

SUMMARY

HOUSEHOLD CONTRACEPTIVE DISTRIBUTION IN RURAL BANGLADESH
Six Months Experience

CHOLERA RESEARCH LABORATORY

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A house -to-house distribution of oral contraceptives was conducted by the Cholera Research Laboratory (CRL) between October and December in a rural area of Bangladesh. Good demographic surveillance has been maintained by CRL for this poor, rural, agricultural, traditional population for 10 years, making the area an excellent site to test the concept of household availability.

The objectives of the project are to determine the acceptability and feasibility of household distribution, the level of contraceptive use and the effect on fertility. The 250,000 population under demographic surveillance has been divided into two areas for study purposes. The distribution area comprises 150 villages provided oral contraceptives at each household. The other half has only one family planning research clinic providing services to a number of circumscribed villages. Government services are available in both areas.

Literate male field assistants (FAs) were trained for five (5) days, and the illiterate part-time lady village workers (LVWs) received training for 6 part days. Ten FAs working individually with the LVW in her village distributed contraceptives and information to the 23,395 eligible women (all married women ages 15-44). 19,027 women were present on the initial distribution and 13,087 (69%) received the contraceptives. The work progressed rapidly during the two-month distribution; each worker providing contraceptives to on an average of 30 women per day.

A baseline KAP survey indicated 36 % of eligible women would consider using contraception at some time and 25% named pills as the method they would use. The baseline contraceptive use survey found 1% of eligible women reporting use of a modern method before the program began in the distribution area. Correcting for under-reporting, the rate would not likely rise above 1.5%. At three months following the distribution, a 20% sample survey of villages indicated 22% of the eligible women had used some contraceptives in the past three months and 16% were currently using. At six months, 24% had used some contraceptives and 15% were currently using.

There was little difference in the reported use rates between Muslims and Hindus. No relationships could be established between contraceptive use and occupation of husband or educational level of wife or husband, although further analysis will be done. Contraceptive practice rates increased steadily for women having successively more live births, with a large increase in contraceptive use noted between women having two and four live births.

Side effects were common, 62% of all women beginning the pill having one or more complaints they related to the pill. Dizziness was a particularly common complaint and was significantly related to discontinued use.

We are encouraged by 24% of the married women 15-44 having initiated contraceptive use in the first six months, even though this group contains many who are not biologically eligible (menopausal, pregnant, or less than six months postpartum). However, many discontinue after short periods and the ultimate stable use rate is difficult to predict at present.

CHOLERA RESEARCH LABORATORY

HOUSEHOLD CONTRACEPTIVE DISTRIBUTION PROGRAMME
IN RURAL BANGLADESH - SIX MONTHS EXPERIENCE *

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Introduction: The problem of rapid population growth in Bangladesh cannot be over-emphasised. A crude birth rate of 49 and a death rate of 20, with a consequent rate of natural growth at 2.9% together with a density of 1450 persons per square mile depicts the most serious population problem perhaps any country has faced (1). Experience with the family planning programme for the last 11 years shows that although the programme has been able to spread the message of family planning to a large fraction of the population, it achieved very little success in promoting practice. This low rate of practice was in sharp contrast with the need for contraception as expressed by the desire to limit childbearing (2). The impact survey found that while 55% rural and 61% urban women did not want any more children and thus needed contraception, only 1.9% rural and 3.7% urban women were actually using a modern method of contraception (3).

In the face of great differences between need, knowledge and actual use, it was logical to postulate that lack of convenient availability of contraceptives at the doorstep is an important factor responsible for the low use rate. The relative magnitude of this factor can be determined by making contraceptives adequately available in the household and noting the extent of contraceptive practice it promotes.

Inadequacy of clinical facilities and shortage of medical personnel constitute additional justification in favour of experimenting with a household distribution system for contraceptives.

Objectives: The contraceptive distribution project was designed to assess the feasibility, effectiveness and prospective role of household distribution of contraceptives. The project envisages to accomplish the following research objectives:

1. To assess the level of oral contraceptive practice in rural Bangladesh when this contraceptive is made available free at the doorstep.
2. To evolve a cost-effective delivery system for contraceptives in Bangladesh.

* Preliminary report - not for quotation without permission of the authors.
All data from contraceptive use and KAP surveys as well as cost data are provisional and subject to correction at a later date..

3. To measure the demographic impact of a household contraceptive distribution system not supported by any motivation programme.
4. To identify factors determining acceptance and continued use.

Bangladesh: Bangladesh is a riverine country comprising alluvial plains with low elevation, heavy monsoon rains and a hot and humid summer. 92% of the people live in rural areas. 75% of the people depend on agriculture for their livelihood which accounts for 56% of the Gross National Product (GNP). The per capita income is estimated to be around US\$ 65 (4). The literacy rate is about 20% and the unemployment rate is very high. Religion is approximately 85% Muslim and 14% Hindu.

Matlab: This is a typical rural area of Bangladesh with a density of population higher than the country average and an even larger water communication network. Matlab has been a study area for the Cholera Research Laboratory (CRL) for vaccine trials since 1963. Part of the work in the Field Surveillance Area (FSA) includes information on births, deaths, marriages and migrations. This has been regularly collected since 1966. Matlab was selected for implementation of this project because of this demographic information which will allow us to measure any fertility variations in the future.

The FSA comprises 234 villages with about 250,000 people. For our research purpose the area was divided into two areas. The distribution area comprises 150 villages and about 125,000 people. A relatively smaller area which is served by the Fertility Research Project clinic (FRP) (5) and a buffer zone between this and the distribution area will serve as the control for the project. The three different areas are shown on the map in Figure 1.

Demarcation between the distribution and the control area was somewhat arbitrary. As the FRP clinic had pill acceptors from neighbouring villages who are participating in the pill studies and therefore need continued supervision and surveillance under the clinic, the villages around Matlab bazar were included in the control area. As a result the control area people had a greater access to family planning clinic service as well as some health facilities through Government health centres. Presumably due to this difference, the baseline contraceptive practice in the control area is higher than the distribution area (2.07% against less than 1%). However, because the overall practice rate is very low this difference is not likely to affect the experimental purpose.

Personnel: The distribution project used the services of dais and Field Assistants (FA) normally working with CRL for demographic surveillance. Lady Village Workers (LVWs) or dais are mostly illiterate village women and work part-time with CRL. One dai is assigned to an area (usually one village) comprising roughly 1,000 population. There are 290 dais for 234 villages out of whom 154 are in the distribution area.

Some of the recently recruited dais are relatively young with some amount of education, and preliminary experience suggests that they are more effective for contraceptive distribution and follow-up. Although the word "dai" means indigenous birth attendant; in fact, only 15% of the dais are real birth attendants.

The Field Assistants (FAs) are males educated up to matriculation (10th grade). There are roughly 40 FAs with CRL who supervise demographic data collection and work for a number of other projects. About eight FAs work in the contraceptive project.

Pilot distribution: Before launching the distribution project a pilot distribution was conducted in two villages to obtain some preliminary experience regarding community acceptance, nature and extent of problems encountered and required time-frame and logistics. Only oral pill was offered in this pilot attempt. 101 women were contacted and 52 (52%) accepted the pill; 49 did not.

Training: The amount of training given to the FAs and dais was that considered minimally necessary. They were given roughly three hours of didactic lecturing followed by one day supervised field work and discussion of the work. Several additional days work were partially supervised at the beginning. Informal evaluations were undertaken by the supervisors on the spot to ensure that the workers were able to give the necessary understanding to the potential acceptors.

Distribution phase: The distribution of oral contraceptives started on 9 October 1975 with 8 FAs and 150 dais. One dai worked with one FA during the distribution in her village. They had been previously supplied with standardized printed instructions.

Pattern of distribution: In the initial round of distribution the FAs distributed mainly the pills and gave the instructions, sometimes using the dais as a conversation intermediary. In this effort all women of reproductive age (15-44 years) present in the house were provided with necessary information on the oral pill and were offered the supply. If they agreed to receive the pill a supply of 6 cycles was given. As the work progressed the information spread faster than our workers and as a result comparatively less effort was needed to introduce the concept. In many instances a number of women in the same 'bari*' were given instructions together.

The percentage of women receiving supplies became relatively constant after the first four days of distribution (Table 1). 68.8% of all women contacted received the contraceptive supplies, usually 6 cycles of pills. 18.7% of the total eligible women in the area were absent during the first round. 443 total man days of work were spent on the distribution by FAs, averaging 29.5 contraceptive recipients per man day and about 180 cycles of pills.

In the subsequent rounds of data collection and distribution the FAs were gradually withdrawn from the job of actual distribution to a role of supervision of dais, and the dais alone carried out the re-supply and distribution work. Dais carried a red plastic bag

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* Bari - a bari is a collection of about 5 - 6 households sharing a common courtyard but with separate kitchens. The 25-35 persons living in a bari are blood relations.

with contraceptives, instruction sheets and a small register to record names of clients and quantities supplied. It seems that gradually this "lady with the red bag" going round the village households may gain a symbolic identity and be a helpful reminder to the village women to take their pills.

Although the dais were instructed not to provide any motivation beyond saying that longer child spacing is good for health, in actual practice it was found very difficult to separate motivational efforts from simple information. The initial distribution effort thus required longer than was anticipated. Usually the husbands were absent from the household during the visits, but when present (in about 20-25%) they were included in the discussion because it was found that without the husband's approval wives are hesitant to take the supplies.

Base-line KAP survey: An extensive KAP survey was conducted immediately before the distribution to provide bench mark information on knowledge and levels of contraceptive practice, in relation to which a changing level of contraceptive behaviour can be determined in the future with its social, psychological, economic and programmatic correlates. The size of the sample was 1077 women equally from both distribution and control areas. Detailed analysis of the survey is now underway.

Some of the provisional data indicate 14.1% of these women report using some traditional or modern method in the past. 7.3% report current use, 2.4% relying on modern methods and the remainder using rhythm and other traditional methods. Rhythm and other traditional methods may be somewhat overestimated; however, the corrected total using traditional methods is likely to be 3% or higher. Twenty-three percent know where to get contraception, 16% naming the FRP clinic in Matlab as the place to go. 35.7% indicate a willingness to use contraception at some time, 24.9% naming pills as the method they would use. Injectables were the second most popular and IUDs named by none.

Table 2 provides responses to separate questions about whether the woman would consider using any method of contraception - pills, condoms or sterilization. Pills appear to be the most acceptable and sterilization the least according to this survey. The general attitude of women toward contraception was favourable for 67.5%.

Contraceptive use prevalence: A contraceptive prevalence survey was planned to be carried out before the distribution and thereafter every three months in the 'first year and every six months thereafter. The base-line prevalence was conducted in October 1975 and the second one conducted in February - April 1976, covering 100% eligible women in the area. The third survey now underway is being conducted on a 20% sample. Only six items of information were sought on the first survey: these were parity, date of last pregnancy termination, menstrual status, current contraceptive use, contraceptive use in the last three months and the source.

From the data of the census carried out in May 1974 basic information for all married women of 15-44 years were obtained in the form of computer pointout, and were bound in volumes, village-wise. Marital status in the pointouts was up-dated by the workers. These volumes provide the target population for distribution work and the prevalence surveys. The following information (only in specific code numbers) is available in the pointout sheets:

1. Census number
2. Age
3. Marital status
4. Religion
5. Education of household head
6. Occupation of household head
7. Education of woman
8. Size of house in square feet
9. Some household indicators of wealth and modernity
(kerosene lamp, quilt, watch, radio, remuneration from outside)
10. Number of cows
11. Ownership of boat.

Base-line practice of contraception: The level of contraceptive practice in the area prior to the distribution as obtained through the base-line survey was overall 1.5% for the combined area, 0.98% for the distribution area and 2.07% for the control area (Tables 3 and 4). Differences between the rate of practice between the distribution and control areas have been discussed earlier. A preliminary count of the KAP data shows a modern method practice rate of 2.4%. A consistency check by comparing prevalence survey data against known users from the FRP clinic showed that 30% (17 out of 57) failed to indicate they were using. In another independent survey conducted by female interviewers 44% (28 out of 63) failed to admit their contraceptive use. However, after the distribution phase the under-reporting bias does not appear to be a problem. On the contrary, experience of pilot distribution and a special study of side effects suggest that there may be some over-reporting (presumably trying to please the interviewer). The problem of over-reporting can however be reduced by asking to see the woman's used pill packets.

Post-distribution contraceptive practice: The first round of distribution took 62 days. Out of the total 23,395 eligible women in the distribution area 19,027 (81.3%) were contacted and 4,368 (18.7%) were absent from the household. (Table 1). Of the 19,027 women contacted initially 13,987 (68.8%) accepted the supply of 6 cycles of pills. These women we will categorize as contraceptive recipients because they agreed to receive the supply without any commitment to use them. The second prevalence survey conducted in February-April, showed a total of 2,714 (15.0%) as current users and 3,799 (21.0%) ever users out of 18,206 contacted in all villages. The third prevalence survey just concluded showed 726 (14.6%) current users and 1169 (23.5%) ever users out of 4,932 contacted in the sample villages. Contraceptive practice rate as found in second survey in the 30 sample villages was 15.7% current use and 21.9% ever use.

As seen on Table 5 several adjustments of the use rates can be made by considering certain segments of the population. For example, in most villages the women were instructed to begin oral contraceptives after their infant had reached 6 months of age. However, one in six villages received different instructions: to wait until the baby was 18 months old or until menses began, whichever occurred first. Women in these latter villages had a 9.3% use rate at the 6 months survey compared with 15.6 % use for women in the villages instructed to begin at 6 months post-partum. When menopausal women are removed from the "eligible" group, the use rate at 6 months becomes 16.8%.

Our general observation suggests a clustering of contraceptive users. Where there is one satisfied user, others may follow. Some women have been waiting to observe their neighbours before starting on the pill themselves. This is consistent with a similar observation made in the Companiganj project. There is considerable inter-village variation in contraceptive use and these factors may be playing a role. Some villages with a use rate of 30-40% may indicate a greater potential than what has been achieved. In-depth study may be necessary to identify factors determining the inter-village variation.

Pill use is sometimes a co-operative effort. The woman's young daughter reminds her mother and also punches the tablet out for her. Sometimes a co-user in the same bari or in the neighbourhood is a helpful reminder.

As seen in Table 6 users were distributed principally in the 20-44 year age group with the highest use rate among 35-40 year olds. Use rates also increase quite consistently with each advance in parity (total number of live births to the woman).

Table 17 suggests there may be little difference of use between Hindus and Muslims. Other surveys in Bangladesh have generally found Hindus to have a considerably higher level of practice than Muslims. Educational level of the woman or her husband seems to have little relationship with contraceptive use in this table. However, additional refinements may be necessary since it is probable that the more highly educated couples are also younger and of low parity, which might mask a positive effect of education.

Occupation (Table 8) also appears to have little relation with contraceptive use as reported from the survey.

Side effects: The incidence of side effects appears to be a significant problem, and its type and pattern somewhat different from what was anticipated. Bleeding is a common problem, but dizziness is more significant as it relates to continuation of pill use. A survey of 1,500 contraceptive recipients was undertaken by two senior Australian medical students to investigate the problems reported from the distribution villages. The major findings are:

- a. 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 not related to discontinuation.

- b. Thirty percent of those beginning contraception had stopped and significantly more of those discontinuing complained of side effects than those continuing to use. Sixty-two percent of those initiating use reported one or more side effects they related to pill use.
- c. Women who accepted supplies but did not use them yet indicated the reasons as lactational amenorrhea (greater than 6 months) in 12.1% cases and disapproval of husband in 18.1% for Muslims and 8.4% for Hindus.
- d. 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.
- e. Obvious incorrect pill usage was noted among 12.5% of women using at any time and the rate was higher for those having discontinued.

Dizziness appeared to be an important problem which was related to pill discontinuation. Other family planning programmes also indicated dizziness was the most important side effect. Either anemia or vitamin deficiencies were suggested as possible related factors to this symptom. However, this complaint is also reported as common among women not using the pill. Therefore we identified a group of 69 women who continued to complain of dizziness on three consecutive occasions over a three month period while taking the pill. These women were offered either two multiple vitamin capsules or two glucose capsules per day for 15 days and the status of dizziness was then assessed. Women were given one or the other capsule on a randomized basis and the entire distribution and assessment was conducted in a "double blind" fashion. There appears to be no important difference between those receiving either vitamins or glucose in this pilot study (Table 9). A possibly interesting point is that 63% for both groups combined got better. The hematocrits of these 69 women were not significantly different from a comparison group of fecund, non-contracepting, non-pregnant women, the average values being 35.5 and 34.6 respectively.

Management of side effects may prove to be a significant aspect of the pill programme, and ultimate programme performance may depend on how we handle it. Experience gathered from the Government pill programme through informal sources suggests that appropriate instructional counselling is a key issue. Prior information about the possibility of side effects and reassurance enables women to endure the complaints better. In this context we may suggest that part of the inter-village variation in pill use rate may be inter-dai variation due to a differential effort in counselling and reassurance. Further investigation in this area is desirable.

Service Programme Costs

A crude estimate of some programme costs has been made for the service delivery part of the programme. Research costs cannot be divorced from the service delivery completely, and arbitrary decisions had to be made. For instance, the survey information will be used for research purposes as well as for general service statistics. In this case we have included the cost of collecting the data but not the cost of analysis.

One of the important costs for training, distribution and data collection is the speedboat transport. This is a convenient mode of travel for CRL employees, but it is also expensive and would not likely be used by most programmes conducting a similar effort (Table 10).

From our estimates, several alternative cost measures are provided (Table 11). In general it appears that the costs compare favorably with many other family planning efforts.

References:

1. Census commission, mimeographed hand-out circulated in Ford Foundation Research Club meeting, February 1976.
2. Sirageldin, I, Hossain, M and Caine, M: Family Planning in Bangladesh. An Empirical Investigation, The Bangladesh Development Studies, Vol III, No. 1 January 1975.
3. Pakistan Family Planning Council, Pakistan Impact Survey, 1973.
4. Hossain, M and Waliullah, S : Some aspects of Socio-economic Environment in Bangladesh, a country background paper presented in the Seminar on Population Policy of Bangladesh, 15-21 May, 1975.
5. Fertility Research Programme is a collaborative venture between the Johns Hopkins University and the Government of Bangladesh and is undertaking contraceptive research in Dacca and Matlab.

TABLE 1

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

Working Period	Eligible Women Contacted*				Eligible Women			Man- days Effort	Recipients per Man- day Worked
	Recipients	(%)	Non- Recipients	Total	Absent	(%)	Total In Area		
9-10 Oct.	287	(53.8)	247	534	179	(25.1)	713	17	16.9
11-15 Oct.	1146	(66.6)	576	1722	547	(24.1)	2269	37	30.9
17-20 Oct.	940	(65.3)	500	1440	256	(15.1)	1696	32	29.4
23 Oct-3 Nov.	2460	(67.1)	1205	3665	703	(16.1)	4368	80	30.8
6-10 Nov.	1103	(73.1)	405	1508	264	(14.9)	1772	35	31.5
13-17 Nov.	1445	(70.5)	604	2049	423	(17.1)	2472	42	34.4
20-24 Nov.	1255	(71.8)	494	1749	370	(17.5)	2119	40	31.4
27 Nov-1 Dec.	1586	(68.8)	823	2409	627	(20.7)	3036	59	26.9
4-10 Dec.	2865	(72.5)	1086	3951	999	(20.2)	4950	101	28.4
Total	13,087	(68.8)	5,940	19,027	4,368	(18.7)	23,395	443	29.5
Percent			31.2%	(100.0%)			(100.0%)		

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

TABLE 2

ATTITUDES TOWARD CONTRACEPTIVE METHODS
MATLAB FSA OCTOBER 1975

	Contraception		Pills		Condoms		Female Sterilization	
	<u>No.</u>	<u>(%)</u>	<u>No.</u>	<u>(%)</u>	<u>No.</u>	<u>(%)</u>	<u>No.</u>	<u>(%)</u>
<u>Would ever use</u>								
Yes -----	385	(35,7)	433	(40,2)	274	(25,4)	67	(6,2)
No -----	491	(45,6)	616	(57,2)	763	(70,8)	1001	(92,9)
Inapplicable -----	81	(7,5)	17	(1,6)	7	(.7)	5	(,5)
Didn't know -----	120	(11,1)	11	(1,0)	33	(3,1)	4	(,4)
	<u>1077</u>	<u>(100,0)</u>	<u>1077</u>	<u>(100,0)</u>	<u>1077</u>	<u>(100,0)</u>	<u>1077</u>	<u>(100,0)</u>
<u>Why not use</u>								
0 Inapplicable -----	573	(53,2)	456	(42,3)	305	(28,3)		
1. Want more children -----	118	(11,0)	150	(13,9)	144	(13,4)		
2. Husband opposed, he must decide, etc. -----	42	(3,9)	63	(5,9)	140	(13,0)		
3. Woman opposed -----	20	(1,9)	40	(3,7)	75	(7,0)		
4. Bad for health -----	21	(2,0)	33	(3,1)	20	(1,9)		
5. Menopausal, sterile, long time no conception etc. -----	156	(14,5)	150	(13,9)	146	(13,6)		
6. Against God -----	111	(10,3)	115	(10,7)	115	(10,7)		
7. Other/don't know -----	36	(3,3)	70	(6,5)	132	(12,3)		
	<u>1077</u>	<u>(100,0)</u>	<u>1077</u>	<u>(100,0)</u>	<u>1077</u>	<u>(100,0)</u>		

TABLE 3

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

	Contraceptive 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,

TABLE 4

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

	Contraceptive Distribution Area			Control Area			Combined Area		
	Hindu(%)	Muslim(%)	Total(%)	Hindu(%)	Muslim(%)	Total(%)	Hindu(%)	Muslim(%)	Total(%)
Eligible Women -----	2946(100)	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)
	<u>3(1)</u>	<u>17(1,0)</u>	<u>20(0,86)</u>

* Conducted during house-to-house contraceptive distribution

TABLE 5

CONTRACEPTIVE USE RATES AT 3 AND 6 MONTHS AFTER DISTRIBUTION
BY SUB GROUP, MATLAB, NOV. 1975 - APRIL 1976

	Three Month Survey				Six Month Survey					
	Women Contacted	Ever Used		Active Use		Women Contacted	Ever Used		Active Use	
		No.	(%)	No.	(%)		No.	(%)	No.	(%)
All Eligible Women	4830	1058	(21,9)	757	(15,7)	4980	1169	(23,5)	726	(14,6)
"Start at 18 Mo."	<u>857</u>	<u>117</u>	<u>(13,7)</u>	<u>78</u>	<u>(9,1)</u>	<u>836</u>	<u>128</u>	<u>(15,3)</u>	<u>78</u>	<u>(9,3)</u>
"Start at 6 Mo,"	3973	941	(23,7)	679	(17,1)	4144	1041	(25,1)	648	(15,6)
Menopausal Women	<u>272</u>	-	-	-	-	<u>284</u>	-	-	-	-
Adjusted Eligible Women*	3701	941	(25,4)	679	(18,4)	3860	1041	(27,0)	648	(16,8)

* Married, fecund women 15-44

TABLE 6

CHARACTERISTICS OF FECUND ELIGIBLE WOMEN
AND USE RATES AT 6 MONTHS IN 30 VILLAGES
Matlab, April 1976

6 MONTH SURVEY

<u>Age</u>	<u>Total Contacted</u>	<u>No.</u>	<u>Users</u> <u>(%)</u>
15-19	755	35	(4.6)
20-24	849	98	(11.5)
25-29	805	145	(18.0)
30-34	891	209	(23.5)
35-40	628	169	(26.9)
40-44	<u>292</u>	<u>51</u>	<u>(17.2)</u>
Total	4220	707	(16.8)

<u>Parity</u>			
0	203	8	(3.9)
1	474	31	(6.5)
2	472	42	(8.9)
3	449	60	(13.4)
4	479	97	(20.3)
5	427	96	(22.5)
6	394	91	(23.1)
7	342	91	(26.6)
8	284	70	(24.7)
9	174	48	(27.6)
10	102	34	(33.3)
11+	<u>91</u>	<u>35</u>	<u>(38.5)</u>
Total	3891	703	(18.1)

TABLE 7

RELIGION EDUCATION OF WOMAN AND EDUCATION OF HUSBAND, BY
CONTRACEPTIVE USE RATE, 30 VILLAGES, FECUND ELIGIBLE
WOMEN, MATLAB, APRIL 1976

Religion	6 Month Survey		
	Women Contacted	Users	
		No.	(%)
Muslim	3547	593	(16.7)
Hindu	610	114	(18.7)
Total	4157	707	(17.0)

Education Woman (years)	Women Contacted	Users		Husband Education	Women Contacted	Users	
		No.	(%)			No.	(%)
None	2121	372	(17.5)	None	1835	266	(14.5)
Maktab	1035	154	(14.9)	Maktab	443	100	(22.6)
1	25	4	(16.0)	1	60	11	(18.3)
2	111	22	(19.8)	2	225	40	(17.8)
3	155	25	(16.1)	3	304	63	(20.7)
4	238	41	(17.2)	4	356	75	(21.1)
5	391	59	(14.8)	5	355	70	(19.7)
6	62	13	(21.0)	6	205	31	(15.1)
7	45	7	(15.6)	7	111	27	(24.3)
8+	51	9	(17.7)	8	113	22	(19.5)
-	-	-	-	9	51	14	(27.5)
-	-	-	-	10	121	19	(15.8)
-	-	-	-	11+	139	22	(15.8)
Total	4234	706	(16.7)	Total	4318	760	(17.6)

TABLE 8

CONTRACEPTIVE USE RATES FOR FECUND ELIGIBLE WOMEN
 BY PRIMARY OCCUPATION OF HUSBAND --
 30 VILLAGES, MATLAB, APRIL 1976

<u>Husband's Occupation</u>	<u>6 Month Survey</u>		
	<u>Women Contacted</u>	<u>Users</u>	
		<u>No.</u>	<u>(%)</u>
Agricultural Land Owner	1905	331	(17.4)
Landless Agricultural Laborer	756	119	(15.7)
Fishing	167	17	(10.2)
Non-Agricultural Laborer	572	105	(18.4)
Businessman/Service Employee	617	107	(17.3)
Other/Unknown	200	29	(14.5)
Total	4217	708	(16.8)

TABLE 9

TREATMENT OF DIZZINESS SIDE EFFECTS FOR WOMEN USING ORAL CONTRACEPTIVES
MATLAB, MARCH - APRIL 1976

<u>Effect of Treatment on Dizziness</u>	<u>Multiple Vitamins*</u>		<u>Glucose</u>	
	<u>No.</u>	<u>(%)</u>	<u>No.</u>	<u>(%)</u>
1. Much Worse	4	(11)	6	(19)
2. Somewhat Worse	0	(0)	0	(0)
3. Same	11	(29)	3	(10)
4. Somewhat Better	14	(37)	13	(42)
5. Completely Better	6	(16)	7	(23)
Undetermined	3	(8)	2	(6)
Total	38	(100)	31	(100)

* Daily dose for each of 15 days as follows:

Vitamin A	8000	USP	units
Vitamin D	800	USP	units
Ascorbic Acid	150	mg.	
Thiamin	4	mg.	
Riboflavin	4	mg.	
Pyridoxine	2.4	mg.	
Vit B ₁₂	6	mcg.	
Nicainamide	20	mg.	
Calcium			
pantothenate	6	mg.	
Fluoride	2	mg.	

TABLE 10

MATLAB CONTRACEPTIVE DISTRIBUTION PROJECT - SIX MONTH SERVICE
PROGRAM COSTS-PRELIMINARY ESTIMATES OCT. 1975-MARCH 1976

<u>Training for Distribution, Surveys, and Follow-up</u>			<u>Taka*</u>	<u>\$U.S.</u>
1.	Lady Village Workers (LVW) (154)	3 hr. x 6 days	2,625	181
2.	Field Assistants (FA) (18)	2 hr. x 5 days	1,882	130
	" " (12)	4 hr. x 2 "		
3.	Supervisor (1)	2.4 hr. x 10 days	280	19
4.	Project Manager (1)	8 hr. x 10 days	921	64
5.	Speedboat Transport	6 hr. x 13 "	8,190	565
6.	Speedboat Driver (1)	8 hr. x 13 "	532	37
7.	Training materials and development	-----	2,000	138
Sub - Total			Taka 16,430	\$ 1,133
 <u>Household Distribution - Field Work</u>				
1.	LVW (154)	8 hr. x 2 days	2,100	145
2.	F.A. (10)	8 hr. x 48 "	19,200	1,324
3.	Supervisor (1)	2.4 hr. x 48 days	1,260	87
4.	Project Manager (1)	8 hr. x 48 days	4,158	287
5.	Country boatmen (2)	8 hr. x 48 "	800	55
6.	Speedboat transport	5 hr. x 48 "	25,200	1,738
7.	Speedboat Drivers (2)	8 hr. x 48 "	3,600	248
8.	Field Camps for 12 men-20 days	-----	7,200	497
9.	Other Support Costs	-----	3,000	207
Sub - Total			Taka 66,518	\$ 4,587
 <u>Surveys, Follow-up and Resupply (1st 6 mo.) in Distribution area</u>				
1.	LVW (154)	2 hr./day x 6 mo.	34,654	2,390
2.	F.A. (4) (3 surveys)	8 hr./day x 4 "	19,200	1,324
4.	Supervisor (1)	2.4 hr./day x 4 "	2,520	174
5.	Project Manager (1)	8 hr./day x 4 mo.	8,400	579
6.	Speedboat Transport	2 hr./day x 4 mo.	18,500	1,276
7.	Speedboat drivers (1)	8 hr./day x 4 "	3,600	248
8.	Country-Boatmen (2)	8 hr./day x 4 "	1,600	110
9.	Typist-clerk (1)	8 hr./day x 6 "	4,200	290
10.	Bookbinding and printing	-----	10,000	690
11.	Other Field and Support Costs	-----	15,000	1,034
Sub - Total			Taka 117,674	\$ 8,115

= 2 =

	<u>Taka</u>	<u>\$U.S.</u>
Total Direct Costs	200,622	13,836
35% Overhead	70,216	4,842
Total CRL Direct & Indirect Costs -----	Taka 270,838	\$ 18,678
Estimated Commodity costs, Oral contraceptives,		
81,800 cycles @ \$0.18 -----		14,724
Condoms - 264 gross @ \$3.50 -----		924
Total for first 6 months -----		\$ 15,648
	<u>Taka</u>	<u>\$U.S.</u>
Total CRL and Commodity Costs -----	497,727	34,326

* 14.5 Taka = 1 U.S. dollar

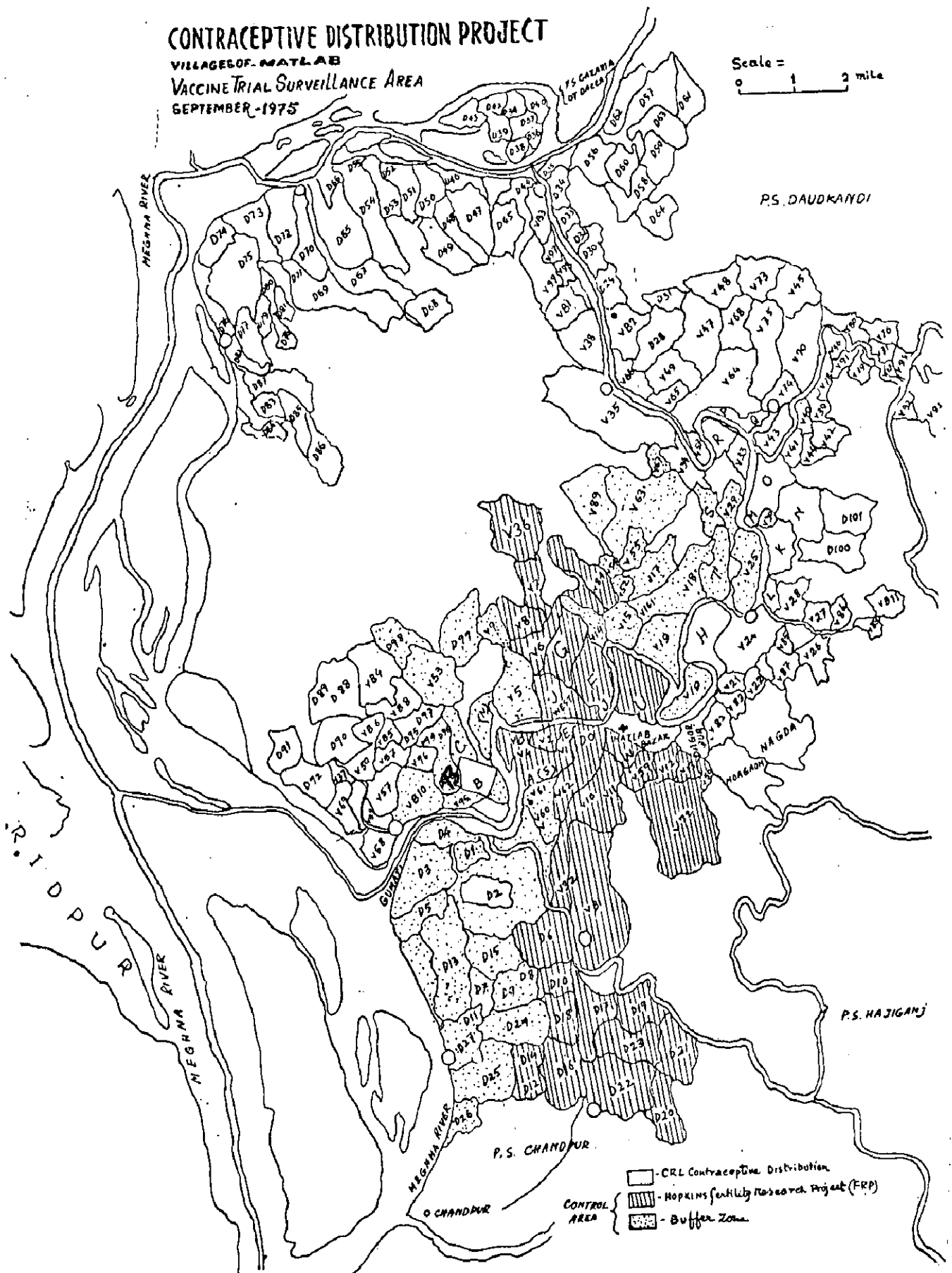
TABLE 11

COST ESTIMATES PER WOMAN PARTICIPANT FOR TRAINING, DISTRIBUTION,
FOLLOW-UP, SERVICE STATISTICS COLLECTION, AND COMMODITIES,
MATLAB, OCT. 1975 - MARCH 1976

		Cost per Participant					
		CRL Direct Costs		CRL Direct and Indirect Costs		CRL Total Costs plus Commodities	
	<u>Women</u>	<u>Taka</u>	<u>(\$U.S.)</u>	<u>Taka</u>	<u>(\$U.S.)</u>	<u>Taka</u>	<u>(\$U.S.)</u>
Contraceptive Recipients	13,087	15	(1.06)	21	(1.43)	38	(2.62)
Acceptors (at 3 mo.) (Initial Users)	3,977	50	(3.48)	68	(4.70)	125	(8.62)
Active Users (at 3 mo.)	2,835	71	(4.88)	96	(6.59)	175	(12.07)

VILLAGE OF MATLAB
VACCINE TRIAL SURVEILLANCE AREA
SEPTEMBER-1975

P.S. DAUDKANDI



*Presented at the Third Scientific Session of BMA
on 8th January, 1977.*

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PRESENT TRENDS IN MEDICAL CONSULTATION
PRIOR TO DEATH IN RURAL BANGLADESH

770076

K.M.A. Aziz
Cholera Research Laboratory

For proper evaluation of the extent of use of our rural public health facilities, data on types of medical care actually received by the people are necessary. This study is an attempt to estimate prevalence of various types of medical consultations in certain areas of rural Bangladesh. From the study it is possible to draw some conclusions as to the sources of medical treatment received by people prior to their deaths.

The present study area includes approximately 46,000 inhabitants of 35 villages under the jurisdiction of the Matlabganj Police Station in the Comilla District. 823 deaths occurred in a one year period between May, 1975 and April, 1976. The death reports used in this study were collected by trained male field assistants of the Cholera Research Laboratory (CRL) in their routine monthly interviews of every family in the study area. The assistants always inquire about deaths at every household, but they also can refer to simple lists of death and death dates compiled by locally recruited female CRL workers, known as dais, who ask about deaths, among other things, in their daily diarrhea surveillance visits to every family in the area.

The field assistant is required to fill out a death report form for every death (slide 1). The data recorded in this form include information on medical assistance received from various types of consultants during the final ailment of the deceased. Concerning consultants, choices include (1) licensed allopath, (2) allopath quack, (3) homoeopath, (4) kabiraj, (5) other, and (6) no consultation. The field assistant seeks this information from a reliable source close to the deceased. The death report form also includes data on the deceased person's education, occupation and marital status.

For this study, data collected was analyzed to show variations in the extent of types of medical consultations according to age, sex, education, occupation and marital status of the deceased.

RESULTS:

Table 1 shows that in only 13% of the total number of cases under consideration, licensed allopaths were consulted. In approximately 27%, allopath quacks were consulted. Almost 35% of the deceased did not receive any medical care. In a little more than 11% of the cases, more than one type of practitioner was called in, but frequently these did not include a licensed allopath. Homoeopaths and kabirajes, or herbal practitioners, were called in at a rate of 4% for each type.

Table II shows the types of medical consultation according to age of the deceased. The data in this table show that within the age group 0 to 4 years, in 8.4% of the cases licensed allopaths were consulted and in the age group 5 to 14 years, 12%. But in the 15 to 49 and 50+ group, in 20.8% and 18% of the cases, respectively, licensed allopaths were consulted. These data show that for children, the services of licensed allopaths were less frequently used. In all age groups, allopath quacks were in almost equal demand (a range of 26.2% to 28%). 40.6% of the deceased in the 50+ age group received no medical care of any type. In the lower age groups, this figure ranged between 30.2% and 32.9%. Approximately 6%, on the average, of cases between 0 to 4 years and 5 to 14 years involved consultations with homoeopaths and kabirajes. The average rate of treatment by these practitioners was less than 2% for the older age groups.

Table III shows type of medical consultations according to sex. 14.5% of males and 11.6% of females were treated by licensed allopaths. Allopathic quacks were called in for 28.7% of the males and 25.1% of the females. Homoeopaths and kabirajes were utilized slightly more often for females. 37% of females and 32% of males received no medical treatment. Multiple consultations took place in the cases of 11.7% of males and 10.4% of females.

Table IV shows type of medical consultation according to educational attainment. Only 9.5% of the illiterate deceased received the services of licensed allopaths as opposed to 25.7% of those with primary level education. 44.4% of the illiterate received no treatment from any source. For people with primary education, the figure drops to 34.3%. In this table, the size of groups having higher education is so small that no attempt at interpretation of data is made.

Table V shows type of medical consultation according to different occupational groupings. The data in this table show that 27.4% of the cultivators and 22.9% of the skilled workers were treated by licensed allopaths. Cultivator families showed a distinct preference for consulting either licensed or unlicensed practitioners of the allopathic system of medicine. Cultivators also had the lowest percentage of no consultation, 21.9%. In contrast, only 16% of the disabled, 13.4% of the female household workers, and 10% of the ^{un}skilled workers were treated by licensed allopaths, and in these groups, between 42.7% and 45% received no medical treatment of any kind.

Table VI shows type of medical consultation according to marital status. Only 9% of the people whose spouses were dead had consultations with licensed allopaths and over 50% of such people had no consultations of any type. Married persons had a significantly higher level of consultations with licensed allopaths,

19.7%, and lower level of no consultations, 35.7%.

SUMMARY AND DISCUSSION

This study shows that only 13% of the total number of cases under consideration had consultations with licensed allopathic physicians. On the other hand, almost 27% of the cases involved contacts with allopathic quacks. In the study area, it was observed by the author that one of the main reasons for a higher percentage of allopathic quack consultation was the latter's frequent availability at the very doorstep of the rural household. The study reveals that for almost 35% of the cases, no treatment from any source was received. This high figure deserves a critical review. Some of this can be explained by the fact that 6.13% of the deaths (this figure will be looked at more later) were sudden allowing little time for adequate medical consultation. Still this leaves almost 29% of dying people who received absolutely no medical care.

Children in the 0 to 4 year age group had the lowest rate of treatment by licensed allopaths. This may indicate that the parents concerned did not recognize the urgency of consulting licensed allopathic physicians. Education apparently makes people more aware of the need for consulting licensed allopaths. The preference for allopaths by literate or illiterate land-owning cultivators indicates a probable relationship between

financial solvency and choice of medical care. People whose spouses were dead had a much lower frequency of consultation with licensed allopaths than those whose marriages were intact. Moreover the former group had no medical treatment of any kind in more than 50% of the cases.

The study just reported was conducted in a deeply flooded area of rural Bangladesh. According to the hydrology map prepared by the World Bank, approximately 19.6 million people of rural Bangladesh come from such deeply flooded areas. Assuming that the accessibility of different types of medical consultation will be somewhat similar in all the deeply flooded areas, the results of this study perhaps are applicable for such areas only. Lack of easily available, speedy transport in the study area was probably one of the main reasons for the high percentage of no consultation at all. In the study population, during the the specified period, 3.2% of the total cases died of drowning offering little or no time for medical attention. There were three probable murders and three suicide cases which together resulted in 0.72% of the total deaths. Also, among the 823 deaths under study, 19 newborn babies died on the day of birth. These deaths occurred without prior medical consultation. The percentage of such deaths was 2.31%. Thus drownings, murders, suicides, and deaths on the day of birth comprised 6.13% of the total deaths.

The major causes of crisis in the national health care scene appear to be (1) ~~shortages~~ and maldistribution in various categories of health manpower and facilities (for example the licensed allopathic physicians usually are not available beyond the thana headquarters), (2) exorbitant yet still rising costs of medicines and consultation which are beyond the reach of many rural people, and (3) ~~lack of sufficient and effective~~ controls for the assurance of quality of care. For example, the allopathic quacks who visit almost every village home may not know or follow even the most basic principles of medicine.

As a concluding remark it may be appropriate to say here that toward the goal of reaching every rural family at its doorstep, a village oriented cadre of short trained doctors appears to be the immediate need.

TABLE I

TYPES OF MEDICAL CONSULTATION PRIOR TO DEATH FOR 35 VILLAGES
UNDER MATLAB THANA IN 1975 - 1976

Type of Consultation	Number of Deceased	Percentage
Licensed Allopath	107	13.00
Allopath Quack	221	26.85
Homoeopath	34	4.13
Kabiraj	33	4.01
Other	50	6.07
No Consultation	287	34.87
Multiple Consultation	91	11.06

TABLE II

TYPES OF MEDICAL CONSULTATION BY AGE AND SEX COMBINED PRIOR TO DEATH

FOR 35 VILLAGES UNDER MATLAB THANA IN 1975 - 1976

Age Group		TYPE OF CONSULTATION						
		Licensed Allopath	Allopath Quack	Homeopath	Kahiraj	Other	No Consultation	Multiple Consultation
0 - 4	Number %	36 (8.41)	112 (26.17)	21 (4.91)	27 (6.31)	46 (10.75)	141 (32.94)	45 (10.51)
5 - 14	Number %	6 (12.00)	14 (28.00)	3 (6.00)	3 (6.00)	1 (2.00)	16 (32.00)	7 (14.00)
15-49	Number %	20 (20.83)	26 (27.08)	1 (1.04)	1 (1.04)	2 (2.08)	29 (30.21)	17 (17.71)
50 +	Number %	45 (18.07)	69 (27.71)	9 (3.61)	2 (.80)	1 (.40)	101 (40.56)	22 (8.83)

TABLE III

TYPES OF MEDICAL CONSULTATION BY SEX FOR 35 VILLAGES UNDER MATLAB THANA IN 1975 - 1976

Sex	TYPE OF CONSULTATION						
	Licensed Allopath	Allopath Quack	Homeopath	Kabiraj	Other	No Consultation	Multiple Consultation
Male	58	115	15	14	23	129	47
%	(14.46)	(28.68)	(3.74)	(3.49)	(5.74)	(32.17)	(11.72)
Female	49	106	19	19	27	158	44
%	(11.61)	(25.12)	(4.50)	(4.50)	(6.40)	(37.44)	(10.43)

TABLE IV

TYPES OF MEDICAL CONSULTATION BY LITERACY LEVEL FOR PERSONS AGED 15 YEARS AND OVER

Educational Category		TYPE OF CONSULTATION						
		Licensed Allopath	Allopath Quack	Homeopath	Kabiraj	Other	No Consultation	Multiple Consultation
Illiterate	Number	18	68	3	1	1	84	14
	%	(9.52)	(35.98)	(1.59)	(.53)	(.53)	(44.44)	(7.41)
Primary	Number	36	28	1	2	3	48	22
	%	(25.71)	(30.00)	(.71)	(1.43)	(2.14)	(34.29)	(15.71)
Secondary	Number	3	3	-	-	-	2	1
	%	(33.33)	(33.33)	-	-	-	(22.22)	(11.11)
Higher Secondary	Number	2	-	-	-	-	2	2
	%	(33.33)	-	-	-	-	(33.33)	(33.33)

TABLE V

TYPES OF MEDICAL CONSULTATION BY OCCUPATION FOR PERSONS AGED 15 YEARS AND OVER

Occupational Categories	TYPE OF CONSULTATION						
	Licensed Allopath	Allopath Quack	Homoeopath	Kabiraj	Other	No Consultation	Multiple Consultation
Skilled Worker %	8 (22.86)	8 (22.86)	- -	- -	- -	13 (37.14)	6 (17.14)
Unskilled Worker %	4 (10.00)	12 (30.00)	2 (5.00)	1 (2.50)	- -	18 (45.00)	3 (7.50)
Cultivator %	20 (27.40)	28 (38.36)	1 (1.37)	1 (1.37)	- -	16 (21.92)	7 (9.59)
Disable %	13 (15.85)	21 (25.61)	1 (1.22)	1 (1.22)	1 (1.22)	35 (42.68)	10 (12.20)
Household Work %	14 (13.46)	30 (28.85)	- -	- -	3 (2.88)	45 (43.27)	12 (11.54)
Other %	- -	- -	- -	- -	- -	10 (99.91)	1 (9.09)

TABLE VI

TYPES OF MEDICAL CONSULTATION BY MARITAL STATUS FOR PERSONS AGED 15 YEARS AND OVER

Marital Status	TYPE OF CONSULTATION						
	Licensed Allopath	Allopath Quack	Homoeopath	Kabiraj	Other	No Consultation	Multiple Consultation
Never Married %	3 (25.00)	3 (25.00)	- -	- -	- -	4 (33.33)	2 (16.67)
Married %	42 (19.72)	62 (29.11)	3 (1.41)	3 (1.41)	3 (1.41)	76 (35.68)	24 (11.27)
Spouse Dead %	10 (9.01)	33 (29.73)	1 (.90)	- -	- -	56 (50.45)	11 (9.91)
Separated %	1 (33.33)	- -	- -	- -	- -	2 (66.67)	- -
Divorced %	3 (42.86)	- -	- -	- -	1 (14.29)	1 (14.29)	2 (28.57)