



Financial and Other Rewards for Good Performance or Results: A Guided Tour of Concepts and Terms and a Short Glossary*

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Results-Based Financing (RBF) for health has been defined as "a cash payment or non-monetary transfer made to a national or sub-national government, manager, provider, payer or consumer of health services after predefined results have been attained and verified. Payment is conditional on measurable actions being undertaken." (www.rbfhealth.org). RBF is an umbrella term because the definition is general and characterizes various programs in many countries. Different labels exist for essentially the same concept or are associated with different incentives and payment arrangements. This glossary describes how different terms are used and points out significant distinctions among types of RBF health programs.

Introduction: Getting away from paying for inputs

Paying for **inputs**, particularly paying salaries to health care providers, has two well-known virtues. Costs are predictable, apart from variations due to overtime pay and fluctuations in the quantities of variable inputs such as drugs and other consumables; and providers have no financial incentive to deliver excess services. Supplier-induced demand is not a problem. (As discussed below, it is sometimes desirable to motivate providers to induce more demand than would occur spontaneously.) However, it is just as well-known that salaried personnel, who earn the same amount independent of their output or production, also have no financial incentive to produce any more than the minimum required to stay employed. If they lack adequate non-financial incentives or motivation to do a good job in either quantity or quality, they may be tempted to produce less than is needed or deliver poor quality service. It is a fair starting point to say that anything that introduces financial or other rewards based on some definition of **results** represents an attempt to get away from simply paying for inputs, at least in part.

Everyone knows what inputs are—the human resources (more strictly, the time those human resources spend in production), drugs, consumables and the use of buildings and equipment in delivering health care services. Production means using inputs to deliver **outputs** by way of **processes**. These outputs are variously known as services or interventions and include examinations, tests, surgeries, consultations and treatments of all kinds, including hospital stays paid by the day. As Figure 1 shows, while inputs are usually paid by salaries for people and by various purchasing arrangements for non-human inputs, outputs are commonly paid for by **Fee for Service (FFS)**—payments for specific tasks or procedures such as a patient consultation, an immunization or a surgical procedure. The provider may then be responsible for purchasing inputs, and now faces a financial incentive to deliver as many services as possible, so long as the fee exceeds the cost of delivery. A number of procedures corresponding to a diagnostic-related group (DRG) may be financed by a single payment as a way to control the incentive to over-produce individual services and bill for them. There can be a single price for a hip replacement or a normal birth rather than separate payments for the surgeon or obstetrician, the nurses and other staff, the other required inputs and the days and services provided by the hospital. Bundling of payments, of which DRGs are an example, can be extended to the care for a patient's specific condition (such as diabetes) during some interval ranging usually from a month to a year. If a provider assumes the responsibility for all the care a patient may need during that interval, even for several conditions, and is paid a fixed amount for providing that care, the payment method is called capitation.

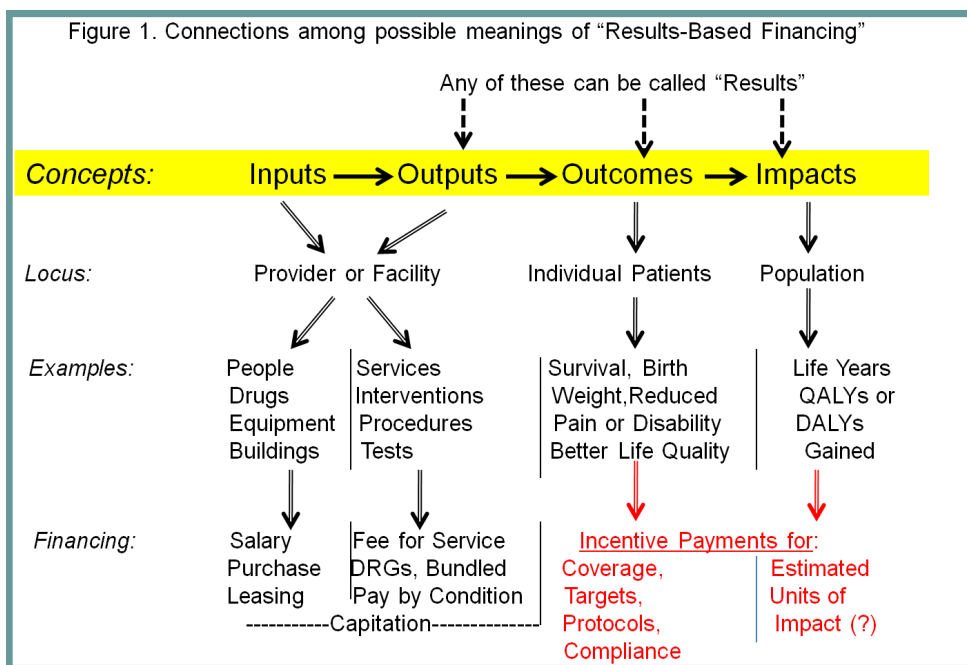
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[1] The views expressed here are the author's own and should not be interpreted as reflecting the views of Health Affairs, where the author is a Deputy Editor, nor of the World Bank or its staff or Executive Directors.

Moving from FFS to DRGs to bundled payments to capitation shifts the financial risk progressively from the payer to the provider and strengthens the incentive to keep the services delivered to a minimum consistent with the desired quality and outcomes of care. Risk also changes character, moving from that associated purely with the procedure to insurance risk (Miller). Payment contracts under capitation may also specify particular outputs that providers must deliver. This shifting of risk to the provider is often a reason for applying some variant of RBF at the margin or at least not basing a provider's entire revenue or income on results. This is particularly important if providers, usually in the public sector, are accustomed to being paid salary with no additional incentives for performance.

Shifting more of the risk to providers does not necessarily reduce the risk to the payer by the same amount, because the latter still has to determine when the conditions for payment have been met, with the risk of paying too much for poor or inadequate results or of failing to pay when the provider has complied. The costs of verification may be considerable, and tend to increase as one moves the definition of results from outputs toward impacts. This will be the case particularly if compliance is measured by survey data, with very large samples needed to detect and reward improved results with sufficient confidence for the payer.

It should also be noted that the use of RBF may shift the risks that the beneficiaries of a program face. If the results are not achieved—whether because of failures by providers or because the beneficiaries do not behave as expected—the latter stand to lose the benefits of the program. Those benefits may include payments in cash or in kind (such as food) as well as the services the program is designed to deliver, as discussed below.



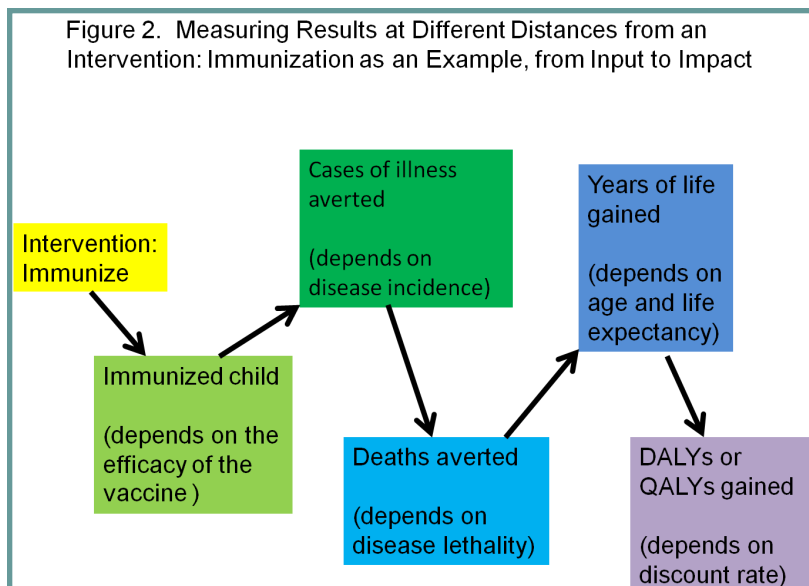
However they are paid for, the primary locus of both inputs and outputs is usually the provider, whether that is an individual, a group, a facility (clinic, hospital or health post), a practice or an organization. Outputs are intended to yield **outcomes** that benefit the patient or beneficiary. Good prenatal care should mean babies born with an adequate weight and an excellent chance of surviving the neonatal period. A hip replacement, properly delivered, should improve a

patient's mobility and reduce disability and pain; and so on. Clearly an output can be defined without regard to quality, but the outcome for the patient generally does depend on quality. This leads to efforts to build into the method of payment an incentive for good quality and therefore requires something more than just FFS. The Global Partnership on **Output-Based Aid (OBA)** explicitly calls both outputs and outcomes, "outputs", but this muddies a useful distinction; "results" is a better umbrella label. OBA is discussed further below.

The last stage shown in Figure 1 is **impact**, which refers to the effect on the health of a population and is the product of the number of patients who experience an output and their average outcome. Because the health effect in a population may include people living longer and with better quality of life as measured by synthetic units such as Quality- or Disability-Adjusted Life Years (QALYs or DALYs), that effect can sometimes only be roughly estimated at the time that outcomes occur and could only be fully known afterwards, possibly after many years. Furthermore, synthetic measures involve subjective parameters—disability weights or similar values placed on different functional limitations, and discount rates—on which consensus may not exist. This makes it difficult to pay a fixed price for each QALY or DALY or additional life year that follows from the delivery of health care services, and in consequence there is no customary way to pay providers for impact, however desirable it might be to do so.

However, this is primarily a problem of the time horizon and the uncertainty about long-run impact. If a program includes an incentive payment for each newborn child who survives for a year, or for five years, the impact can be measured within the typical accounting period of an RBF program of three to five years. Neither the providers who deliver care to newborns and small children nor the party financing the program need to assume the risks associated with mortality beyond some young age. To tie the payment more closely to results attributable to the program, such a reward for helping infants and children survive could be based on only those newborns at high risk of early death as judged by criteria defined in the program. If done correctly, such an impact payment would avoid paying a bonus for children who were at little risk of early mortality and in principle would concentrate effort on those at high risk.

Figure 2 illustrates how “results” can be defined and measured or estimated at different removes from the intervention that causes those results, for the specific case of immunization. The simplest way to pay for results is to pay providers to immunize children and assume that the later-stage results follow from what is known about vaccine efficacy, disease incidence, lethality or case fatality and the age at which death or other health damage might occur in unimmunized children. Paying for results farther along the chain toward impact might then take the form of bonuses for further reducing incidence by achieving herd immunity; or for reducing mortality more than proportionally by concentrating effort not on the children easiest to reach but on those most at risk if not immunized. RBF can take as many specific forms as there are specific types of results one wants to achieve, with different incentives appropriate to each stage.



It is true that as one moves from paying for outputs to paying for outcomes and from there to impact, it becomes more complicated to attribute results to the program and to assure that payments really reward what the program achieves; but in principle, results can be defined and measured or estimated anywhere along that continuum, and payments established accordingly. It is probably also true that it may be helpful to include several incentives in a program, operating at different stages from outputs to impacts. In that case it is desirable to have only a small number of incentives, and to ensure that they are not only compatible—a minimal requirement—but that they operate in sequence, rewarding a provider for following a protocol even if the outputs are worse than expected, or for achieving desired outputs but not meeting targets for outcomes, and so on. This approach may be particularly valuable in the early stages of implementation.

Moving from processes toward impacts often increases the scope for entrepreneurship and innovation on the part of the agent or recipient. This can have negative consequences if there is a well-established protocol for how to achieve the desired results but providers do not follow it because they are not required to. In the absence of a clearly best way to proceed, though, leaving more scope for experimentation and innovation can yield dynamic as well as static benefits, by encouraging the development of better processes and protocols.

Paying for (some definition of) results

If the object is to avoid simply paying for inputs, then any payment system must be connected at least partly (perhaps only at the margin) to outputs or outcomes or both. Because population impact is the sum of individual outcomes, or the product of average outcome and the number of beneficiaries, a program that tries to pay for impact depends on defining and quantifying outcomes. Either of these two middle stages in Figure 1 can be called **results**: the outputs result from using inputs in production, and the outcomes result from or are equal to the effectiveness of the outputs, including their quality. Note that this broad understanding of the terms implies that even FFS payments are a form of RBF, although by

themselves they are not usually so called, because they pay for outputs rather than inputs. Even traditional FFS may represent a pronounced change to a system in which all payment was previously for inputs. Moving from FFS to DRGs (in the hospital sector) similarly is a large change, in which what changes is the definition of an output. However, as described below, FFS payments may be combined with other forms of payment for results and so be incorporated into RBF. Since no single form of payment for health care is without drawbacks and the possibility for perverse incentives, mixed systems of payment will, if well-designed, nearly always be superior (Ellis and Miller). The point of RBF programs in general is not to promote a particular form of payment but to connect whatever payment methods are used to the desired results, however those are defined.

These are not the only terms in use for the various efforts to develop incentives for better payoffs from health care. Several terms refer to “performance” rather than “results”, as **Performance-Based Incentives (PBI)** (Eichler, Levine et al.), **Pay for Performance (P4P)** or **Performance-Based Payment** (Eldridge and Palmer). Note that none of these terms includes the word “financing”, but “pay” or “payment” takes its place. PBI, in contrast to all the other labels mentioned so far, emphasizes the incentives which the payment or financing method creates for the provider or beneficiary. Payment then depends on whether the incentives are effective—whether the actors to whom they are directed actually behave as desired and expected. Perhaps because all forms of RBF try to set up effective incentives and motivate behavior change, “incentives” are implicit no matter what label is used, and PBI remains the only label to include the word.

“Performance” is a neutral word, just like “output” or “outcome”; providers can perform well or badly in producing services. To refer to incentives or payments as based on performance means rewarding good performance or penalizing bad performance, or both. Performance actually *occurs* at the process stage where inputs are turned into outputs and may be judged at that stage, by what are usually called process indicators; but in practice it is also *judged* by output or outcome indicators at subsequent stages. In that sense, “performance” spans the same range as “results”, so that the two terms are in principle interchangeable even though one sounds like describing what a provider *does* and the other sounds like describing what the provider *achieves* for the patient’s benefit. As used in the several country program examples cited by Eichler, Levine et al., PBI is essentially synonymous with RBF; so is P4P. It is a historical accident, perhaps tinged with institutional rivalry and the desire to “brand” particular models, that all these terms exist.

Performance-Based Financing (PBF), sounds even more like a synonym for RBF. However, it has acquired a more restricted definition. As used in several programs in Africa (Burundi and Rwanda, with pilot projects in Cameroun, Congo and the Central African Republic), PBF is defined as “FFS-conditional-on-quality-of-care” (Soeters et al.). That is, health care providers are paid for delivering specific services, provided the services follow explicit protocols, with a system of inspection and auditing to assure compliance and to raise quality where necessary. Performance-based payments are also provided for the teams that carry out these inspections, to motivate them to be thorough and accurate. PBF is therefore a subset of RBF.

The adoption of PBF is sometimes regarded as “akin to health system reforms” because multiple changes are introduced in how the health system functions (Fritsche). Paying providers partly by FFS, on top of salary or whatever payment system was already in place, gets away from only paying for inputs and puts the incentive on outputs; and the requirement to follow protocols is meant to link outputs to outcomes. The NGO responsible for this introduction in several countries supports the model with training courses and a manual (CORDAID). All RBF programs similarly require training and reference materials; PBF in the examples mentioned here is a somewhat more uniform program, although details of the incentives and payment may vary considerably. For example, the variable take-home earnings of providers in health facilities subject to PBF can be 60-100% of base salary in Rwanda and up to 100% of base salary in Burundi. At these levels, the incentives are incremental and not simply marginal. The high level of PBF payments in Burundi means that about 20% of total health expenditure comes from the program.

Three other terms are also in use. **Output-Based Aid (OBA)** is “a results-based mechanism that is used to deliver basic infrastructure and social services to the poor.” These services can include piped water, energy (e.g., natural or bottled gas), health care or public transportation. As with other forms of RBF, OBA links payments to results through a contract, which may be with a government agency, an NGO, an insurer or a private service provider, for profit or non-profit. One distinguishing feature is that payment provides a subsidy to cover the difference between the full cost of providing a service and the price that poor users can afford, so it is explicitly based on an estimate of ability or willingness to pay. Payment can be a fixed amount per service user or subscriber in health programs, typically from a donor or central

government to an NGO or other service provider. If the payment is proportional to use of the service—for example through subsidy of beneficiaries’ electricity costs, then the payment is a form of FFS. OBA programs may include a performance bonus to the service provider for extending the service to additional beneficiaries, somewhat like a recruitment payment for expanding coverage. Another characteristic is that the subsidy is often used additional to private sector financing or leverages such financing by putting the service within reach of consumers too poor to pay the full cost. Other forms of RBF may also subsidize poor consumers to use the services of private providers, although in health programs the providers are most often public.

Performance-based contracting (PBC) refers to the mechanism by which any performance- or results-based incentive is expressed in a formal agreement between the parties. It does not in principle describe a distinct type of scheme; every form of RBF requires some kind of contractual linkage to specify what is to be paid for, and under what conditions. However, as with PBF, the term has also come to be used in a more restrictive sense. In programs in Haiti, Cambodia and Afghanistan, PBC refers to contracts between a financing agent and an NGO, with payment depending on achievement of a performance measure that may include coverage targets and quality norms for a set of services. The contrast with PBF is that the latter concentrates on agreements with providers, as described above. Of course, the NGO operating under a contract may also be the provider or may in turn contract with providers, so the distinction between PBF and PBC is not strict; and PBC can be used more generally to refer to any contract where payment depends on a specific definition of performance.

The other term is **Cash on Delivery (COD)** (Birdsall, Savedoff, Mahgoub and Vyborny). While this is a form of RBF, it is also described as “a new approach” to external assistance generally (and not necessarily just to health; the example developed in the publication refers to primary schooling). The principal—typically an aid donor—agrees with the agent or recipient on the objective, on what is to be delivered, for example the number of children who should complete primary school. The agent is typically expected to be a government or sub-governmental agency, but the concept could be applied to an NGO or even a private firm. The agent is then left free to determine how to achieve the desired result and receive the cash, without interference from the principal or burdensome requirements for intermediate steps, supervision or reports. COD Aid 1) pays for outcomes not inputs, (2) relates hands-off funders to responsible recipients, (3) requires independent verification (4) depends on transparency through public dissemination of results and (5) is complementary to existing aid. COD Aid is also most clearly distinguished from OBA in that it aims primarily at the funder-country relation, not at the funder-provider relation. The objective is to encourage innovation by the recipient and allow it to concentrate on the results rather than on the requirements and demands of the principal. The “OD” part of COD means that, in contrast to much external assistance, the recipient does not get any of the cash up front. The financing needed to deliver the services has to come from some other source, such as the recipient’s regular budget or loans not tied to the COD program, which may be repaid from the COD funds.

Defining incentives and whom they affect

The terms RBF, PBF, COD and P4P all emphasize financial incentives; providers or agents stand to earn more for compliance with the terms of the contract or to lose money for failing to do so. PBI sounds like a broader term, recognizing that other, non-financial, incentives may also affect how providers perform. However, “financing” means only that the cost of providing incentives has to be met; it does not imply that the rewards have to be exclusively monetary. Actual programs described as RBF may also incorporate non-monetary incentives but usually concentrate on monetary rewards and penalties. This emphasis reflects both the belief, widespread among economists, that financial incentives are more powerful or more dependable than motives such as professionalism, maintaining a good reputation with peers and patients, or the desire to benefit mankind; and the fact that programs usually involve new money rather than simply shifting some of current expenditure on health care from one channel to another. Non-monetary rewards are typically more important when incentives are directed to program beneficiaries than when they apply to providers. They can include the health care, educational or other benefits in kind of participating in a program, or non-cash transfers such as foodstuffs.

Depending on the type of incentive, it may be applied directly to individual healthcare providers, to a group of them who work together, or be aimed to influence performance by applying to a whole organization responsible for the care of a population, a sub-national level of government, or a national government which accepts assistance from a donor. In any case, the incentive must be defined so that everyone can tell whether it generates an adequate response. (Some incentives are easier to “game” by misrepresenting performance than others.) There are several ways to do this. The

simplest, as noted above, is to replace payment for inputs with FFS. In this case the incentive is: more output means more payment, in the same proportion. A more complicated incentive arises if payment is made only for outputs that are produced following a specified protocol or guideline, as in PBF; or those outputs that do follow the protocol are paid at a higher rate than those that do not, creating an incentive to deliver better quality. The incentive can be expected to be effective if the extra payment equals or exceeds any additional cost required to follow the protocol so that there is a net increase in payment. (It might also be effective without any additional net income if there are rewards in the form of professional recognition or greater satisfaction with outcomes.) For example, the payment for prenatal care can be higher if the woman's first consultation occurs before the 20th week of pregnancy; or the payment for a delivery can be higher if the baby weighs at least 2500 grams, or if its Apgar score five minutes after birth is 6 or more (although this last indicator is harder to verify and therefore less reliable), as occurs in *Plan Nacer*, a maternal and child health insurance program in Argentina (Musgrove).

When a provider agency such as a hospital or clinic receives a financial reward for performance, it may be free to distribute all or part of the money to its staff or to use it for investments to improve capacity or quality. As described in detail below, *Plan Nacer* includes such a mechanism, with variation allowed from one facility to another in how the funds are allocated and in how the decision is made.

Payment under these conditions depends on the number of patients who receive the intervention in question, without reference to those who do not. There is therefore an incentive for supplier-induced demand, and this is reinforced if there is an explicit payment for enrollment of potential patients or beneficiaries. Such demand is desirable in these circumstances; being supplier-induced is not always a bad thing. Thus a provider or other agent can be paid for recruiting pregnant women into prenatal care, paid more for doing so early in the pregnancy, paid more according to the number of consultations she receives, paid for delivering the baby, and paid a further reward for the baby being healthy and of adequate birth weight.

Recruitment, or simply registration of patients or other beneficiaries who present spontaneously for care, defines a denominator population. The members of this population—all registered pregnant women, all children under the age of five, all HIV-positive individuals, for instance—who actually receive the intervention on which the incentive is defined or who achieve the desired outcome from it, constitute the corresponding numerator. The ratio of these two numbers is the coverage of the service or outcome at which the incentive is aimed. Coverage can also be estimated based on an estimate of the potential beneficiary population rather than on the number actually enrolled. Coverage can be the basis for an incentive, and that can be either linear or non-linear. A **linear coverage** incentive pays the same amount for each one percent of coverage, for example, up to 100 percent or coverage of the entire denominator population. A **non-linear incentive** may pay only if the coverage reaches or exceeds a specified level, such as requiring that 90 percent of newborns weigh 2500 grams or more, or 85 percent of all two-year-olds be fully immunized.

Targets like these are a common way of defining an RBF incentive; they motivate the responsible party to meet or comply with the target but provide no incentive to go beyond it, since the payment is all-or-nothing if the incentive has only one step. Of course, a coverage incentive can, at the cost of greater complexity, be organized in several steps, paying something for reaching 50 percent coverage, for example, and still more for achieving 85 or 90 percent. A coverage target can be applied on top of an ordinary FFS payment or one that depends on following a protocol, so that there is some reward for outputs or outcomes that fall short of the desired coverage. Targets, and rewards for meeting them, are not necessarily defined once-for-all: repeated adjustments may be needed to steer the program toward better performance. This is partly because while it may be obvious in what *direction* people are expected to respond to the incentives, it is harder to estimate the *magnitude* of their reactions and the collateral effects on other parts of the system. Learning also can be expected to occur among both the program participants and in the agency financing the RBF program. In consequence, programs that operate under the same general logic, such as PBF, can include incentives of different sizes and detailed structure.

Incentives for program beneficiaries

So far, the incentives analyzed here have concentrated on the supply side, that is, on incentives to some person or agency responsible for delivering the desired services or results. But one can also apply the concept of results or performance to the consumers of those services, offering them rewards for using the services. One relatively widespread application is the type of program called **Conditional Cash Transfers (CCT)** which differs from traditional welfare programs for poor

households in that the payment of cash is conditional on specific actions by the household or some of its members. Typical requirements in several Latin American countries are to ensure that children attend school (usually at the primary level), are fully vaccinated, or have regular medical check-ups; or that their mothers or both parents attend meetings or classes to learn more about health, child-rearing and nutrition (Glassman, Todd and Gaarder). Regular (most often monthly) cash payments are always part of the reward in these schemes, but participating households may also receive food or other rewards in kind, so that "CCT" actually refers only to one of the incentives, which may but need not be the largest one in value. Households participating in a CCT program do not sign a legal contract, although they must register formally in order to participate. There is still in effect a PBC, a contract that binds the donor to deliver cash or goods if the program participants comply with requirements.

Payments or material rewards in a CCT program are ex-post; the household receives them only on verification of compliance. A voucher program has some similarity to this kind of demand-side program, in that the voucher is of value to the recipient only if the corresponding service is used. It differs, of course, in being given ex-ante; the beneficiary may receive the voucher but never use it, so that it does not effectively constitute a reward for doing anything. To describe a voucher program as a form of RBF therefore stretches the definition of the latter compared to the other types of program discussed here. Moreover, a voucher cannot be used for anything except the specific schooling, health, transportation or other service, and so does not qualify as a type of CCT, in which the beneficiary is free to spend the cash as (s)he wishes. Unconditional cash transfers are by definition not CCT, even if they sometimes yield the same desired results as payments that come with conditions on beneficiary behavior. But in such cases there is no specific incentive for the recipient, nor for any provider; and absent a clear incentive, no such program can be considered a form of RBF,

Just as incentives to providers concentrate on outputs or outcomes and cannot easily reward or penalize long-term impacts at the population level, incentives to households also have to be geared to verifiable and short-term actions. Parents can be rewarded for keeping children in school or attending clinics regularly, but not rewarded or penalized so easily or fairly according to their children's school grades or achievement or their state of health. Demand-side and supply-side incentives can be structured to be complementary; in fact, they may fail to achieve the results wanted if they are not matched. Paying parents to bring their children to school or clinic requires that teachers and health providers be available and of adequate quality. On the other hand, incentives for recruitment on the supply-side, or to raise the quality of services, are likely to increase demand for those services even without any specific additional incentives on the demand side.

Plan Nacer in Argentina provides an example: part of the financing has gone to provide equipment and training to the participating health care providers to assure an adequate supply response to the increased demand. The situation is asymmetric: demand-side programs probably need complementary efforts on the supply-side, more than the other way around. However, supply-side incentives may require efforts to increase demand by supplying information about the availability and particularly the quality of services. This is especially likely to be the case if the intended beneficiaries have a low opinion of the existing services. *Plan Nacer* provides an example of this, too, as do OBA programs to deliver water or sanitation services to potential consumers who do not understand the full value of those benefits, even when their cost is subsidized. The issue in an RBF program is often not simply supply- versus demand-side incentives but rather the proper combination of incentives and the degree to which they are mutually reinforcing in producing results.

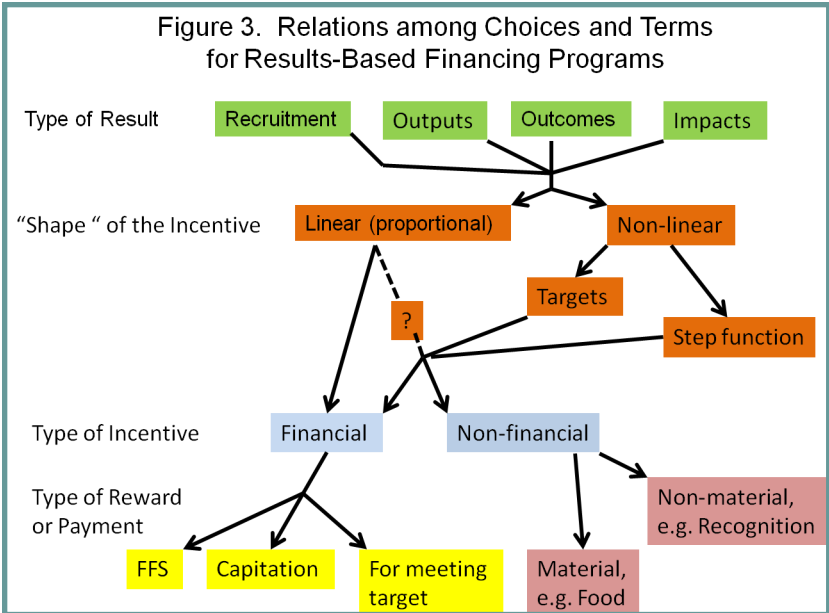
If one were starting with a blank slate, "performance" might be the best general term to use for these ideas, and it seems to have been the first to become widely used, particularly in the form of P4P. It is the term chosen for the Performance-Based Incentives Working Group at the Center for Global Development (Eichler, Levine, et al.; Glassman, Todd and Gaarder) and for a major study of Performance Measurement for Health System Improvement (Smith, Mossialos, Papanicolas and Leatherman). Because "incentives" describes the key mechanism for trying to get "results", and does not imply only financial incentives, PBI appears to (to this observer) to be the most general way of describing what all these terms refer to. However, it is too late to simplify the vocabulary to a single term, and meanwhile both RBF and PBF have become entrenched and distinguished from each other. PBF in particular, as defined above (FFS plus quality incentives) is now the only term used in several African programs. RBF remains the umbrella term for all these variants.

Concepts and their relations

All the terms considered here consist of three words. Except for P4P, CCT and COD, the first word always refers to the objective—**results**, **output**, or **performance**. When that is the case, the third word always refers to the reward—**incentive**, **financing**, or **aid** (Perrot et al., p. 17). The words "output" and "aid" appear only in the OBA label. CCT is similar

in that it refers to rewards (but needs two words, **cash transfers** to do so). The middle word is most often **based**, as in PBI, RBF, PBF or OBA. P4P simply reverses the order of objective and reward, so it matches this sequence when it is re-named **Performance-Based Payment** (Eldridge and Palmer). The term COD also refers to the cash in the first term, saying that it will be paid on delivery but not saying precisely *what* is to be delivered; there is no word for an objective in the name, just as there is not in CCT. These two terms do not *sound* like examples of RBF; they arose because of the need to find names for programs with distinctive features.

Is there a logical way to relate all these terms that helps to explain where they are equivalent or where one can be regarded as a subset or narrower definition of another? Getting the concepts in the right relation means more than locating the terms relative to one another; it also means clarifying the choices that distinguish one kind of program from another—choices about the type of result desired, the way the incentive is constructed and the form of payment or reward. Figure 3 attempts this task by emphasizing these choices and classifying incentive programs accordingly. The simplest path from the type of result desired to the reward for delivering it runs through purely financial incentives that



are proportional to the number of beneficiaries recruited or served or the volume of outputs or outcomes. There does not seem to be any easy way to relate non-financial rewards proportionally to results, except in the simple case of material rewards to program beneficiaries, each of whom receives the same food basket or other material payment for participation. Because programs sometimes reward the enrollment of eligible beneficiaries apart from whatever services are provided for them, the figure distinguishes recruitment as one type of result as well as outputs and outcomes.

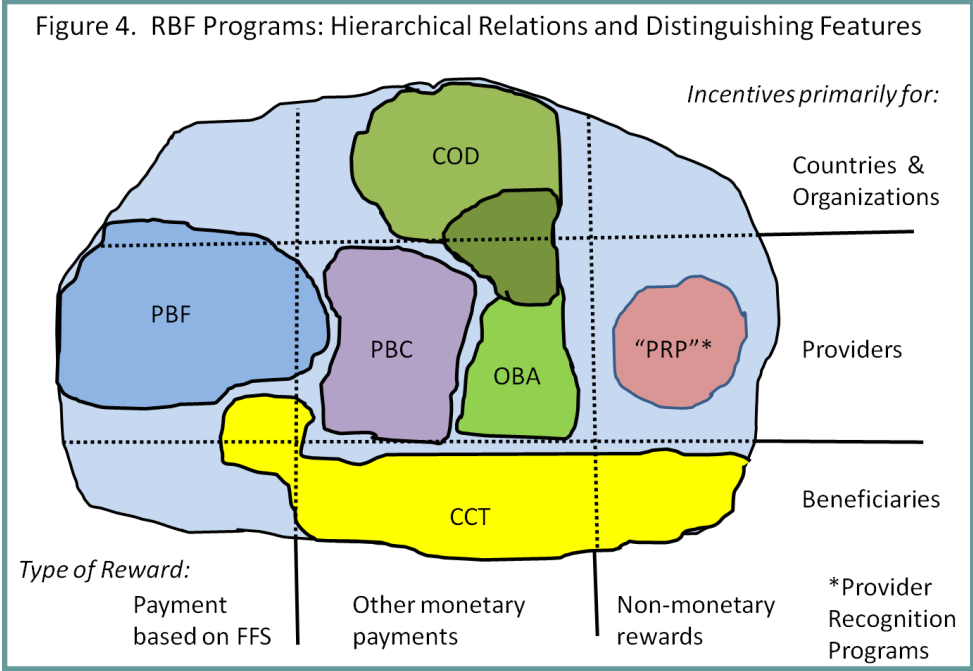
The task of making sense of the variety of terms is complicated because it may be relatively simple to characterize a specific

incentive (output, linear, financial, for instance), but much harder to describe a whole program because the latter may include several distinct types of rewards or punishments and different mechanisms for delivering or withholding them. *Plan Nacer*, the maternal and child insurance program in Argentina, provides an example since it involves at least four incentives. Moreover, these operate at the two different levels—the provincial Ministries of Health, which receive funds from the national ministry, and the providers that contract with the provincial Ministries to deliver services to the program beneficiaries:

- (1) There is a capitation payment, 60% of which is paid to the Provincial Ministry on verification of enrollment of an eligible beneficiary;
 - (2) The remaining 40% of the capitation payment is potentially available to the Provincial Ministry in increments of 4% for meeting each of ten targets that are defined by coverage of specified services or other activities;
 - (3) Public providers are paid FFS for delivering the services in the benefit package, on top of their traditional budgetary financing from the Ministry, making RBF incremental to the existing financing rather than replacing it; and
 - (4) In ten of the participating provinces, providers are eligible to receive part of the difference between the revenues to the Ministry (for enrollment and target achievement) and its expenses in paying for services, and can use up to 50% of such payments as bonuses for staff. Allowing providers to share in the incentive payments appears to improve the program's performance.
- All these incentives qualify as RBF, but they correspond to different paths through Figure 2, including everything except

non-financial rewards (and the Argentine government decided in 2010 to consider the provision of food packages to beneficiaries, which would make the program also resemble a CCT).

Despite the difficulty of identifying any particular program with just three words that indicate how these choices are made, it is possible to sketch a rough hierarchical relation among these terms: Figure 4 suggests how. The areas in the figure do not represent the relative coverage or importance of different kinds of programs, but only how they are similar to or different from one another. The most inclusive concept, following World Bank usage, is RBF; it could also be called PBI. The RBF space is classified along two dimensions: whether incentives are directed primarily to countries (governments) or organizations, to providers or to beneficiaries; and by whether rewards are monetary and based on FFS, make financial transfers in other forms, or are non-monetary, allowing for nine potential cells or combinations of the target of an incentive and the type of reward. The “provider” category includes managers who oversee and can motivate doctors and nurses, for example.



PBF is a proper subset of RBF, defined by the use of FFS together with quality-related incentives. When OBA is applied to health care it is a proper subset of RBF, distinguished by the emphasis on aid, which is usually foreign aid or external assistance but applies equally well to domestic aid from a government or NGO. When the subsidy payments are related to service consumption by beneficiaries, OBA also has an element of FFS and therefore overlaps with PBF. COD, in turn, overlaps with OBA because the authors

emphasize it as applied to foreign aid, although the logic of COD can be applied to non-aid programs, simply as a different way to contract for results. The distinguishing feature is neither the incentive nor the reward, but rather the relation between the financing agent and the recipient. This need not be a classical arm’s-length relation between principal and agent, because the agent is likely to share, at least in part, the goals of the principal.

OBA and COD are shown as financing only monetary rewards, but these are not paid as FFS to individual providers. Particularly for COD the emphasis is on outcomes rather than outputs. COD and OBA also typically differ in that the former provides incentives chiefly to governments and organizations while the latter deals most often with providers of services—which may also be large organizations, especially for infrastructure. Figure 4 shows the overlap of COD and OBA; other combinations of RBF programs may also overlap at the margins, depending on exactly how they are defined. (All the boundaries in the figure really should be broad and somewhat blurry, to emphasize that these characterizations are broad rather than sharp-edged.)

CCT programs are another subset of RBF, distinguished by their application primarily to beneficiaries rather than only to providers and often differentiated from many programs by their inclusion of non-monetary rewards. These distinctions are not perfectly strict, however. For example, programs not regarded as CCTs may also include incentives for beneficiaries and offer non-cash benefits, and some part of a COD contract might be based on FFS payment for specific services. If one were to treat voucher programs as a form of RBF, they would be located in the cell in Figure 4 defined by incentives to beneficiaries and by non-financial rewards. As noted above, however, vouchers do not really seem to qualify as RBF. Finally, one can consider what might be called “provider recognition programs” that attempt to motivate and

reward providers exclusively with non-material incentives such as enhanced reputation. For example, a hospital or clinic that is judged to provide good quality care and therefore to produce good outcomes can be awarded a “gold star” which should help it to attract patients. Such programs also sometimes exist at the community level and within professional organizations and governments, but because of their limited scope and zero or near-zero cost are not usually considered RBF even though they can be located in an otherwise empty space in Figure 4.

A simple glossary of terms

The hierarchical relations in Figure 3 and the distinctions illustrated in Figure 2 can be summarized in a brief glossary of weakly nested definitions. The object here is to provide relatively broad definitions, not blueprints, recognizing that a specific RBF program of whatever type is truly characterized not by any of these labels but by the details of who is rewarded, for what activities or results, by way of which incentives, and under what rules for compliance and verification.

Results-Based Financing, RBF, is defined in the Abstract, above. It refers to any program that rewards the delivery of one or more outputs or outcomes by one or more incentives, financial or otherwise, upon verification that the agreed-upon result has actually been delivered. Incentives may be directed to service providers (supply side), program beneficiaries (demand side) or both. Payments or other rewards are not made unless and until results or performance are satisfactory; and they are not used simply to buy recurrent inputs, although the service providers who receive the payments may use the funds to purchase inputs. In many cases RBF payments are additional to the traditional or current sources of financing for inputs, as when providers continue to receive salaries and are also eligible for results-based bonuses. There may also be supplemental investment financing of some inputs, including training and equipment to enhance capacity or quality. Verification that results were actually obtained is an essential feature. The ideal is perhaps for verification to be undertaken by a neutral third party, even if the principal pays the corresponding costs, but many arrangements are possible. Ex ante verification (before payment) can be complemented by ex-post assessment. The definitions of results or objectives and rewards are embodied in contracts between one or more principals who provide the incentives and one or more agents who contract to deliver the specified results, outputs or outcomes. The contract may also specify varying degrees of collaboration between principal and agent, supervision of the latter by the former, or other aspects of how the results are produced, such as protocols to be followed or targets to be met.

Pay for Performance (P4P), Performance-based Payment and **Performance-Based Incentives (PBI)** can all be considered synonyms for RBF. Performance in these labels means the same thing as results, and payment means the same thing as financing. These terms do not introduce any additional distinctions.

Performance-Based Financing, PBF, in contrast to other labels using “performance”, is a form of RBF distinguished by three conditions. Incentives are directed only to providers, not beneficiaries; awards in current programs are purely financial, although discussion in some countries contemplates provided non-financial rewards such as improved housing or transportation or the provision of schooling, which have been shown in Ethiopia to be significant inducements for providers to locate in small towns or rural areas (Hanson and Jack). Cash payment is by FFS for specified services; and payment depends explicitly on the degree to which services are of approved quality, as defined by protocols for processes or outcomes. Payments can be made to facilities or to individuals; “provider” includes both categories and can refer to any level of the health system, from community workers to hospitals.. The relation between results and payments can be linear or non-linear, in the terms of Figure 2.

Performance-Based Contracting, PBC, is a form of RBF that departs from simpler types of contract in setting a fixed price for a desired output and then adding a variable component that can reduce payment for poor performance or increase it for good performance compared to the standard defined in the basic contract (Loevinsohn). The variable share at risk is often small, of the order of five percent of the base price in either direction, but it can be much larger, as in the PBF payments in Rwanda and Burundi, described above. These are otherwise classical contracts that do not involve FFS or other output-related payments. They are usually applied to NGOs; the fixed price component leaves it to the provider to allocate funds among inputs. (In that respect, PBC somewhat resembles COD; the funder does not determine how the funds are used.) One may describe PBC as “contracting out” to distinguish it from PBF, which is a form of “contracting in”.

Output-Based Aid, OBA, is a subset of RBF, usually applied to non-health sectors, which in practice includes only financial rewards. Output is used as a synonym for results and does not usually include results better classified as outcomes. The distinguishing feature is that the principal is an aid donor; the agent is therefore typically a recipient government or public

agency, although it could be an NGO or private for-profit organization if external assistance is provided directly to such an entity rather than passing through a government.

COD, Cash on Delivery, is a subset of RBF; since it is defined as "a new approach to foreign aid" it overlaps with OBA. However, delivery may refer to outcomes rather than just outputs. It is distinguished by the maximal degree of autonomy for the agent in deciding how to produce and deliver the results. Once the objectives and the payment are contracted, the principal does not dictate or supervise the agent's decisions or methods. This difference from RBF or OBA programs in general is procedural rather than referring to the objectives, the verification mechanism or the manner of payment.

CCT, Conditional Cash Transfer, describes demand-side programs where the incentives apply exclusively or primarily directly to the program beneficiaries rather than to the agent(s) delivering services. Results are defined by the enrollment of beneficiaries in the program and their compliance with required behaviors such as consuming specific services. Incentives to recruit and enroll beneficiaries or to provide them with services may also apply on the supply side in these programs, as in RBF generally. For the name CCT to apply there must be a financial payment to the beneficiaries for compliance. CCTs typically offer non-financial rewards, such as food packages, as well.

The different labels do not adequately distinguish the program features because the same word sometimes has different meanings. "Performance" is generally synonymous with "results", but the substitution of one word for the other makes PBF a narrower term than RBF. Similarly, "cash" in COD is more restrictive than in CCT, since the latter often includes non-cash rewards. ("Based" always has the same meaning in different terms, but it does not appear in COD and is replaced by "conditional" in CCT.)

Any of these concepts can in principle be applied in any sector. They have frequently been used in health (Brenzel et al.; Eichler, Levine et al.; Soeters; WHO); provide a way to improve results in education (Birdsall, Savedoff et al.); and have also been used, among other things, to expand the delivery of safe water and of natural gas for domestic use (GPOBA). The appropriate objectives and incentives, including the price, for financial incentives, vary among applications; the logic of paying for results rather than inputs is the same.

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References

(This is not a literature review; only a few selected sources are cited in the text, primarily to establish definitions or provide examples. See the extensive bibliography in Brenzel et al. and the sources in the other publications indicated below).

Nancy Birdsall and William D. Savedoff, with Ayah Mahgoub and Katherine Vyborny, *Cash on Delivery: A new approach to foreign aid with an application to primary schooling*. Washington, DC: Center for Global Development, 2010.

Logan Brenzel, with contributions from Anthony Measham, Joseph Naimoli, Amie Batson, Caryn Bredenkamp and Rachel Skolnik, *Taking Stock: World Bank Experience with Results-Based Financing (RBF) for Health*. World Bank, HDNHE, 30 June 2009.

Catholic Organization for Relief and Development Aid (CORDAID), *Course book on Performance-Based Financing*. Available at <http://www.cordaidpartners.com/rooms/performance-based-financing>

Cynthia Eldridge and Natasha Palmer, *Performance-based payment: some reflections on the discourse, evidence and unanswered questions*. *Health Policy and Planning* 2009; **24**: 160-166.

Rena Eichler, Ruth Levine and the Performance-Based Incentives Working Group, *Performance Incentives for Global Health: Potential and Pitfalls*. Washington, DC: Center for Global Development, 2009.

Randall P. Ellis and Michelle McKinno Miller, *Provider Payment Methods and Incentives*. In Kris Heggenhougen (ed.), *Encyclopedia of Public Health*. New York: Elsevier, 2008.

Gyuri Fritsche, *Indicators/Services for Purchase Through Performance-Based Financing*. Unpublished Concept Note. World Bank, HDNHE, 10 September 2004.

Amanda Glassman, Jessica Todd and Marie Gaarder, *Performance-Based Incentives for Health: Conditional Cash Transfer Programs in Latin America and the Caribbean*. Center for Global Development Working Paper No. 120. Washington, DC: Center for Global Development, 2007.

Global Partnership on Output-Based Aid, *Annual Report 2009: Supporting the Delivery of Basic Services in Developing Countries*. Washington, DC: World Bank, 2010..

Kara Hanson and William Jack, *Incentives could induce Ethiopian doctors and nurses to work in rural areas*. *Health Affairs* 2010 **29**(8): 1452-1460.

Benjamin Loevinsohn, *Performance Based Contracting for Health Services in Developing Countries: A Toolkit*. Washington, DC: World Bank, 2010. Web-based summary of a 2008 World Bank publication of the same title. Available at www.wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2010/0503/000334955_201.

Harold D. Miller, *From Volume to Value: Better Ways to Pay for Health Care*. *Health Affairs* 2009 **28**(5): 1418-1428.

Rodrigo Moreno-Serra and Adam Wagstaff, *System-wide impacts of hospital payment reforms: Evidence from Central and Eastern Europe and Central Asia*. *Journal of Health Economics* 2010 **29**: 585-602.

Yogita Mummsen, presentation of the GPOBA at the World Bank, 25 March 2010.

Philip Musgrove, *Plan Nacer, Argentina: Provincial Maternal and Child Health Insurance Using Results-Based Financing (RBF)*. Submitted to the World Bank, 4 March 2010.

Jean Perrot, Eric de Roodenbeke, Laurent Musango and Gyorgy Fritsche, *Performance Incentives of Health Care Providers*. Discussion Paper No. 1, 2010. Geneva: World Health Organization, January 2010. Available at http://www.who.int/contracting/DP_10_1_EN.pdf.

William D. Savedoff, *Basic Economics of Results-Based Financing in Health*. Submitted to the World Bank, 9 March 2010.

Peter C. Smith, Elias Mossialos, Irene Papanicolas and Sheila Leatherman, eds., *Performance Measurement for Health System Improvement: Experiences, Challenges and Prospects*. Cambridge: Cambridge University Press, 2009.

Robert Soeters, Christian Habineza and Peter Bob Peerenboom, *Performance-Based Financing and Changing the District Health System: Experience from Rwanda*. *Bulletin of the World Health Organization* 2006 **84** (1): 884-889.