd Round	208(7.1)	1690(8.4)	1898(8.2)	-	-	-	-	-	-
Absent Both Rounds	350(11.9)	2287(11.3)	2637(11.4)						
Contraceptive Users on 2nd Round (As % of Women Contacted)									
Oral Contraceptives	3(1)	15(0.9)	18(0.8)						
Other Methods	0(0)	2(0.1)	2(0.09)						
	3(1)	17(1.0)	20(0.86)						

* Conducted during house-to-house contraceptive distribution

APPENDIX 1

DIRECTIONS FOR ORAL CONTRACEPTIVE USE (FIELD STAFF)
CHOLERA RESEARCH LABORATORY

1. These tablets are one of the very best methods of family planning available. Longer spacing between pregnancies can improve the woman's health. The tablets will only work to prevent pregnancy, however, if the woman takes one every day. If she stops or forgets to take her tablets, she will become pregnant. A woman should generally continue taking the pills even if she is taking other medicine for illness.

2. To begin the tablets, if the last menstrual bleeding started less than 10 days back, the woman may begin right away to take one tablet each day. If the last menstrual bleeding started more than 10 days back, the woman should begin taking tablets on the 5th day after her next menstrual bleeding starts, even if the woman is still bleeding. Condoms should be used until the tablets are started. Tablets may be swallowed with water. The woman should first take all the white tablets - one each day for 21 days. When they are finished she should begin the colored tablets, taking one each day. Bleeding should begin while taking the colored tablets. When all the tablets, white and brown, on one card are finished, the woman should begin a new card the very next day starting with the white tablets, even if she is still bleeding.

3. If a woman who has recently delivered a baby wishes to begin taking family planning pills, there are special instructions as to when she should begin her tablets. If her infant died, if she is not breastfeeding the infant, or if she has started having regular menstrual periods, she may begin taking tablets regardless of when she delivered. However, if she is breastfeeding and menstruation has not yet resumed, she should wait until the six-month birthday of her infant to begin taking the tablets. That is, if the infant was born on January 1, she may begin taking tablets on July 1.

4. Pregnancy does not occur if the woman takes one of these tablets each day. When a baby is desired, she stops taking the tablets. If a woman has forgotten to take a tablet, she should be advised to take the tablet as soon as she realizes she has forgotten it. In addition, the regular tablet should be taken at the usual time. To help the woman in remembering to take a tablet each day, it is good practice to set a specific time to take the tablet every day, such as the "magreb" prayer or after the evening meal.

5. The woman should not become concerned if during the use of these tablets some signs similar to pregnancy may occur such as slight headache, nausea, or dizziness. These are temporary occurrences in some women only and should disappear with regular use of pills. If bleeding or spotting should occur between menstrual periods (while taking the white tablets) do not be alarmed. This, too, is a temporary occurrence in some women which should subside with regular use of the tablets.

CHOLERA RESEARCH LABORATORY
INSTRUCTIONS FOR CONDOM USE

1. The condom is a good method of family planning used by the male partner. This method is only effective in preventing pregnancy if used correctly during each act of intercourse.

2. The condom should be removed from its wrapper and rolled completely over the already erect penis just before the penis is inserted into the vagina. After ejaculation the still-erect penis should be removed from the vagina. Hold on to the condom during withdrawal so that no semen is spilled. After complete withdrawal, remove the condom from the penis.

3. A condom should be used only once -- do not re-use the condom.

APPENDIX 2

CHOLERA RESEARCH LABORATORY
DRAFT D HUBER OCTOBER 1975

CASE EXAMPLES - - INITIAL DISTRIBUTION

1. Situation: Woman 7 months since last delivery. Breastfeeding and no menses. Does not want to use the pill because pregnancy has not occurred to her before menses return.

Response: Women usually do not become pregnant before menses return but any woman has a slight chance of pregnancy before menses return. Therefore, if she wants to be certain of preventing pregnancy, she should start pills now. Otherwise she may wait until the first menstrual period and then begin pills on the 5th day.

2. Situation: Woman 4 months after delivery. Breastfeeding and wants to prevent all pregnancy for certain.

Response: She should wait until the infant is 6 months old and then begin the pills. Her menses will return with regular use of pills, but she is protected against pregnancy. If she begins taking pills too soon after delivery, the breast milk may be slightly lessened.

3. Situation: Woman 4 months after delivery breastfeeding and menses have already returned.

Response: She may begin pills now (even though breast milk may be slightly decreased on pills, the risk of another pregnancy can result in reduction of breast milk also).

4. Situation: Woman with baby aged 3 months who died last week.

Response: Woman may begin taking pills immediately. If baby dies or the woman has had a miscarriage, she can become pregnant again within 1 or 2 months after pregnancy termination or death of baby.

5. Situation: Woman 12 months after delivery, breastfeeding. Husband is away (amenorrhea still). She is worried husband will not approve.

Response: Leave pills with woman and she can discuss it with the husband when he returns. The woman does not have to agree to take the pills in order to receive them.

6. Situation: Woman 18 months after delivery and menses have returned. She is breastfeeding baby. Last period began 8 days back.

Response: May begin pills immediately.

7. Situation: Woman 18 months after delivery and menses have returned. Last period began 12 days back.

Response: She should wait until next period and begin pills on the 5th day after bleeding begins. Should use condoms until beginning the pills.

8. Situation: Woman is currently 8 months pregnant and wants to use pills in the future.

Response: She may be given the pills (6 cycles) with definite instructions that she should NOT take the pills during pregnancy and should wait until the baby is 6 months old before beginning pills. (If the baby dies or if she has a miscarriage, then she may begin pills immediately).

9. Situation: Woman has not had a pregnancy for 4 years and believes she is not likely to become pregnant. She is 30 years old and is having menstrual periods regularly.

Response: Unless she is not living with husband, she may still have a chance to become pregnant and should probably begin taking the pills. The woman's own judgement must be used somewhat.

10. Situation: Woman 40 years old and has not had a pregnancy for 6 years. Believes she does not need contraceptives. She is still menstruating.

Response: In this case the woman is probably correct. If there is no pregnancy in 5 years or longer, she is unlikely to become pregnant, but cannot be certain. If she wants to be CERTAIN of preventing pregnancy, she should begin the pills.

11. Situation: Woman in ill health and therefore feels she should not take contraceptives.

Response: She should take pills because pregnancy should be avoided during ill health.

12. Situation: Woman has irregular periods and wants to begin pills. She has had no menstrual period for 2 months.

Response: If woman believes she is not pregnant, she may begin the pills immediately. If she believes she is pregnant, then the pills should not be taken during pregnancy. Pills will NOT cause abortion or miscarriage. If pregnancy is undetermined, she should use condoms until next menstruation and then begin the pills.

FOLLOW-UP CASE EXAMPLES

Situations after initial delivery:

1. Situation: Woman complains of headache two weeks after she begins taking the pills.

Response: Slight headache sometimes occurs when first taking the pills. This usually goes away after 1 or 2 pages of pills. Also, many women get headache without pills and headache now may not be related to taking the pills.

2. Situation: Woman complains of nausea 3 weeks after starting the pills.

Response: Pills sometimes cause slight complaints similar to early stages of pregnancy, such as nausea, but these usually go away with regular pill use in short time. Should continue using the pills.

3. Situation: Woman complains of burning in her hands and feet two weeks after starting pills.

Response: These complaints are not caused by the pill and she should continue taking the pills.

4. Situation: Woman has fever 1 month after beginning pills and feels she is not strong enough to take pills.

Response: Pills do not cause fever. If she is ill and taking other medication, she should continue taking pills to prevent pregnancy. If she is ill, this is all the more reason not to become pregnant at this time.

5. Situation: Woman after 3 pages of pills complains of slight bleeding between periods (while taking white tablets). Bleeding lasts for 4 days.

Response: This is not unusual and is nothing to be worried about. The irregular bleeding usually does not continue with regular pill use. If it does not subside, the woman may take two WHITE tablets per day for 3 to 4 days until the bleeding stops. (The extra pills should be taken from a separate packet so as not to disrupt the regular packet).

SUPPLIES

Supplies of pills:

1. Each woman may be given 6 pages to start with, unless she wants fewer.

2. Re-supply may be obtained from Field Assistant (Field Surveillance Branch) during his regular rounds or from Dai. Both should carry some supplies with them during the course of routine work - both pills and condoms.

3. If not satisfied with pills, then condoms should be given, but this method does not give certain protection against pregnancy.

INSTRUCTIONS FOR COMPLETION OF CONTRACEPTIVE PREVALENCE SURVEY QUESTIONS (SEPT. 1975)

Complete the 6 questions below for all married women ages 15-44. Update the marital status for women using the following code: (correct the survey sheet using these numbers

0 never married
1 currently married
2 widowed
3 divorced
4 separated

Give code numbers on the survey sheets for the six questions. When asked to "specify" information write in above the code number.

When there is misinformation on the survey sheet, such as a duplicated number or the census number is for a male, write in the correct information next to the census number and indicate the error.

For each married woman present (aged 15-44) give 12 code numbers for the 6 questions as follows:

(1) Date of Last Termination	(2) Menstruating	(3) Current Method Contraception	(4) Method in past 3 months	(5) Source	(6) Parity
day mo. year					
1 2 3 4 5 6	7	8	9	10	11 12

1. Date of last termination (of any pregnancy) usually obtained from family record

example, live birth on 8 June 1975

0 8	0 6	7 5
day	mon.	year

(6 numbers placed in 1st open space on computer printout listing)

When day, month, or year is unknown, indicate with 9's- Example, last live birth in 1966, day and month unknown.

9 9	9 9	6 6
day	mo.	year

If "not applicable" fill in with zeros. Example, woman has never been pregnant.

0 0	0 0	0 0
day	mo.	year

2. Is woman currently menstruating? (M P in past 30 days)

1. absent from household
2. yes, is menstruating
3. no, post partum amenorrhea
4. no, currently pregnant
5. no, menopausal
6. no, amenorrhea for other or unknown reasons
9. undetermined
0 not applicable

3. Is woman or husband using anything at present to prevent pregnancy? (in past 2 weeks):

1. Nothing
2. Pill
3. Condom
4. I.U.D.
5. Injection
6. Sterilization (man or woman)
8. Other (specify)
9. Undetermined
0 Not applicable

4. Has woman or husband used anything (at any time) in past three months to prevent pregnancy?

1. Nothing
2. Pill
3. Condom
4. I.U.D.
5. Injection
6. Sterilization (man or woman)
8. Other (specify)
9. Undetermined
0 Not applicable

5. Source of contraception used. Give most recent source of contraception during past 3 months.

1. CRL field staff (dai, F.A.)
2. Matlab Hospital Clinic (F.R.P. Dr. Saleha)
3. Govt. worker or govt. clinic
4. market (shop)
8. Other (specify)
9. Undetermined (unknown)
0 Not applicable

6. Parity What is the total number of live births the woman has had? (fill in blank space on computer printout on same line as woman's census number).

Parity is total number of live births for the woman (including those born alive and now dead). It does not include stillbirths and miscarriages.

Example, Woman had 6 live births and 1 miscarriage.

Parity

0 6

If parity undetermined, write 99

APPENDIX 4

INSTRUCTIONS FOR RECORDING DATA FOR INITIAL PHASE OF CONTRACEPTIVE DISTRIBUTION

These responses should be recorded for each married woman aged 15 - 44 in the contraceptive project area except for those women who are absent. For absent women indicate the response to the first question only.

1. Is woman present or absent, and if present was she also present at the time of the prevalence survey?

code number	response
1.....	absent
2.....	present now, absent before (complete prevalence questions now)
3.....	present now, present before

2. How many pages of pills given (note: there are three pages in one package).

0.....	none
1.....	one page given
2.....	two pages given
3.....	three pages given
.	
.	
.	
.	
9.....	nine or more pages given

3. How many condoms were given (note: there are three condoms in one strip; given strips of condoms, do not given individual condoms except in unusual circumstances and make the proper record).

0.....	none
1.....	one strip of condoms
2.....	two strips of condoms
.	
.	
9.....	nine or more strips given

Example: A married woman who is present now and was absent at the time of the prevalence survey is given 6 pages of pills and 4 strips of condoms (a total of 6 cycles of pills and 12 condoms) should be recorded:

2 6 4

Presence — Number of pages (cycles) of pills — Number of strips of condoms

The prevalence survey questions should be asked of this woman.

APPENDIX 5

INSTRUCTIONS FOR SECOND PREVALENCE SURVEY - JANUARY 1976

(3 months following initial distribution)

Six numbers will be coded in the next open space on the Prevalence Survey volumes:

Menstrual status	Current method of contraception	Method in past 3 months	Source	Pills given	Condoms given

1. Is woman currently menstruating? (M P in past 30 days)

1. Absent from household
2. Yes, is having natural menstrual periods (has stopped pills more than 30 days previously and has had 2 or more periods since stopping)
3. No, post partum amenorrhea
4. No, currently pregnant
5. No, menopausal
6. No, amenorrhea for other or unknown reasons
7. Yes, is menustrating, related to pill taking (has taken pills in last 30 days)
9. Undetermined
0. Not applicable

2. Is woman or husband using anything at present to prevent pregnancy? (in past 2 weeks):

1. Nothing
2. Pill
3. Condom
4. I. U. D.
5. Injection
6. Sterilization (man or woman)
8. Other (specify)
9. Undetermined
0. Not applicable

3. Has woman or husband used anything (at any time) in past 3 months (since distribution for treatment area) to prevent pregnancy?

1. Nothing
2. Pill
3. Condom
4. I. U. D.
5. Injection
6. Sterilization (man or woman)
8. Other (specify)
9. Undetermined
0. Not applicable

4. Source of contraception used. Give most recent source of contraception during past 3 months.

1. CRL field staff (dai, F.A.)
2. Matlab Hospital Clinic (F.P.P., Dr. Saleha)
3. Government worker or government clinic
4. Market (shop)
8. Other (specify)
9. Undetermined (unknown)
0. Not applicable

5. How many pages of pills given (note: There are three pages in one package) Include any supplies previously given by dai that have not already been recorded in Prevalence Volume.

0. None
1. One page given
2. Two pages given
3. Three pages given
9. Nine or more pages given

6. How many condoms were given (Note: There are three condoms in one strip. Give strips of condoms, do not give individual condoms except in unusual circumstances and make the proper record)

0. None
1. One strip of condoms
2. Two strips of condoms
9. Nine or more strips given

EXAMPLE: A woman presently menstruating and currently taking the CRL pill is given an additional 3 pages and no condoms. Record as follows:

7	2	2	1	3	0

APPENDIX 6

INVESTIGATION OF CONTRACEPTIVE SIDE EFFECTS AND THEIR IMPACT ON CONTRACEPTIVE USAGE

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David Everett
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January 24, 1976

Cholera Research Laboratory
Dacca, Bangladesh

INTRODUCTION:

This study was designed as a descriptive adjunct to the contraceptive saturation program in the Matlab Bazar Thana, which began distribution in October 1975. The aim was to quantitate the frequency of different side effects being experienced by a sample of acceptors, and correlate their importance to the success of the project.

Side effects are an important aspect of the acceptance of any drug. It is necessary therefore, especially in a massive distribution, to know just how significant side effects are going to be, in order to allocate sufficient effort in this area.

The types of side effects reported by local women have relevance to all family planning projects in Bangladesh and need not correspond with experiences in other countries.

During the distribution of free pills, field assistants accompanied by "dais" gave a standard set of information to all acceptors. They stressed the need to continue taking one pill each day to prevent pregnancy (21 white followed by 7 brown pills). The brand of pill used was Norinyl 1/50 (. 05 mg. mestranol, 1 mg. norethindrone). It was explained that menstruation should occur during the brown pills. Women were warned that slight initial side effects may occur in some. These included headaches, nausèa, dizziness and perhaps intermenstrual spotting. No assurance of intended use was required from the woman before pills were supplied

METHODS:

The plan was to interview as many women as possible during the 4-week period available to us for field work. Based on the results of a preliminary interview with 121 dais (CRL village women employees), study villages were chosen which fulfilled the following criteria:

1. The distribution must have been completed in that village a minimum of 8 weeks prior to our enquiry.

2. Villages needed to be geographically accessible and in pairs, so that two teams could work separately while using the same speedboat.

3. Villages where the dai had indicated apparently high usage rates were first chosen. These were soon exhausted, and villages of unknown usages fulfilling 1 and 2 were included. The bias towards good-usage villages was thus eliminated to a certain extent.

4. We attempted to include all villages (fulfilling 1 and 2) which, according to the dai interview, were problem villages with high dropout rates.

As field work proceeded it became obvious that the information recorded initially from the dai interview usually did not correlate at all well with our findings in the village. Hence, apart from criteria 1 and 2, the selection of villages for study may be more representative of the whole FSA (Field Surveillance Area) than at first anticipated. Once a village was chosen for study, census numbers of all acceptors in that village were listed using prevalence survey books.

The two investigators worked independently, each accompanied by a field assistant and dai. Each acceptor was asked the following questions:

1. Did she still possess the pills she accepted and had she taken any? If pills had been used, the pages were inspected, including where possible completely used pages to confirm the answer. * The number of weeks use was recorded and any obvious incorrect use noted. **

2. If she had not used any pills, was there any specific reason?

3. If she had used pills, was she continuing to do so or had she discontinued?

4. If the woman had used pills at any stage, was she happy with them or did she have any problems with them?***

5. Had the woman heard anything, good or bad, about the pills from other women?

* In all cases before interview the field assistant attempted to explain that we did not mind if the woman chose not to use the pills, but were merely requiring information for the study. In a small number of cases, the woman's reply was nevertheless suspect. This arose in some cases from efforts to please, and in others from fear of punishment. Whenever such a suspect reply arose and could not be confirmed by inspection of the pill pages (for example, a woman claiming to have finished a page the previous night), the dai's confirmation was sought. If the dai could not help and the field assistant was unconvinced, a menstrual history was taken in an attempt to check that she had just completed a page. If satisfaction was still not achieved, the woman was counted as a non-user.

** "Obvious incorrect use" included instances where a semi-used page was presented from which pills had been randomly taken, with brown pills and white pills taken out of order. This does not include pages which had been tampered with by children, nor cases where pills had been missed for one or more days as this is impossible to detect. More minor variations, for example beginning at the wrong end of the line, were ignored so long as the woman completed 21 white pills before taking the brown pills. Wrong use which the woman volunteered was also included in this category, for example where she had stopped taking the pill when bleeding.

*** The question regarding side effects was purposely left as open-ended as possible, the rationale being that side effects volunteered spontaneously are more likely to be significant. We felt that if a checklist was used, over-reporting

of side effects may result. Any checklist of "known" pill side effects would no doubt be compiled from the experience of western women. No such bias is included by an open-ended question, and hopefully side effects attributed by Bengali women to this particular pill brand may be ascertained. Another disadvantage of presenting the woman with a long checklist of possible pill side effects would be to implant in her bari a source of unwarranted doubt about the safety of pills.

RESULTS:

In a total of 28 villages, 1527 acceptors were interviewed from a list of 1853 acceptors. The range of time elapsed from distribution to interview was 8 to 13 weeks, with the weighted mean lying at 72 days.

Section I - Usage Patterns

Findings of significance to be noted from Table I-1 include:

(1) An overall drop-out rate of 30%. This is much higher than the 13% indicated by our preliminary interview with the dais. This drop-out rate applies to a mean interval of 10 weeks since distribution. The next prevalence survey will determine whether, after a longer interval, the total numbers of contracepting women increase or decrease.

(2) Comparing Hindu and Muslim acceptors, it would appear that Hindus report a higher initial use of their supplies (37% versus 31% original use for Muslims). However, when continued use is compared, there is little difference to be found (24% of Hindus continuing to use pills and 22% of Muslims continuing). The higher Hindu drop-out rate(36% versus 28% for Muslims) is significant ($X^2 = 4.07$, $p < 0.05$) but unexplained. One possibility is that Hindus may simply be more ready to admit to discontinuing (see Cultural Factors, Sources of Bias).

(3) From Table I-2, the median length of use for those women who stopped the oral contraceptives is 3 weeks. The median length of use for those continuing is 7 weeks. The life table calculations for women using the oral contraceptives (Table I-3) shows the following points:

(a) In the dx calculation (drop-outs) there is a clustering around the 4, 8 and 12-week intervals. This may mean that the women who report dropping out tend to do so at the end of a cycle of pills. One cannot exclude the possibility that, if false answers were given regarding dropping out, they were mostly applied to these times. (e.g. "Yes, I took 2 pages in the past (8 weeks), but they are not available as they've been thrown away.")

(b) The same applies to the Wx calculation at 12 weeks. If any errors exist they are most likely to occur at this time because checking the validity of a report of continuation is most difficult at the time of changing to a new packet. However, as explained in "Methods" we attempted to eliminate

over-reporting where suspicion existed. It must also be noted that the number of weeks usage was approximated to the nearest week.

(c) By calculating lx, after deriving px from our sample population, it can be seen that there is a steady, almost linear, decay of continuation up till the 12th week. Thereafter occurs the drop discussed in (a) above (refer to Graph I). By the end of the second cycle of pills, 73.8% of users are continuing. By the end of the third cycle of pills, 48.8% of users are continuing.

Section II - Side Effects

Considering that 62% of all pill users attributed at least one symptom to the pill (Table II-1), the significance of side effects to the overall program is confirmed. There is a significant association between women complaining of symptoms and discontinuing pill use ($X^2 = 19.15$, $p<0.001$). Looking at the overall rates for individual side effects (Table II-2) we see that "dizziness" is by far the most common. At the time of interview, this was explained by the field assistants as a sensation of movement in the head, and/or the sensation of light-headedness experienced especially on rising to the upright position (see Discussion). Not only was dizziness the most commonly reported side effect, but also it was significantly associated with pill discontinuance (Table II-3) ($X^2 = 8.59$, $p<0.01$).

The two categories of bleeding problems, the next most frequent complaint, were, surprisingly, not significantly associated with pill discontinuance, whether treated as separate complaints or grouped together. This was contrary to our original expectations.

As may be expected, the side effect of vomiting although uncommon, was significantly associated with discontinuance.

Several important negative findings appear on Table II-2. A total of only 3 women volunteered the complaint of suppressed lactation. This finding is particularly heartening as, understandably, the threat of a reduced milk supply is taken very seriously by village women.

Section III - Reasons for Non-use

Points for note from Table III:

(1) Muslims more frequently volunteered the response, "husband did not permit use", and, notably, also experienced a higher rate of pregnancy. While clear that the husband's permission was generally sought, in some cases it may merely have been a convenient response to our questions.

(2) At the initial distribution women were instructed that to be certain of avoiding pregnancy by "mura" (post-partum conception before resumption of menstruation), pill-taking should commence at 6 months post-partum. A significant proportion of non-users (12.1% overall) reportedly ignored these instructions in favor of maintaining the natural infertility of lactating amenorrhea.

Section IV - Rumours

As can be seen from Table IV-1, ther is a significandy negative association between women hearing rumours about the pills and pill discontinuance (X^2 4.04, p 0.0). That is a greater proportion of continuing users reported hearing any rumour than stoppers. This may relate to a higher level of discussion about the pill among women currently using it. It may be helpful to know that excessive general effort does not need to be applied to dispelling rumours. This does not exclude the possibility that a powerful localized rumour may drastically effect usage in the vicinity.

The frequency rates for individual rumours about oral contraceptives (Table IV-2) indicates that the most commonly heard rumours are ones that attribute various side effects to the pill. The rumours are so rational in fact, that their frequency follows almost the same order as for actual side effects. During the enquiry it was noticed that for a given bari, women hearing rumours of a particular side effect formed a periphery around a user experiencing such a side effect.

The higher frequency of "good" rumours (*Table IV-2) reported by Muslims may be a factor of either greater fearfulness, greater eagerness to please, or both.

Section V - Incorrect Use of Pills

The relatively common occurence of women incorrectly using pills (Table V) is of importance to the training efforts of the program. Incorrect use detected by inspecting the pages is undoubtedly an under-estimation of the total incorrect use. The occurence of women forgetting a few pills in a cycle may be high, and of great relevance to pill efficacy. It is impossible however, to get accurate information about this. We suspected that in many cases, bleeding problems were directly caused by incorrect use. For example; women who had taken brown pills when white were in order, or had forgotten pills in the middle of the cycle. Some women convinced that their menstruation was heavier than usual, thought it best to cease taking pills until the menses stopped, thus prolonging the period further. Unfortunately, we could not prove an association between bleeding problems and incorrect use.

Section VI

For the individual village rates of usage, see Table VI.

SOURCES OF BIAS:

(1) Our study sample had a 32% Hindu composition, a proportion 3 times higher than that of the Field Surveillance Area overall. This was partly intentional so that Hindu numbers would be significant enough to draw conclusions as to whether their usage of pills differed from that of Muslims. Marked differences did not eventuate. Usage rates were not the primary concern of this study as these will be recorded in depth by the program's next prevalence survey.

(2) The presence of foreigners imposes a bias of unknown quantity, but one which can hardly be eliminated. We feel that the presence of any person of perceived authority, Bengali or otherwise, immediately creates a bias. In a very few cases we detected a reaction of reservation and fear of punishment, while in other perhaps more educated women there was an unreal anticipation of our expectations and an eagerness to please. In an attempt to eliminate these factors, the field assistant explained that we merely sought information and that we felt it was the woman's right not to take pills if she so chose. Hopefully this also lessened any feeling of obligation on the part of the woman towards people associated with the Cholera Hospital and its services. If these errors do exist, we feel they will influence results in the direction of over-reporting of pill usage.

(3) The most obvious source of errors attributable to foreigners is that of translation difficulty. This becomes particularly important with respect to symptomatology. Despite numerous attempts, it was impossible to share the subjective experience of the woman regarding "dizziness" and "burning sensations". Consultations with Bengali workers in this field, however, confirmed our impressions about them.

(4) Cultural factors. Our immediate impression was that Hindu women were much easier to interview, especially when compared to Muslim villages where "Purdah" was practised. During the initial stages of the study, their openness at interview led us to believe they may be more willing pill users, which proved to be quite erroneous. We later discovered that although Hindus in general were quicker to admit to discontinued use or rumours they had heard, they were not exempted from attempts to falsify answers in order to please.

(5) The constant presence of the investigators is believed to have reduced certain reporting biases. When responses were questionable, additional probing was conducted to resolve inconsistencies. The quality of co-operation between field assistants and village women could be observed and subjectively assessed. Standardized questioning could also be ensured.

DISCUSSION AND RECOMMENDATIONS:

(1) The role of the village dai is central to the running of the Matlab project. The presence of a woman well known to other villagers and always on hand to guide in correct usage or help with problems which arise and resupply pills as needed, must be very reassuring to users. Our comparison of preliminary dai interview information and facts as we found them would seem to indicate that, at least in the initial stages of the project, the dais had little idea of contraceptive practice in their area. During our field work we came across dais with good knowledge of their area effecting correct usage. Other dais had little interest or understanding of the pills with many women in their area incorrectly using them. Recently, the dais have attended many small training sessions and a great advance will be madeif, during the prevalence survey and re-distribution, they give the instructions while the male field assistant silently watches. There is no reason

why the model of a local figure encouraging women in correct pill usage cannot be reproduced in other areas. We occasionally found a bari in which a young, educated man, or even an old, religious leader had voluntarily taken on such a role.

(2) The prevalence survey teams will no doubt be faced by problems similar to those experienced by us. They will need to be on their guard against over-reporting and false answers from women assuming to know their expectations. A notable example is that of two women who were taking rather a long time to produce their supposedly current pages. When we finally received three crisp, fresh, empty pages from each, other women began laughing and the two had to admit to having just punched them out.

(3) As seen previously, bleeding problems were quite frequently reported. Instructions to dais and field assistants on their management must be made simple and clear. The suggestion has been to double the pill dose for 4 days when inter-menstrual bleeding occurs. We came across a few cases of these instructions being applied to menorrhagia, so that women were taking the extra white pills with their brown pills. The dai should supply the extra four pills to ensure that the woman does not take them from her current page, thus shortening her cycle. In a small number of cases of authentic break through bleeding, the supply of Norinyl 1/80 is indicated.

(4) Our findings that the report of "dizziness" is significantly associated with discontinuance while bleeding problems are not, may seem puzzling. We found that the symptom of dizziness was taken seriously as one which reduced the woman's work capacity and brought on the displeasure of mother-in-law and husband. Our suspicion, strengthened by discussion with other, local family planning groups, is that "dizziness" per se is a frequent complaint. Unfortunately, no control studies have yet been done along these lines. It has also been the observation of other local groups that dizziness is the symptom most often attributed to the pill.

(5) In this culture it is generally accepted that authority lies with the husband, as would seem indicated by the frequency of the response "husband did not permit use". It may be beneficial if more effort is made to involve the husband in the sphere of family planning. This of course presents many practical problems as husbands are generally absent from the bari at the time of the distribution visit. Perhaps elderly male relatives present at the distribution could support the woman in her later approach to the husband.

(6) Our detection of high rates of incorrect use among women stresses again the need for repeated training of the dai so that she has sufficient confidence to deal with such cases. It is perhaps unfortunate that ther is no pill package specifically designed for Bengali use, with some feature to distinguish one day from the next. The instruction that the pill should be taken at a regular daily event, e.g., befor the "magreb" prayer, or after the evening meal is a useful one.

(7) The reproducibility of the Matlab project is no doubt of interest to other agencies. The good relations of the people with the Cholera Hospital may have influenced the high initial acceptance rates, but certainly women will not feel obliged to use the pills unless they themselves are motivated to do so. The working hypothesis of the project was that where supply services are good and demand exists, family planning will proceed with a minimum of propaganda.

GRAPH 7:- RELATION BETWEEN % CONTINUATION AND WEEKS OF USE.

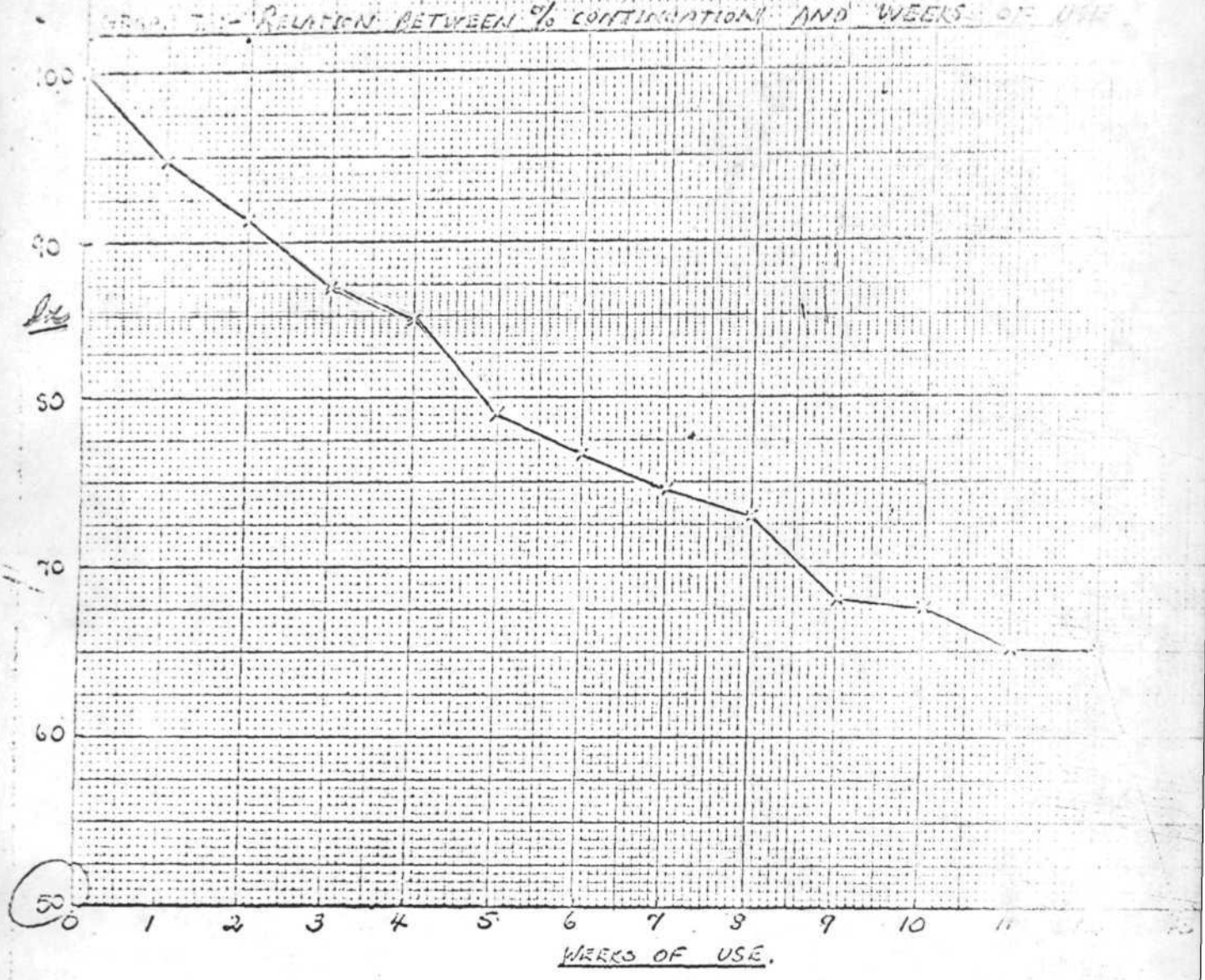

TABLE I-I

O.C. usage, as recorded in 28 sample villages from the Matlab VTS area (October 1975-January 1976)

	Overall	Hindu	Muslim
*Estimated no.of eligible women	2188		
Total no. of acceptors	1853	600	1253
No.acceptors contacted by survey	1527	491	1036
No.acceptors absent	326 (18%)	109 (18%)	217 (17%)
No.acceptors who ever used O.C.'s	503	181	322
Proportion of acceptors who ever used	33%	37%	31%
Proportion of acceptors continuing to use at time of survey	23%	24%	22%
Proportion of estimated eligible women continuing use.	16%		
No.users continuing	349 (70%)	116 (64%)	233 (72%)
No.users discontinuing ("drop outs")	154 (30%)	65 (36%)	89 (28%)
Total	503 (100%)	181 (100%)	322 (100%)

*Estimated no.of eligible women contacted during contraceptive distribution phase, determined by using the prevalence survey acceptance rate of 69.8%. We have assumed that, although this figure was derived for the whole VTS distribution area, it is also applicable to our sample 28 villages.

TABLE 1-2

Number of weeks of use of O.C.'s in both the continuing and discontinuing groups of users

No. of Weeks Used	Discontinued			Continued		
	Hindu	Muslim	Total	Hindu	Muslim	Total
< 1	11	15	26	-	9	9
1	11	6	17	4	8	12
2	5	14	19	2	15	17
3	2	9	11	9	2	11
4	10	15	25	16	28	44
5	5	3	8	5	17	22
6	5	3	8	9	26	35
7	-	2	2	13	26	39
8	2	12	14	11	27	38
9	1	-	1	11	16	27
10	2	2	4	5	10	15
11	-	-	-	3	12	15
12	8	7	15	22	25	47
13	-	-	-	-	5	5
>13	3	1	4	6	6	12
Total	65	89	154	116	233	349

TABLE 1-3

Life table calculations for (503) women using O.C.'s in the 28 sample villages of the Matlab VTS area, October 1975 to January 1976

X to X+1	nx	dx	Wx	n^1x	qx	px	ℓx
0-1	503	26	9	498	.052	.948	100
1-2	468	17	12	462	.037	.963	94.8
2-3	439	19	17	430	.044	.956	91.3
3-4	403	11	11	397	.028	.972	87.3
4-5	381	25	44	359	.070	.930	84.8
5-6	312	8	22	301	.027	.973	78.9
6-7	282	8	35	263	.030	.970	76.8
7-8	239	2	39	219	.009	.991	74.5
8-9	198	14	38	179	.078	.922	73.8
9-10	146	1	27	132	.008	.992	68.0
10-11	118	4	15	110	.036	.964	67.5
11-12	99	0	15	91	0	1.000	65.1
12-13	84	15	47	60	.250	.750	65.1
13+	22	-	-	-	-	-	48.8

x to x+1 = Weeks of use of O.C.'s

nx = Users at start of interval

dx = Drop outs

Wx = Withdrawn (remaining active users at time of survey)

n^1x = Adjusted no. "at risk" (users at start of interval)

qx = Estimated probability of dropping-out during interval

px = Estimated probability of continuing during interval

ℓx = Percentage of continuing users after x weeks

TABLE II - 1

Frequency of side effect complaints in 28 sample villages of the Matlab VTS area, October 1975 to January 1976

	Total		Hindu		Muslim	
No. users who complained of any symptom	310	(62%)	113	(62%)	197	(61%)
No. continuing users who complained of any symptom	193	(55%)*	62	(53%)	131	(56%)
No. discontinuing users who complained of any symptom	117	(76%)*	51	(78%)	66	(74%)

* Chi Squared = 19.15

$p < .001$

TABLE II-2

SYMPTOMS ATTRIBUTED TO O.C.'s BY WOMEN WHO USED THE O.C.'s AT SOME STAGE IN 28 SAMPLE VILLAGES OF THE MATLAB VTS AREA DURING THE PERIOD FROM OCTOBER 1975 TO JANUARY 1976

(503 Women used the O.C.'s; 181 Hindu and 322 Muslim)

SYMPTOM	HINDU		MUSLIM		OVERALL	
	%	#	%	#	%	#
Dizziness	43	78	43	139	43	217
Inter-menstrual bleeding	9	17	19	61	16	78
Prolonged or heavy menstrual bleeding	12	23*	8	25	10	48
Burning sensations(head) limbs, abdomen)	3	6	11	35	8	41
Weakness	6	10	2	7	3	17
Insomnia	-	-	5	16	3	16
General uneasiness	3	5	2	6	2	11
Pain(usually abdominal)	1	2	3	9	2	11
Nausea	2	3	2	7	2	10
Vomiting	3	5	1	3	2	8
White discharge	3	5	0.3	1	1	6
Diarrhea	1	2	1	3	1	5
Fever	0.5	1	1	4	1	5
Decreased Appetite	0.5	1	1	3	1	4
Depressed Lactation	0.5	1	0.6	2	0.6	3
Headache	-	-	-	-	-	-
Drowsiness	-	-	-	-	-	-
Miscellaneous	-	-	0.6	2	0.4	2*
** TOTAL		159		323		482

* 1 complaint of excess sweating
1 complaint of palpitations

** Some women complained of more than 1 symptom.

TABLE II-3

SYMPTOMS ATTRIBUTED TO O.C.'s BY WOMEN WHO HAD DISCONTINUED O.C.'s AT THE TIME OF THE INTERVIEW FROM 28 SAMPLE VILLAGES OF THE MATLAB VTS AREA DURING THE PERIOD FROM OCTOBER 1975 TO JANUARY 1976 (154 women discontinued; 65 Hindu and 89 Muslim)

SYMPTOM	HINDU		MUSLIM		OVERALL	
	%	#	%	#	%	#
Dizziness	55	36	51	46	53	81
Inter-menstrual bleeding	6	3	22	20	15	23
Prolonged or heavy menstrual bleeding	11	7	9	8	10	15
Burning Sensations (Head, limbs, eyes, abdomen)	-	-	11	10	6	10
Weakness	2	1	3	3	3	4
Insomnia	-	-	2	2	1	2
General Uneasiness	3	2	6	5	5	7
Pain (usually abdominal)	2	1	6	5	4	6
Nausea	3	2	-	-	1	2
Vomiting	8	5	1	1	4	6
White discharge	-	-	-	-	-	-
Diarrhea	3	2	1	1	2	3
Fever	2	1	3	3	3	4
Decreased appetite	-	-	-	-	-	-
Depressed lactation	2	1	1	1	1	2
Headache	-	-	-	-	-	-
Drowsiness	-	-	-	-	-	-
Miscellaneous	-	-	1	1	0.5	1*
** TOTAL		61		105		166

* 1 complaint of palpitations
** Some women complained of more than 1 symptom

TABLE II-4

SYMPTOMS ATTRIBUTED TO O.C.'s BY WOMEN WHO WERE CONTINUING TO USE O.C.'s AT THE TIME OF THE INTERVIEW FROM A SAMPLE 28 VILLAGES OF THE MATLAB VTS AREA DURING THE PERIOD FROM OCTOBER 1975 TO JANUARY 1976 (349 women continued using O.C.'s; 116 Hindu & 233 Muslim)

SYMPTOM	HINDU		MUSLIM		OVERALL	
	%	#	%	#	%	#
Dizziness	36	42	40	94	39	136
Inter-menstrual bleeding	12	14	18	41	16	55
Prolonged or heavy menstrual bleeding	14	16	7	17	9	33
Burning sensations (head, limbs, eyes, abdomen)	5	6	11	25	9	31
Weakness	8	9	2	4	4	13
Insomnia	-	-	6	14	4	14
General uneasiness	3	3	0.5	1	1	4
Pain (usually abdominal)	1	1	2	4	1	5
Nausea	1	1	3	7	2	8
Vomiting	-	-	1	2	0.5	2
White Discharge	4	5	0.5	1	2	6
Diarrhea	-	-	1	2	0.5	2
Fever	-	-	0.5	1	0.3	1
Decreased appetite	1	1	1	3	1	4
Depressed lactation	-	-	0.5	1	0.3	1
Headache	-	-	-	-	-	-
Drowsiness	-	-	-	-	-	-
Miscellaneous	-	-	0.5	1	0.3	1*
TOTAL **		98		218		316

* 1 complaint of excessive sweating
** Some women reported more than one symptom

TABLE III

Reasons volunteered by acceptors who have not yet used the pills supplied
(1024 non-users; 310 Hindu and 714 Muslim)

	Hindu		Muslim		Overall	
Pregnancy	52	(16.4%)	161	(22.8%)	213	(20.8%)
Post-partum amenorrhoea (less than 6 months)	59	(19.0%)	129	(18.1%)	188	(18.4%)
Post-partum amenorrhoea (more than 6 months)	40	(12.6%)	84	(11.9%)	124	(12.1%)
"Husband didn't permit use"	26	(8.4%)	129	(18.1%)	155	(15.1%)

TABLE IV-1

Frequency of women hearing rumours relating to O.C.'s in the 28 sample villages (1527 women interviewed)

	Overall		Hindu		Muslim	
No. of acceptors who reported hearing any rumours	548	(36%)	152	(31%)	396	(38%)
No. of continuing users who reported hearing rumours	158	(45%)	52	(45%)	106	(45%)
No.of discontinued users who reported hearing rumours	56	(36%)	16	(25%)	40	(45%)
No. of non-users who reported hearing rumours	334	(33%)	84	(77%)	388	(35%)

TABLE IV-2

Frequencies of various rumours heard by women of the 28 sample villages (1527) women interviewed)
October 1975 - January 1976

	Hindu		Muslim		Overall	
Permanent Sterility	2	(0.4%)	13	(1.3%)	13	(1.0%)
Death	10	(2.0%)	20	(1.9%)	30	(2.0%)
Punishment for non-users	-		2	(0.2%)	2	(0.1%)
Causes brain damage, paralysis or madness	1	(0.2%)	5	(0.5%)	6	(0.4%)
Burns or causes ulcer in the uterus	7	(1.4%)	17	(1.6%)	24	(1.6%)
Worsens general health	12	(2.4%)	7	(0.7%)	19	(1.2%)
Contraceptive"goes against God"	-		7	(0.7%)	7	(0.5%)
Inter-menstrual bleeding	17	(3.5%)	78	(7.5%)	95	(6-2%)
Prolonged or heavy menstruation	35	(7.1%)	98	(9.5%)	133	(8.7%)
Dizziness	96	(19.6%)	207	(20.0%)	303	(19.8%)
Weakness	18	(3.7%)	14	(1.4%)	32	(2.1%)
Burning sensations	8	(1.6%)	32	(3.1%)	40	(2.6%)
Nausea	1	(0.2%)	4	(0.4%)	5	(0.3%)
Vomiting	3	(0.6%)	2	(0.2%)	5	(0.3%)
Uneasiness	-	-	1	(0.1%)	1	(0.1%)
Decreased appetite	-	-	1	(0.1%)	1	(0.1%)
Decreased sleep	1	(0.2%)	6	(0.6%)	7	(0.5%)
Headache	1	(0.2%)	3	(0.3%)	4	(0.3%)
Diarrhea	-		5	(0.5%)	5	(0.3%)
Depressed lactation	2	(0.4%)	4	(0.4%)	6	(0.4%)
Miscellaneous	5	(1.0%)	4	(0.4%)	9	(0.6%)
*Improves health	13	(2.7%)	70	(6.8%)	83	(5.4%)
Total Rumours	232		600		832	

*Attempts were made to exclude this rumour if the woman only heard this from the distributors rather than from other women.

TABLE V

Frequency of incorrect use of O.C.'s among users of the 28 sample villages (63 used incorrectly; 22 Hindu and 41 Muslim)

	Hindu		Muslim		Overall	
No. of users detected taking pills incorrectly	22	(11.5%)	41	(13.1%)	63	(12.5%)
Nos. of continuing users detected taking incorrectly	11	(9%)	28	(12%)	39	(11%)
Nos. of discontinuing users detected taking pills incorrectly	11	(17%)	13	(15%)	24	(16%)

TABLE VI

Individual village usage rates for the 28 sample villages of the Matlab VTS (period October 1975 - January 1976)

Village	Days between distribution and interview	No. of acceptors interviewed	"Original" usage rate	"Continuin usage rat
VB5/VB6	69	51	47%	37%
V32/83	62	76	28%	24%
V57	56	52	35%	29%
V30	61	35	57%	23%
K	64	51	33%	22%
P	59	119	43%	20%
V50	74	72	25%	17%
V58	73	63	37%	22%
V85/87	73	50	34%	28%
V26	64	140	28%	23%
0	69	68	47%	32%
V41	67	85	28%	25%
VB7/V96	89	34	32%	24%
V51	86	107	27%	21%
V70	88	27	15%	7%
V37	90	11	27%	9%
V27	82	73	19%	15%
V24	81	112	46%	29%
V21	85	22	14%	9%
V23	82	53	28%	17%
V28	82	64	30%	25%
L	82	22	45%	45%
VB11	80	110	30%	19%
V88	77	30	23%	13%