



RESULTS-BASED FINANCING FOR HEALTH

Cure, Curse, or Mixed Blessing?

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Ministers of Finance in many developing countries are increasingly reluctant to expand health budgets unless they can see a clear link to better health outcomes, such as the Millennium Development Goals (MDGs).

Many countries, especially those in Africa, risk not achieving the MDGs for child and maternal health by 2015. According to a recent UNICEF report, only 24% of 68 priority countries are “on track” to achieve the child health goal (MDG 4) by 2015 [UNICEF, 2008].

As governments and development partners recognize with time the limited returns from business as usual, they are looking for innovative strategies that offer the hope of increasing the impact of their investments in health. Results-based financing (RBF) is one such strategy that is attracting more and more attention of late [International Health Partnership, 2009]. RBF is a national-level tool for increasing the quantity and quality of health services used or provided based on financial or in-kind rewards made to providers, payers, or consumers after measurable actions have been taken. Not everyone, however, is equally enthusiastic about RBF. This Technical Working Paper will explore the full range of the debate around RBF and propose a way forward.

In summary, proponents are buoyed by behavioral and economic theory, empirical evidence of varying strength, the hope of new data on the horizon, and promising anecdotal information about changes in processes. The more circumspect point to a dearth of compelling evidence that such schemes are feasible and can be effective in developing countries, remind us that experience in industrialized countries has been mixed, cite numerous pitfalls, and are concerned about the capacity of governments to support these schemes in the short and long term. Although this paper pres-

ents the two ends of the polemic surrounding RBF, in practice many interested observers find themselves at different points along the continuum between enthusiasm and skepticism. We suggest that the way forward requires balancing active optimism with caution as countries have already begun to experiment with these schemes and need support in generating new knowledge about what works.

Why the enthusiasm for financing linked to results?

BEHAVIORAL AND ECONOMIC THEORY ¹

Behavioral and economic theory both support the notion that financial incentives can contribute to improved health results. All relevant stakeholders are motivated by the incentives found in health systems, which stem from the organizations in which people work and the institutional arrangements that shape their work. How people are paid and monitored also affect motivation. Observations about the current state of health systems in many developing countries suggest that an increased focus on performance incentives could play an important role in improving the provision of and demand for essential health services.

¹ A full treatment of the economics of RBF is beyond the scope of this paper, but will be addressed subsequently on this website.

Motivation refers to the driving forces that determine the direction and strength of goal-oriented behaviors (Liu and Mills, 2007a). Individuals are motivated by both intrinsic and extrinsic factors. Intrinsic factors are self-generated and stem from professionalism, pride, beliefs, and the satisfaction of meeting people's needs, among other factors. Extrinsic factors, such as status, reward, and financial incentives, among others, encourage or discourage individual behaviors (Schneider, 2007; Liu and Mills, 2007a).

In many low-income countries, providers may have a strong intrinsic motivation to provide good care, but they face a range of constraints that undermine motivation. Health care workers in these settings often:

- are widely disbursed, and lack knowledge and skills to do their jobs;
- operate without supervision most of the time;
- receive little recognition;
- have few opportunities for career advancement;
- receive low and irregular salaries;
- work daily in isolation; and
- have little discretion or autonomy.

Financial incentives, such as bonuses paid to health facilities, teams, or providers that meet certain quantity or quality targets, may reinforce their professional pride and desire to deliver good care, thereby contributing to improved performance. In settings where these constraints are less severe, financial incentives may further improve already good performance. We acknowledge that non-monetary incentives and other interventions that can stimulate local problem-solving (Catsambas et al., 2008) or take health successes to scale (Levine et al., 2004) can also contribute to improving performance. Although these complementary interventions will not be discussed in this paper, we recognize that more efforts are needed to find ways to combine these interventions with basic health system inputs to improve performance.

In these same settings, poor women are often the beneficiaries of sometimes elaborate information, education, and communication efforts intended to increase their awareness of the availability of maternal and child health (MCH) services, and their knowledge about appropriate health care seeking behavior. Although such efforts may be necessary for improving awareness and knowledge, they are rarely sufficient for increasing use of health services: these women also face hidden costs to using services, which may be financial, social, and/or cultural in nature. Financial incentives, such as vouchers, and cash transfers paid conditionally on a household's adoption of one or a series of health-promoting actions, can provide them with the means to overcome one or more of these obstacles.

Agency theory also provides a useful framework for understanding the role of extrinsic factors and the promise of a popular mechanism within results-based financing schemes—performance-based contracting—as there are many principal-agent relationships in health care (Arrow, 1986). In this theory, the utility functions of the principal (payer) and the agent (health care provider) are divergent. To better align the interests of these two actors, agency theory suggests that explicit and transparent contracts are needed (Preker, et al, 2000). It is nearly impossible to observe the efforts of all health care providers; therefore, an incentive-compatible contract between the principal and the agent, monitored on the basis of results (Liu and Mills, 2007b), is necessary.

When the assumptions of agency theory are violated ², it is difficult to design a contract that will motivate the agent to behave in the best interests of the principal, particularly under conditions of information asymmetry and outcome uncertainty (Liu and Mills, 2007b). The agent may undertake opportunistic behavior that works against the welfare of the principal. Monitoring is one solution to these agency problems. The level and type

² The five assumptions of agency theory are: 1) both the principal and agent are utility maximizers; 2) income and effort are two major arguments in the utility functions of both, and are in conflict; 3) the principal knows perfectly what actions should be undertaken by the agent, but information is only available to the agent; 4) outcome is perfectly correlated with the agent's efforts and is observable; and, 5) the principal and agent enter into a contract voluntarily.

of remuneration in these incentive compatibility contracts will be a function of whether the provider is maximizing utility, income, or profit (Liu and Mills, 2007c); has a target income in mind; or is related to transaction cost and property rights theory (Preker et al, 2000).

On the demand side, utility-maximizing households may fail to consume the optimal quantity and quality of health services because of lack of information, the principal-agent problem³, or the presence of positive externalities (Preker et al., 2000). In addition, financial barriers and opportunity costs may prevent households from seeking care. Introducing a financial incentive changes the direct cost of paying for care and the opportunity cost of seeking care. Overall consumption of health care also may increase as a result of a household income or substitution effect.

EMPIRICAL EVIDENCE

Although the empirical evidence in support of incentive-based schemes in developing countries is not as sizeable or always as strong as proponents would like, there is a growing body of work that demonstrates that financial and in-kind incentives positively affect the health care choices of both consumers and suppliers of health care services in these settings (Fiszbein and Schady, 2009; Gertler and Boyce, 2001; Lagarde et al., 2008;

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Langenbrunner and Liu, 2004; Levin and Eichler, 2008; Miller, 2007; Schneider, 2007; Liu and Mills, 2007a).⁴ In recognition of RBF as a dynamic, rapidly evolving field that is generating new information on a continuous basis, and the limitations of space, we will not

attempt a comprehensive, systematic review of all of the relevant literature here; rather, we offer a purposive sampling of the literature with some indicative results⁵.

The strongest study designs (true experiments) are most frequently found in the literature on demand-side schemes. The literature on supply-side schemes reflects a mix of mostly quasi-experimental and non-experimental designs.

Performance-based financing to sub-national health authorities has been associated with increased utilization of key health services and enrollment in health insurance schemes. For instance, Plan Nacer in Argentina has increased enrollment of poor previously uninsured women and children, first in the north of the country, and then country-wide. Results have been impressive: 80% of the population in the Northern provinces is covered and the scheme has now been extended to the rest of the country (Blanco, 2008).

Performance-based contracting with private and public health facilities has been associated with increases in service utilization. In Afghanistan, impressive results include major increases in DTP3 immunization coverage, prenatal visits for women, and overall use of services (Loevinsohn, 2008). In Cambodia, coverage rates for health services, such as immunization, were much higher in districts with performance-based contracting of NGOs than in government-managed districts (Schwartz et al. 2005). Contracting in Cambodia was also associated with equity gains as poorer households obtained more services. Haiti reported a 13 to 24 percentage point increase in immunization coverage since 1999, and a 19 to 24 percentage point increase in women delivering in facilities of contracted NGOs (Eichler, 2006).

Some evidence suggests that the results-based financing scheme in Rwanda has contributed significantly to reductions in the infant mortality rate (from 86 to 62 per 1000 live births), and to increases in the use of insecticide-treated bed nets (ITNs)(from 4% to 67%), deliver-

³ Parents may have different utility functions of their children. Preventive and promotive health care services may be under-consumed in this case.

⁴ The incentive environment of organizations encompasses the degree of autonomy (decision rights), accountability, market exposure, financial responsibility, and extent of unfunded mandates (WHO, 2000).

⁵ A review of the published and unpublished literature on RBF is underway and the findings will be posted to this website in the coming months.

ies in health centers (from 39% to 52%), contraceptive prevalence (from 17% to 36%) and quality of services between 2004 and 2008 (Soucat, 2009). More recent evidence from Rwanda, from a prospective quasi-experimental design, has demonstrated substantial improvements in child health as measured by height and morbidity (Gertler, 2009). Because the study was able to isolate the effect of incentives from the effect of additional resources, the investigators concluded that an equal amount of resources without the incentives

would not have achieved the same outcomes.

Conditional Cash Transfers (CCTs) had a marked impact on utilization of essential preventive child health services in Mexico, Honduras, and Nicaragua (Rawlings 2004). In addition, immunization coverage

increases in Nicaragua were highest for children traditionally hardest to reach, who live farthest from health facilities, and whose mothers have not completed primary school (Barham et al., 2007). The CCT program in Mexico was associated with a lower incidence of childhood illness and the program in Colombia was associated with reductions in acute diarrhea (Schady 2006). Finally, CCTs are associated with significant increases in household food consumption and increased height (Rivera et al. 2004)(Fiszbein et al. 2009).

Voucher schemes have been less well evaluated than other RBF mechanisms. A *Safe Motherhood Project* in Indonesia enhanced access and use of midwifery services by the poor through the use of vouchers for a basic package of mother and child care and family planning services (Gotter et al., 2003). This experience suggested that performance-based contracts stimulated the use of reproductive health services, particularly among the poor; however, service utilization may

exceed health system capacity to address demand resulting in overcrowding of hospital delivery facilities (Gotter et al., 2003). Voucher schemes need to consider the capacity of facilities to meet needs.

THE HOPE OF NEW EVIDENCE ON THE HORIZON

The World Bank's Health Results Innovation Trust Fund is a multi-donor fund that supports eight competitively selected countries⁶ to design, implement, monitor, and evaluate RBF mechanisms with the potential to accelerate progress toward the achievement of national health goals. The countries receiving money from this grant are focusing their efforts on reducing child malnutrition, child mortality and maternal mortality (MDGs 1c, 4 and 5, respectively). Rigorous impact evaluations have been incorporated into each project to determine the cost-effectiveness of RBF with respect to provider and patient health-related behaviors, coverage of the population with high impact interventions, and, where possible, health status. Results are expected in the next several years.

PROMISING ANECDOTAL INFORMATION

Lessons from countries as diverse as Afghanistan, Argentina, Rwanda and Cambodia, among others, suggest that because such schemes change the traditional relationships among stakeholders, it may be possible to improve key systemic processes, such as governance. These schemes require greater accountability for public funds, explicit performance contracts, and robust monitoring of results and processes. There is anecdotal evidence from these countries that managers and providers at sub-national and health facility levels often benefit from greater autonomy, authority, and flexibility to carry out their work. These schemes also have the potential to improve the management of information and resources. Efforts are underway to verify and document these impressionistic data.

The potential of these schemes to change business as

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⁶ The eight countries are Afghanistan, Benin, D.R.Congo Eritrea, Ghana, Kyrgyz Republic, Rwanda and Zambia.

usual and to empower providers and consumers is sometimes best and most compellingly reflected in the words of the scheme participants. Beginning with pilot efforts in 2005, Rwanda has been progressively rolling out a fee-for-service scheme that includes a combination of public and faith-based providers as beneficiaries. As of 2008, approximately 78% of all health facilities nationwide were enrolled. What do providers say about it?

“Patients are now clients and we have to identify and attract them,” was one comment heard during a recent informal visit to some of these facilities. Another said, “We need to keep our facility up to standard, including ensuring equipment is available, procedures are followed, and reports are completed.” Other health workers reported that they were experiencing more peer pressure, because the health facility benefits or loses based on the behavior of the team. Increased accountability was another theme, as providers reported that mayors and community leaders were exerting increased control and pressure to perform over health facilities. A sign with the following warning—“If it isn’t written down, it doesn’t count”—was observed in more than one health facility during this recent visit.

In Argentina, the government adopted a plan (“Plan Nacer”) to reorient the national Maternal and Child Health Insurance Program to focus on performance and greater accountability, which they hoped would change the dynamic of financing and the provision of health services at the provincial level. The first phase of the project demonstrated that payment mechanisms could be successfully implemented even in the most socio-economically distressed provinces. Health teams from the smallest primary health care centers in these provinces reported that the payments were highly motivating. Those teams and their respective ministries of health became the main supporters of the program and influenced the decisions by other provinces to participate in the plan (Sabignoso, Personal communication).

Why the wariness about financing linked to results?

EVIDENCE FROM DEVELOPING COUNTRIES

A recent paper that reviews the literature on supply-side schemes alone (i.e., performance-based pay for providers) notes a failure of most of these schemes to account for the counter-factual (i.e., would other approaches to delivering services have been better, the same, or worse in the absence of the scheme) and to control for confounding factors in the analysis of effectiveness (Eldridge and Palmer, 2009). The authors call for additional research, in the form of controlled and descriptive case studies, to answer a series of outstanding questions about the appropriateness of such schemes for developing country settings; the relevance of scheme success to overall health system development (because of potential unintended consequences); and the feasibility and cost of monitoring the behavior of beneficiaries.

A recent experience in Uganda with contracting private, not-for-profit health service providers showed no statistically significant difference in utilization between those facilities with and without a performance bonus. Investigators reported that this might have been related to the small bonus size, complexity of the contracts, or short duration of the incentives (Lundberg and others, 2007; Johannes et al, 2008).

On the demand side, although there is good evidence that CCTs have improved the lives of poor people and have increased their utilization of key health services, the evidence that they can lead to improvements in final health outcomes is far less compelling [Fiszbein et al., 2009; Glassman et al., 2007]. For example, Fiszbein and colleagues report that CCTs have not always resulted in better child nutritional status, although the evidence is good that these schemes have increased the likelihood that households will take their children for

preventive health check-ups [Fiszbein et al., 2009]. Fiszbein and colleagues cite a need for more policy experimentation and evaluation on the impact of CCTs on child nutritional status and other health outcomes. Other analysts have questioned whether CCT schemes, which have been used primarily in middle-income countries, can also be effective in low-income countries, which have more limited health system capacity (Lagarde et al., 2007).

EVIDENCE FROM INDUSTRIALIZED COUNTRIES

Christianson and colleagues recently reviewed the literature on the effect of financial incentives on the quality of care healthcare organizations and individual practitioners deliver to consumers [Christianson et al., 2007]. The key findings from their review of 36 published articles with strong research designs were that there were few significant impacts on quality and limited evidence that financial incentives were effective in improving the delivery of preventive services. Methodologically, they note that it is often difficult to assess the independent effect of financial incentives because many payer programs combine quality improvement interventions with incentive payments. Furthermore, they point out that there is little information on the barriers to effective design and implementation of pay-for-performance initiatives. Consequently, they call for future research that contributes to a better understanding of the linkages between financial rewards for quality and practitioner behavior, the cost-effectiveness of pay-for-performance initiatives of different types, and the unintended and unexpected effects of pay-for-performance on the health care system as a whole.

POTENTIAL PITFALLS

Based on their work in establishing a performance-based financing scheme in Rwanda, Meessen and colleagues cite five risks associated with performance-based incentives for health workers [Meessen, 2007]. Providers may: 1) neglect activities that are not remunerated; 2) neglect

quality attributes of the activities that are delivered; 3) inflate records for the remunerated activities; 4) induce unnecessary demand for the remunerated activities; and 5) deliver the remunerated activities in spite of insufficient capacity.

Oxman and Fretheim have catalogued the many potentially undesirable effects reported in the literature that may arise when financial incentives are linked to performance (Oxman and Fretheim, 2008). They included in their review only those published articles that met the Cochrane Criteria. The list includes unintended behaviors, distortions, and gaming. For example, consumers may pursue unhealthy behaviors to retain eligibility in a program, while providers may ignore important but non-remunerated tasks and/or misreport on actual practice. Corruption, cherry-picking, and dependency are other potentially perverse effects. For example, providers may misuse or steal payments, focus on certain kinds of patients or behaviors to the exclusion of others, and discontinue a recommended practice or practices once the extrinsic incentives are no longer available.

Although conditional cash transfers have been shown to increase utilization of services, these schemes are not risk-free. Some have suggested that assigning a condition to a cash transfer may result in a cost incurred by the beneficiary in complying with the condition or to costly behavioral distortions (Fiszbein et al., 2009). Some analysts have claimed that these schemes are coercive, potentially stigmatizing, and may infringe on personal privacy [Shaw, 2007; Claasen et al., 2007; Popay, 2008]. Others have noted that their success may be limited to simple, clearly defined, and time-limited behavioral tasks alone [Jochelson, 2007].

Another concern is that the removal of an incentive may result in reversion to former, less health-promoting behaviors, while others say that such incentives may be difficult to remove once they've been introduced

[Lundberg et al., 2008]. Finally, in the absence of a counterfactual, such schemes may crowd out intrinsic motivation and increase the costs of such programs (i.e., paying people to do what they would have done anyway) [Lagarde et al., 2007; Shaw, 2007; Titmuss, 1970].

GOVERNMENT CAPACITY

Do governments have the capacity to support these schemes? Industrialized countries have reported certain difficulties in managing supply-side schemes [Eldridge and Palmer, 2009], and CCT programs are complex

Questions about how best to track results and how an often-cited risk—misreporting—will be identified and sanctioned

and present several management challenges (Fiszbein et al., 2009). Chief among the many concerns are the weak health management information, monitoring, and evaluation systems that are often found in most countries; a fear that duplicative, parallel systems will be created

to address the weaknesses in the existing systems; and the potentially high cost of monitoring such programs, considering the need in many incentive-based schemes for some form of independent auditing. Questions about how best to track results and how an often-cited risk—misreporting—will be identified and sanctioned.

Another major preoccupation relates to the capacity of current financial management and disbursement systems to support such schemes, and the fear, again, that duplicative, parallel financial and accounting systems will be created to address these weaknesses. Some worry about the capacity of governments to develop and manage contracts, particularly in settings where Ministries of Health have little or no prior experience with linking pay to performance. Others are anxious about the political sensitivities associated with channeling funds directly to health facilities and health providers, the challenges of ensuring payments are received by the intended beneficiaries—in a timely fashion and in the correct amount—and the potential for misuse of funds.

Some question whether these schemes can be successfully replicated in different settings under different conditions.

There is also a serious concern about the so-called prerequisites for ensuring the success of performance incentive schemes: Will a steady supply of essential commodities, equipment, and well-trained staff be available? Will financial incentives encourage consumers to visit health services, even if they are sub-optimal or non-existent? In this case, the dictum of “first do no harm” would certainly be violated. The suggestion that the introduction of financial incentives may actually serve to stimulate improvements in the functioning of health systems remains an empirical question.

Another serious issue is sustainability. In general, most new performance-based schemes will require an initial injection of new resources, at least in the initial stages, for both development and implementation (Christianson et al., 2007). By contrast, the case-based payments made to hospitals under the U.S. Medicare DRG system were initially carried out in a budget neutral manner, excluding administrative costs (Schieber, Personal Communication). Although governments may be able to allocate budgets over time in support of performance-based contracting so that financing for these schemes becomes no longer ‘additional’ to government budget, financing for cash transfer and other programs that provide benefits to individuals will be expected into the future.

THE WAY FORWARD

Proponents and the wary alike agree that more and stronger evidence is needed about both the impact and the cost-effectiveness of such schemes. They also agree that rich description of scheme processes and unintended effects is urgently needed. Without such information, it is difficult to interpret evaluation findings or judge the extent to which these schemes can be replicated in different settings.

It is probably an overstatement, however, to assert that nothing or not enough is known about RBF, particularly in the case of demand-side schemes, and perhaps risky to suggest that countries delay further action until all the evidence is in. Countries are experimenting with these schemes based on the best available information, word of mouth, and first-hand observation. New evaluation research and monitoring and documentation can provide real time information on what works and how to do it better.

With the limited evidence on RBF strategies from developing countries, particularly on the supply side, it is understandable that some analysts look to industrialized countries for information from which they can draw inferences about the potential of such schemes in low- and middle-income countries. Because of major differences between health systems, evidence from high-income countries may not be directly relevant to low-income settings. Performance-based strategies in high-income countries tend to focus more on making incremental improvements in quality or reducing costs, rather than on seeking large increases in access to services to achieve mortality and morbidity reductions characteristic of lower income countries.

There is general recognition that a range of problems may arise during implementation and that administrative and management capacity needs to be strengthened. These are hardly sufficient reasons, however, for not exploring the potential of these schemes. Policy makers, planners, and implementers, armed with the knowledge

that such pitfalls and capacity challenges are ever-present need to exercise both due diligence and vigilance during design and implementation to mitigate the associated risks as they arise. Flexibility in project design and implementation, with good monitoring, will also allow for mid-course corrections and will facilitate learning-by-doing. Many of the pitfalls and capacity constraints identified to date are empirical questions, some of which may be addressed through continuous monitoring and others through rigorous evaluation.

With so many countries struggling to achieve the MDGs, ignoring creative and innovative approaches is to proceed at even greater risk. Is RBF a proven panacea? Certainly not. It has yet to prove that it can overcome health system capacity deficiencies, be implemented as planned in different contexts, avoid creating perverse incentives, and demonstrate effectiveness in improving coverage of the population with high impact interventions and health status.

Does it hold promise as an innovative financing scheme and as such deserve a closer look? Probably so. Countries are moving forward in the face of many uncertainties, and governments and the donor community working together can support and learn from these experiences. RBF may yet prove to be an important tool for strengthening health systems, which would be welcome news to all those concerned about and urging action on the fragile state of health systems in many parts of the world [Reich et al., 2008].

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