USAID
FROM THE AMERICAN PEOPLE

A Performance-Based Reimbursement Scheme

A Final Report of a Pilot Study

July 15, 2006

This publication was produced for review by the United States Agency for International Development.

A Performance-Based Reimbursement Scheme

A Final Report of a Pilot Study

Technical Report
Cooperative Agreement No. 388-A-00-02-00060-00
July 15, 2006

Prepared for
NGO Service Delivery Program
House No. NE(N) 5, Road No. 88
Gulshan - 2, Dhaka - 1212
Bangladesh

Prepared by
Dennis N.W. Chao
Senior Health Economist
RTI International
3040 Cornwallis Road
Post Office Box 12194
Research Triangle Park, NC 27709-2194
and
The Health Management and Finance Team
NGO Services Delivery Program
Dhaka, Bangladesh

Table of Contents

Page

List of Figures

Page

List of Tables

Section 1. Background

NGO Service Delivery Program (NSDP) is a United States Agency for International Development (USAID) funded program delivering primary health care services through an umbrella of nongovernmental organizations (NGOs) in Bangladesh. The network of 33 NGOs is spread all over Bangladesh, operating through 317 static clinics. The NGOs receiving USAID funds through NSDP have four objectives: expanding the range, improving the quality, and increasing the use of the Essential Services Package (ESP), especially by the poor; increasing the capacity of NGOs to sustain clinic and community-based service provision; improving NGOs' institutional and financial sustainability; and collaborating with the Government of Bangladesh, in coordination with other donors, to expand the role of NGOs as providers of the ESP within the National Health System.

To address two of the four objectives, NSDP developed a system ensuring better access of the health services to the poorest segment of the population, along with raising revenue by providing fee-for services to the better off population. The former strategy highlights a safety net policy for the poorest segment, who are identified by participatory rapid appraisal technique and handed out a health benefit card. The latter strategy helps the NGOs to revise their service charges according to local demand and other factors.

However, the drawback of this system is that there exist built-in disincentives for the NGOs to aggressively pursue those two goals. First of all, any extra revenue generated from charging user fees or serving more paying clients goes to a program revenue reserve fund that the NGOs can not use easily. Neither the NGOs nor the clinics benefit from increased program revenues, and therefore, have no impetus to generate more revenue. Secondly, NGOs and clinics are faced with the apparently conflicting objectives of serving the poor and improving cost recovery. When an NGO or a clinic tries to serve more poor people, it also runs the risk of sacrificing revenue and not improving cost recovery. Given the importance of cost recovery, it is entirely possible that some NGOs and clinics are more interested in serving the health needs of paying customers, which ensures revenue. In any case, putting the burden of paying for the poor on NGOs and their clinics provides no incentive for them to actively and enthusiastically recruit and serve the poor. In order to encourage NGOs and clinics to make significant efforts to serve the poor as well as to improve cost recovery, the disincentives must be taken out of the system and incentives must be introduced.

Section 2. Guiding Principles for Developing an NSDP-Specific Performance-Based Reimbursement scheme (PBRS)

2.1 What do we want this scheme to achieve?

Our objective is to develop a *comprehensive*, *innovative*, and *effective* scheme that can provide *strong incentives* to NSDP NGOs to motivate them to make major efforts in *simultaneously* advancing the two main objectives of the program: *increasing cost-recovery rates* and *serving more of the poorest of the poor (POP).*

NSDP NGOs need to reduce their dependency on funding from USAID and, at the same time, to recruit and serve more POP in their catchment areas. With the program entering its final phase, effective incentives can be the impetus for NGOs to take vigorous and enthusiastic action toward these program goals. In the process, both the institutions and their workers will be appropriately rewarded.

We also want to develop an scheme that addresses other issues related to the operation of NSDP:

- the accumulation and use of revenue funds[1]
- cultivation of the concept and practice of performance-based contracting
- linkages to the NGOs' Serving the Disadvantaged Fund (SDF)
- means to achieve the desired program goals by the end of the project.

We observe that under the current management system, NGOs tend to maintain the status quo. In our assessment, some program policies and rules must be modified before strong incentives will be possible. To have a strong and effective scheme, NSDP and USAID/Bangladesh must be willing to consider new approaches and be ready to take bold action.

2.2 What did we take into consideration in designing this scheme?

In designing the proposed scheme, we considered the current grant management rules and regulations and whether they constitute any disincentives for NGOs to move forward strongly to either improve cost recovery or increase services to POP. We also considered the current NGO performance on cost recovery and serving POP. Finally, we examined lessons learned from similar exercises in other countries.

The use of incentives to motivate service providers has been tried in many developing countries with varying degrees of success (Bitrán and Giedion, 2003; Barnum, 1995).

[1] Revenues generated by NGOs from user fees are deposited in special accounts. NGOs are not authorized to use these funds without written consent of NSDP.

Careful review of their experience, as described below, suggests some guiding principles that can help develop new schemes.

Incentives should be provided to both institution and individual.

Some incentives should be provided directly to the organizations responsible for overall performance. The purpose of the scheme is to make the organization (management and employees) responsive to the objectives of the program and responsible for its action or inaction. Without incentives for the organization, NGO owners and management are not motivated to direct their employees to achieve higher goals. However, it is equally important that part of any reward to an organization is distributed among individuals who work for the organizations. The NGOs should decide the criteria for distributing rewards to their employees.

The scheme must be simple to understand.

The scheme should be easy for the NGOs to understand and remember. The rewards should be tangible, and NGOs should have full control to use them at their discretion.

The scheme should be based on just a few performance indicators.

Rewards should be based on overall achievement, represented by a few indicators. Otherwise, duplications or contradictions may occur among indicators.

The scheme should be based on annual performance instead of monthly performance.

Performance should be evaluated and incentives rewarded once a year to eliminate monthly variations in performance indicators and to reduce the administrative burden of NGOs and granter.

The scheme should be easy to implement and administer by a grantee.

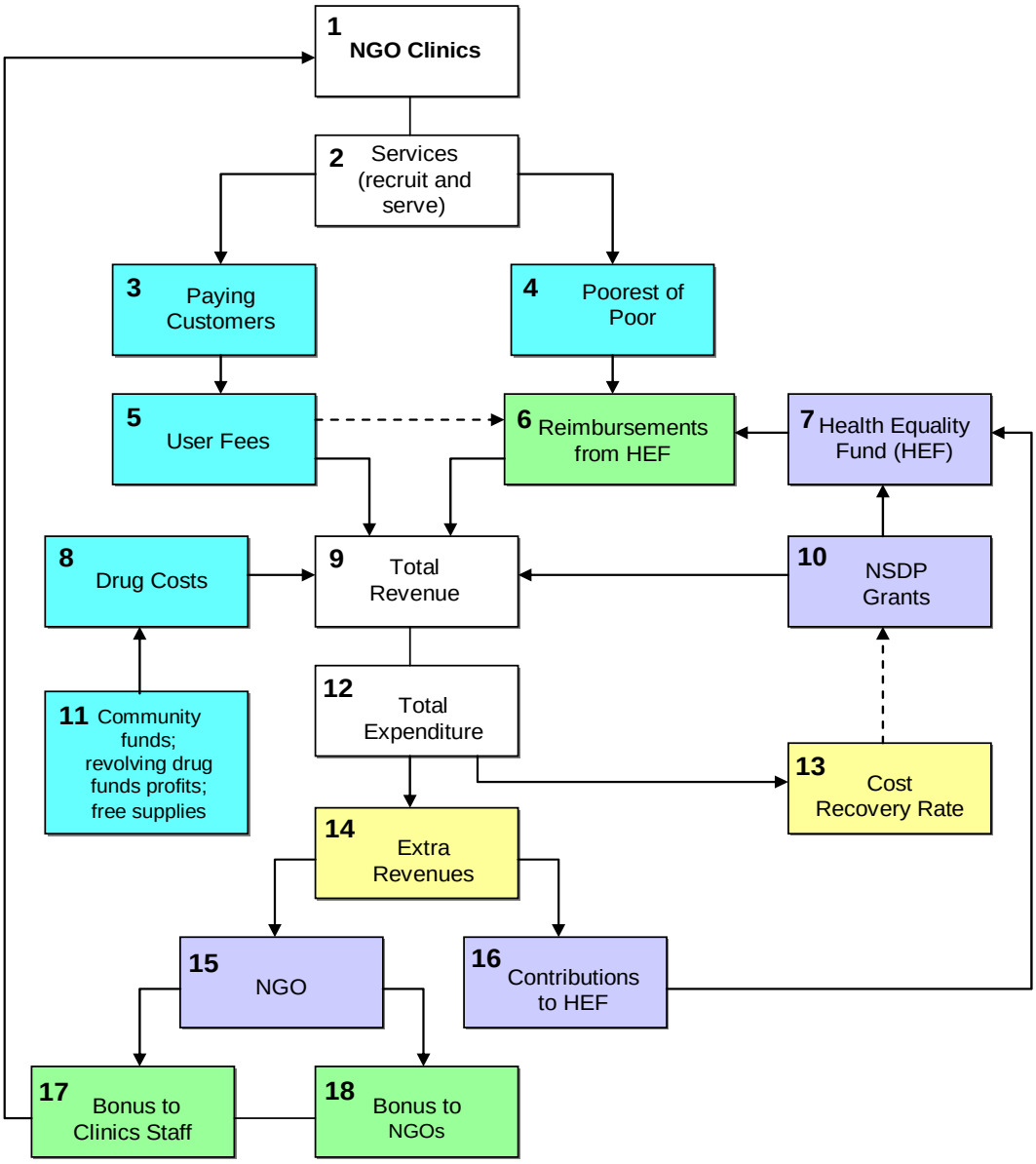
The scheme can be used as an opportunity to develop NGOs' capabilities to make decisions, such as how to use resources more effectively and how to distribute bonuses equitably, for themselves. This is a step toward local-level planning as a part of the decentralization process.

Section 3. Description of the PBRS

3.1 The overall structure

We designed a scheme that incorporates the guiding principles discussed above, takes into consideration current program status and NGOs' performance, and integrates two major cost-recovery interventions while simultaneously addressing cost recovery and POP issues. Figure 1 is a diagrammatic presentation of the proposed scheme. In this system, NSDP can set rules (blocks 7, 10, 14, 15 in purple) to provide incentives (blocks 6, 17, 18 in green). NGOs can make extra efforts in alternative ways (blocks 3, 4, 5, 8, 11 in blue) to surpass the indicators (blocks 13 and 14 in yellow) to trigger these incentives.

Figure 1. A Diagrammatic Presentation of the Proposed Scheme



3.2 Set variable cost-recovery targets

3.2.1 Variable cost-recovery rate targets can be set by NSDP annually for each NGO (block 13 in Figure 1).

3.2.2 NSDP only funds the part of the budget that is not covered by the targeted revenues (block 10 to block 9 in Figure 1). In other words, all NGOs receive grants according to the proportion of their project budget not covered by their current target cost recovery rates. Therefore, if an NGO's target cost recovery rate is 30%, only 70% of its budget will be funded through an NSDP grant. This is consistent with the current practice of NSDP.

3.2.3 The NGOs are responsible for making up the proportion of their budgets not funded through user fees. If the actual revenue of an NGO turns out to be lower than targeted, it must make up the difference by its own means or use its current accumulated revenue balance.

3.3 Additional revenues to support incentives to NGOs and health providers

3.3.1 If an NGOs' actual revenues exceed the target, the extra revenue will **NOT** be channeled to the accumulated revenue fund account, as is now the case. These extra funds will become the foundation of the scheme and will be used in three ways to provide monetary incentives for NGOs and their workers:

- A certain percentage (e.g., 25%) will be used for providers' bonuses, distributed by the NGOs to all providers working at the clinics according to their contributions to the efforts (blocks 14, 15, and 17 in Figure 1). NSDP should refrain from setting detailed rules regarding who should get how much reward to avoid incurring administrative burdens. NSDP could assist NGOs to develop guidelines regarding how to reward their staffs.[2]
- A certain percentage (e.g., 25%) will belong to the organization for use in supporting its own initiatives at the discretion of the NGO's board (blocks 14, 15, and 18 in Figure 1). In these cases, NGOs will not need NSDP's approval to use the funds. NSDP could again provide some general guidelines on how these funds should be used. *NGOs can use the reward to address governance issues, to improve institutional and management capacity, and to support NGO networking activities*.

[2] The proposed scheme does not violate the Tiahrt Amendment since it does not propose a target to be reached by any NGO for any particular family planning method nor does it propose to reward any NGO or any provider for achieving a target for promoting a particular family planning method. The clinics will continue to provide cafeteria services to the customers for available family planning methods, and the customers will have freedom of choice of methods. The proposed scheme is to motivate and reward the NGOs and their health service providers for providing ESP services to more clients including the poorest of poor.

- The remaining revenues (e.g., 50%) will be channeled to the program-wide NSDP Health Equity Fund (HEF) to be used as incentives for the NGO to serve POP (block 14 to block 16). This pooled Health Equity Fund account is explained below.

The percentage distributions are subject to discussion among NSDP, USAID, and all the NGOs. Most importantly, we reemphasize that under the new rules, extra funds generated by any NGO will not go back to the NGO's revenue account, over which it does not have full control. We believe this *fundamental* rule change will provide a *very strong incentive* for all NGOs to exceed their assigned target rates. The extra funds generated will support three different but critical areas: bonuses for health providers, incentives for the organization, and resources to support POP.

Under the current system, the only way that NGOs can generate more bonuses is to generate more revenue, and the only way to generate revenue is to either increase the number of paying customers or increase user fees. There is no incentive for NGOs to serve the POP, since they do not contribute to the revenue side. Therefore, to correct this situation, we propose the creation of the Health Equity Fund (HEF).

3.4 Creating a NSDP Health Equity Fund to reimburse NGOs' costs of serving POP

The other half of the scheme is to strongly motivate NGOs to serve more POP through the creation of a HEF.

3.4.1 An NSDP HEF will be established with the sole purpose of providing funds to serve POP. Health equity funds are increasingly used by international agencies as a way to make health care accessible to people who are unable to pay existing user fees. A health equity fund has the effect of leveling the playing field for the paying customers and POP.

3.4.2 The basic idea is that either donors or the government will cover the user fees, through a health equity fund, for people who otherwise could not afford to go to an NGO for services. This arrangement removes the burden of financing from NGO. When the user fees are covered, NGOs have no reason to hesitate to serve POP. The concept of a health equity fund has been successfully tested in several Asian countries. A World Bank report (Bitrán and Giedion, 2003) indicates that "Systems that compensate providers for the revenue forgone from granting exemptions (Thailand, Indonesia, and Cambodia) have been more successful than those who expect the provider to absorb the cost of exemptions (Kenya)" (p. 78).

3.4.3 The concept and practice of an HEF also convey a message that the government will need to pay NGOs, whether through contracts or vouchers, for them to continue to provide services to POP.

3.4.4 NGOs will use methodologies developed by NSDP to identify POP. NGOs will be automatically reimbursed for each POP served, up to the amount of user fees regular customers are paying (blocks 4 and 5 to block 6). Therefore, the amount of reimbursement will differ for each NGO.

3.4.5 NGOs will no longer have to write proposals in order to use revenue funds to support serving POP, and the number of POP they can serve will no longer be subject to the amount of the NGOs' accumulated revenue funds. *With the support of an HEF, an NGO can serve as many qualified POP as it can identify and recruit.*

3.4.6 Funds that NGOs receive from the HEF can be counted in the overall cost recovery (blocks 6 and 9 in Figure 1). Since funds in the HEF will be generated locally from user fees from the previous reporting period, they will not be part of the grants from the current period and should be treated as user fees collected from paying customers.

3.4.7 The NSDP HEF, as we suggest, will effectively remove several restrictions that prohibit NGOs from serving POP (blocks 2 and 4 in Figure 1). In addition, it will provide strong incentives to NGOs to recruit and serve POP. Under this scheme, NSDP's efforts in defining and identifying POP will be matched by the NGOs' self-interest in serving POP. We believe that under this scheme, NSDP will have a much better chance of making significant progress in serving more POP.

3.5 Modifying the "Serving the Disadvantaged Fund"

The "Serving the Disadvantaged Fund" (SDF) is an individual NGO's own fund for the purpose of supporting some part of the costs of serving POP. It derives from five sources: community funds, revolving drug fund profits, free supplies of medicines, revenue funds (with concurrence from NSDP), and rationalized pricing. With the HEF in place and supporting direct service to POP, we will be able to eliminate the revenue funds and rationalized pricing from the potential sources of SDF. This seems to make sense given that in the long run, the revenue funds will not continue to be available.

The SDF (block 11) could complement the HEF by covering expenses for medicine for POP (block 8 to block 9 in Figure 1). If the NGOs use the SDF to pay for medicine for POP, the NGOs' cost-recovery rates will not be affected. If an NGO has no SDF to pay for medicine for POP, it can use part of the "user fee" it receives from the HEF to pay for them. However, the amount going to the overall revenue will be reduced, and the cost-recovery rate will also be reduced. It will be in the NGOs' interest to generate SDF funds from the first three sources (community funds, revolving drug fund profits, and free supplies of medicines) to pay for the medicines or any other costs associated with serving POP.

3.6 What can NGOs do to benefit from the scheme?

Each NGO can strive for a higher cost-recovery rate by adjusting user fees or recruiting more paying customers (blocks 3 and 5 to block 9 in Figure 1). Equally effective, each

NGO can also identify, recruit, and serve more POP (blocks 4 and 6 to block 9). Serving more customers will require NGOs and their clinics to improve productivity and cost efficiency through increasing customer flows and reducing downtime at work. Each NGO can also achieve a higher cost-recovery rate by generating more community funds to support the additional cost of serving the POP.

3.7 The dynamics of the scheme

After an NGO raises its cost-recovery rate by recruiting and serving more paying customers and POP over the course of a year, NSDP has the option to raise the cost-recovery rate target for the next year. Thus, this NGO will not be awarded a bonus unless it can further increase the cost-recovery rate. One might argue that this rule might be interpreted as punishing those NGOs that perform well. To encourage those who make progress in cost recovery, NSDP also has the option to increase the cost-recovery rate incrementally. For example, if an NGO increases its cost-recovery rate from 20% to 25% in 1 year, its target cost-recovery rate for the next year will be set at, say 22.5%. Incremental increases will not take away all the incentives at once, but will put pressure on NGOs over time.

3.8 Implications of grant availability and distribution

Accumulated past revenue funds will continue to be used for investment in NGOs' facilities and services, but future revenues are to be used to reward NGOs and their health providers, and to become incentives for serving POP. Less grant money will go to paying customers and more grant money will go to support POP, which is exactly what the program desires. Total grants from NSDP will not be larger, but the number of customers, particularly POP, will be larger.

3.9 How to finance the proposed scheme

We suggest that initially, a part of the grant funds *not* distributed to NGOs because of higher cost-recovery rates for high performers will go into the pooled HEF account administered by NSDP (block 10 to block 7 in Figure 1) as a reserve for the HEF. In Table 1, column 13 represents this saving in 2005 in the magnitude of 4,892,685 TK. A proportion of this savings should be used as the reserve for the HEF in case there is a net outflow of funds from the HEF to the NGOs for user fees for the POP. As we demonstrate in Section 5, we expect that the HEF will be self-sustaining. Contributions to the HEF from extra revenues generated can cover most of the user fee payments to NGOs.

3.10 When and how to make the transactions

The HEF will reimburse user fees to an NGO for each POP it serves, but there is no need to make the transactions frequently. Since NGOs also are supposed to give back a certain

portion of the extra revenues generated to the HEF, the easiest way is to settle the two-way transactions once every 6 months or once a year. At the end of each period, NSDP and NGOs will examine service data and determine how much each NGO should be given as user fees for POP served. They will also examine the extra revenues generated and calculate how much the NGO should contribute to the HEF. Depending on which number is larger, either the HEF will make a payment to the NGO, or the NGO will transfer its contribution to the HEF. Since transactions between the HEF and NGOs will only take place once (or twice) a year, the administrative costs involved in managing the scheme will be very low.

Section 4. Designing and Implementation of a Pilot Study

The proposed plan will be implemented initially with four NGOs. Two (CWFD and PKS-Khulna) are in an urban area and two (Swanivar and former NSDP NGO DCPUK) are in a rural area. Their current service and financial performance and other characteristics are described in rows 5-15 of Table 1. The urban group is important because of the current attention on serving the poor in slum areas. Four additional NGOs (see below) will serve as controls. All eight NGOs have been trained in POP identification and the use of health benefit cards to recruit POP.

As agreed, in order to test the effectiveness of this incentive strategy, we will introduce an element of operations research in the initial implementation. Since total randomness in sample selection does not apply in this case, we will follow the quasi-experimental design approach. The four NGOs chosen as our control group include Fair Foundation and BMS (urban) and JTS and formal NSDP NGO JUSSS (rural). Their service and finance characteristics are also described in Table 2. While the average cost-recovery rate, the average expenditure per customer, and the average user fee are similar for the intervention and the control groups, there are substantial variations between urban and rural groups and within each group.

The effectiveness of this scheme will be measured by the impacts on the two performance indicators: the number of POP served (line 19) and the cost-recovery rate (line 23). We will carry out an initial evaluation 6 months after the start of the scheme and again in 1 year's time. If the 6-month evaluation is positive and promising, we will start implementing with the rest of the NGOs.

Table 1. Characteristics of intervention and control NGOs

	Urban				Rural			Intervention	Control
								NGOs	NGOs
NGO	CWFD	PKS	Fair Foundtion	BMS	Swanirvar	Former DCPUK	JTS		
(1) ID	1	2	3	4	5	6	7		
(2) Location	Dhaka	Khulna	Khulna	Dhaka	Dhaka	Rangpur	Rajshahi		
(3) Number of Clinics	17	11	10	8	38	4	21	70	39
(4) Operations Research	Intervention	Intervention	Control	Control	Intervention	Intervention	Control		
Pre-Pilot Status									
(5) MOCAT Score	2.38	1.73	1.82	1.75	2.26	1.84	2.18	2.05	1.92
(6)QMS Mean Score	81	79	92	66	80	76	96	79.00	84.67
(7) Total Number of Customers	467,526	367,340	197,463	327,075	3,881,469	429,174	1,827,504	5,145,509	2,352,042
(8) Total 2004 Budget	27,078,636	15,522,042	14,242,291	9,791,331	62,290,317	6,939,320	31,918,965	111,830,315	55,952,587
(9) Expenditure per Customers	58	42	72	30	16	16	17	22	24
(10) Cost Recovery Rate	18.00%	20.00%	13.00%	23.00%	16.00%	19.00%	12.00%	18.25%	16.00%
(11) Calculated Average User Fee	10.43	8.45	9.38	6.89	2.57	3.07	2.10	3.97	3.81
(12) Average Use Fee	7	8	7	8	8	2	4	6.25	6.33
(13) Formative Research	Yes	No	Yes	No	Yes	Yes	Yes		
(14) Training in LA Identification	Yes	Yes	Yes	Yes	Yes	Yes	Yes		

Section 5. Statistical Analyses of the Results

The results from the pilot study at the clinic level were analyzed to test the effectiveness of the PBRS in improving cost recovery rates and increasing the number of POP served.

The impact on cost recovery rates

The data from the PBRS pilot study are divided into two groups: intervention and control. A clinic is considered to be an observation unit, with observations being made over two time periods: baseline (March 2004 to February 2005) and follow-up (March 2005 to August 2005). The observations are recorded monthly. There are 70 intervention observations and 39 control observations. Cost-recovery means are used from each time period for each group by dividing the total sum of the monthly revenue by the total sum of the monthly expenditure. A percentage increase from baseline to follow-up is calculated for each observation. From these, a mean percentage increase and standard deviation is calculated for each group (intervention and control). A one-tailed two-sample heteroscedastic t-test is performed, comparing the mean percentage increase between the treatment and control groups. Letting μ equal the mean percentage increase, the hypotheses are as follows:

H_0: $\mu_{treatment} = \mu_{control}$

H_a: $\mu_{treatment} > \mu_{control}$

The mean percentage increase is 26.02% for the treatment group and 20.28% for the control group. The standard deviation is 23.42 for the treatment group and 19.47 for the control group. The test yields a p-value of 0.0870. Assuming these data have the properties of the same t-distribution, it would be expected based on these data that the intervention group would perform at least this much higher than the control group by nothing other than random variation approximately 8.70% of the time. In many situations, this is considered strong enough evidence to reject H_0 in favor of H_a.

Impact on serving the POP

There are eight intervention observations and six control observations. The number of POP served is summed for each time period. A percentage increase of number of POP served from baseline to follow-up is calculated for each clinic. A one-tailed two-sample heteroscedastic t-test is performed, comparing the mean percentage increase between the treatment and control groups. Letting μ equal the mean percentage increase, the hypotheses are as follows:

H_0: $\mu_{treatment} = \mu_{control}$

H_a: $\mu_{treatment} > \mu_{control}$

The mean percentage increase is 38.28% for the treatment group and -27.04% for the control group. (Note that the control group experiences a decrease.) The standard

deviation is 52.12 for the treatment group and 22.69 for the control group. The test yields a p-value of 0.0050. Assuming these data have the properties of the same t-distribution, it would be expected, based on these data, that the treatment group would perform at least this much higher than the control group by nothing other than random variation approximately 0.50% of the time. In many situations, this is considered strong enough evidence to reject H_0 in favor of H_a.

The information on serving the poorest is more limited, since most clinics only started serving POP identified very recently. However, the result did show that ***both*** the paying customers and the poorest customers ***increased substantially*** in the intervention group. The revenues of the intervention group increased because they serve more paying customers and more POP.

Given the strong results of the pilot study, we recommend scaling up the performance scheme to the rest of the NGOs.

Section 6. Extra Revenue Generated, Health Equity Fund Replenished, and Bonus Calculated

Table 2 summarizes the significant improvement in cost recovery rates of the 69 intervention clinics[3], their designated contributions to the HEF, and bonus to be awarded to NGOs and their health providers. Column 1 and 7, respectively, are the cost recovery rates for all the clinics for the 12 months prior to the pilot study and 6 months of the pilot study. The amount of user fee reimbursements each Clinic receives for serving the POP HBC holders is shown in Column 5. Clinics are expected to contribute half of the increase in revenue income to the HEF. Column 9 shows the amount each clinic contributes to the HEF. Column 10 is the balance of the amount of reimbursement each clinic receives from the HEF and the amount it contributes to the HEF. The majority of the clinics contribute positively to the HEF. The total of column 10, in the sum of 1,092,726 Taka, represents the total inflow of funds into the HEF. The HEF now has adequate reserves to start for the proposed scale-up implementation.

Additional revenue income generated by the clinics from increases in cost recovery rates are shown in Column 8. Sixty-four out of the 69 clinics generated extra revenue income and the total additional revenue income generated is 2,562,169 Taka. To reward their excellent performance and in accordance with the agreed and approved rules of the PBRS scheme, cash bonuses are to be given to the four NGOs, and all the health providers that have made positive contributions. The rule of the PBRS requires that 25% of this additional income to be provided to NGOs as performance bonuses. The calculated amount of bonus for each NGO is shown in Column 11. NGOs can use these bonus payments for investment in capacity building and improvement. Another 25% of the additional revenue income is to be awarded to health providers in the clinics. Fifty-two

[3] The Raumari clinic of formal NSDP NGO DCPUK was excluded from the bonus calculation

health workers, from 5 clinics that did not generate additional revenue income, are not eligible for bonus. Column 12 shows how much total cash bonus is to be given to the health providers in each clinic and Column 14 shows the average amount of bonus each health worker from each clinic will receive. The range of bonus per health provider extends from 0 to 1,893 Taka with an average of 672 Taka. The total bonus to be awarded to the 4 NGOs and 938 health providers is 1,330,996 Taka.

Table 2. Summary of Performance Improvement, Contribution to Health Equity Fund, and Calculation of Bonus

	Baseline	Pilot Period												
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
NGO/Clinic	Cost Recovery Rate	Total Expenditures	Revenue Required to maintain baseline cost recovery rate	Actual revenue from paying customers	Calculated reimbursement from HEF for serving LAs	Total revenue (4)+(5)	Cost Recovery Rate for the pilot period	Additional revenue generated (6)-(3)	Contribution to HEF	Net flow into HEF (9)-(5)	Bonus to be given to NGO	Bonus to be given to health providers	Number of health providers	Bonus per health provider
CWFD														
Barisal	19.27	544,028	104,830	133,060	0	133,060	24.46	28,230	14,115	14,115	7,058	7,058	12	588
Bhola	10.52	452,835	47,647	45,329	3,285	48,614	10.74	967	483	-2,802	242	242	9	27
Gandaria	27.08	877,803	237,726	352,678	36,469	389,147	44.33	151,421	75,711	39,242	37,855	37,855	20	1,893
Gauripur	14.15	320,392	45,335	59,010	1,969	60,979	19.03	15,644	7,822	5,853	3,911	3,911	8	489
Gopalpur	11.33	444,278	50,322	47,660	3,593	51,253	11.54	931	466	-3,127	233	233	10	23
Jhalokati	14.38	531,667	76,467	65,143	0	65,143	12.25	-11,325	0	0	0	0	11	0
Joydebpur	35.79	535,270	191,597	266,280	6,319	272,599	50.93	81,002	40,501	34,182	20,250	20,250	13	1,558
Lalbagh	24.74	804,629	199,084	289,620	5,516	295,136	36.68	96,052	48,026	42,510	24,013	24,013	16	1,501
Muradpur	18.62	740,663	137,939	146,511	1,793	148,304	20.02	10,365	5,182	3,389	2,591	2,591	15	173
Netrakona	12.51	343,749	42,995	61,654	847	62,501	18.18	19,506	9,753	8,906	4,876	4,876	8	610
Mymenshing	17.12	795,216	136,160	190,065	7,977	198,042	24.90	61,882	30,941	22,964	15,471	15,471	17	910
Rayerbazar	26.85	1,100,944	295,657	375,102	10,572	385,674	35.03	90,017	45,008	34,436	22,504	22,504	20	1,125
Tangail	16.74	493,010	82,510	105,563	5,235	110,798	22.47	28,288	14,144	8,909	7,072	7,072	10	707
Wari	18.91	634,758	120,029	150,106	5,125	155,231	24.46	35,202	17,601	12,476	8,800	8,800	11	800
Begumganj	23.66	366,687	86,762	35,985	6,107	42,092	11.48	-44,670	0	-6,107	0	0	6	0
Dayaganj	48.96	475,000	232,570	183,647	13,927	197,574	41.59	-34,996	0	-13,927	0	0	11	0
Amanatganj	17.64	243,825	43,000	34,869	0	34,869	14.30	-8,131	0	0	0	0	7	0
NGO Subtotal	21.34	9,704,754	2,130,633	2,542,282	108,734	2,651,016	27.32	520,383	309,752	201,018	154,876	154,876	204	759

(continue)

Table 2. (continued)

PKS_K														
Chuadanga	20.29	501,934	101,867	108,668	5,051	113,719	22.66	11,852	5,926	875	2,963	2,963	10	296
Darsona	22.70	480,006	108,949	114,256	5,518	119,774	24.95	10,825	5,412	-106	2,706	2,706	10	271
Nirala	19.11	525,245	100,396	127,669	10,525	138,194	26.31	37,799	18,899	8,374	9,450	9,450	12	787
KDA Avenue	22.23	777,711	172,889	166,011	8,197	174,208	22.40	1,319	659	-7,538	330	330	12	27
Nowapara	19.55	556,563	108,824	116,605	5,594	122,199	21.96	13,375	6,688	1,094	3,344	3,344	12	279
Phultala	20.07	625,727	125,596	122,202	40,457	162,659	26.00	37,063	18,532	-21,925	9,266	9,266	13	713
S.C. Road	35.81	1,637,716	586,417	707,192	15,243	722,435	44.11	136,019	68,009	52,766	34,005	34,005	33	1,030
Satkhira	26.80	863,052	231,259	268,433	3,125	271,558	31.46	40,299	20,150	17,025	10,075	10,075	24	420
Taltola	16.74	282,151	47,223	54,431	5,702	60,133	21.31	12,910	6,455	753	3,228	3,228	8	403
Islamabad	15.54	252,117	39,177	49,902	5,019	54,921	21.78	15,743	7,872	2,853	3,936	3,936	7	562
Tootpara	18.11	280,688	50,835	56,122	2,844	58,966	21.01	8,131	4,065	1,221	2,033	2,033	8	254
NGO Subtotal	24.95	6,782,911	1,673,430	1,891,490	107,275	1,998,765	29.47	325,335	162,668	55,393	81,334	81,334	149	546
SWANIRVAR														
Atwari	19.53	595,450	116,301	148,168	0	148,168	24.88	31,867	15,933	15,933	7,967	7,967	15	531
Austagram	19.25	579,798	111,634	137,682	183	137,865	23.78	26,230	13,115	12,932	6,558	6,558	14	468
Bakshiganj	18.67	544,360	101,619	142,080	117	142,197	26.12	40,577	20,289	20,172	10,144	10,144	14	725
Basail	20.55	938,639	192,845	191,796	347	192,143	20.47	-703	0	-347	0	0	17	0
Bhairab	16.77	577,187	96,808	132,105	210	132,315	22.92	35,507	17,753	17,543	8,877	8,877	15	592
Bhuapur	22.23	609,648	135,514	184,180	0	184,180	30.21	48,666	24,333	24,333	12,166	12,166	14	869
Chhagalnaiya	19.83	552,564	109,579	140,852	0	140,852	25.49	31,273	15,637	15,637	7,818	7,818	14	558
Daganbhuiyan	18.30	567,365	103,820	146,278	45	146,323	25.79	42,503	21,251	21,206	10,626	10,626	14	759
Daulatkhan	20.91	610,141	127,585	156,367	0	156,367	25.63	28,782	14,391	14,391	7,195	7,195	16	450
Debiganj	17.33	578,242	100,238	123,578	0	123,578	21.37	23,340	11,670	11,670	5,835	5,835	15	389
Delduar	15.82	741,073	117,251	181,993	0	181,993	24.56	64,742	32,371	32,371	16,185	16,185	17	952

(continue)

Table 2. (continued)

Dewanganj	12.04	574,358	69,156	130,557	381	130,938	22.80	61,782	30,891	30,510	15,445	15,445	14	1,103
Feni	22.82	576,153	131,480	171,897	780	172,677	29.97	41,197	20,598	19,818	10,299	10,299	15	687
Ghatail	14.16	828,321	117,263	190,983	0	190,983	23.06	73,720	36,860	36,860	18,430	18,430	19	970
Ghior	16.38	587,236	96,166	126,834	0	126,834	21.60	30,667	15,334	15,334	7,667	7,667	14	548
Gopalpur	19.31	892,530	172,339	226,734	44	226,778	25.41	54,439	27,219	27,175	13,610	13,610	21	648
Hossainpur	19.04	581,653	110,740	180,634	335	180,969	31.11	70,229	35,115	34,780	17,557	17,557	15	1,170
Islampur	18.71	654,029	122,396	146,757	269	147,026	22.48	24,630	12,315	12,046	6,157	6,157	17	362
Itna	17.23	537,116	92,561	127,473	108	127,581	23.75	35,019	17,510	17,402	8,755	8,755	14	625
Kalihati	21.22	860,620	182,624	241,055	25	241,080	28.01	58,456	29,228	29,203	14,614	14,614	20	731
Karimganj	19.74	616,360	121,662	179,356	118	179,474	29.12	57,812	28,906	28,788	14,453	14,453	15	964
Katiadi	14.25	805,257	114,750	199,035	74	199,109	24.73	84,360	42,180	42,106	21,090	21,090	20	1,054
Kuliar Char	17.56	617,761	108,499	176,652	970	177,622	28.75	69,122	34,561	33,591	17,281	17,281	16	1,080
Lalmohan	19.27	889,324	171,346	214,697	0	214,697	24.14	43,350	21,675	21,675	10,838	10,838	20	542
Madhupur	21.69	926,399	200,893	252,001	0	252,001	27.20	51,108	25,554	25,554	12,777	12,777	20	639
Manpura	15.46	536,952	83,013	98,379	0	98,379	18.32	15,366	7,683	7,683	3,841	3,841	15	256
Melandaha	16.41	595,272	97,683	136,666	463	137,129	23.04	39,446	19,723	19,260	9,861	9,861	14	704
Nagarpur	18.94	717,714	135,929	171,241	0	171,241	23.86	35,312	17,656	17,656	8,828	8,828	18	490
Nikli	16.27	542,311	88,224	134,874	0	134,874	24.87	46,650	23,325	23,325	11,663	11,663	14	833
Pakundia	16.17	577,083	93,297	147,709	0	147,709	25.60	54,412	27,206	27,206	13,603	13,603	15	907
Panchbibi	22.87	592,171	135,454	170,204	0	170,204	28.74	34,751	17,375	17,375	8,688	8,688	14	621
Parshuram	18.58	555,697	103,259	139,592	624	140,216	25.23	36,957	18,478	17,854	9,239	9,239	14	660
Savar	26.85	615,612	165,291	226,049	142	226,191	36.74	60,900	30,450	30,308	15,225	15,225	15	1,015
Sonagazi	21.00	556,006	116,735	157,313	213	157,526	28.33	40,791	20,396	20,183	10,198	10,198	14	728
Tarail	18.36	548,493	100,679	128,963	0	128,963	23.51	28,283	14,142	14,142	7,071	7,071	15	471
Tazumuddin	22.38	568,965	127,355	169,904	0	169,904	29.86	42,549	21,274	21,274	10,637	10,637	14	760
Dhalapara	21.26	686,194	145,890	210,243	0	210,243	30.64	64,353	32,176	32,176	16,088	16,088	17	946
Sallah	17.96	613,270	110,127	141,388	0	141,388	23.05	31,260	15,630	15,630	7,815	7,815	15	521
NGO Subtotal	18.80	24,547,323	4,628,006	6,282,263	5,448	6,287,711	25.61	1,659,705	830,204	824,756	415,102	415,102	599	693
(continue)														

Table 2. (continued)

Ex-DCPUK														
Bhurungamari	27.50	698,375	192,023	197,328	3,765	201,093	28.79	9,070	4,535	770	2,268	2,268	13	174
Char Rajibpur	20.49	654,030	133,989	134,792	846	135,638	20.74	1,649	824	-22	412	412	13	32
Rajarhat	23.10	704,727	162,823	194,646	14,203	208,849	29.64	46,026	23,013	8,810	11,507	11,507	12	959
NGO Subtotal	24.08	2,057,132	488,835	526,766	18,814	545,580	26.52	56,746	28,373	9,559	14,186	14,186	38	373
Total	20.41	43,092,121	8,920,903.18	11,242,801	240,271	11,483,072	26.65	2,562,169	1,330,997	1,090,726	665,498	665,498	990	672

Section 7. Summary and Recommendations

The results of the pilot study strongly suggest that the PBRS has succeeded in improving clinic and NGO cost recovery rates and increasing their services to POP. In pursuing their own interest of generating extra funds to reward their workers and to support institutional improvements, NGOs have helped NSDP to reach out to more POP and to improve cost-recovery rates. The mean percentage increase of clinics' cost recovery rates from the pre-pilot to the post-pilot period is significantly higher for the intervention group than the control group. The intervention group clinics increased the number of POP served while the control group did not. The simultaneous improvements provided evidence that with proper incentives to the NGOs and their staff, the conflicts between cost recovery and serving POP can be avoided or alleviated.

In the pilot study, half of the extra revenue income generated by the higher cost recovery rates of the clinics will be distributed to NGOs and their health providers to reward their high performance. The size of the bonus awarded to each NGO and each health provider depends on their respective performance and the range of bonuses for health providers seems reasonable.

The other half of the extra revenue income generated will be transferred to the HEF. A substantial amount of funds will become the foundation of an HEF to support future service to the POP. Most of the clinics contributed to the HEF, while a few of them needed funds from the HEF to cover user fees for the POP. This confirms that the introduction of HEF has the additional benefit of promoting cross-subsidization, whereby higher-income groups will pay fees that enable services for those who cannot pay. In our case, user fees collected from paying customers will be used to pay user fees of POP. On a higher level, cross-subsidization also took place from higher revenue clinics to lower revenue clinics.

The pilot study suggests that the PBRS also helps NGOs make the transition into the next phase, when their operations must be fully supported by user fees and payments by third parties for the POP. Through the implementation of the PBRS, participating NGOs developed skills and gained experience in expanding client bases, adjusting user fees, and improving the cost efficiency of the program to enhance cost recovery. They also benefited from working with an HEF to serve the POP, and could use their knowledge of identifying, recruiting, and serving POP to obtain contracts from the government or other international donors that serve POP in the future.

In sum, through the pilot study, we found evidence that NGOs and their workers are motivated to serve more POP and to increase cost recovery with the proposed PBRS. As a result, at no additional cost to NSDP, NGO productivity was raised, the number of POP served increased, and the cost-recovery rate was improved. The scheme turned static cash reserves into dynamic and productive fund flows.

Many other NSDP NGOs have expressed their keen interest in participating in a similar PBRS. With the positive and significant results from the pilot study, we strongly recommend scaling up the PBRS to a larger number of NGOs. We are confident that the PBRS will provide a powerful thrust capable of propelling more NGOs and the NSDP to higher levels of achievement. The scaling up will also provides NSDP another opportunity, with more NGOs and clinics and a longer observation period, to examine the work and the effects of the PBRS.

Bibliography

Bailit Health Purchasing, LLC. March 2002. *Provider Incentive Models for Improving Quality of Care*. Washington, DC: National Health Care Purchasing Institute.

Barnum, Howard, Joseph Kutzin, and Helen Saxenian. March 1995. *Incentive and Provider Payment Methods.* Working Paper No. 51. Washington, DC: Human Resources Development and Operations Policy.

Blummenfeld, Stewart N. May 1985. *Operations Research Methods: A General Approach in Primary Health Care.* PRICOR Monograph Series, Method Paper 1.

Bitrán, Ricardo, and Ursula Giedion. March 2003. *Waivers and Exemptions for Health Services in Developing Countries.* Social Protection Discussion Paper No. 0308. Washington, DC: World Bank.

Bitrán, Ricardo, Vincent Turba, Bruno Meessen, and William Van Damme. July 2003. *Preserving Equity in Health in Cambodia: Health Equity Funds and Prospects for Replication.* Washington, DC: World Bank.

Eichler, Rena, Paul Auxila, and John Pollack. November 2000. *Performance-Based Reimbursement to Improve Impact: Evidence from Haiti.* Health Sector Reform Initiative. Boston: Management Sciences for Health.

Fisher, Andrew A., and James R. Foreit with John Liang, John Stoeckel, and John Townsend. May 2002. *Designing HIV/AIDS Intervention Studies: An Operations Research Handbook.* New York: Population Council.

Hecht, Robert, Amie Batson, and Logan Brenzel. March 2004. "Making Health Care Accountable: Why Performance-Based Funding of Health Services in Developing Countries Is Getting More Attention." *Finance and Development*: 16-19.

Kipp, Walter, Jimmy Kamugisha, Phil Jacobs, Gilbert Burnham, and Tom Rubaale. 2001. "User Fees, Health Staff Incentives, and Service Utilization in Kabarole District, Uganda." *Bulletin of the World Health Organization* 79 (11): 1032-1037.

Partners for Health Reform. 2001. "Priority Services in Egypt and Rwanda: Building Performance Incentives." *Health Reform and Priority Service Journal*: 27-33.

Partners for Health ReformPlus. *Using Incentives to Improve Health Care Delivery*. Bethesda, Maryland: Abt Associates.

Ridde, Valery. 2003. "Fees-for-Services, Cost Recovery, and Equity in a District of Burkina Faso Operating the Bamako Initiative." *Bulletin of the World Health Organization* 81(7): 532-538.