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Evaluating Alternative Ways to Provide Home Service Delivery of Family Planning in Bangladesh

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This paper explores two programs designed to address concerns with costs and coverage of the current family planning home service delivery programs in Bangladesh. One program employs part-time workers and is designed to reduce the costs of providing contraceptive services to women in their homes. The second program uses volunteers in addition to full-time paid workers in order to improve coverage of households and therefore program effectiveness. These programs are compared with the traditional programs run by both the government and various non-governmental organizations (NGOs) that are designed to replace or supplement them. Observation of workers provided information on their work performance, including time worked and activities accomplished. Our results show that the NGO program using part-time workers is far less costly than the typical NGO program employing full-time workers, but that it provides poorer coverage and lower quality of services. The program that uses volunteers to increase household coverage is costlier than is the typical government program and is no more effective in terms of the number and quality of visits to eligible couples. Moreover, the contraceptive prevalence rates where volunteers supplement field workers are very similar, suggesting that outcomes for the two programs are the same. Apparently the presence of volunteers allows full-time workers to decrease their workload. Financial sustainability can be increased by substituting part-time for full-time workers. Use of volunteers does not increase coverage though it increases costs.

Key words: Bangladesh; family planning; impact; costs

Introduction

In 1982, home service delivery of contraceptives was introduced by the Maternal and Child Health (MCH) - Family Planning Extension Project in two rural districts of Bangladesh. This was done in response to results from a field experiment conducted by the International Center for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) that showed a dramatic increase in contraceptive use in home service delivery areas. However, initial results of the Extension Project showed little change in contraceptive use, and it was not until additional field workers were recruited in 1985, thereby increasing their density, that there was an increase in the proportion of women contacted by a field worker, and a consequent rise in contraceptive use. In both districts, contraceptive use was 14-20 percentage points higher in 1986 than in 1984.[1]

Concerns about low field worker density and low client contact rates also led the Government of Bangladesh (GOB), to hire an additional 10,000 field workers between 1987 and 1990 to supplement the original 13,500 hired in 1974-1976.[2] Various non-governmental organizations that are supported by USAID-funded cooperating agencies in Bangladesh have created similar home service delivery systems, which now employ an estimated 7,000 outreach workers. This brings the total of governmental and non-governmental outreach workers to approximately 30,500 with an added 5,900 workers hired as supervisors.

Observers have noted that the expansion of the home service

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delivery system in Bangladesh has led to widespread increase in the acceptance and use of contraceptive methods.[1,3] Since the expanded home service delivery programs have been in place, contraceptive use in Bangladesh has grown steadily from 25 percent in 1985 to 45 percent in 1993/94. Moreover, the proportion of women who use oral contraceptives or condoms - the main methods provided by these field workers, - was 20 percent in 1993/94 compared with 7 percent in 1985. Also, the proportion of women who received oral contraceptives or condoms from field workers increased greatly, from 42 percent in 1989 to 65 percent in 1993/94.

Despite the success of home service delivery programs, there are important issues regarding coverage, costs and financial sustainability in both the government and non-governmental sectors. One area of concern is the ability of the field workers to reach their target group of married women of reproductive age. Visit patterns vary widely; due to large travel distances to the field and the competing demands of domestic chores, field workers often fail to visit the expected number of women.[4] Data from the 1993/94 Demographic and Health Survey (DHS) showed that only 43 percent of married women of reproductive age had been visited by a field worker over the previous six months.[5] If the rate of visits is to be increased, new strategies must be used to reach the women not covered by the current programs. One way to do this would be to increase the number of field workers, but this option would substantially increase the program costs, and this is the second concern. The costs of the home service delivery program are already high, and are projected to increase rapidly just to maintain the current model. For example, one projection shows that the costs of the government doorstep delivery program would increase from $23.5 million to $32.9 million over the period 1994-2004 if the current model is used to provide services to a larger population.[6]

This paper explores two service delivery models designed to address the concern of coverage or that of financial sustainability. The *Swanirvar* program is one of several efforts in Bangladesh to substitute part-time for full-time workers in order to reduce the costs of providing family planning home service delivery to eligible couples. The general aim of the program is to attain sustainability through grassroots community-level support.[7] It employs 1,400 women in the community who work as part-time outreach workers and are paid a small honorarium, the amount dependent on the number of households in their assigned areas. Although these workers are designated part-time, no information is available on how many hours per week they are expected to work. In fact, the main distinction between full and part-time workers is with respect to the number of households in their assigned areas, with the full-time workers being assigned more households than the part-time workers. The mean payment for a part-time worker is less than 20 percent of that for an average full-time worker. Like other home service delivery workers, the part-time workers are expected to visit households and to provide women with re-supply methods, to counsel them and to give them information about family planning and maternal-child health. The workers charge a modest fee for contraceptives - 1 taka (U.S. $.025) for a cycle of oral contraceptives or a dozen condoms - which allows some of the program's costs to be recovered. The workers also encourage clients to proactively seek them out to receive re-supply as well as to use the services available at nearby clinics, both of which reduce the burden of the field visits that have to be made. Each supervisor is responsible for about 6 workers and is paid only about 25 percent of the salary of a supervisor in a non-governmental (NGO) program that employs full-time workers.

The various issues facing innovative programs that rely on low-paid part-time workers are regarding effectiveness, quality of services, replicability, costs and sustainability. In order to look at these issues, we compared the *Swanirvar* program that employs part-time workers with the more typical NGO programs that employ full-time workers, on a number of points. These include the number and content of family planning visits and cost per visit.

The Local Initiatives Program (LIP) is another innovative program that, instead of replacing the regular field workers, recruits volunteer workers to assist them. This volunteer activity is intended to increase the coverage of the GOB home service delivery program. This program operates in approximately a quarter of the country's *thanas* (small administrative units[a]). In addition to employing the volunteers, the project includes a number of other interventions such as training and technical assistance directed at the program staff, and better planning and

monitoring of program performance.

The program has recruited and trained 30,000 female community volunteers from rural areas to work under the supervision of government outreach workers or family welfare assistants (FWAs). The volunteers are expected to visit couples, educate them about family planning, and re-supply them with oral contraceptives and condoms. They are not paid a salary, but are reimbursed their travel expenses (about $.75-$1.00 per month). The work of the volunteers is intended to free some of the time of the FWAs so that the latter can "attend to the service needs of selected [eligible] couples, including hard-to-reach clients, [and] those interested in clinical methods or MCH services, as well as to attend to their numerous other responsibilities, including the organization of Satellite Clinics.[8]" The FWA is also elevated to a supervisory role, with each FWA responsible for approximately 15-16 volunteers.[9] In general, "The intent of introducing volunteers is to expand access to FP information and services (re-supply methods) at the community level.[9]" Stated another way, the goal is to increase the coverage of couples in the program.[10]

The issues of concern in programs that add volunteers to their full-time staff are also related to coverage, quality, replicability, cost and sustainability. The program in its current form is costlier than the typical government program, due to the fact that it is an "add-on" to that program; therefore, the question is, 'is it also more effective?' Specifically, what happens to productivity (as measured by the number of visits made in the FWA's area)? And, what happens to the quality of services? Even if the addition of volunteers increases the quantity and quality of visits, it is still important to quantify the added cost per visit in achieving the increase in effectiveness, as added costs will reduce program sustainability.

Methods

The data are from a cross-sectional study of workers that provided family planning services to women in their homes. The performance of workers can be evaluated by examining the quantity and quality of visits that they make. The goal of these visits is to increase contraceptive use, and this outcome is dependent on worker performance, and also the availability of other sources of family planning, and the characteristics and fertility intentions of the women. As this is a cross-sectional study, we cannot determine whether the visits of the field workers in any of the programs raised contraceptive use. We therefore restrict ourselves to an examination of productivity differences in the programs.

NGO programs with part-time vs. full-time workers

A sampling frame was created for all NGO sub-projects that employed at least 18 workers each. The sampling frame was sub-divided according to whether the workers were full or part-time. For programs with full-time workers, the sub-projects were listed according to the cooperating agencies that managed them, and then grouped according to geographical divisions. Sixteen sub-projects were selected, using a random start and a systematic sampling interval.

Three instruments were used to obtain information on how the field workers spent their time. These included the following: (1) an abstract of field worker log books that provided information on reported monthly work activities, (2) a field worker surveillance to determine if they worked, and (3) accompanying observations to record field worker activities. These included travel to the field, travel from one household to another, contacts with clients, attendance at satellite clinics (SCs) and Expanded Program of Immunization (EPI) sites, and time spent at the office. Different subjects were selected such that no single field worker contributed data to more than one instrument.

An instrument for abstracting log book information was applied to two field workers in each typical NGO sub-project, generating a total of 32 abstracts. The surveillance was carried out for two field workers from each of 16 sub-projects for a total of one day each, producing 32 days for analysis. Observations of daily work activities were conducted among 64 field workers for an average of three days each or a total of 192 observation days.

The data collection for part-time workers was the same, but was carried out on a smaller scale because of cost considerations. The selection of sub-projects with part-time workers was limited to those managed by a local NGO, *Swanirvar*. At the time of data collection all of the 33 *Swanirvar* sub-projects had at least 18 field workers each. These sub-projects were located in 30 different *thanas*; as of early 1996, the *Swanirvar* project had sub-projects in 36

thanas.[7] As the sub-projects were selected randomly from the sub-set of the sampling frame, they may be considered to be geographically representative.

The *thanas* were ordered geographically, and a sample of four was drawn using a random start and a systematic sampling interval, and the sub-project located in each chosen thana was selected. Abstracts were obtained from 16 log books, surveillance was conducted on eight days, and the daily work activities of 16 part-time workers were observed for an average of three days each.[11,12]

GOB Programs with and without Volunteers

The sampling frame for the government programs, including those with and without volunteers, consisted of *thanas* with a health complex and at least four family welfare centers in the country's four "old" divisions. In the case of the program without volunteers, the *thanas* were listed according to their proximity to each other, and two from each division were selected using a systematic sampling procedure (random selection of a starting *thana* and application of an appropriate sampling interval). Once a thana was selected, two neighboring *thanas* were chosen.[b]

The sampling for each instrument was spread out in the *thana* such that no two FWAs reported to the same supervisors so that 64 sub-areas were covered. The number as well as type of forms was the same as that for the NGO programs with full-time workers.

In selecting the sample for the program using volunteers, we included *thanas* that had unions[a] which varied according to when the program was initiated. There were 36 eligible *thanas* that included sub-projects with the required variation in duration of activities. These were ordered geographically from 1 to 36, and four were selected using a random start and a systematic sampling interval. After the selection was completed it was discovered that two of the four *thanas* had fewer than four active sub-projects, and therefore a fifth *thana* was selected (in another division) to complete the sample of 16 sub-projects.

For the program that added volunteers, the data collection form used to record the work activities of FWAs was amended to include information on the other activities that the FWAs were expected to carry out in their areas with volunteers including supervision of volunteers and visits with clients of the volunteers. The form noted activities such as the following: talking about the volunteer's problems, guiding the volunteer, checking the volunteer's previous day's work, and visiting a household with a woman with whom the volunteer had problems. The same number of the various types of forms were used as for the NGO part-time program described above.[13,14]

It should be noted that no data collection was carried out to obtain information on the activities of volunteers. The log book entries of the FWAs include the visits made by the volunteers that they supervise; it is not possible to determine whether the FWAs or the volunteers actually made the visits.

The field work was carried out in 1993-94.

Analysis

The analysis is based on comparisons between the results obtained for the part-time vs. full-time program, and for programs with and without volunteers. Chi-squared tests were used to test for significant differences in proportions; analysis of variance and t-tests (two-tailed) were used as appropriate to test for significant differences in means.

Results

NGO Programs with Part-time and Full-time Workers

a. *Quantity and cost of visits*

This section considers both the output and the costs of the programs using part-time and full-time workers. The output of a program may be defined as the quality and number of visits made by the workers to eligible couples.

We begin with a discussion of the quantity of work produced. Columns 1 and 3 of Table 1 provide information on the activities reported in the log books of the field workers. According to the log books, part-time workers are responsible, on an average for 419 couples whom they visit monthly. They report making home visits on 20 days per month, implying that they make 21 home visits per day. Full-time workers report that they are responsible for an average of 679 couples, and make 364 visits per month over 17 days, or an average of 21 visits per day.

Table 1 *Reported Productivity for NGO Programs with Part-time and Full-time Workers*

	Part-time workers		Full-time workers	
	Reported	Estimates	Reported	Estimates
Number of Couples Registered	419	419	679	679
Days per Month Making Home Visits	19.8	17.1	17.0	16.2
Visits per Day	21.2	13.8	21.4	19.6
Total Number of Monthly Visits	419	236	364	318
Field worker Cost per visit		$0.05		$0.20

Table 2 *Total Time Spent with Clients and on Traveling Per Day, by whether Part or Full-time Workers were Employed by NGO Programs*

Activity	Part-time Workers Time (in hours)	%	Full-time Workers Time (in hours)	%
Client Contact	0.9	36	1.5	28
Travel	1.6	64	3.7	71
To/from field	0.8	32	1.8	35
Between households	0.8	32	1.9	36
Total	**2.5**	**100**	**5.2**	**100**
Number of home visit days	31		46	

Note: Includes days on which the only activity was field work

We used data from the observational and surveillance studies to determine actual performance and to compare it with reported performance. The surveillance study indicated that absenteeism from work was low. Only 1 of 32 full-time and 1 of 8 part-time workers did not report for work. The observational study showed that the full-time workers divided their work month into (i) days spent in the field (24 percent), (ii) days spent in the office (17 percent), (iii) days spent doing both field and office work (50 percent) and (iv) days spent doing other work (9 percent). Part-time workers spent 80 percent of their work days in the field.

Table 2 compares the division of the day for full and part-time workers, between travel and client contact time, and for days on which home visits are conducted and no other activities are carried out. As might be expected, part-time workers spent about half as much time in the field per day as did full-time workers. They spent less time with clients, but the biggest difference between full and part-time workers was in the time spent traveling. It is likely that this difference reflects the smaller number of households covered by the part-time workers. It should be noted, however, that on days on which full-time workers go to the office also, they spend less time in the field {4 hours}, thereby reducing the advantage of full-time over part-time workers since the latter do not have to attend office.

Columns 2 and 4 of Table 1 adjust the reported information on work activities, using the results from the surveillance and observation studies. Absenteeism makes only a minimal impact on reported work.[3] But, the observation of part-time workers indicated that the average number of visits per day was far lower than reported, - 14 rather than 21. Thus we calculate that only 236 visits per month are actually made by these workers. In contrast, full-time workers are much more dependable in their reports of the number of visits made. Observational data show that they make 318 visits per month, a little less than the reported 364 visits per month. The last line of the table shows the field worker cost per visit. As expected, the program that uses part-time workers has far lower per unit costs. The part-time workers produce fewer visits per month, and the payments that they receive are also far lower than those of the full-time workers.

b. *Quality of visits*

Three indicators of visit quality are used: the average length of time spent with each client, the percent of clients that received information about family planning or maternal-child health, and the percent of clients using a re-supply method who received supplies.

As shown in Table 3, the visits that were observed are short in both the programs, although they are longer for the full-time workers. Visit lengths vary substantially by type of visit. Two-way analysis of variance shows that the simultaneous effects of both visit type ($f_{5,3225}$=2.7, p<.05) and program ($f_{1,3225}$=13.0, p<.001) are significant. Overall, the typical full-time

worker spends about 4.5 minutes with a client, while the part-time worker spends about 3.7 minutes. Part-time workers spend significantly less time with new acceptors (t_{91}=2.0, p<.05) and users of injectables (t_{242}=2.47, p<.01) than do full-time workers.

Table 3 *Mean Minutes Per Visit by Type of Visit by whether Part or Full-time Workers were employed by NGO*

	Part-time workers Mean (in Minutes)	n	Full-time workers Mean (in Minutes)	n
New Acceptor	3.4	6	8.0	87
OC user	4.0	156	4.4	750
Condom user	3.6	30	5.5	251
Injectable user	2.2	34	3.7	210
IUD/sterilization user	3.9	40	3.6	315
Non-user/Traditional method user	3.7	136	4.4	1222
Total	3.7	402	4.5	2835

The last indicator of quality is whether supplies or information were provided to users of re-supply methods. Table 4 compares the percentage of clients who received supplies or information by program. Overall, part-time workers were about as likely as full-time workers to provide supplies of oral contraceptives, the most important method provided by the workers. However, the percentage who received information about either family planning or maternal-child health was much lower in the program with part-time workers than in the one with full-time workers (χ^2_1=50.1, p<.001).

Table 4 *Percent Distribution of Visits According to Services Provided to OC Users by whether Part or Full-time Workers were Empoloyed by NGO*

Supply/Topic	NGO Program Part-time Workers	Full-time Workers
Supply	**62**	**59**
FP/MCH	1	8
FP only	6	15
MCH Only	5	11
No FP, No MCH info	50	25
No Supply	**38**	**41**
FP/MCH	4	5
FP only	6	9
MCH only	1	6
No FP, No MCH info	27	21
Total	**100**	**100**
Number of visits	162	799

Another important activity of the field workers is to motivate women to use family planning. However, in the programs with full and part-time workers, the percentage of field workers' clients who are non-users of family planning is lower than that of non-users in the general population. The DHS identifies 57 percent of married women of reproductive age as non-users of modern methods nationally, while the observational data identify only 43 percent of women in the program with full-time workers, and 33 percent in the program with part-time workers as being either non-users or users of traditional methods. This finding indicates that the field workers in both the programs are not doing an adequate job of contacting non-users to motivate them to use family planning.

Our results indicate that there are variations between the two programs in the quality of care, with the programs with full-time workers having a higher overall level of quality of care although it is important to remember that these variations are small.

GOB Program with and without Supplementary Volunteers

a. *Quantity and cost of visits*

This next section of the paper compares outputs, outcomes, and costs in programs with and without supplementary volunteers. As described above, the program using volunteers is a special program which employs community women as volunteers under the supervision of regular government-paid FWAs, to help expand program coverage and to allow the FWAs to take on new responsibilities.

We begin with an analysis of productivity. Table 5 compares the reported productivity of the programs according to whether they have volunteers to assist the FWAs. In both the programs, family planning visits are reported to be made to about 650 households. Visits are reported to be made on about 15 days per month and there are about 23 visits per day. In both the programs, a similar number of eligible couples were reported to be visited each month (346 and 350 couples, respectively).

Table 5 *Reported Productivity for GOB Programs by whether GOB FWAs are Assisted by Volunteers*

Activity	No Volunteers	Volunteers assist FWAs
Number of Couples Registered	653	661
Visits per Day	22.7	23.5
Days per Month Making Home Visits	15.4	14.7
Total Number of Monthly Visits	350	346

The reports of the FWAs therefore suggest that overall productivity in both the programs is similar. We found also that there was no significant difference in absenteeism in the two programs. In the program without volunteers, 25 percent of the 32 FWAs did not work while in the program with volunteers, 3 of the 8 workers did not go to the field. However, there were some differences in how a typical work day was spent. Table 6 provides information on how the work time of the FWAs in the program with volunteers is divided between travel time to the field and other work activities. Data from a typical GOB program are provided for comparison. Most of the days on which the FWAs were observed were spent making home visits, and the amount of time that they worked was similar to that of FWAs in the typical GOB program without volunteers. There were 13 observation days on which 11 of the 16 FWAs supervised volunteers. On days during which supervision of volunteers was added to the job of making home visits, the work time was longer by about an hour. However, on days on which the FWAs only supervised volunteers, the work day was only 1.5 hours. FWAs worked 3.1 hours on days when they did home visits in combination with SC or EPI work. It can be concluded that field work still makes up the bulk of the FWAs' activities, even when there are volunteers, because the amount of time dedicated to supervision of volunteers is minimal.

We calculated the actual number of visits made by the FWAs in the program without volunteers, using the surveillance and observation data. We estimated that only 62 percent of the reported visits were actually made (11.4 days per month X 19 visits per day = 217 visits) thus indicating that actual productivity is lower than the reported productivity. As we have no information on the activities of the volunteers, we are unable to determine if the actual number of visits made in this program is also lower than reported.

If we make the assumption that the visits are equal in the two programs, then obviously the costs in the program with volunteers are higher. One study reports that each FWA supervises 15-16 volunteers.[9] The FWA cost per visit in the program without volunteers is US$0.24 per visit (78 percent of the salary of an FWA is allocated to the home visit program and is used to produce 217 visits). If we assumed that the visits in the program with volunteers were no higher, then the costs for FWAs and volunteers would rise to $0.29 per visit (15 volunteers at a cost of US$0.75 per month).

Table 6 *Time Spent (in hours) by GOB FWAs on Different Activities, by whether Volunteers Assist FWAs*

Activity	Type of Work				
	No volunteers	Volunteers assist FWAs			
	Home Visits Only	Home Visits Only	Home Visits/Supervision of Volunteers	Supervision of Volunteers Only	Satellite Clinic/EPI/Office Work**
Home Visits	2.4	2.4	2.9	0.0	0.1
Travel to/from Field	1.4	1.1	1.2	0.0	0.7
Work with Volunteers	0.0	0.0	0.5	1.5	0.0
SC/EPI	0.0	0.0	0.0	0.0	2.3
Total	**3.8**	**3.5**	**4.7**	**1.5**	**3.1**
Number of Days of Observation*	149	25	7	6	6

* *Program with volunteers, excludes one case in which an FWA attended a special meeting, and three cases in which FWAs did not report for work as expected.*

** *Includes one case in which one home visit was made prior to EPI work.*

An important indicator of FWA performance is contraceptive use. A key question is whether the combination of service provision by FWAs and volunteers raises contraceptive use above that of areas served by only FWAs. Theoretically, because volunteers provide a way to increase program coverage, contraceptive use should be higher in their areas than in those without volunteers, assuming that the areas are comparable. Table 7 compares the percentage of married women using a contraceptive method and the percentage using oral contraceptives or condoms for areas in the Demographic and Health Survey (DHS) according to whether volunteers are working in the area (including areas covered by both GOB and NGO programs).[d] Although there is some variation in the prevalence rates associated with the length of time that volunteers have been active in an area, overall, the contraceptive prevalence rate does not vary by whether or not there are volunteers (35 percent). The prevalence of oral contraceptives and condom use is also nearly the same for both the programs (19-20 percent). Thus, it appears that volunteers have not helped to increase contraceptive prevalence rates, and productivity in the two programs is about equal. The supposition of equal productivity is also borne out by the finding that the proportion of women visited by a field worker in the preceding six months is very similar (39.4 vs. 37.0) for both programs.

Table 7 *Percent of Married Women Using a Modern Method of Contraception and Using OCs or Condoms in Areas with and Without Volunteers*

Status of volunteer program	Using any modern method	Using OCs or Condoms	%
active:			
<1 year	32.6	19.4	305.8
1-2 years	43.1	25.1	232.1
≥3 years	32.2	17.9	441.6
Total	34.9	20.1	979.5
Rural/no volunteers	35.2	19.1	6987.1

Quality of Visits

A second important issue concerns the quality of services received. As Table 8 shows, the time spent with clients by the paid workers in the two programs is similar. Two-way analysis of variance shows a significant effect of visit type ($f_{5,3579}$=8.2; p<.001) but not program ($f_{1,3579}$=3.0) on contact time. Among specific user groups, there is a significant difference between the programs only for non-users (t_{151}=2.2, p<0.5). For all the other user groups, the mean time spent with clients is roughly the same.

Overall, as Table 9 shows, the FWAs working in areas with volunteers are significantly more likely to provide information to oral contraceptive users than are the FWAs in programs without volunteers (χ^2_1=4.0, p<.05). In contrast, oral contraceptive users in the volunteer areas are less likely than those in the typical GOB program to receive contraceptive supplies from the FWAs (χ^2_1=8.0, p<.01).

Table 8 *Mean Minutes Per Visit by Visit Type by whether GOB FWAs were* Assisted by Volunteers

Contraceptive Use Status	No Volunteers		FWAs Assisted by Volunteers	
	Mean Minutes	n	Mean Minutes	n
New acceptor	7.8	122	4.4	31
OC user	3.6	1066	3.1	163
Condom user	5.0	145	6.3	37
Injectable user	3.4	255	3.1	45
Sterilization/IUD user	3.4	407	3.3	85
Non-user/Traditional method user	4.2	1033	4.0	211
Total	4.0	3029	3.7	572

Note : One case omitted because of missing information on contraceptive status.

Table 9 *Percent Distribution of Visits by GOB FWAs to OC Users and Acceptors by whether Contraceptives were supplied and by topics Discussed, by Program*

	Program	
	No Volunteers %	FWAs Assisted by Volunteers %
Supply	**64.4**	**56.8**
FP/MCH	1.5	3.1
FP only	12.9	16.8
MCH only	5.4	3.7
No FP, No MCH	44.6	33.2
No Supply	**35.7**	**43.2**
FP/MCH	0.8	2.6
FP only	9.5	11.1
MCH only	2.4	6.3
No FP, No MCH	23.0	23.2
Grand Total	**100.0**	**100.0**
Number of Visits Observed	**1156**	**190**

Note : Total does not equal 100.0 because of rounding

In the light of the above evidence, it appears that the content and duration of visits carried out by the FWAs in the two programs is about the same. A small difference in provider-client contact time favors the non-volunteer program. Also, although the FWAs in programs with volunteers tend to provide their clients with information more often than their typical GOB counterparts, they seem to be less effective at providing supplies.

Discussion

This paper has reviewed two service delivery models that have been used in Bangladesh either as supplements to or replacements for the traditional model of home visits to provide contraceptives and other family planning services. Given the high costs of the traditional programs, Bangladesh needs to consider alternatives to the current system. The two alternatives reviewed here provide a comparison with the traditional models of full-time workers employed either by the government or by NGOs.

An important limitation of our analysis of programs, comparing full and part-time workers, is that it did not take into consideration differences in the comparative performance of these workers in recruiting and maintaining acceptors of contraception. While costs are far lower in the program with part-time workers, there are some indications that the quality of services may be somewhat lower as well. However, it is not clear whether any differences in quality are important enough to merit concern given the very great cost differences between the two programs.

Part-time workers, like full-time NGO workers, visit a disproportionately high number of contraceptive users; moreover, they are more likely than the full-time workers to visit users of oral contraceptives. Because they visit a smaller percentage of non-users, they may be less effective than the full-time NGO workers in recruiting women to use contraception. When part-time workers visit oral contraceptive users, they are also less likely than the full-time workers to provide information. To the extent that women need information and counseling to encourage continued method use, continuation rates in the areas with part-time workers may be expected to be lower than in the areas with full-time workers.

The data on work performance of part-time workers indicate that their job primarily is to re-supply women with oral contraceptives and condoms. They make short visits to clients; they visit a disproportionately high percentage of oral contraceptive users; and primarily they provide supplies on these visits. Thus, while a program with part-time workers is far lower in cost than one with full-time workers, there may be other even less costly ways of providing oral contraceptives and condoms to established users. NGOs may want to explore other ways of re-supplying contraceptives: for example, depot holders could provide women with oral contraceptives and condoms. Some *Swanirvar* workers have already been successful in developing a segment of their clientele who proactively seek services at the workers' homes.[7] Program costs in the future may depend on the willingness of women to travel to a depot holder: the longer the distance women are willing to travel, the fewer would be the depot holders needed.

The second alternative to the traditional home service delivery model used volunteers in addition to FWAs in order to increase program coverage. Our results suggest that there is little or no difference in performance between areas according to whether the FWA has volunteers to assist her. Reported visits are about equal as are contraceptive use and the proportion of women reporting that they were visited by an FWA. While no data were obtained on the performance of volunteers, the data on job performance of the FWAs suggests that the presence of volunteers allows the FWAs to reduce their work load.

One important job that the FWAs are expected to perform is supervising the volunteers with the goal of improving the quality of visits made by the volunteers. No data were obtained to evaluate the quality of supervision, but on days fully devoted to supervision, work time is found to be very low.

The duration and content of visits made by the FWAs vary little by whether there are volunteers available. For example, oral contraceptive users in areas with volunteers were more likely to receive information but less likely to receive supplies than those in areas without volunteers. In any case, these differences are small, an observation which is supported by the fact that the average time spent on different types of visits is very similar between the two programs. Perhaps the most telling indication of the uniform quality of visits

across both programs is that the contraceptive prevalence rates in the two areas are about the same.

Increasing program coverage may not be necessary or may be accomplished in less costly ways than recruiting volunteers. Some visits are not necessary, as for example, those to acceptors of sterilization. FWA coverage could be improved without increasing the total number of visits simply by targeting women who need to be visited so that the visits that are made are more efficient. There are also other ways to increase the number and duration of visits, besides adding workers. Home service delivery workers employed by the government work between 3-1/4 and 3-3/4 hours.[6] If the number of couples for which they are responsible is increased, then they can make additional visits by increasing the amount of time that they work. Taking into consideration the fact that the lower-paid part-time workers work on an average 2-1/2 hours per day, it does not seem unreasonable to expect the government workers to increase their hours of work in order to cover more couples. Moreover, the government workers can increase the number of days that they work by reducing absenteeism.

It is time Bangladesh began to consider phasing out the home visit program. Some research points to the importance of continued home visits in increasing demand for family planning.[1,3,15-17] Others argue that home visits simply contribute to the continued isolation and immobility of women, and that they are no longer needed to stimulate demand.[18-19] NGOs, in fact, are now placing less reliance on home service delivery and are trying out new service delivery models such as provision of methods through depot holders.

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Notes

a. The largest political regions that make up Bangladesh are its six Divisions, of which until recently there were only four (the four "old" Divisions were used in the sampling for this project). The Divisions are further subdivided[20] into the following administrative units in descending order of size: Districts, Thanas, and Unions. A district comprises 7 to 8 Thanas, while a Thana is made up of approximately 9 Unions. A Union, the smallest administrative unit, is a collection of some 20 villages.

b. This procedure was used to minimize costs for conducting the full study that also included a clinic component.[13]

c. Unfortunately, cost considerations allowed us to conduct surveillance of only 8 part-time NGO workers and 8 FWAs working in areas with volunteers. This limited information leaves some room for doubt in interpreting the results. Therefore, we have taken a conservative approach with respect to the implications of the surveillance study. In comparing the efficiency of the special programs with their "typical" counterparts, we give the benefit of the doubt to the more expensive programs so as not to artificially inflate their disadvantage.

The proportion of workers from the surveillance study who did not work when expected was higher among part-time than full-time NGO workers. This is to the disadvantage of part-time workers. However, the baseline cost of the program using part-time workers is lower than that of the typical NGO program. So, we accept the surveillance data as correct. This minimizes the apparent difference between the programs.

On the other hand, the program in which FWAs are assisted by volunteers is already more expensive than the typical GOB program, without adjusting for any difference in absenteeism. Because the surveillance shows greater absenteeism for FWAs in the program with volunteers than for typical GOB fieldworkers, it would only increase the comparative disadvantage of the former to take this difference into account. Thus, again, in order to present the minimum cost difference between the programs, we use the more favorable typical GOB surveillance data for both programs.

d. No attempt was made to "match" the areas without volunteers with areas with volunteers in the DHS in this study.