

Can “Pay for Performance” Increase Utilization by the Poor and Improve the Quality of Health Services?

Discussion paper for the first meeting of the
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I. Introduction

Too often, poor people do not utilize essential preventive, curative and life extending primary care services, even when those services are available. Understanding the reasons for this and, importantly, the policy and programmatic approaches that can increase effective utilization is central to the success of many current efforts to improve health in the developing world. Deficiencies in the quality of care, caused by lack of knowledge, insufficient resources, organizational rigidities, and inappropriate incentives for providers, impede the ability of health systems to improve health outcomes for the poor. This paper, which was prepared as background for the Working Group on Performance Based Incentives, looks at a particular type of financing intervention that has been applied in several different ways around the world to address the joint problems of underutilization and low quality of health services. The focus is on demand- and supply-side financial and material (examples: food, travel vouchers) incentives that can be used to improve utilization and quality of ambulatory health care services, especially for the poor. Our attention will focus on interventions that link payment or material goods to indicators of performance (example: increased immunization coverage) or defined actions (example: TB patient presents to take medicine) that are closely correlated with improved health outcomes. Not included are approaches that transfer funds or goods to consumers or providers in ways that are not conditional on some measurable indicator of performance (example: across the board salary increases) as well as other interventions aimed at improving performance such as provider training or health education.

Increased world focus on improving health outcomes, as evidenced by initiatives such as the Global Fund, GAVI, PEPFAR, and the global commitment to meet the Millennium Development Goals, is revealing that money, buildings, numbers of health workers and drugs only move countries part of the way toward adequate utilization of services of acceptable quality. These global funding initiatives are helping to minimize the financial and material constraints that prevent health systems from performing well. What is being revealed, however, is that even when providers have the knowledge, skills and necessary inputs (human resources, drugs, equipment, supplies) to produce a sufficient quantity of quality services to meet population needs, we see low utilization, substandard quality, and poor health outcomes throughout the developing world. And even when consumers are aware of health benefits and services are physically and financially accessible, they do not necessarily obtain services. Without system building efforts that focus on the currently inadequate (and often perverse) incentives faced by the key health system actors (providers and consumers) it is unlikely that ambitious improvements in health outcomes can be attained. This paper argues that pay-for-performance schemes that are appropriately designed to address the underlying barriers and constraints to strong health system performance have the potential to contribute significantly to improving health outcomes in the developing world.

This paper begins by defining and describing “pay-for-performance” approaches designed for consumers, individual health care providers, service delivery institutions, and sub-national levels of countries. It follows with a section that presents evidence of two basic, related problems: first, health services are underutilized by the poor, relative both to what would be desirable from a public health perspective and to the utilization levels of

individuals from better-off households; second, services available to the poor are of substandard quality. The subsequent section discusses determinants of demand and supply and principal agent theory to ground our discussion of incentives in the health system in economic theory. Following this, to place the pay-for-performance (P4P) approach within a systemic context, is a brief discussion of the relationship among elements of health systems, and the links between those elements and P4P applications. This section also suggests a framework that might be used to evaluate and categorize P4P interventions and their contributions to improving health system performance. Section six summarizes selected details of cases that are presented in the Annex. Some interventions are focused primarily on demand side constraints, others are designed to motivate providers, and others address both demand and supply side behavior. The description provided only scratches the surface of what can be learned. Following this overview of cases is a brief section that is intended to focus future work, under the auspices of the working group, on the practical details of what it takes to move from the idea stage to implementation. The final section summarizes broad unanswered questions that constitute a possible agenda that the working group could address.

II. What is “Pay-for-Performance”?

A suggested working definition of “Pay-for-performance” or “P4P” is: “Transfer of money or material goods conditional on taking a measurable action or achieving a predetermined performance target.”

Demand side P4P interventions considered by this working group will include those using incentives to address the full range of constraints that prevent households and individuals within households from obtaining effective public health services. For example, conditional cash transfer programs pay monthly subsidies to households conditional on defined actions such as taking children for well-care visits or keeping them in school. These financial incentives may contribute to overcoming social and cultural barriers that might otherwise cause households to invest less in females or children. The opportunity to receive subsidies to pay for transportation as well as ongoing food support while undergoing the extended course of treatment for tuberculosis or AIDS may encourage more of the poorest people to get tested and reluctant to seek care because of concerns about social stigma to come forward.

On the supply side, this working group will consider the full range of financial and material incentives that are aimed at inspiring changes in behavior among public and non-state sector institutions, managers, and health workers that ultimately result in improved performance. Examination of the way providers of health services are paid in developing countries would lead one to conclude that the goal is to cover costs rather than to prevent illness, manage and control chronic illness, and to cure acute illness. Health workers are paid salaries that are not tied to measures of output, or to whether the population receives priority services. Other funding covers the operational costs of running facilities and to purchase drugs and supplies. Payment is certainly not tied to whether the services are appropriate, of good quality, or the right people are being reached. While it is important to ensure that providers have the knowledge, skills, support systems and needed inputs to deliver essential services, focusing exclusively on these factors only improves health system performance part of the way. It is

also critical to consider the factors that motivate individual providers and institutions to combine these inputs to deliver good quality services to targeted populations.

Carefully designed financial and material incentives for providers have the potential to increase utilization and quality of essential services by motivating additional effort and inspiring innovation. While technologies to prevent and treat many communicable diseases and to promote good health are known, approaches to combine all the needed inputs to produce the ultimate outcomes are not fixed. For example, children can be immunized by physicians, nurses, or community health workers and vaccinations can happen in health facilities, mobile clinics, or under a tree. Providers can improve outreach to groups that are not utilizing adequate health services by, for example, engaging with community leaders to increase knowledge, extending clinic hours to accommodate predominant community work schedules, and traveling to local communities to provide preventive services. In most health systems, individual providers and institutions that provide services do not have the motivation to identify and implement alternative strategies to provide more people with needed services. P4P aligns payment of individuals and institutions with this ultimate purpose of their work.

Underlying the discussion of barriers and constraints on both the demand and supply side to effective performance is the recognition that the behavior of many of the individuals who make up a health system does not necessarily contribute to achieving the “social goals” of the system. Consumers don’t seek the care they need to prevent and cure illness and providers don’t devote adequate efforts to ensure that consumers utilize the services known to be effective and don’t necessarily follow recommended clinical guidelines. Part of this disconnect can be explained by the observation that households do not fully internalize the benefits of prevention and cure of infectious diseases that have externalities and the risks of not adhering to guidelines for consumption of antibiotics and other drugs that have the potential to create resistance. Financial and material incentives tied to indicators of performance can motivate consumers to obtain care and adhere to extended drug treatment regimens. Consumer directed incentives work by both removing barriers to seeking care and by inciting actions that consumers may not otherwise take. Payment to providers that is conditional on achieving performance targets can motivate effort, encourage compliance with recommended clinical practice and inspire innovation in service delivery that includes creative approaches to reaching under-served populations. When well designed, P4P can align the behavior of providers with the social goals of primary health care.

III. Problems that Pay-for-Performance can address: Health services are under-utilized, especially by the poor, even when accessible services exist; and services are often bad quality

In developing countries, health status of the poor is worse than the rich, utilization of services is lower for the poor than the rich, and government subsidies are not effectively targeted to support services for the poor. Even when services can be accessed by the poor, they are often of inadequate quality. This section presents data on health status and utilization of the poor and suggests some reasons for the discrepancies to contribute to the thinking about what can be done to improve utilization of services for the poor. Following the presentation of disparities in utilization between rich and poor is a discussion of quality

in developing countries and why policies that contribute to improving quality are important to improving health outcomes for both the poor and relatively better off.

Striking differences in the infant and under five mortality rates, maternal mortality, and life expectancy between the poorest and richest reveal how wide the gap is. Globally, 80 out of 1000 infants born to the poorest socio-economic quintile die, in contrast to an average infant mortality rate of 5 per 1,000 live births among the richest. Differences in under-five mortality rates are equally extreme as shown in Table 1. The data show that child-birth for women in the bottom socio-economic quintile is extremely dangerous as 689 poor women die in child birth per 100,000 live births in contrast to 13 in the richest quintile. Life expectancy at birth is 20 years lower for the poorest quintile than for the richest worldwide¹.

Table 1:
Differences in health status between the richest and poorest of the world

	<i>lowest income quintile</i>	<i>highest income quintile</i>
Life expectancy at birth (years)	58	78
Infant mortality rate (per 1,000 live births)	80	5
Under-5 mortality rate (per 1,000)	123	7
Maternal mortality ratio (per 100,000 live births), modeled estimates	689	13

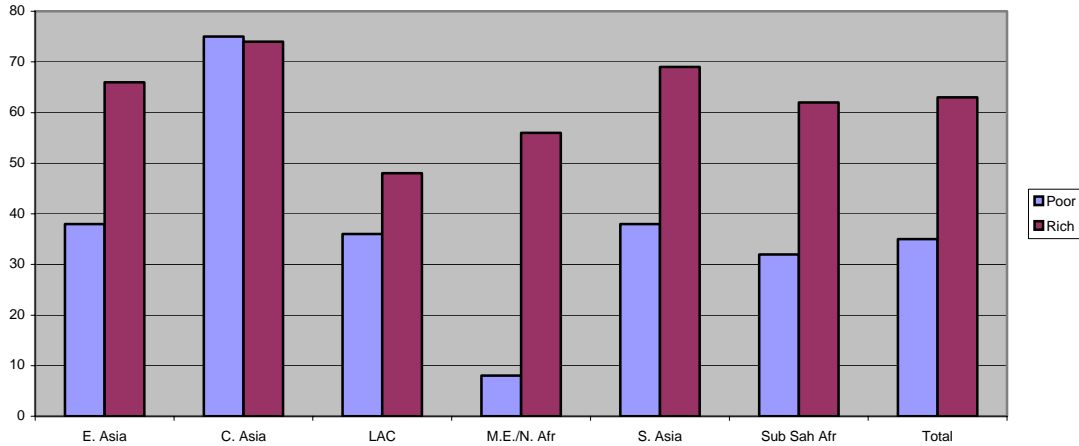
Source: World Bank, data from the Poverty and Health Web Site, most data from 2003, full data sets available at: <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY>

Part, but certainly not all, of the explanation for the extreme differences in health status between poor and rich can be explained by differences in the utilization of essential health services. For example, for the 56 countries included in the analysis presented in Chart 1, an average of 34% of children born to the poorest families are fully immunized in contrast to 62% of rich children. This indicates that the poor are not being reached as effectively as the rich with the range of strategies countries use to motivate families to immunize their children. This wide inequality in utilization between rich and poor is also seen in essential

¹ Much available information on health status and utilization of services in developing countries is reported as averages, blurring the large disparities between rich and poor. In addition to increasing overall average health status in the developing world, increased attention is being paid to improving the health status of those in poverty measured in both an absolute sense and relative to the rest of the population in their country. Country level evaluations that analyze data from Demographic and Health Surveys (DHS) (Gwatkin 2002.) and Living Standards and Measurement Surveys (LSMS) (Wagstaff 2000, Gwatkin 2002) have grouped country populations into socio-economic quintiles and compared health status and utilization of each group to reveal large disparities.

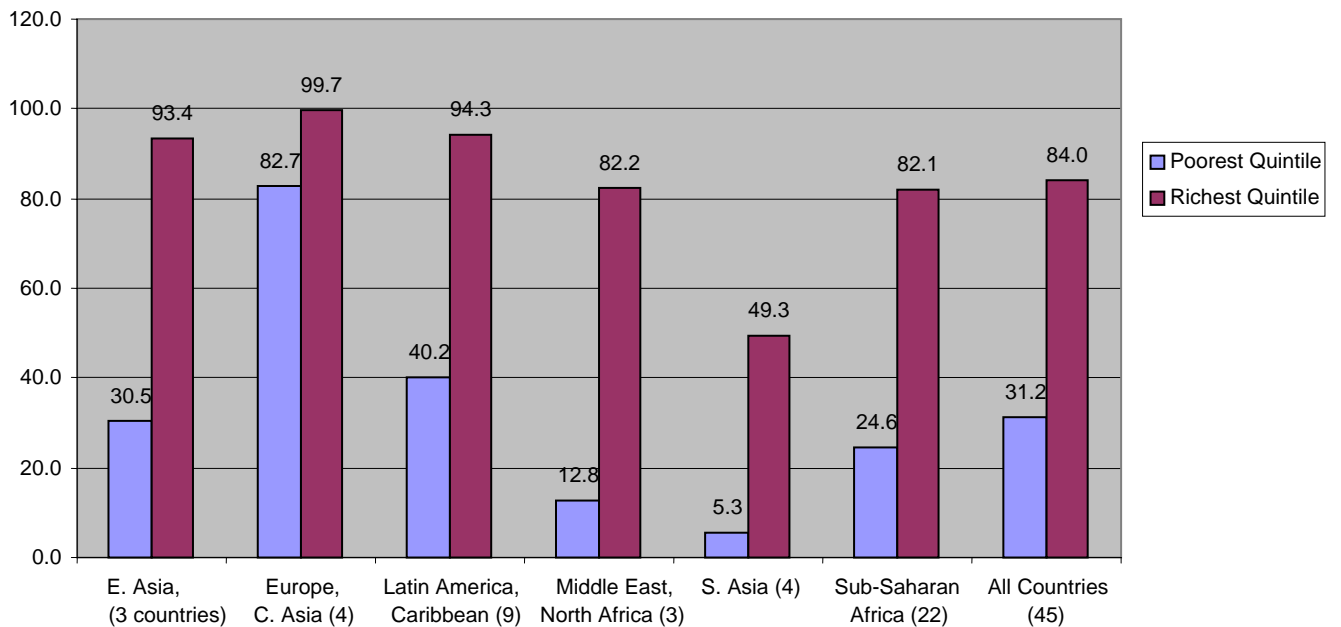
primary health care services that are likely to be delivered by health providers at service delivery points. Chart 2 shows this inequality between rich and poor in deliveries assisted by a medically trained birth attendant and Chart 3 shows this inequality in utilization of services to medically treat acute respiratory infections.

**Chart 1:
Inequalities in Full Immunization Coverage.
(56 Developing Countries, approx. 1990)**



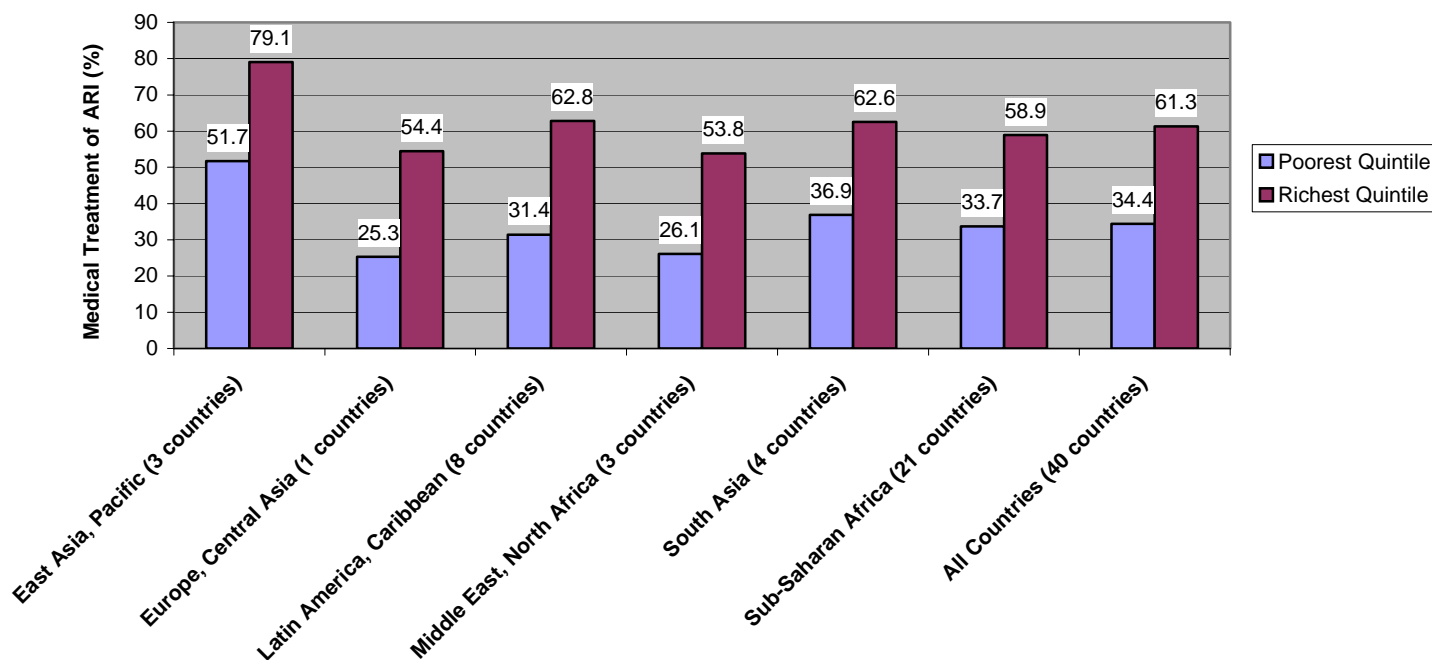
Source: Gwatkin, Davidson R. presentation to the Measles Initiative. [http://www.measlesinitiative.org/NGO Alliance/presentations/Gwatkin.pdf](http://www.measlesinitiative.org/NGOAlliance/presentations/Gwatkin.pdf).

**Chart 2:
Attended Delivery by a Medically Trained Person -- Rates among Poor and Rich**



Source: World Bank, data from the Poverty and Health Web Site, most data from 2003, full data sets available at: <http://web.worldbank.org/WBSITE/EXTER>

Chart 3: Medical Treatment of ARI -- Rates among Poor and Rich



Source: World Bank, data from the Poverty and Health Web Site, most data from 2003, full data sets available at: <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY>

Policy and programmatic approaches to increase utilization of quality services by the poor must consider the disease burden of the poor. Wide disparities in health status and utilization of essential public health services indicate that delivery system priorities should not be the same for population groups with different socioeconomic characteristics. For the poor, strategies to prevent and cure communicable diseases must be a priority, as 59% of death and disability among the world's poorest is caused by communicable diseases. In contrast, non-communicable diseases need to be the focus for the world's richest, as 85% of death and disability are caused by non-communicable diseases for this group. (Gwatkin, Guillot and Heuveline 1999).

Public spending in poor countries is not effectively targeted to benefit the poorest. Benefit-incidence analysis of surveys on health that have been conducted in 23 developing countries indicate that, on average, the richest socio-economic quintile receives over twice as much financial benefit as the poorest quintile from government health service expenditures. (Gwatkin 2002, Castro-Leal et al 2000)². Recommendations to improve targeting include techniques based on household characteristics (household assets that indicate wealth), on geography (regions known to have a high proportion of poor people), and on diseases.

² It is important to note that underlying this analysis is the assumption that the benefits of taxes should be equally distributed across the population. In contrast, some argue that if higher income people contribute more in taxes they are entitled to receive more of the benefits. This argues for a measure of net benefit incidence that accounts for tax incidence.

Recommendations to target based on disease come from the estimates of the global burden of disease that recognize that some diseases, such as tuberculosis, afflict predominately poor people as shown in Table 2.

Table 2:
HIV and Tuberculosis among the Richest and Poorest of the World

	<i>Poorest Quintile</i>	<i>Richest Quintile</i>
Prevalence of HIV, total (% of population ages 15-49)	2.1	0.4
Prevalence of HIV, female (% of population ages 15-24)	2.5	0.1
Tuberculosis incidence (per 100,000 people)	225	17

Source: World Bank, data from the Poverty and Health Web Site, most data from 2003, full data sets available at: <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY>

Studies on inequalities in utilization and expenditures on health services indicate that richer groups are more likely than poor groups to see a medical practitioner and obtain medicines when sick. However, household expenditures as a percentage of household income are not higher for richer households than for poor ones. Especially relevant to this working group is the finding that richer households are not more likely to use the private sector than poor households. (Makinen et al 2000).

In an attempt to explain differences in utilization between the poor and rich that suggest policy recommendations, Castro-Leal et al (2000) considered five determinants of demand: income, service quality, access, direct user charges and gender. Since health care is a normal good, households with more income should demand more of it all else equal. But all is not necessarily equal. They cite studies on health care quality in sub-Saharan Africa that indicate that the quality of care in public facilities available to the poor is lower than that available to the rich as measured by availability of drugs, staff skills and the quality of health facilities. Physical access to health care and the opportunity costs posed by having to travel to obtain care are obstacles that prevent utilization of care by the poor more than the rich. User fees for medical consultations are also more of a burden for the poor and constrain utilization unless quality improvements compensate. Differences in utilization of services between males and females have both demand and supply side explanations. Social values in some cultures that place a higher worth on males than females may cause households to spend more on care for males resulting in higher utilization for males than females. Other explanations for gender differences include the possibility that the opportunity cost of women's time is higher than men's. It is also important to note that care seeking behavior may differ between poor and higher income people because of differences in the perception of illness (Ensor and Cooper 2004). Supply side constraints may also contribute to gender differences if, for example, the facilities available to provide reproductive health services to the poor do not provide the same quality of services as those used by the rich.

Equally, if not more, important to improving health outcomes is that services are of adequate quality. Evidence indicates that there is wide variation in health worker adherence to clinical practice guidelines in countries at all levels of development, from the primary to tertiary care level, and in the public and private sectors (Peabody et al August 2005, Peabody et al September 2005). Examples of poor quality such as delayed and wrong diagnoses and incorrect treatment affect the health of the rich as well as the poor. For example, projects supported by FIDELIS in a number of countries to encourage innovation in the detection of tuberculosis and completion of treatment find that poor people often seek care from multiple providers in both the private and public sectors before receiving an accurate diagnosis (I.D. Rusen 2005). This example of poor quality indicates that even when treatment for tuberculosis itself is free, low income households may be pushed into poverty due to the costs they incur trying to seek an accurate diagnosis. Another study in Papua, New Guinea found that only 24 percent of health workers were able to indicate correct treatment for malaria (Peabody et al 2005).

Poor quality³ can be caused by problems in the structural elements of the health system or the processes that transform structural inputs into health outcomes. The Disease Control Priorities Project team (Peabody et al September 2005) looking at quality suggests that too much emphasis in developing countries has been placed on structural elements and not enough on processes. They suggest that structural elements such as the availability of doctors, infrastructure, and health insurance only represent the *intent* to provide health services. The processes that transform structure into health outcomes are at the core of what makes a health system function well.

Cross country research done in five countries with different systems of organizing and financing care, China, India, the Philippines, El Salvador, and Mexico, find examples of compliance with recommended clinical practice in settings without all structural elements in place and poor compliance in settings with good structural elements (Peabody et al September 2005). To get around potential biases caused by other approaches to measuring adherence to recommended clinical guidelines⁴, medical practitioners in the five countries at all levels of the system and in both the non-state and public sectors, were asked to comment on appropriate diagnosis and treatment for three homogeneous written cases (called “clinical vignettes”) with diarrhea, tuberculosis, and needing prenatal care. Variation in quality of care within countries was wide, and variation persisted across type of facility and by clinical condition. These results suggest that policy interventions aimed at increasing physician adherence to recommended clinical practice guidelines would contribute greatly to improved health outcomes for all population groups that currently utilize services and others that might be induced to seek care once quality has improved.

³ “Quality” is defined by the Institute of Medicine as “the degree to which health service for individuals and populations increase the likelihood of desired outcomes and are consistent with professional knowledge.” (IOM 2001),

⁴ In addition to vignettes, chart abstraction, direct observation, recorded visits, administrative data review, and standardized patients have been used to compare quality. Some methods suffer from poor quality data, high costs of data collection, ethical issues, and the challenge of variation in the severity of illness across cases.

IV. Economics of Pay-for-Performance

Underlying any discussion of the economics of P4P are the determinants of demand and supply and recognition of what is required of the actors in the health care system (the consumers, individual providers, service providing institutions, payers, policy makers and implementers of policies) to transform inputs into improved health. Drivers and constraints to consumer demand and the barriers and obstacles that must be overcome are the focus of demand side P4P interventions. The production function that transforms inputs into health outcomes and the central role of provider behavior in this process is a critical focus of supply side P4P interventions. A framework that links determinants of demand and supply to principal agent theory provides a helpful structure to consider for identifying interventions that can improve health outcomes.

Demand for health care services of a given level of quality is influenced by factors that determine whether an individual identifies illness or appreciates the value of preventive care services and is willing and able to seek appropriate health care (Ensor and Cooper 2004, Grossman 2000). Willingness to seek care is partially affected by what people know as well as social norms. It is also affected by the direct and opportunity costs of seeking treatment, household income, and the costs and availability of substitute products and services. There are also intra-household factors to be considered such as possible preferences to spend resources on males over females or on working adults over young children and the elderly. In addition to the direct costs of treatment that include fees paid for care, medicines and supplies, and the direct cost of transportation to obtain treatment, households consider the opportunity cost of care-seekers time. Opportunity costs can be considerable for obtaining treatment for conditions that require ongoing services such as diabetes, hypertension, tuberculosis and HIV/AIDS. The price and availability of substitute products and services such as low quality or counterfeit drugs from local drug sellers or care from local quacks or traditional healers must also be considered. Multiple determinants of demand can sometimes interfere with patient decisions to seek care or continue treatment. Recognizing these tensions and introducing interventions that align consumer objectives has the potential to support care seeking behavior and adherence.

Supply of health care services is determined by a combination of structural inputs (people, infrastructure, knowledge, technology, drugs and supplies, financing) and the processes that transform these inputs into outputs that ultimately lead to improved health outcomes. Central to the transformation of inputs into outcomes is the behavior of the health care provider. Many settings that contain the majority of structural elements needed to produce quality care lack the processes to effect this transformation. In contrast, there is evidence that settings with severely constrained resources are able to produce high quality care (Peabody et al August 2005). To understand production functions at both the individual and institution level it is important to consider the objective functions of individual providers. Providers are driven by a range of often competing objectives that include elements such as the desire to cure patients, the desire to make money and the desire for leisure. The challenge comes when one objective such as the intrinsic desire to cure patients is in conflict with another objective such as the desire for leisure. Recognizing competing objectives and introducing dynamics that align provider motivations is at the core of payment for performance.

The application of performance based reimbursement schemes to developing country consumers, health care providers and institutions is best understood by using principal-agent theory from the field of economics (Grossman and Hart 83, Kreps 90, Rogerson 85). In this theoretical framework, the payer (or entity that transfers material goods) is the *principal* who in health care systems can be the government, public social insurance agency, donor, community fund, or a private payer such as an insurance company. The principal purchases services from an *agent* that is a health care providing institution or individual. The principal can also transfer resources to consumers (also agents) conditional on defined actions or results. Because the principal cannot perfectly monitor the activities of agents it has less than perfect information about what it is actually paying for. There may be questions about issues such as whether the agent is providing adequate quality services, 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 the way the principal would like *because then it becomes in the agent's own best interest to do so*. Performance based reimbursement establishes explicit indicators of performance that are valued by the principal and provides financial and material incentives to agents for achieving defined performance targets.

V. Pay-for-Performance can contribute to improving the performance of health systems

The causes of underutilization and poor quality of essential services and where P4P interventions may be effective are best examined within the broader context of the health system. It is helpful to take as a starting point “core goals and functions” of health systems: “improved health (as equitably as possible), through systems that are also responsive and financially fair. And all health systems have to carry out the same basic functions regardless of how they are organized or which health interventions they are trying to deliver. These functions are the development of human and other key resources; service provision; financing and stewardship.” (Evans April 2005) Actions to improve the performance of health systems can range from small-scale changes to comprehensive reforms to system financing, organization and management. Initiatives may directly target different actors in the health system such as households or service providers or may introduce changes that impact on a range of actors such as policies that change the way resources are allocated.

Table 3 identifies a range of P4P and “other” systemic solutions to the performance problems of poor quality and inadequate utilization of services by the poor, building on a framework presented by Bennett and Travis (2005). The underlying causes of these performance problems can come from the household, service provider, and the broad health sector level. Identifying the underlying causes of the problems enables us to identify a range of solutions that incorporate payment for performance and those that do not. For example, one of the reasons households may not utilize services is that they face financial barriers. Some P4P solutions include CCT programs, transport subsidies, food support, financial rewards to providers for reducing physical and financial barriers to access for households, national schemes that transfer public resources to local levels based on results and social insurance schemes that pay providers based on results. Solutions that are not performance based include fee waivers, enforcing elimination of unofficial fees, universal coverage (if

“true” universal coverage can be achieved), constructing facilities close to where people live and regulation of the quality of low cost and low quality substitutes.

Examination of the solutions listed in this table suggest that one of the key differences between P4P solutions and “other” solutions is the difference between a “command and control” approach and a “contract and incentive” approach that sets into motion a dynamic that encourages the many actors in the health system to respond with innovative solutions. This may suggest that in settings where government leadership is not strong or the ability to design and implement effective national public systems on a large scale in a relatively short timeframe is weak, P4P solutions may generate better and more rapid results. In other settings where the government is strong and ability to implement publicly managed systems is reasonably good it may be feasible to implement managerially imposed and publicly installed solutions. An interesting example to illustrate this issue is the case of contracting NGOs to deliver primary health care services to rural and indigenous populations in Guatemala. Recognition that a large infrastructure of NGO service providers existed in regions the public system wasn’t reaching, and that it would not be feasible for the public sector to expand capacity to provide services to this underserved population in a short period of time, motivated the government to contract private providers. Reinforcing this point is the observation that the government was more confident of its ability to develop the capacity to design and manage contracts and payment than to construct, staff, and enable an expanded public delivery system. Further emphasizing this point is that the government was not even confident of its ability to enhance the logistics and distribution system to get drugs, supplies and equipment to rural providers. Contracts to the NGOs relied on the NGO ability to manage procurement and distribution and included payment for drugs and supplies as well as for services (except for vaccines) (La Forgia, Mintz and Cerezo 2005).

The dynamics of the health system are as important as the elements, or building blocks. Changing incentives for service providers and institutions so that they are rewarded for achieving performance targets and providing performance based awards to households has the potential to provide the impetus needed for these essential actors to find solutions to other health systems problems. For example, contracted NGOs in Haiti paid partly on results were reluctant to be held responsible for improving immunization coverage because they did not control the supply of vaccines and had long experience of unreliable supplies from the government. Changed incentives that rewarded NGOs for increasing the percentage of children that were fully vaccinated in their catchment areas motivated NGOs to solve this system problem by holding the ministry of health accountable for assuring a reliable supply of vaccines and by arranging transportation to pick up vaccines when inventories were running low. Thus, it is worth examining the potential for incentives to act both directly and indirectly to improve health system performance.

Table 3:
Examples of P4P and “other” system solutions to increase utilization of essential services by the poor and improve quality

Level	Constraint or Underlying Performance Problem	P4P Solutions	“Other” System Solutions
<p>Household/Community Level</p>	<p>1. Households can't afford to obtain quality care: <i>Financial barriers</i></p> <p>2. Health care services are hard to reach: <i>Physical barriers to access.</i></p>	<p>1.1 <u>CCT Programs</u>: directly increase household income and reduce prices of essential services. Also inhibits household decisions to purchase low cost substitutes.</p> <p>1.2 <u>Transportation subsidies</u>: reduce direct cost of obtaining care.</p> <p>1.3 <u>Food support</u>: Frees up income that would have been used to buy food. Reduces opportunity costs of seeking care—especially for treatment of chronic conditions.</p> <p>1.4 <u>Financial rewards to providers for results (and/or penalties for poor performance)</u>: Financial incentives to providers stimulate outreach and reduce financial barriers faced by households.</p> <p>1.5 <u>National to local transfers based on results</u>: Can stimulate local solutions to reducing financial barriers to access.</p> <p>1.6 <u>Social insurance that provides universal coverage and pays providers based on performance</u>. Can be part of a P4P intervention if payment is based on results. Will also minimize household decisions to consume low cost substitutes.</p> <p>2.1 <u>Transportation subsidies</u>: reduce direct cost of obtaining care.</p> <p>2.2 <u>Financial rewards to providers for results (and/or penalties for poor performance)</u>: Financial incentives to providers stimulate outreach, offer more convenient clinic hours, and reduce financial barriers faced by households.</p> <p>2.3 <u>National to local transfers based on results</u>: Can stimulate local solutions to reducing physical barriers to access.</p>	<p>1.1 <u>Waived or reduced fees</u>.</p> <p>1.2 <u>Rules enforced that eliminate charging informal fees</u>.</p> <p>1.3 <u>Universal coverage for a comprehensive package of services</u>.</p> <p>1.4 <u>Construct functioning facilities close to where people live</u>. Reduces financial barriers by reducing transportation and opportunity costs of seeking care.</p> <p>1.5 <u>Regulate quality of low cost substitutes</u>: Eliminate counterfeit drugs and non-accredited health care providers through enforcement of regulations.</p> <p>2.1 <u>Coordination and joint planning with Department of Transportation and Roads</u>: May reduce travel times by building roads and enhancing transportation options.</p> <p>2.2 <u>Construct functioning facilities close to where people live</u>: Reduces financial</p>

Level	Constraint or Underlying Performance Problem	P4P Solutions	“Other” System Solutions
Household/Community Level (cont.)	<p>3. Lack of information and social norms and inhibit seeking recommended preventive and curative care: <i>Information.</i></p>	<p>2.4 <u>Provide per diems and vehicles to enable providers to reach remote areas.</u> Can be an incentive if per diems exceed incurred travel costs and vehicles are also used for personal use.</p> <p>3.1 <u>CCT Programs:</u> Some require parents to attend health education sessions. Payment conditional on actions can counteract social norms that may cause households to invest less in females. May also limit household decisions to choose low cost and low quality substitutes.</p> <p>3.2 <u>Food support:</u> Opportunity to receive food and other remuneration may help overcome social barriers to obtaining care.</p> <p>3.3 <u>Financial rewards to providers for results (and/or penalties for poor performance):</u> Financial incentives to providers can stimulate improved communication and health education that may enhance care seeking by increasing understanding and reducing social obstacles.</p> <p>3.4 <u>National to local transfers based on results:</u> Can stimulate local solutions to increasing knowledge of the value of health interventions and counteract social norms that inhibit appropriate care seeking.</p> <p>3.5 <u>Regulations that require health screening or evidence of good health as a condition of participation in other valued program.</u> Example: regulations that require full immunization as condition of enrolling in school.</p>	<p>barriers by reducing transportation and opportunity costs of seeking care.</p> <p>2.3 <u>Implement strategies to reach remote areas:</u> Mobile clinics, community health worker programs, per diems and vehicles to enable providers to reach remote areas.</p> <p>3.1 <u>Behavior Change Communication.</u></p>

Level	Constraint or Underlying Performance Problem	P4P Solutions	“Other” System Solutions
<p>Service Provision Level</p>	<p>4. Inadequate supply, maldistribution, and poor motivation of health workers: <i>Staffing challenges.</i></p> <p>5. Weak technical guidance, program management, and supervision: <i>Management challenges.</i></p>	<p>4.1 <u>Financial rewards to providers for results (and/or penalties for poor performance)</u>: Financial incentives that reward results can motivate solutions to the model of service delivery that may include strategies to improve outreach to underserved areas, utilization of changed mix of health care workers, and payments conditional on achieving results (or penalties for not) can motivate effort and innovative solutions.</p> <p>4.2 <u>National to local transfers based on results</u>: Can stimulate solutions similar to 4.1.</p> <p>5.1 <u>Financial rewards to health service providing institutions for results (and/or penalties for poor performance)</u>: Financial incentives that reward results can strengthen management by causing service providing institutions to examine the range of constraints they face to achieving results and the systems, capabilities, and strategies they need to introduce to achieve</p>	<p>4.1 <u>Training and continuing education</u>: To upgrade skills of existing health workers and to train new ones.</p> <p>4.2 <u>Alter the skill mix of health worker teams</u>: to maximize effectiveness with the given supply pf human resources.</p> <p>4.3 <u>Improve health infrastructure and ensure availability of supplies and medicines</u>: May improve motivation if needed inputs are in place.</p> <p>4.4 <u>Increase salaries</u>: May improve motivation even if salary increases are not performance based.</p> <p>4.5 <u>Improve management and management support systems</u>: career paths, management information systems, strengthen supervision, human resource strategy.</p> <p>4.6 <u>Strengthen community participation</u>: Support, engagement, interest, and oversight from local communities may increase responsiveness and effectiveness of health workers.</p> <p>5.1 <u>Training and continuing education in planning and management</u>.</p> <p>5.2 <u>Introduce and enforce quality standards and accreditation</u>.</p> <p>5.3 <u>Design and implement management systems</u>: such as health management</p>

Level	Constraint or Underlying Performance Problem	P4P Solutions	“Other” System Solutions
<p>Service Provision Level (cont.)</p>	<p>6. Drugs and supplies not available: <i>Drugs and Supplies.</i></p>	<p>them. 5.2 <u>National to local transfers based on results</u>: Can stimulate solutions similar to 5.1. 6.1 <u>Contract out drug procurement, storage, and distribution.</u> Reward contracted entity (ies) based on results (example: reduced drug stock outs). 6.2 <u>Performance based incentives in inventory management and distribution</u>: Increase responsiveness by improving management systems from central to regional levels and to facility levels.</p>	<p>information systems, financial management, human resources management, drug management. 5.4 <u>Provider report cards</u>: public reporting of _ provider performance. 6.1 <u>Improve management procedures and systems to strengthen procurement, storage and distribution.</u> 6.2 <u>Establish essential drug lists.</u></p>
<p>Health Sector Level</p>	<p>7. Inequitable and inefficient distribution of resources for health: <i>Resource allocation.</i></p> <p>8. Weak and overly centralized systems for planning and management: <i>Planning and Management</i></p>	<p>7.1 <u>National to local transfers based on results.</u> 7.2 <u>Payment to providers to provide services to the poor.</u> Can be part of a social insurance scheme, a contracting process for the private sector, a system to reward public sector providers- or a combination. 8.1 <u>National to local transfers based on results</u>: stimulate development of stronger local level management and planning.</p>	<p>7.1 <u>Reform of resource allocation mechanisms</u>: to improve equity, target scarce resources to cover the poor, and improve quality. 7.2 <u>Improve national financial planning</u>: information and value driven financial planning and resource allocation with improved information such as National Health Accounts. 8.1 <u>Decentralize planning and management.</u> 8.2 <u>Strengthen management capacities at the central and regional levels</u>: training, continuous education, and hiring.</p>

Level	Constraint or Underlying Performance Problem	P4P Solutions	“Other” System Solutions
<p>Health Sector Level (cont.)</p>	<p>9. Weak drug policies and supply systems: <i>Procurement and distribution.</i></p> <p>10. Poor quality of care: <i>Quality Assurance.</i></p> <p>11. Lack of Intersectoral action and partnerships: <i>Cooperation.</i></p> <p>12. Weak incentives for providers to be efficient and responsive: <i>Incentives.</i></p>	<p>9.1 <u>Contract out drug procurement, storage, and distribution.</u> Reward contracted entity (ies) based on results (example: reduced drug stock outs).</p> <p>9.2 <u>Performance based incentives in inventory management and distribution:</u> Increase responsiveness by improving management systems from central to regional levels and to facility levels.</p> <p>10.1 <u>Financial rewards to providers for results (and/or penalties for poor performance):</u> Financial incentives to providers for results stimulate improvements in technical quality and responsiveness. Provide incentives so it is in providers’ interest to adhere to quality standards.</p> <p>10.2 <u>National to local transfers based on results:</u> similar to 10.1.</p> <p>11.1 CCT programs are intersectoral .</p> <p>12.1 <u>Financial rewards to providers for results (and/or penalties for poor performance):</u> Financial incentives that reward results can improve both efficiency and responsiveness.</p> <p>12.2 <u>National to local transfers based on results:</u> similar to 12.1.</p> <p>12.3 <u>Social insurance that provides universal coverage and pays providers based on performance.</u> Can be part of a P4P intervention if payment is based on results that stimulate efficiency and responsiveness.</p>	<p>9.1 <u>Improve management procedures and systems to strengthen quantification, procurement, storage and distribution.</u></p> <p>9.2 <u>Establish essential drug lists and standard treatment guidelines.</u></p> <p>9.3 <u>Establish and enforce standards for drug sellers.</u></p> <p>10.1 <u>Quality assurance standards:</u> mandate and monitor.</p> <p>11.1 <u>Establish intersectoral committees to focus on health.</u></p>

VI. Evidence and illustrative cases

Growing interest and momentum behind the application of performance based incentives indicates that it is time to integrate and assess the accumulating body of evidence on P4P initiatives in developing countries and their potential for improving quality and utilization of services by the poor. Initiatives have moved beyond the pilot phase and have been expanded to scale to cover large proportions of populations. For example, we now have evidence from several schemes that cover a large portion of country populations (examples: China, DRC, Haiti, Mexico). A number of innovative approaches are being tried, indicating significant potential for global learning. Combining evidence into a common framework and identifying what is known as well as the gaps will provide countries, donors, policy makers, and program managers with the beginning of a blueprint for the types of P4P schemes that are effective and when they are effective, the design flaws to avoid and the potential impact. What follows is a brief summary of cases of P4P known to this author, followed by more detailed descriptions in the Annex⁵.

Included are:

- 2 large-scale conditional cash transfer programs intended to encourage poor households to invest in the human capital of their children by rewarding school attendance, improved nutrition, and utilization of health services. (Oportunidades in Mexico and RPS in Nicaragua).
- 6 schemes that contract non-state sector providers to provide primary health care services to poor rural households partly driven by the recognition that the public system does not have adequate capacity. (Haiti, Cambodia, Democratic Republic of Congo, Guatemala, Rwanda, Nicaragua RPS).
- 4 schemes that use financial incentives with both public and non-state providers to increase utilization of services by the poor. (Cambodia, Haiti, Rwanda, Democratic Republic of Congo).
- 2 schemes that include strengthening the “steering” role of the public sector as an explicit goal (Democratic Republic of Congo, Haiti) and 5 schemes that strengthen the steering/leadership role of government, though it may not be an explicit goal, through the design, management, and implementation process (Cambodia, Guatemala, Mexico Oportunidades, Nicaragua RPS, Rwanda).
- 24 schemes that incorporate P4P incentives into tuberculosis control programs to increase both case detection and treatment completion. These are of specific interest because of the long period of treatment required to cure TB and the additional challenges this poses to continued adherence. Of these, 2 impose financial risk onto patients; 9 provide performance incentives to patients that include food, travel support, and money; 4 provide payments to provider based on some measure of

⁵ The majority come from gray literature and include information from reports, presentations, and discussions with implementers and/or evaluators. It is important to emphasize that these cases are only a “taste” of the P4P initiatives that are being tried in developing countries. They were chosen because of either direct involvement by this author or personal contact with authors of evaluations and those involved in design and implementation. Some are more successful than others and a few describe perverse results ; for example, in one case poor TB patients who received food support while under treatment subsequently pressured providers to continue food subsidies after their treatment was completed.

performance; 7 provide P4P for both patients and providers; and 1 includes a performance based element in the transfer of funds from national to local governments.

The above bullet points indicate that P4P schemes are being implemented to address the full range of health systems performance problems described in Table 3. Schemes target health systems performance problems at the household, service provision, and health sector level. The first few points describe the magnitude of the schemes to demonstrate that they serve large populations and have moved beyond a small pilot stage. The points that follow show how elements of these cases address underlying constraints or performance problems that inhibit the poor from utilizing essential services and for services to be of appropriate quality.

P4P schemes range from very large national programs to localized pilots. The Mexican conditional cash transfer program that provides income subsidies to poor households has expanded to cover 25 million people living in both rural and urban areas. A large scale program that contracts international entities to manage the health system in regions of the Democratic Republic of Congo is intended to reach 8 million people living in 67 health zones. In half of the provinces of China, providers who refer smear-positive patients to a TB dispensary receive a financial payment and those who are responsible for curing smear-positive patients receive payment when patients complete treatment. Other schemes target between 1 million and 3 million people and represent a significant proportion of the populations in Cambodia, Haiti, and Guatemala. Many schemes begin as pilots and then expand once evidence is built and lessons are learned while others are rolled out quickly and the implementers learn in the process.

P4P schemes have been implemented in post- conflict/fragile states and relatively stable countries in all regions of the world. P4P schemes have been implemented in post-conflict settings such as Cambodia, Haiti, DRC, Guatemala and Rwanda and in more stable countries such as Mexico, India, China and Brazil.

P4P schemes have been financed with donor assistance. Multilateral donors that have funded cases discussed in this paper include: World Bank (China, DRC, Mexico and Guatemala), Inter-American Development Bank (Mexico, Nicaragua) and the Asian Development Bank (Cambodia). Bilateral donors include USAID (Haiti), DfID (China) and Swedish SIDA (Rwanda). Sources of funding for most of the TB control programs presented in the annex are not known but donor support is likely in most cases.

P4P schemes can contribute to overcoming the financial and physical barriers to access that poor households face. All the schemes presented address household financial and physical barriers to accessing care. Direct initiatives include income transfers to households conditional on taking defined actions in the conditional cash transfer programs in both Mexico and Nicaragua. TB programs provide food, money for transportation, and financial awards to patients that present to take medicine in Cambodia, Haiti, India, Jordan, Peru, Romania, Russia, South Africa, Sudan, Yemen and Zimbabwe. Financial incentives to providers to increase the number of people receiving services stimulates outreach and reduces both financial and physical barriers by motivating providers to deliver services closer to where people live and at hours convenient to their work schedules. P4P programs in

Cambodia, DRC, Guatemala, Haiti, Rwanda, and Nicaragua have this feature at the provider level.

P4P schemes can contribute to increasing information that encourages utilization of essential preventive and curative services and may also contribute to overcoming barriers posed by stigma. Conditional cash transfer programs in both Mexico and Nicaragua include the requirement that households participate in health education sessions. Evidence from Mexico indicates that these sessions contribute to improved nutrition as well as to improved adult health by stimulating healthy behaviors that reduce obesity, diabetes and hypertension (Fernald, Gertler and Olaiz 2004). In addition, the opportunity to receive additional income or food for actions such as immunizing children, obtaining prenatal care or testing for tuberculosis, may cause people with social or private reservations to utilize services they might not otherwise choose to take. The municipal government in Cochin, India notes that the money provided to TB patients to subsidize the cost of travel and to purchase food is a more cost-effective way to increase case-detection (described as the “pull” method) than active case finding.

P4P schemes can provide a catalyst to strengthen management at the service provision level, which includes improving utilization of staff, motivating health workers and improving the availability of drugs and supplies. Programs that contract non-state sector providers to deliver services pay health services providing organizations based on performance. These organizations may have a number of service delivery sites and many health workers of different types. In theory, paying an organization to achieve performance targets stimulates development and implementation of a plan to make the changes needed to achieve the rewarded results. Incentives that come with paying for results can stimulate similar responses in the public sector if other barriers such as civil service restrictions that prevent payment of performance awards to public employees are removed. In Haiti, this process strengthened the management of NGOs, stimulated the development of management systems, altered the way staff were utilized and compensated and encouraged community outreach. This combination of strategies contributed directly to increasing utilization of services. (Orientation on Payment for Performance, May 2005). HealthNet International managed health services in one of the “contracting in” districts in Cambodia and reported a range of strategies to better utilize staff, motivate health workers and stimulate results (Soeters 2002). There is limited documented evidence of what organizations do in response to new incentives and what strategies work and which do not. This is an important area for future research.

P4P can be part of a sector wide strategy to improve health outcomes. Payment for results can be integrated into social insurance systems and federal to state and local transfers. Incentives that tie payment to results can be integrated into drug management systems to increase responsiveness of, for example, central medical stores to regions and facilities. Establishing a P4P system requires different capacities than other forms of payment such as covering inputs or transfers to NGOs, and has the potential to increase the leadership role of governments. The process of defining good performance, how to measure it and how to pay for it requires a degree of rigor that can aid in establishing and enforcing standards.

If not carefully designed, P4P schemes can introduce unintended and potentially damaging effects. It is important to recognize that incentives exist in all systems and that

introducing a P4P scheme only changes them. Since the purpose is to change behavior by building on knowledge of how people respond to financial incentives, it is important to consider the perverse as well as potentially positive effects of incentives. Some perverse effects that people are concerned about come from the impact of offering incentives in one part of the health system but not in others. Scarce health workers may be drawn to provide services in programs that offer financial rewards and may neglect others, leaving important services without needed staff. Other potential negative effects include the possibility that within programs people may focus only on achieving the explicit targets that are being rewarded at the expense of other important but unmeasured tasks. Because not all health services are easy to standardize, this may result in important services being neglected. People are also concerned about the financial sustainability of incentive payments and are concerned about creating expectations among health workers that could result in long term damage to morale if funds for award payments dry up.

What are the results? The Annex reports results for the schemes for which data are available. For the most part, payment for performance schemes included in the annex increase results along the areas being measured and rewarded. Because most schemes do not collect data on control groups it is not possible to fully determine whether the improvements would have happened anyway. For those that do have controls, there are significant improvements in a number of key areas. It is also not clear if there are other P4P initiatives that have been failures and have not reached an international audience. Because P4P initiatives usually rely on baseline data to establish performance targets, there are usually before and after comparison data that provide some insight into the effectiveness of the models.

Models continue to evolve. It is also important to emphasize that few models are fixed. They evolve as the capacity of the implementers grows and priorities change. Instituting an ongoing evaluation process is important to the continued success of P4P schemes.

These programs have shown improvements in some or all indicators and all of them have experienced challenges in the implementation process. While studies have shown that targeted financial incentives do motivate changes in the behaviors of both service providers and consumers, it has not been proven that P4P is the most effective strategy for achieving these changes nor has it been determined which P4P strategies are the most effective and the most cost-effective in any given setting.

VII. Steps to design, implement, manage and monitor a Pay-for-Performance process

Critical to the development of recommendations to countries and funders that suggest when P4P is likely to increase utilization and improve quality more effectively than an alternative approach, is recognition of what it takes to design, implement, monitor and manage P4P schemes. The capacity to manage the payment process is often over-looked or somewhat neglected and is clearly critical to the potential success of a P4P program. Political obstacles must be identified through a strategic assessment of stakeholder positions and a strategy to mobilize support may be necessary in some environments. In addition, it is not clear what, if any, preconditions must be met before a P4P scheme can be implemented effectively. This

section will present a brief discussion of the steps needed to design, implement, manage and monitor a P4P process.

We are considering a broad range of pay for performance schemes that cover payment to public as well as private health services providers and to consumers. The first step in any consideration of introducing P4P is to clarify the performance problems and their underlying causes. Once the underlying causes are identified, the full range of both P4P and “other” solutions need to be considered. If P4P initiatives appear to be the best approach to addressing the underlying constraint, the government or leading agency will need to assess the feasibility and gain political and institutional support. After these first hurdles are overcome, the details of design and implementation of the actual payment scheme must be considered. Mintz, LaForgia, and Savedoff (2001) identify nine steps to follow when contracting private providers to deliver services. The following list is an adaptation of this framework to include P4P to public providers, between national to more local levels of government, and to consumers.

Suggested Steps to Design and Implement P4P Schemes:

1. *Specify performance problems, underlying causes, and chosen P4P interventions* if deemed appropriate.
2. *Assess the feasibility of paying for performance*, including the costs, political consequences, availability of suppliers, adequacy of information to monitor performance, regulatory framework, readiness and capacity to manage the process.
3. *Gain political and institutional support* for paying for performance from powerful stakeholders, including building public support from communities, organizations, and unions.
4. *Define service specifications*, including services or actions to be purchased and the target population to be served. Determine how the target population will be identified.
5. *Select performance measures* and how they will be evaluated.
6. *Define payment methods* and the operational procedures to link payment to performance.
7. If appropriate, *select providers and maximize competition* in the bidding process.
8. Ensure the *capacity for contract management*.
9. *Evaluate, revise and refine* the approach as experience is gained.

The above steps are outlined here to begin the process of offering policy makers and implementers guidance about how to move from concept to action. These steps also link to the description of the cases, which attempts to describe details such as what entity manages the payment and monitoring process and how performance is evaluated.

VIII. Strategic Questions: Under what conditions can Pay-for-Performance interventions contribute most to increasing utilization of essential services by the poor and when can they improve quality?

The issues presented here span large strategic questions such as whether there are environments where P4P schemes are likely to be most effective to the details of how to establish and evaluate performance indicators. In addition, there are a range of issues around

which the people who work on performance based payment interventions in developing countries disagree. Increasing knowledge and moving toward consensus on key issues will help facilitate communication of the potential benefits of P4P in environments with different characteristics.

Unanswered questions include:

1. Are there environments (health system contexts) where performance based payment approaches will not be effective? Potential examples:
 - a. Immature NGO service sector with weak managerial and technical capacity. Some groups working on programs to contract NGOs based on performance claim that it is not advisable to hold immature NGOs accountable for results. They claim that it is important to build the institutional capacity of these NGOs before holding them accountable for achieving performance targets. In contrast, other groups perceive this view to be paternalistic and somewhat counter to the philosophy of pay for performance. They also see that there are advantages to holding less mature NGOs accountable for performance results that includes setting in motion a dynamic in the institution in an early stage of development that stimulates strong management, implementation of management systems, a focus on quality, and responsiveness to consumers. Another advantage is that they perceive that it is easier to introduce a dynamic that propels change in NGOs where the organizational culture is less mature and, therefore, less entrenched.
 - b. Limited competition in private service delivery. It may not be advisable to contract based on results if there is only one provider serving a given population. The risk is that if they perform poorly changing the terms of payment to be based on results transfers a degree of risk onto the provider that may push the provider to go out of business, leaving the population without any place to go to obtain services. In contrast, if the contracting approach is competitive, even if there is only one provider, the threat of competition may motivate better performance and the opportunity to be paid to serve the target population may attract more providers to enter the market.
 - c. Conditional Cash Transfers to households in countries with a large proportion of the population considered poor. In countries where a large proportion of the population is considered poor, it is not clear whether conditional cash payments would be more effective than other interventions such as more sweeping economic changes. It would be helpful to consider what lessons can be learned from CCT programs in Latin America that would be applicable to more resource poor countries such as in sub-Saharan Africa.
 - d. Weak capacity to design and manage contracts in the MOH. Critical to the success of any contracting or P4P program is the ability to design, manage,

monitor, and implement a process that ties payment to verifiable results. If the government will manage this process a group will need to be set up with the required combination of skills, often not present in ministries of health and often in short supply in a given country. It would be useful to clarify what backgrounds and skill levels are required for staff and what kind of training would be effective and necessary. It would also be useful to better understand what functions can be learned over a multi-year process given that everything cannot be implemented “perfectly” from the start.

- e. Civil service restrictions that make reform of payment to reward outputs/outcomes impossible. Payment to public providers based on performance has the potential to improve results. However, most civil service rules prohibit payment of performance bonuses or penalties and provide a degree of job security that makes it difficult to require measurable performance. Some countries revise civil service rules and others are able to find creative adaptations to existing rules such as paying performance awards to teams who then can determine how the funds are distributed among team members or alternatively be available for staff to invest in improving working conditions at their place of work (example of non-personally remunerative benefit). Obstacles to payment for performance that come from a context broader than the health sector must also be considered.
2. Are there environments (health system contexts) where performance based payment approaches will be especially effective? Examples:
 - a. Post-conflict settings where NGOs are strong and the government weak and without strongly entrenched interests. A number of the public sector run cases of performance based contracting of NGOs to deliver services take place in post-conflict settings where government interests are not fully entrenched and capacity for direct service delivery by the public sector is weak. Examples include: Afghanistan, Cambodia, Democratic Republic of Congo, and Rwanda. It would be useful to see if it is possible to draw from these and other cases to better understand when to recommend P4P contracting in post-conflict settings.
 - b. Strong community engagement in the health sector. One of the challenges to implementing a P4P approach is that self-reported data from service providers without additional verification will not work well. Providers provided a financial reward conditional on attainment of a performance target have strong incentives to report that the result was achieved even if it was not (also see point 6). In Rwanda, community committees provide this oversight function. It would be useful to understand the conditions and dynamics that need to exist in a setting for community committees to provide this oversight function.
 - c. Build on performance emphasis of other global initiatives (GFATM, GAVI, PEPFAR). Global health initiatives such as the Global Fund, PEPFAR, and GAVI, condition payment partially based on whether performance targets

are achieved. Recently, global health initiatives such as the Global Fund and GAVI have encouraged countries to submit proposals that include components to strengthen the health system. It would be useful to consider whether settings with large amounts of funding from these performance-based funding initiatives are conducive for implementing P4P.

- d. Large private and NGO sector. It would be valuable to consider whether countries with large and well developed private and NGO sectors are more amenable to contracting based on results than settings with small or nascent non-state sectors.
 - e. Large public “payer” such as a social insurance organization: In countries where financing and provision of services in the public sector are distinct and where there is a dominant public payer such as a social insurance organization (example: Suriname) or a system with multiple payers that can be influenced through regulations (example: Colombia), it would be worthwhile to assess whether it is relatively easy to pay based on performance because it involves altering the terms of payment to providers in systems where many of the other elements needed to manage and implement a P4P process are in place.
3. Do other elements of health systems need to be fully functioning or just “good enough”? Can appropriate incentives be the catalysts to solve some system problems? What system problems might be solved by introduction of appropriate incentives? These questions are central to this working group as they link P4P to the wider global focus on strengthening health systems. Making progress toward answering these questions will help reduce obstacles and identify additional benefits to paying based on performance. It is also critical to determine the elements of health systems that P4P cannot solve.
 4. How to anticipate negative and or positive spillover effects of incentives on the health system? Very much related to the previous issue, this working group could contribute to identifying the process by which paying based on results catalyses other system changes and what these changes might be. Negative spillover effects are also important to consider and include issues such as perverse effects of paying performance bonuses that cause other health services to be neglected. Other perverse effects of concern include damage to provider’s sense of social responsibility that may happen when motivated to work for extrinsic financial rewards instead of by intrinsic motivation.
 5. Is it ethical to provide incentives to poor consumers that motivates (or coerces) them to change behavior because they will receive a payment and not necessarily because they appreciate the value of the service or believe it is in their best interest? Conditional cash transfers as well as food support P4P programs are designed to change behavior and to motivate poor consumers to act in ways deemed socially desirable (examples: cure TB or immunize children). It is also possible that poor households will be coerced by the opportunity to obtain additional household income to perform actions that they do not necessary believe are in their best

- interest. Past abuses of financial incentives that led poor people to be surgically sterilized remind the public health community of the potential to violate human rights if appropriate policies and procedures are not followed.
6. How to measure performance when financial payments are at stake? Some experts working on programs that contract providers and pay based on performance insist that performance indicators must be verified by an independent entity to overcome the problem that if you pay based on performance targets there is a strong incentive for providers to self-report that the targets are achieved. Critics of this view suggest that by relying on an independent entity to verify performance, the opportunity to provide incentives for contracted service providers to develop strong management information systems and to use this information to strengthen institutions is compromised. It is also difficult and expensive to survey large enough samples of households to reduce confidence intervals enough to make reasonable improvements in performance targets measurable in a statistically significant way. Instead of independent verification of results, these critics recommend a system with a combination of self-reported data from providers and random audits from an independent entity to verify accuracy combined with serious penalties if errors are discovered.
 7. Are different combinations of consumer and provider incentives appropriate for different health conditions? For example, preventive care interventions require different consumer and provider actions than lifetime management of diabetes or extended treatment for tuberculosis. The obstacles to appropriate utilization of care for chronic as opposed to acute or time-limited care conditions are potentially different. For example, demand side obstacles are more considerable for treatment of long-term or lifetime chronic conditions such as TB or HIV/AIDS than to get a child immunized. Obstacles on the service delivery side may also be different as effective treatment may require different patient communication and support skills. These potential differences on both the demand and supply side may require a different set of P4P interventions for chronic conditions than for discrete ones.
 8. Do “before and after” studies provide sufficient information or are impact evaluations necessary? The majority of programs that transfer resources based on results collect baseline data and pay based on evaluation of results in a subsequent period. This forms a body of evidence not often available in other large-scale health interventions that enables some assessment of the impact of P4P programs. However, data are usually not collected on control groups making it hard to clearly attribute improvements in performance to the P4P scheme. Rigorous impact evaluations would contribute greatly to the body of evidence.
 9. Do P4P interventions reach the poorest of the poor with health services? If so, what are the design elements that facilitate this objective? Gwatkin, Wagstaff and Yazbeck (2005) tell us that programs must be specifically targeted to reach the poorest of the poor in order for this goal to be effectively realized. P4P interventions have the potential to target especially poor communities, and identifying design elements that accomplish this would help donors and countries know more about meeting an important equity objective.

Can “Pay for Performance” Increase Utilization by the Poor and Improve the Quality of Health Services?

Annex: Brief Descriptions of a Sample of P4P Cases

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CASE 1: Progresa and Oportunidades

Country: Mexico

Population covered: 25 million people and 5 million families, 25% of the population of Mexico

Services provided: Health, education and nutrition. Preventive and ambulatory curative health care services provided in public health centers. Nutritional supplements for children, and pregnant and lactating women are also provided.

Description of Performance Problem(s) the Program is Trying to Solve: Near term: Increase school attendance, improve utilization of preventive and curative health services, improve nutritional status. Longer term: Build human capital by increasing schooling, nutrition, and utilization of health services by poor children.

Brief description of the model: The goal of this program is to help poor households today and to encourage them to invest in human capital for the future with a focus on breaking the intergenerational transmission of poverty. Families receive conditional cash transfers as long as their children remaining in school, utilize services at public health centers, and participate in health education sessions. The nutrition component included a fixed monetary transfer of roughly US\$15.50 per month for improved food consumption. The precursor to the current program, Progresa, began in 1998 in rural regions of the country. In 2002 the program was expanded to include urban populations and was renamed “Oportunidades”.

Progresa was designed so that impact could be rigorously evaluated. There were intervention and control communities chosen with similar characteristics. Household surveys determined whether people utilized services in public or private facilities, how much they spent out of pocket on care, number of days of illness, and frequency and number of days of hospitalization. As the program expanded to urban areas under Oportunidades there was an opportunity to examine medium term effects in rural areas as well as shorter term effects in urban zones.

Demand side incentives: Households are provided a monthly payment conditional on having obtained the following services:

Age Group	Frequency
Children	
Less than 4 months	3 visits: 7 and 28 days; and at 2 months
4 months to 23 months	6 visits: 4,6,8,10,12 and 18 months
2 to 19 years	2 visits per year, each 6 months.
Women	
Pregnant	5 prenatal care visits
Post-partum and lactating	2 visits: one at 7 days post-partum and another at 28 days.
Adults and Youths	
Men and women 20 to 49 years	2 visits per year: each 6 months.
Men and women 50 years and older	1 visit per year

Source: Gutierrez, Juan Pablo, Sergio Bautista, Paul Gertler, Mauricio Hernandez, Stefano Bertozzi. 2004. *Evaluación Externa de Impacto del Programa de Desarrollo Humano Oportunidades*. Instituto Nacional de Salud Pública. Documento Técnico de Evaluación Numero 3 2004.

Supply side incentives: None. I do believe, however, that there were investments to strengthen the capacity of the public health centers to provide the package of services.

Who is the payer: unclear.

How is performance measured?

Results: Rural households in intervention communities obtain an average of 2.7 more preventive and curative consultations in public health centers than control group households, which translates into a 35% increase in utilization. Rural households from intervention communities have fewer days of illness and fewer hospitalizations. When they are hospitalized, they remain in the hospital for fewer days. Also important is a decline in utilization of services from private providers, which contributed to reducing household out-of-pocket spending on health services. Results for urban areas were similar.

Because data are reported by age group for each variable it is not possible to report all findings in this brief summary. What follows are data for selected indicators. Much more detail is available in the many evaluations that have been done on this program. The following tables come from: Gutierrez, Juan Pablo, Sergio Bautista, Paul Gertler, Mauricio Hernandez, Stefano Bertozzi. 2004. *Evaluación Externa de Impacto del Programa de Desarrollo Humano Oportunidades*. Instituto Nacional de Salud Pública. Documento Técnico de Evaluación Numero 3 2004., and have been translated into English.

Average Effect Attributable to Oportunidades on the utilization of ambulatory care services in rural areas in 1998, by age group (standard errors)

Variable	< 6 years	6to 15 years	16 to 49 years	50 years plus
Visited public health services in the last 4 months	0.053 (0.013)	0.040 (0.007)	0.019 (0.007)	0.048 (0.018)
Visited private health services in the last 4 months	-0.058 (0.017)	-0.014 (0.009)	-0.335 (0.014)	-0.109 (0.031)
Total spending on health services in the last 4 months	-\$51.56 (10.49)	-\$30.65 (9.10)	-\$54.19 (8.98)	-\$71.62 (19.03)

The estimation compares the difference between the individuals in beneficiary households to the individuals in households in comparison zones. The results in **bold** indicate a level of statistical significance of at least 95%.

Average Effect Attributable to Oportunidades on the utilization of ambulatory care services in rural areas in 2000, by age group (standard errors)

Variable	< 6 years	6to 15 years	16 to 49 years	50 years plus
Visited public health services in the last 4 months	0.062 (0.019)	0.046 (0.009)	0.030 (0.009)	0.044 (0.016)
Visited private health services in the last 4 months	-0.055 (0.010)	0.002 (0.005)	-0.254 (0.132)	-0.112 (0.039)
Total spending on health services in the last 4 months	-\$41.40 (11.55)	-\$22.36 (10.53)	-\$49.29 (16.74)	-\$71.71 (17.05)

The estimation compares the difference between the individuals in beneficiary households to the individuals in households in comparison zones. The results in **bold** indicate a level of statistical significance of at least 95%.

Average effect attributable to Oportunidades on the utilization of preventive care services for rural populations in 1998 and 2000 (standard errors)

Year	Variable	18 a 49 years	50 years plus
1998	Preventive care consultations	0.118 (0.009)	0.183 (0.020)
2000	Preventive care consultations	0.080 (0.008)	0.157 (0.016)

The estimation compares the difference between the individuals in beneficiary households to the individuals in households in comparison zones. The results in **bold** indicate a level of statistical significance of at least 95%.

CASE 2: Nicaragua Conditional Cash Transfer Program

Population covered: 6,000 households in 21 census comarcas in six municipalities in the northern part of the central region of Nicaragua

Services supported: Basic health and nutrition services and education

Description of Performance Problem(s) the Program is Trying to Solve:

Phase 1 (2000-2002):

- 1) Improve household overall diet by increase overall expenditures on food through income transfers.
- 2) Improve nutritional status of children under 5.
- 3) Increase enrollment, reduce desertion and enhance school progression during the first 4 years of primary school.

Phase 2 (2002-2005):

- 1) Additional improvements in all of phase 1 targets.
- 2) Improve maternal health including family planning

Brief description of the model: This conditional cash transfer program combines both demand and supply subsidies in health and education. This description will focus only on the health component. In phase 1, cash transfers to households for health, given to the mother when possible, were equal to roughly 13% of the average income of poor households. In phase 2 the amount of the demand side transfer was reduced by 30% (source: Adato and Maluccio, 2005), while the supply side performance based payment remained the same. This change in the model between phase 1 and phase 2 has the potential to inform the relative contributions of demand and supply side financial incentives to improving health related results.

This project has been rolled out in two phases. An experimental approach was used that included control and intervention groups in phase 1. In this phase, the program supported improved nutritional status, vaccinations, and well-child visits. In phase 2, maternal health services were added that include prenatal and antenatal care, assisted deliveries and family planning services. To ensure that poor households have access to services, private NGOs were contracted and paid based on performance indicators that were closely aligned with program goals. There were no control regions in phase 2.

Demand side incentives: Eligible households, determined by a combination of geographical and household level targeting, are provided a cash transfer equal to US\$224 per year, paid every 2 months. Receipt of this payment in Phase 1 was conditional on attending health education workshops and taking children under 5 for mandated health care appointments (monthly visits for children under 2, bimonthly for ages 2-5). In Phase 2, this payment was significantly reduced while the required service package was expanded to include maternal health and family planning services.

Supply side incentives: Supply of health services is by contracted private providers, chosen through a competitive process, who are trained and paid a per capita payment of US\$130 per

year per household to deliver the services covered by the program free of charge. In Phase 1, services included: growth monitoring and development monitoring, vaccinations, provision of anti-parasites, vitamins and iron supplements for children. In Phase 2, maternal health and family planning services were added. Providers receive 3% of the annual maximum payment in advance. The other 97% is conditional on achieving performance targets.

Who is the payer: There is a Red de Proteccion Social (RPS) project management unit housed in the Ministry of Family (MIFAMILIA). This unit contracts private agencies to manage payment to households. This unit also pays private health care providers directly.

How is performance measured? A census of socio-demographic characteristics of households residing in RPS municipalities is carried out by MIFAMILIA to establish baseline data and to determine household eligibility to receive subsidies. When households visit health providers they have to sign (finger print) a form testifying that they have received a specific service. Providers have to hand MIFAMILIA these lists in order to receive payments for the services delivered. All this information is downloaded in the management information system (MIS) managed by MIFAMILIA. Each household keeps a form that records health care services received by all members of the household. MINSA and MIFAMILIA carry out random controls to verify that services are being delivered as reported by providers. In addition, every two months the IADB carries out random audits of a sample of providers and households selected from the roster contained in the MIS to verify that reported services were actually delivered to households. During these checks both providers and households are interviewed and records analyzed.

Results: The challenge in interpreting results is that between phase 1 and phase 2 there were a number of other programs implemented in the country to strengthen delivery of services that impacted the control group and the second phase intervention group in a way that makes it difficult to compare results among groups.⁶ For this reason, reported here are results from phase 1. If this case is chosen for further analysis, the challenges with the experimental design need to be better understood.

⁶ Source: Discussion with IADB task team leader, Ferdinando Regalia.

Impact of RPS in Nicaragua during Phase 1: Selected health and nutrition indicators

Indicator	Intervention Areas Baseline (%)	Control areas baseline (%)	Changes in Intervention areas (%)	Changes in Control Areas (%)	Net impact (Change in intervention areas- change in control areas)
1. Participation in growth monitoring (children < 3 years)					
i. Health control visit in a health post, RPS or other.	69	73	25	2	23
b. Weighed during the last six months	56	61	35	7	29
c. Increased weight during the last 6 months	38	39	49	18	32
2. Full immunization (children 12 to 23 months)					
a. BCG (1 dose)	96	94	3	0	3
b. Polio (complete, 3 doses)	75	78	17	12	6
c. Pentavalent (complete, 3 doses)	20	16	63	60	3
d. DPT (complete, 3 doses)	48	50	46	36	10
e. Pentavalent or DPT (complete, 3 doses)	69	63	18	24	-6
3. Spending on Food					
a. Annual per capita spending on food (córdobas)	C\$ 2.818	C\$ 2.684	C\$ 373	-C\$510	C\$ 884
b. Household spending on food as a percentage of total household spending	70	70	0,0	-4	4
4. Extreme poor and poor in the program .					
a. Extreme poor	42				
b. Poor	80				
c. % living under US\$1 per day	80				

Source: from IADB, information reported as calculated from reports by IFPRI 2002 and a CAE seminar, February 2000.

CASE 3: Democratic Republic of Congo (DRC)

Population covered: 8 million people living in 67 health zones.

Services provided: primary care, nutrition, and other public health services.

Description of Performance Problem(s) the Program is Trying to Solve: This complex and ambitious World Bank supported project aims to achieve 3 overarching goals: strengthen the service delivery system; enhance population access; and improve health outcomes. In July 2002, it was estimated that 16 million Congolese have critical food needs. Approximately 70 percent of the population had little or no access to health care and eighty percent had no access to safe water. Outbreaks of meningitis and cholera had been reported in several provinces. Infant mortality has returned to its 1970's level: 129 per 1,000 in 1995, with peaks of 156 per 1,000 in rural areas.

Indicators	Estimated Baseline	Target
<i>Put in place an environment that favors development of the health system</i>		
% of the targeted health zones that meet the minimum national norms sanitaires		80
% of health zones that are receiving Appui Global	0	100
% of health zones with a trained water and sanitation coordinator	0	80
% of health zones with a functioning "mutuelle"	0	25
<i>Provide access to essential health care to at least 50% of the population</i>		
% of population living within access of a functional health center	20	50
% of functional health centers	30	60
% of households with access to potable water	20	40
% of households that use impregnated mosquito nets	1	10
<i>Provide the population with access to an acceptable level of health or access to services</i>		
% of children 0-2 years with moderate or severe malnutrition (weight for age)	30	20
% of children 1-4 years with a brachial perimeter less than 12.5 cm.	10.6	8
% of children 1-4 years with a brachial perimeter between 12.5 and 13.4 cm.	13.2	10
Number of women who die during pregnancy or childbirth per 100,000 live births	1289	1000
% of fully vaccinated children aged 12-23 months	29	50

Source: power point presentation, "Paying for Performance to Achieve Public Health Goals", by Eva Jarawan

Brief description of the model: Eight international organizations (mostly NGOs) with a long history of work in the DRC were contracted to manage the health delivery system in defined geographic regions (1st level contracts) in a World Bank funded emergency project. It is important to clarify that the contracts between the Bank project and these 1st level NGOs are **not** performance based. These umbrella NGOs, in turn, subcontract with a range of

entities in the regions they are responsible for (2nd level contracts) and these contracts are intended to be performance based.

One of the objectives of this project is to build local capacity of the public staff that oversees the health system by engaging provincial health inspectors and local health zone teams and providing bonus payments for good performance. Performance based subcontracts are also implemented with general hospitals, health centers in the health zones, and with medical schools.

The 8 umbrella NGOs adopted a range of approaches to performance-based payment. Some are exclusively process oriented (performance defined by process measures such as the frequency of meetings or supervisory visits), some are output oriented (fees provided for specific services), and some are truly performance oriented (performance awards tied to improvements in key public health interventions such as immunization coverage). Much can be learned by comparing performance across approaches. When an early evaluation was done, performance results were not available.

Demand side incentives: none

Supply side incentives: performance awards for supervisors and health inspectors in the district level public health system, performance bonuses for primary and secondary care service providers and for medical schools. A range of indicators and approaches are being tried, some are more oriented to health outputs and others are more process oriented.

Who is the payer: The local government entity that manages disbursement of World Bank funds pays the 1st level contracts. Each of the 8 umbrella organizations manage performance-based payment to the 2nd level contractors.

How is performance measured? Varies widely across the 8 umbrella NGOs. Details are available in Eichler (2004).

Results: Full project results not available as of 2004. Selected results from data in one hospital follows: (source: power point presentation by Dr. Robert Soeters, date unknown). Details of specific form of performance based contract unclear but payment is fee-for-service (potential perverse incentives- especially for Caesareans).

Results from Mbilizi Hospital after Introduction of Performance Based Payment

	2002 FINANCEMENT TRADITIONNEL INPUT	2003 FINANCEMENT sur base de la PERFORMANCE = Appr Contractuelle	DIFFERENCE 2003 / 2002
Consultations médecins	1140	3900	242%
Actes chirurgicaux majeurs	60	180	200%
Accouchements eutociques	336	456	36%
Césariennes	264	288	9%
TOTAL NOMBRE D'ACTES	1800	4824	168%
Taux d'occupation de lits	45%	63%	38%
Subside Cordaid 2002 Agence Financière 2003	\$52,000	\$17,685	- 66%
Subside moyen par ACTE	\$28.89	\$3.67	- 87%
Amélioration coût -efficacité 2003 par rapport 2002 = $\\$28.89 : \\$ 3.67 = 8$ fois			
Avec l'approche contractuelle le subsidie obtient 8 fois plus d'output par rapport à une approche traditionnelle type input.			

CASE 4: Cambodia

Population covered: 1 million living in 9 districts in 3 provinces.

Services provided: maternal and child health services

Description of Performance Problem(s) the Program is Trying to Solve: In the 1993 post-conflict period, Cambodia had limited health human resources, little rural health infrastructure, and poor quality of care. This program was intended to increase access and utilization by expanding availability of services to underserved populations with the ultimate result of improving maternal and child health outcomes.

Brief description of the model: A competitive process solicited proposals from international and local groups to implement two contracting models in 8 districts, each with a population of 100,000-200,000 people and 4 additional control districts with similar characteristics. Each district was randomly assigned to either “contracting out” (CO), “contracting in”(CI), or control. The result was that 2 bidders were chosen to implement the model in the CO districts, 3 were chosen to implement in the CI districts, and the 4 control districts remained. Contracts were for 4 years. Performance target improvements were specified for each district.

Three approaches were implemented:

- 1) *Contracting Out:* NGOs were contracted to provide a package of services to a district and had full control over hiring and firing and over procurement of drugs and supplies. Per capita costs were proposed in the competitive bidding process and winning bids were given the proposed amount.
- 2) *Contracting In:* NGOs were contracted to manage district-level public facilities but had to work with government staff and procurement system. In addition to managing the publicly provided funds, they received an additional \$.25 per capita to use as staff incentives.
- 3) *Control:* Continued government management and provision of public facilities with increased funding equivalent to \$.25 per capita roughly equalized resources among the three groups.

Demand side incentives: None

Supply side incentives: Unclear from the literature surveyed what the performance- based incentives are at the district level, if any. NGOs that managed each district could develop innovative schemes to provide incentives to health centers and health centers, in turn, provided incentives to motivate staff to work harder and to abandon their private practices. One documented example of a CI model (Soeters and Griffiths, 2003) used performance payments to individual health workers designed as follows: basic monthly incentive payment 55%; punctuality incentive payment 15%; performance bonus 30%. Payment of punctuality incentives was determined by the health center director and the performance bonus was determined by whether monthly financial targets were achieved. In addition, non-financial targets were specified such as EPI coverage, number of TB patients, and percentage of

correct diagnosis and treatment, but no monitoring system had been set up when the contracts were negotiated to evaluate these indicators. After it became clear that it was difficult for health center managers to monitor multiple contracts with individual health workers, the model shifted in one district to performance based sub-contracts with each health center. The focus changed to health outputs as more data became available. One interesting approach noted was that in one district health facility managers provided a fee to traditional birth attendants for each pregnant woman they convinced to deliver at the health center.

Who is the payer: The Project Coordination Unit located in the Ministry of Health specifies and monitors contracts and manages payment. Portions of payment that come from ADB loan funds must be approved by ADB procurement process.

How is performance measured? In 1999, baseline household surveys were conducted by an independent entity. The same survey was implemented in 2002 to determine if performance improvements were attained.

Results: The following table shows a comparison of percentage increases in results on key performance indicators across the three models. Recent rigorous econometric analysis that attempts to control for selection bias (NGOs may have chosen to bid on CO districts because potential gains were bigger) support the results of less rigorous analysis (Kremer, 2005). Both the CO and CI models outperformed the control districts in all contracted outcomes except for quality of care as perceived by households. There was no performance difference in non-contracted outcomes between the three models.

**Average Percentage Change in Health Service Coverage Indicators
(1999-2000)**

Indicator	Control	Contracted-In	Contracted-Out
Antenatal Care	160	233	402
Trained Delivery	26	0	0
Facility Delivery	0	225	142
Antenatal Tetanus Immunization	149	149	400
Family Planning Knowledge-all	307	317	599
Family Planning Knowledge- lower 50% socioeconomic status	271	301	560
Contraceptive Prevalence Rate	93	105	123
Child Immunization	56	82	158
Vitamin A Capsule Receipt- all	-25	18	21
Vitamin A Capsule Receipt- lower 50% socioeconomic status	-24	30	24
Percent of illness treated in public health facility - lower 50% socioeconomic status	82	491	1096

Source: Bhushan, Indu, Sheryl Keller, and Brad Schwartz. March 2002. "Achieving the Twin Objectives of Efficiency and Equity: Contracting Health Services in Cambodia". ERD Policy Brief Series Number 6, Asian Development Bank.

CASE 5: Haiti**Country:** Haiti**Population covered:** more than 3 million people**Services provided:** immunizations, pre and post-natal care, assisted deliveries, family planning services, HIV testing and treatment (begun in 2004), TB, treatment for ARIs, diarrhea and other primary health care curative services.**Description of Performance Problem(s) the Program is Trying to Solve:** The objective of this program is to improve health outcomes for Haitian households by paying contracted NGOs partially based on whether they achieve performance targets. Some of the performance problems that motivated the shift from payment that reimbursed documented expenditures to P4P include the following results of a household survey.

- Vaccination coverage varied widely, with the worst performer reaching only 7% of the target population, whereas a good performer reached 70%.
- 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%.
- Some NGOs achieved contraceptive prevalence rates of 25%, while others achieved rates of less than 7%.

Brief description of the model: This USAID funded project managed by Management Sciences for Health began contracting NGOs and paying partially based on performance in 1999. The initial pilot of 3 NGOs serving 500,000 people was responsible for generating considerable improvements in performance. Adopted as model of contracting and refined over years, this project now contracts 32 NGOs based on performance and serves over half the population of Haiti.

Indicators are a combination of health output targets and management capacity indicators. This process has evolved and has changed for a range of reasons over the six-year period. For example, in 2004 some NGOs are rewarded for testing a target number of pregnant women for HIV/AIDS and the immunization target indicator has been dropped for several NGOs that succeeded in reaching over 90% coverage. Recognition that NGOs will focus energy on the performance targets being measured and may somewhat neglect other important services caused the project team to expand the list of indicators. To control the costs of measurement, two packages of indicators that each contain measures of results for services provided to all priority population groups have been defined. At the end of the contract period, one of the two packages is randomly chosen for evaluation.

Payment is a combination of fixed quarterly payments based on 95% of the estimated cost of producing the defined package of benefits to the population served by each institution. NGOs can earn the 5% plus and additional 5% if all performance targets are achieved. Performance awards are determined annually.

Demand side incentives: Currently none, but there is some consideration of introducing food packages and transportation support to help those on ART.

Supply side incentives: NGOs are paid partially based on achieving defined performance targets related to attainment of health output targets and strengthening of institutional capacity. NGOs are at risk for 10.5% of the maximum potential payment they receive.

Who is the payer: The USAID contracted firm, Management Sciences for Health, manages contracting, payment and performance monitoring and measurement.

How is performance measured? In the pilot year an independent firm was contracted to measure baseline and end of pilot period performance. In subsequent years, performance targets are self-reported by NGOs with random audits performed by a contracted independent entity. Serious penalties are imposed for evidence of incorrect reporting, including contract termination.

Results: The following table shows results for two indicators, immunization coverage and minimum of 3 prenatal care visits, for the subset of NGOs that were contracted to provide both services. In addition to NGOs that provide the full package of health services supported by the project, there are specialized NGOs that only, for example, provide services to women, people with HIV/AIDS, or youth (not included in this table).

NGO #	Percent of Incentive Award Earned (From all targets)							Selected indicator change during years of Participation in the P4P program		
	P. 1 11/99 3/00	P. 2 4/00 9/00	P. 3 10/00 9/01	P. 4 10/01 12/01	P. 5 1/02 12/02	P. 6 1/03 12/03	P. 7 1/04 12/04	Immunization	3 prenatal visits	Years
1	70	85	90	100	70	40	60	49.2 to 88.0	49.3 to 36	5
2	80	85	70	100	60	63.5	75	39.7 to 90.0	32 to 72	5
3	40	75	90	90	30	52.5	60	34.7 to 98	18 to 98	5
4			80	100	55	62.5	55	37 to 84	17 to 57	4
5			70	90	10	80	60	73 to 88	38 to 88	4
6			80	81	80	40	80	54 to 102	25 to 76	4
7			10	NA	NA	NA	NA	27	27 to 21	1 (contract cancelled)
8					78	85	50	50 to 107	44 to 54	3
9					48	55	NA	78 to 71	36 to 40	3
11							92.5	65	74	1
12							100	94	93	1
13							85	119	75	1

CASE 6: Output-based funding in Rwanda

Country: Rwanda

Population covered: People living in the Kabutare and Gakoma districts of Butare Province.

Services provided: Primary health care services including referrals to hospitals.

Description of Performance Problem(s) the Program is Trying to Solve: Low utilization of both preventive and curative care services and poor quality of care.

Brief description of the model: In 2002, HealthNet International with support from Swedish SIDA and in partnership with the Rwandan Ministry of Health, introduced a change in payment to health service providers that was based on outputs rather than inputs. They designed and implemented a pilot in Kabutare and Gakoma District of Butare Province that contracted 19 health centers to provide primary health care services. Of these 19, 10 are private nonprofit (Catholic and Protestant NGOs) and 9 are public.

The P4P program is overseen by a steering committee comprised of a broad range of stakeholders. Steering committee verifies accuracy of provider submitted claims. There are two levels of P4P contracts. At the institution level there is a “Purchase Contract” that specifies quantity based payment to health centers based on fees for specified services. Individual health workers have a “Motivation Contract” that specifies the terms of monthly performance premiums. This is essentially a fee-for-service model that provides incentives to increase volume of services that are severely under-utilized.

Demand side incentives: None

Supply side incentives: Payment to facilities based on fees for each service provided provides an incentive to increase volume. Payment to health workers based on terms specified in a motivation contract provide incentives that help to align efforts of individual workers with institution level goals.

Who is the payer: HealthNet International managed payment during the pilot with the intention to transfer this function to the local government level.

How is performance measured? Providers submit claims for fees for services provided and the community steering committee verifies accuracy.

Other: In addition to the program designed and implemented by HealthNet International another program with a different design was implement by Cordaid. In addition, both the World bank MAP program and USAID are supporting P4P programs to deliver services to people with HIV/AIDS in Rwanda that build on the lessons learned from these pilots.

Selected Results:

Activities	2001	2002	Growth rate
Consultations	172896	248165	43.50%
Deliveries at the Health Center	1381	2870	107%
Deliveries referred to Hospital	163	523	221%
Family planning, new subscriber	421	775	84%
Pregnant woman VAT 2-5	5935	9376	58%
Child <1 DTC3	11505	13728	19%
<i>Child <1 VAR</i>	<i>10981</i>	<i>10167</i>	<i>-7.50%</i>

Source: Bruno Messens and HealthNet International

CASE 7: Contracting NGOs to Deliver Primary Health Care Services in Guatemala

Country: Guatemala

Population covered: 3 million

Services provided: 88 NGOs contracted to deliver basic package of services with priority to maternal and child health care services in rural and indigenous areas. All supplies also procured by NGOs (except vaccines).

Description of Performance Problem(s) the Program is Trying to Solve: Increase access and utilization to rural and indigenous populations in areas where publicly managed services were irregular or unavailable. Specific goals were to cut infant and maternal mortality in half in a five-year period.

Brief description of the model: The government of Guatemala viewed contracting NGOs as a quicker way to increase coverage and access than building and enabling more public facilities. In addition, the government recognized that the ability of the public sector to supply medicines, equipment, and other material support was limited and this component of the health system would not be feasible to strengthen quickly. To improve health outcomes in underserved areas, they chose to build on capacity that already existed in the non-state sector to deliver health services by contracting NGOs that had established strong links with local communities and the systems and infrastructure to deliver services. This program began as a pilot in 1997 that was then expanded. Information is available through 2002.

Two forms of contracts:

1. *Direct contracting model:* NGOs directly contracted to provide a package of preventive and curative MCH services.
2. *Mixed contracting model:* NGOs contracted to administer, manage finances, and manage payment to MOH-operated teams of providers consisting of a mix of both MOH and NGO-hired personnel.

National Goals of SIAS Program	
Measure	Specific 5- Year Goal
Vaccination coverage in children under 5	> 90% of covered population
Coverage of prenatal control	at least 75% of covered population
Coverage for anti-tetanus vaccination in women in their childbearing years	at least 75% of covered population
Growth monitoring of children less than 2	at least 75% of covered population
Availability of oral hydration kits in every home	100% of families covered
Presence of medications	At least 80% of essential medications Health Posts and NGO-operated services (<i>Botiquines Básicos</i>)

Source: LaForgia, Gerard, Patricia Mintz, and Carmen Cerezo. March 2004. *Is the Perfect the Enemy of the Good? A Case Study on Large-scale Contracting for Basic Health Services in Rural Guatemala*. World Bank draft paper, reproduced table 4 from page 20.

The Ministry of Health specified the benefits package and rigid norms that needed to be followed by NGOs to deliver the services in the package. While the intention was to hold NGOs accountable for achieving results, this was not fully appreciated or implemented until the third year of the program, when it became clear that there would be benefits to holding NGOs accountable for the same results that the country was accountable for in the program goals and in the terms of their loan with the Inter-American Development Bank.

Demand side incentives: None

Supply side incentives: Beginning in 2000, performance indicators were included in contracts and attaining targets was a condition of contract renewal.

Indicators for Determining NGO Contract Renewal	
Assessment Category	Indicator
Community Organization	No. volunteer community workers selected No. of community midwives selected Existence of community census Existence of community map Existence of community pharmacies
Training	No. of workers trained in at least 6 basic themes: mapping, censusing, taking, ARI, diarrhea, vaccination and growth promotion
Coverage	% prenatal coverage % iron and folic acid coverage for pregnant women % pregnant women with 2 nd dose of tetanus % infants with DPT3, polio3, BCG1, and measles coverage % children <2 under growth monitoring % children <2 with iron supplement coverage
Administrative-financial	Complete ledgers of all expenditures Inventory system up to date All personnel hired with formal contracts Monthly financial and Bank statements Quarterly financial execution reports Evidence that all public financing used for SBS activities % budget execution

source: LaForgia, Gerard, Patricia Mintz, and Carmen Cerezo. March 2004. *Is the Perfect the Enemy of the Good? A Case Study on Large-scale Contracting for Basic Health Services in Rural Guatemala*. World Bank draft paper, reproduced table 5 from page 21.

Who is the payer: Government of Guatemala paid capitation payments roughly equal to \$6.25 per capita based on number of assigned inhabitants in defined catchment areas. Fee included care, capacity strengthening, outreach services, and all supplies and medicines except for vaccines. Overall per capita cost of the program estimated at \$8.

How is performance measured? Self reported by NGOs. Household based assessments of providers were supposed to be included in the original design but have not been implemented. Global targets were established and applied uniformly to all NGOs because no baseline data were available.

Results: Unfortunately, results were not reported in the gray literature. Part of the challenge to assessing the impact of large scale contracting programs is that success and failures can be extremely political and exposing challenges or touting successes can pose challenges for incumbent or challenging political leaders. This may hamper the research process.

Selected Results from the Catalogue of Experiences on the Use of Incentives and Enablers for Patients and Providers to Improve Tuberculosis Program Performance⁷

Patients assume financial risk- scheme tied to performance

Country program or project ⁸	Brief Description of the Scheme	Results as Reported by Respondents and Selected Issues
Bangladesh (BRAC)	Patients pay a deposit upon initiation of treatment and receive 37.5% back at completion of therapy; community supervisor receives remainder of deposit.	Cure rate=89%; Case detection rate=50%. Reported results are partially attributed to incentive scheme.
Indonesia (PPTI – clinic in Jakarta)	Patients are “adopted” and assured a free supply of drugs through treatment completion. If patient defaults, contract specifies they must repay the cost of consumed drugs.	Cure rate= 90%; default rate= 1%. Low default rate attributed to contract system. Many adopters choose to adopt again after initial adoptee has completed treatment.

Patient incentive only- performance related

Country	Brief Description of the Scheme	Results as Reported by Respondents and Selected Issues
Cambodia (NTP)	Food is provided to in-patients in hospitals and food packages to outpatients who attend clinic for treatment.	Cure rate=92%; default rate=2%. Food from World Food Programme (WFP).
Cochin, India (Municipal Government)	Monetary support is provided to patients to enable travel, to purchase food and as an incentive to motivate behavior.	Increased case detection. Almost 100% treatment completion reported. Indication that offering incentives “pulls” people to get TB treatment. Perceive active case finding to be less cost-effective.
Jordan (NTP)	A monetary incentive is provided to patients who attend clinic for treatment	No performance results reported.
Peru (reported and administered by national food program)	Food baskets are to patients at end of each month of treatment completed	Increase in weight of patients between treatment inception and completion. Logistics of managing food reported to be a challenge. High treatment completion rates reported by NTP (89%)
Romania (NTP)	Patients are provided travel support for ambulatory treatment.	Reported compliance increased to 95% (not clear from what baseline). When scheme ended due to lack of funds compliance fell to 80%.

⁷ From: Beith, Alexandra, Rena Eichler, Jeffrey Sanderson, and Diana Weil. November 2001. *Can Incentives and Enablers Improve the Performance of Tuberculosis Control Programs?* Conference paper prepared for discussion at the workshop on Incentives and Enablers to Improve Performance of TB Control Programs at the 2001 IUATLD conference, Paris, France.

⁸ Note: NTP= National Tuberculosis Program.

Sudan (NTP)	Patients are provided with food packages and transport to DOTS centers.	Treatment completion rate of 82% partially attributed to scheme. Food from WFP
Yemen (NTP)	Food is provided on a monthly basis to patients who attend the clinic for treatment.	Cure rate for areas with food packages 85% compared with 78% without. Defaulter rate with food packages reported at 7% as compared to 10% without food.
Zimbabwe (NTP)	Travel support is provided to patients to attend ambulatory clinics.	No data collected. Respondent unclear of financial sustainability

Provider incentive only- performance related

Country	Brief Description of the Scheme	Results as Reported by Respondents and Selected Issues
Bangladesh (Damien Foundation)	Travel, food and/or a doctor's handbag/thermometer are provided to village doctors who attend training, have provided DOT to at least 4 patients, and provide regular referrals of suspected TB patients.	Cure rate=88%. Additional factors noted to contribute to success include community participation and adaptation of scheduling for DOT to patient's scheduling needs.
China (NTP DOTS program – ½ of provinces)	Providers who refer smear-positive patients to the TB dispensary receive financial payment and those who are responsible for cure of smear-positive patients receive monetary incentives upon treatment completion.	No results reported specifically on use of incentives. NTP DOTS program reports cure rates of 95%+.
Pune, India (Local Health Authority)	Monetary incentives are provided to private providers by the local public health authority upon patient cure	Report patient default rate of zero. Note that monitoring many private providers is labor intensive.
South Africa (Operation Hunger – Eastern Cape)	Providers receive a monetary incentive when they provide DOT to patients.	No data reported.

Both patient and provider incentives- performance related

Country	Brief Description of the Scheme	Results as Reported by Respondents and Selected Issues
Czech Republic (MoH)	In process of developing a scheme that will provide a monetary incentive to both patients and providers.	No results yet.
Haiti (International Child Care in collaboration with NTP)	Pilot to test use of monthly food baskets provided to both patients and to treatment partners based on adherence to DOTS.	Positive: Increased case finding in treatment centers offering food; increased return of defaulters; increased clinic attendance. Adverse: Staff under pressure from patients to extend food after treatment completion; increased workload imposed on staff to distribute food commodities.
Peru (Partners in Health project)	Transportation and monthly food baskets are provided to community-based providers who visit MDRTB patients and provide DOT. Patients also receive various forms of social	Scheme was initially pilot tested, then expanded. Over 80% cure rate of MDRTB patients. Low abandonment rates.

	support and food.	
Russian Federation (Novgorod Oblast TB Dispensary)	Food, other material goods and travel support are provided to patients. Providers receive fuel for hospital cars to perform home DOT and defaulter tracing.	Report decrease in treatment interruptions; decrease in defaulters; increase in treatment completion.
Russian Federation (Ivanovo Oblast TB Dispensary in collaboration with CDC)	Food, other material goods and travel support are provided to patients. Providers receive fuel for hospital cars to perform home DOT and defaulter tracing.	Treatment interruption decreased from 50% of patients to 4%; Default rates fell from 21% to 5%; Treatment completion grew from 40% to 64%. Part of improved performance attributed to incentives and enablers- additional explanations include improved management, training of providers, monitoring and supervision, and establishment of an outreach team.
Russian Federation (Orel Oblast TB Dispensary in collaboration with CDC)	Food, other material goods and travel support are provided to patients. Providers receive fuel for hospital cars to perform home DOT and defaulter tracing.	Drop out rate among target groups fell- with incentives drop out rates range from 2%-7% compared to 15%-20% before scheme.
South Africa (TB Care Association of Cape Town)	Food vouchers are provided to patients when they attend regular group sessions and adhere to treatment. Providers receive a monetary incentive when they provide DOT to patients.	No data reported.

Both patient and provider scheme- partly performance related

Country	Brief Description of the Scheme	Results as Reported by Respondents and Selected Issues
Syria (NTP)	Monetary incentives are provided to patients who adhere to regular DOT. Providers who work in TB care receive a 5% salary increase not tied to performance.	No data reported.

Performance based payment between national and municipal level government

Country	Brief Description of the Scheme	Results as Reported by Respondents and Selected Issues
Brazil (NTP)	NTP pays municipalities a fee for each cured TB patient. Payment is higher for patients under supervised treatment than self-administered.	No data reported. Problems with the scheme include weak M&E system and inadequate capacity to follow up.

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