Performance-Based Payment to Improve the Impact of Health Services: Evidence from Haiti

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Abstract

Holding health institutions accountable for achieving explicitly defined results by linking reimbursement to results can be a powerful strategy to improve health system performance. In Haiti, USAID introduced performance-based payment as the mechanism to pay nongovernmental organizations after a population-based survey identified poor performance in NGO services. Examples of poor performance included immunization coverage of 7% and contraceptive prevalence rates as low as 6%. Rather than the previous system that reimbursed NGOs for documented expenditures up to a ceiling, performance increase targets were established and a portion of the historically funded budget received by NGOs was withheld. NGOs had the opportunity to earn back the withheld amount plus a bonus if these performance targets were reached. This pilot study, which involved three NGOs for one year, showed marked improvements in immunization coverage and positive changes in organizational behavior.

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The Challenge of Improving Provider Performance

Those who pay for health care services in developing countries have not typically required provider institutions to guarantee their performance. Public payers typically fund public institutions to maintain installed capacity (paying salaries and recurrent costs), rather than to ensure that consumers actually receive high-quality services. There is also little evidence that public contracts for services with the private sector include conditions that hold nonprofit and for-profit providers accountable for performance. Donors have tended to adopt practices similar to those of public payers, either providing lump sum grants or reimbursing public providers and NGOs for documented expenditures. Consumers, also important payers, especially for ambulatory care services and drugs, lack the knowledge or purchasing power to hold providers accountable for delivering quality care. The result is that provider organizations tend to devote their energy to securing funds rather than to improving efficiency or the quality of care. This lack of accountability in health systems has contributed to poor performance, as measured by access, levels of production, quality, efficiency, and other indicators.

Principal-agent theory in the field of economics has motivated consideration of performance-based payment schemes as an alternative method of paying developing-country health care institutions (Grossman and Hart, 83; Kreps, 90; Rogerson, 85). According to this theory, the payer is the *principal,* who in health care systems can be the government, donors, or a private payer such as an insurance company. The principal purchases services from an *agent,* a health care providing institution. Because the principal cannot perfectly monitor the activities of the agent, it has less-than-perfect information about what it is purchasing. There may be questions about issues such as whether the agent is providing services of adequate quality, whether the target population is actually being served, or whether funds are being used efficiently. Because intensive monitoring is prohibitively costly, another option is to design a contract that provides incentives to the agent to perform in the way the principal would like because it is in the agent's best interest to do so. Consistent with this theory, performance-based payment establishes indicators of performance that make clear what principals want and that give agents financial incentives for achieving defined performance targets. Unlike the payment schemes that predominate in developing countries, performance-based payment holds the potential of altering incentives so that institutions focus on results such as improving immunization coverage or increasing parents' knowledge of oral rehydration therapy.

Another implication of principal agent theory is that performance-based payment can influence organizational culture. Because the payment mechanism rewards results, institutions that provide health services can be expected to examine the ways in which they structure and organize care, motivate and supervise staff, and use resources. The change in payment policy fosters finding innovative ways to achieve the results for which health care institutions are rewarded. The incentive to achieve results has the potential to transform managers and staff into strategic problem-solvers focused on improving quality of care and efficiency. The transformation motivated by the change in the payment system directly contributes to ensuring the sustainability of provider organizations

Finally, the new responsibilities assumed by payers and the new capabilities required can also be expected to engender a transformation of payer organizations. Payers must have the capacity to establish performance indicators, measure performance, and implement new contracting processes. Perhaps most challenging is a change in role from passive payer or auditor to active partner. In addition to establishing new payment systems, payers may choose to help recipient institutions attain performance improvements. This may involve providing technical assistance or facilitating the establishment of provider networks so that institutions can learn from each other.

Case Study: Haiti Health Systems 2004 Project

Background

USAID awarded the Haiti Health Systems 2004 Project to Management Sciences for Health in 1995 to help strengthen the health delivery system in Haiti. When HS-2004 began, immediate needs required that the project develop rapid mechanisms to fund NGOs so they could provide critical basic health services, including maternal and child health, reproductive health, and family planning services, to Haiti's population. Initially, NGOs were reimbursed for documented expenditures up to a ceiling that was essentially a negotiated budget. The vision of the project was to develop the capacity of NGOs to eventually receive payment based on services provided (outputs). The challenge was to develop a system that moved toward attainment of project and health system goals without imposing excessively burdensome monitoring and reporting requirements.

The HS-2004 project provided USAID funding to 23 NGOs during the five-year period beginning in 1995. For the five-year period beginning in 2000, the number of NGOs funded by the project will increase to at least 33**.** Under expenditure-based financing, NGOs submit a proposed annual budget and a plan that indicates how they intend to ensure the delivery of a basic package of services. Each month, NGOs submit cost reports in order to receive reimbursement. Expenditure-based reimbursement requires monthly reports and detailed documentation of expenditures by NGOs. The payer, HS-2004, must maintain systems and staff that verify reported expenditures and reimbursement based on monthly submissions.

MSH staff observed the following problems with reimbursement based on expenditures:

- Because institutions were reimbursed for all reported expenditures, they faced weak incentives to become more efficient.
- Weak incentives to become more efficient implied weak incentives to improve management and operations.
- Since payment was not tied to results, the NGOs were not motivated to expand coverage of services.
- The lack of a focus on results meant that NGOs had weak incentives to improve clinical quality and quality as perceived by consumers.

A population-based survey performed in 1997 confirmed that the existing system was performing extremely unevenly. For example:

- Some NGOs achieved contraceptive prevalence rates of 25%, while others achieved rates of less than 7%.
- Some NGOs succeeded in providing a minimum of two prenatal visits to 43% of pregnant women in their regions, while others reached only 21% of this important target group.
- One NGO succeeded in ensuring that a trained attendant attended 87% of births, while a worse-performing NGO succeeded in attending only 53%.
- Vaccination coverage varied widely, with the worst performer reaching only 7% of the target population, whereas a good performer reached 70%.
- One NGO made sure that 80% of women knew how to prepare ORT, while another educated only 44%.

This wide range in a sample of indicators was not found to be correlated with costs incurred per visit.[1] Some NGOs with high estimated average costs per visit were relatively poor performers, while some NGOs with low average costs per visit achieved more impressive performance.

In 1999, HS-2004 decided to test an innovative approach that based payment on results. To develop the capacity of NGOs to succeed in a performance-based funding environment, MSH provided assistance to strengthen institutional capacity in areas such as financial management, strategic planning, human resources management, patient flow, and drug and commodities management.

The primary objective of a performance-based financing model is efficient delivery of high-quality services. The primary strategy is to provide incentives for NGOs to deliver high-quality services in a way that uses resources most efficiently. Rather than dealing with the burden of submitting their expenditures every month, NGOs receive a monthly sum. At the end of a defined period, performance relative to indicators is measured and the magnitude of the bonus is determined. This form of payment enables NGOs to use resources efficiently while focusing on implementing systems of management and staff motivation that are effective in achieving results. The payer must establish contracting, monitoring, and evaluation systems and therefore assumes the role of an active purchaser.[2]

Improving institutional sustainability is also one of the primary goals of HS-2004. To facilitate learning and sharing among Haitian NGOs, HS-2004 facilitated creation of a network of local NGOs. Regular meetings encourage sharing of strategies that have succeeded or failed in the challenging Haitian environment. The network enables NGOS to support and learn from each other.

Performance based payment was expected to have the following advantages:

- Because institutions receive payment if they achieve specific measures of performance, they feel strong incentives to attain performance targets.
- Institutions assume financial risk for improving performance, which translates into strong incentives to use resources efficiently and effectively.
- Because payment is based on achievement of results, institutions face strong incentives to improve management, motivate staff, and innovate.

In 1999, three NGOs participated in a pilot study that changed the terms of their payment from expenditure-based reimbursement to performance-based payment. The results were encouraging enough to cause USAID to recommend phasing in performance-based payment of all NGOs in the Haitian network. We discuss the design, implementation, and results of the pilot below.

Design of Performance-Based Payment in Haiti

Because it was important that the NGOs view the payment change as advantageous, HS-2004 adopted a collaborative approach to design, negotiations, and implementation. NGOs that demonstrated the leadership and institutional capacity to respond to the new system were invited to participate in meetings where they were encouraged to express their views about participation in the pilot. Because these meetings occurred after NGOs had already signed contracts with USAID for the 1999 fiscal year (October

[1]Rough estimates of average costs per visit range from $1.35 to $51.93.

[2] This role is not unlike the role of an employer who purchases health insurance for employees in the U.S. and wants to ensure that the services they purchase represent a good value for the money spent. In recent years, purchasers are being transformed from passive payers merely reimbursing providers into active purchasers that drive changes in the health care market (Meyer et al.).

1998-September 1999), NGOs were willing to renegotiate contracts only if the proposed contract had the potential to make them better off than the current contract. One outcome of the collaborative meetings was agreement on a model that imposed some financial risk but offered the possibility of earning funds that exceeded the amounts in the contracts NGOs had signed with USAID.

The three NGOs chosen to participate in the pilot were: Centres pour le Dθveloppement et la Santθ (CDS), Comitθ Bienfaisance de Pignon (CBP), and Save the Children. Together, these NGOs serve approximately 534,000 people.

Participating NGOs agreed to accept a new contract that would pay 95% of the budget established under the existing expenditure-based financing contract. In addition, NGOs had the possibility of earning a bonus that could equal as much as 10% of the historically established budget. This implies that the NGOs were assuming the financial risk associated with the possibility that they might not attain performance targets and lose 5% of the budget they would have received under the original contract. NGOs were willing to assume this risk because they also faced the possibility of earning an additional amount equivalent to 5% of the historical budget.

Seven performance indicators were determined, and achievement of the target increase in each indicator was associated with a defined percentage of the total bonus. Five indicators related to improving health impact, one to increasing consumer satisfaction by reducing waiting time, and one to improving coordination with the Ministry of Health. Each NGO separately negotiated performance targets for each indicator. Table 1 presents the indicators and the relative weights associated with full achievement of each target.

Table 1: Performance Indicators and Relative Weights

Indicator	Target	Relative weight
Percentage of women using ORT to treat cases of children with diarrhea	15% increase	10% of bonus
Full vaccination coverage for children 12-23 months	10% increase	20% of bonus
At least 3 prenatal visits	20% increase	10% of bonus
Reduction in the level of discontinuation rate for injectable and oral contraceptives	25% reduction	20% of bonus
Number of institutional service delivery points with at least 4 modern methods of family planning and number of outreach points with at least 3 or more modern methods	All institutional service delivery points with 4+, 50% of outreach points with 3+	20% of bonus
Reduction in average waiting time before providing attention to a child (in hours and minutes from arrival to beginning of attention)	50% reduction	10% of bonus
Participation in Local Health Organizing Committee (UCS) and coordination with the Ministry of Health	UCS defined	10% of bonus

Since part of the motivation for the performance-based payment scheme is to improve the institutional sustainability of health providing NGOs, the project provided technical assistance to improve organizational capacity. Participating NGOs received technical assistance to review and reconsider their pricing policies and to develop a plan to generate revenue through sources not related to health services.

Intensive assistance was provided to help NGOs identify unit costs, revenues, and staff utilization by implementing CORE, a cost and revenue analysis tool (Management Sciences for Health 1998). The goal of using CORE was to promote a culture of information-based decision-making by providing managers with the information necessary to make management decisions to improve efficiency.

Measurement of performance

To ensure that performance indicators accurately represented performance in each NGO's service area, HS-2004 contracted an independent survey research firm, l'Institut Haçtien de l'Enfance (IHE) to measure baseline and end-of-pilot performance. The NGOs agreed that there would be incentive problems associated with having the NGOs report on their own performance. Since payment is tied to achievement of performance, the incentive would be to inflate performance to secure the bonus. The independent research firm was viewed as neutral in terms of incentives.

IHE followed the standard cluster sampling methodology recommended by WHO (WHO 1991) to sample households in each of the NGOs service areas to establish baseline measures and results for the number of immunized children. Both immunization cards and reports from caretakers were included. The percentage of women using ORS to treat diarrhea was determined by exit interviews in service delivery institutions with women who brought children to the clinic for reasons other than diarrhea. Coverage of pregnant women with three or more prenatal visits was determined through a review of a sample of medical records. Discontinuation rates for oral contraceptives and injectables were determined by review of family planning registers to identify women who had discontinued use, had not chosen another modern method, and had not expressed the desire to have a child. Average waiting time was determined by measuring waiting times in a sample of institutions at different intervals.

Since there has not been a recent census in Haiti, the total population in each service area was estimated by multiplying the 1982 population by the estimated national population growth rate. This figure is very imperfect because of population mobility and urbanization. These estimated population figures for each NGO form the denominator.

Results

Table 2 presents baseline measures, targets, and results for each participating NGO. The most striking results were the increases in immunization coverage. All three NGOs exceeded the performance targets for immunization coverage substantially. Of the estimated 19,277 children under age one in the NGO service areas, 14,452 were immunized as a result of the performance-based payment pilot. This represents an increase of 6,143 children in Haiti who were immunized in the pilot year as a result of the performance-based payment scheme. In two of the three NGO service areas, the proportion of mothers who reported using ORT increased. In two out of three NGO service areas, the proportions of mothers who reported using ORT and did so correctly also increased significantly. Performance in prenatal visits and reducing the discontinuation rates for oral contraceptives and injectables was relatively weak. The availability of modern contraceptive methods increased substantially.

Table 2: Results from Performance-Based Payment Pilot in Haiti

Indicator	NGO 1			NGO 2			NGO 3		
	Baseline 9/99	Target	Results 4/00	Baseline 9/99	Target	Results 4/00	Baseline 9/99	Target	Results 4/00
Immunization coverage	40	44	79	49	54	69	35	38	73
3+ prenatal	32	38	36	49	59	44	18	21	16
FP discontinuation	32	24	43	43	32	30	26	20	12
Utilization of ORT	43	50	47	56	64	50	56	64	86
Correct utilization of ORT	71	80	81	53	59	26	61	67	74
Institutions with 4+ modern FP	6	9	9	2	5	5	0	5	5

The indicator of waiting time was judged an invalid indicator of quality and was dropped from the scheme. Because people would travel long distances to obtain lab tests, they would choose to wait as long as an entire day for results rather than return home and have to travel a long distance back. The relatively long average waiting time at one NGO was caused by waiting for lab tests and was viewed by the population as an indicator of quality, not poor service. A new indicator of client satisfaction is being developed for the next phase.

The bonus associated with the indicator that measured community participation and collaboration with the Ministry of Health was given to all NGOs. While all NGOs agreed that community participation and collaboration were important, a measurable and verifiable indicator of performance was difficult to determine.

Increases in immunization coverage and availability of modern family planning methods were easier to achieve than reducing the contraceptive discontinuation rate or ensuring adequate prenatal care. NGOs recognized that new models of education and care were needed to achieve these important targets. The focus on results has forced NGO management to recognize that they are not achieving the goals stated in their organizations' mission statement. This realization has inspired NGOs to seek approaches to delivering services and reaching their target populations that are more effective.

All the NGOs that participated in the pilot received more revenue than they would have received under the previous expenditure-based financing scheme. Table 3 presents the results, which show that performance was strong but none of the NGOs achieved all performance increases.

NGOs expressed support for continuing performance-based payment. The shift from justifying expenditures to focusing on results inspired the organizations to question whether their models of service delivery had the greatest positive impact on health and to experiment with changes. They strongly endorsed the expanded managerial and budgeting flexibility, and the increased motivation that staff showed because their organizations could receive bonuses. Participants also noted increased attention on the part of staff to their organization's objectives, and a spirit of innovation about how to achieve those goals. For instance, some reported greater efforts at involving the community in trying to reach health

goals. Everyone emphasized the need for good data and information to make management decisions. Over the course of the pilot, modifications were made, and the three NGOs shared what they learned.

To achieve the performance targets, the NGOs realized that they needed a strategy to motivate staff to focus on the results that the organization was responsible for achieving. Two of the three participating NGOs designed and implemented bonus schemes for staff. One NGO implemented a bonus scheme for local organizations with which they collaborate. Another NGO implemented a bonus scheme for community health agents, cutting their salary in half and reserving the rest for bonuses tied to performance. After poor results from transferring this degree of risk to relatively low paid staff, they increased the fixed proportion of payment and reduced the proportion of payment from bonuses. This NGO reported that the existence of a bonus tied to performance was motivating and improved results, but imposing excessive financial risk was demotivating. All NGOs discussed allocating a proportion of the institutional bonus, if earned, to clinics in their networks on the basis of their relative performance against indicators.

The changes introduced by performance-based payment motivated NGOs to request assistance to strengthen and improve the sustainability of their institutions. They requested technical assistance in areas that included strategic planning, strategic pricing, cost and revenue analysis, determining client perceptions of the quality of service, models of staff organization and utilization, and human resources management.

Table 3: Bonuses Attained

	Bonus attained*
NGO 1	90%
NGO 2	70%
NGO 3	80%

* If actual performance was within one confidence interval, the NGO was awarded the bonus for that indicator.

The Future

HS-2004 will gradually incorporate additional NGOs into the performance-based payment system each year. The model and methods of reimbursement and institutional support will be refined as more experience is gained and more evidence on what works is compiled. During the 2001 project fiscal year (October 2000-September 2001), four additional NGOs have been included. A model is being considered for the 2002 fiscal year that will reduce the portion of payment driven by historical budgets and will phase in capitation payments combined with rewards for results.

The results of the pilot test indicate that performance-based payment is a powerful way to hold NGOs accountable for achieving results. The challenge is to define indicators that relate directly to health impact, consumer satisfaction, and institutional sustainability and to measure and monitor performance in a manner that is not prohibitively costly. Through collaboration and cooperation, HS-2004 staff and participating NGOs will define new indicators and develop improved processes for measurement and validation.

Countries considering implementation of performance-based payment should not underestimate the changes that will be required of both the institutions that provide health care and the paying institutions. Changes in systems will accompany changes in organizational culture in both provider organizations and

payers. While these changes have the potential to be positive in the long run, adjustment costs should not be underestimated.

Since the application of performance-based payment to health services is relatively new, much remains to be learned about the design and implementation of performance-based payment schemes. Research is also needed to better understand the range of effective actions that can be taken by health providing institutions to achieve performance improvements.

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