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**PERFORMANCE INCENTIVES
FOR
HEALTH CARE PROVIDERS**

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PERFORMANCE INCENTIVES

FOR

HEALTH CARE PROVIDERS

by

**Jean Perrot, Eric de Roodenbeke, Laurent Musango
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**World Health
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INTRODUCTION

It is generally agreed that, all things being equal, the health of a population will be better when the country's health system performs better. Notably, since the 2000 WHO World Health Report, a lot has been written about how to measure health system performance. But what we are interested in is rather to question the determinants of this performance. It is not easy to answer this question, but we can agree that elements such as the definition of a clear health policy, presence of a structured and coherent organization of health services and presence of a good regulatory framework can contribute to the performance of a health system. But, we should also not forget that institutions (health care administrations and health providers) and persons working in them are important determinants of health system performance. The better the latter perform, the better the entire system will perform.

This document will not treat the performance of a health system, neither in terms of a comprehensive assessment or a full analysis of its determinants. But it will examine one of its determinants in particular, namely the performance of health care providers and, more marginally, of the health administration. More specifically still, it will examine how these health care providers can be encouraged to enhance their performance and, thereby, contribute to the performance of the health system. To that end, it will be necessary to:

- Define and assess this performance, i.e. the results expected from a health care provider;
- Analyse the factors and mechanisms that encourage health care providers to perform better in order to design mechanisms that act on these factors and mechanisms.

For a long time, the logic has been that differences in results achieved by health care providers were explained:

- By differences in resources. If more resources were devoted to these health care providers, better results would automatically be achieved;
- By differences in the level of effective command and control based on a system of sanctions;
- By differences in the professional conscientiousness of staff working in health facilities.

Yet, the reality is often different. With similar resources, health care providers obtain substantially different results. Besides, quite often, available resources are deemed insufficient for achieving good results. Furthermore, 'command and control' as an operational principle is increasingly less accepted by various actors, and in addition is not a guarantee for achieving the best possible result.

Facing these observations, a new strategy was gradually developed over the past years, based on the use of incentives, which encourage health care providers to do more and better. Therefore, incentives had to be defined that would get health care providers to consider intensifying their efforts so as to achieve better results. It is this logic - "incentives" lead to an increase in effort, which in turn leads to improved results – which we will be analysing in this part. This is a logic well known in the business world. The merchant knows that by working more and better, (s)he will boost his (her) income: the incentive is obvious. In the health

sector, notably in the public sector, this logic is still new. It is, therefore, important to analyse with much attention how it can be implemented. Performance incentive mechanisms are more complex than they appear, both at the level of concepts and in the operational modalities, all the more so, since there is a lack of documented experience. This document will attempt to present these issues so as to provide field actors, both the incentive providers and incentive beneficiaries, with the tools for understanding why these methods are currently being implemented in many countries.

1. DEFINITIONS AND CONCEPTS

The term “performance” is a concept, which, initially, appears quite simple. Yet, when looking up this term in a general dictionary, you find the following two definitions:¹

- *"Result obtained in a specific area by someone";*
- *"Remarkable exploit or success in any area".*

The difference is essential. In the first case, “performance” is a synonym of “result”, whereas in the second case, only good results will be described as "performance". This is the difference between a ‘deed’ and a ‘feat’.

The concept of ‘a result’, which clearly maintains close links with the concept of ‘performance’, must itself be specified:

- The result may be judged in relation to a maximum value considered as the best attainable result: for example, in the educational system, a mark is given in relation to perfect success (in as much as one can agree on what constitutes a perfect paper in philosophy). But it can also be appreciated in relation to the best result known so far: for example, sportsmen compete with each other for a world record... which changes over time.
- The result may also take into account the individual characteristics of the actors: for example, for a world-class athlete, running 100m in 11 seconds is not a good performance today, whereas running it in 20 seconds may be an excellent performance for a person with disabilities. All things being equal, a well-equipped hospital may perform surgical operations to resolve more complex health problems than a poorly-equipped hospital.
- It is important to take the environment into account. Take, for example, the case of two equivalent health facilities, one of which is established in a rich district and the other in a poor district. If we consider as a performance indicator the monitoring of pregnancy then, in that case, all things being equal, it will probably be easier for the first health facility to obtain good results than the second one, since, the socio-economic status of mothers influences their behaviour in the use of health services. Same applies to a comparison between a health facility in a poor rural environment and another facility in a privileged part of the capital city. The socio-economic and cultural aspects are important and they are imposed on the health care providers.

Hence, the notion of performance implies showing interest not just in the result, but relating it to other results obtained in a specific area. This is the approach adopted in the 2000 World

¹ The below is translated from French. From the Merriam-Webster Online Dictionary: there are two definitions, one is ‘the execution of an action’, the second ‘something accomplished’. The former is a ‘deed’, the latter a ‘feat’.

Health Report (page 25), where performance is defined as: **given the resources at its disposal**, these are the results that the health system should be able to attain. Looking at the results actually achieved, the comparison of the two indicates its level of performance. If it exceeds what one legitimately expects from it, then it can be considered performing well. If it is less than expected, then it can be considered under-performing. Performance is a relative notion. One cannot ask Chad to do as well as Switzerland in terms of results, but one can see how, given its resources, Chad compares to countries that are in a similar situation.

Hence, in this chapter, “performance” and “result” will often be used as synonyms. However, we should keep in mind that the notion of performance implies placing the result in its context.

Result and performance

Although often used as synonyms, the words "performance" and "result" relate to different concepts. The word result is used to describe the measurement of an attained situation. In order to define a result, a measurement scale, a measurement instrument and an indicator have to be established.

When it comes to performance, a qualification on a scale of results is added to the concept of result. Moreover, the concept of performance allows the measuring of a combination of results that have contributed to a performance.

The concept of result is often related to a quantitative measure: number of patient visits, rate of nosocomial infections; whereas the concept of performance will aim to include qualitative dimensions. Instead of focusing on the "more", one prefers the "better".²

Measuring performance can thus be based on qualitative instruments and surveys providing a notion of a global result.

2. DETERMINANTS OF PERFORMANCE OF HEALTH CARE PROVIDERS

To understand how a health care provider can be encouraged to change its behaviour and improve its performance, it is necessary to understand its behaviour, i.e. to analyse the determinants of the provider performance. Hence we start with a general thought, which consists in that the performance of a health care provider, i.e. the results obtained by this health care provider, depend on the one hand on factors associated with the demand from the populations living in its catchment area, and on the other hand, the personal characteristics of the supplier:

Results achieved = f (Demand, Characteristics of the Supply)

- Factors associated with demand

If the focus is on the volume of the activity, it is obvious that the results achieved by the health care provider will be better if the demand for his or her services will be higher. Yet, this demand depends on many determinants, including:

² Some quantitative measures are excellent proxy performance measures; for instance the rate of nosocomial infections. However, the challenge is to translate such measures in actionable items through which to influence provider behavior. In poor-country settings where one aims to pay health providers regularly based on regularly and reliably measured performance results, measures such as the rate of nosocomial infections are simply not realistic.

- **The environment in which the demand is made.** For example, a heavy rainy season may affect visits to a health care facility, since the access roads are cut off for several months;
- **The income of the population.** It is known that a poor population, with very low income will express low demand for health care services, especially when the provider charges a fee-for-service. This income of course depends on the socio-economic status of the person, but it may also evolve over time, depending on external factors as is the case during unfavourable climatic conditions in a given region;
- **The perception of the quality of health care providers.** Individuals will be less willing to consult a health care provider, if they know that the services on offer are of poor quality. To a certain degree there is interplay between supply and demand; all things being equal, a weak demand can be due to a low quality supply.
- **Cultural factors:** in some contexts, especially in Africa, one can observe a lower than expected frequency in the use of health care services for certain illnesses for which the western medicine is believed to be ineffective.

These factors determining demand are very important. Some of them can evolve over time (for example, the revenues of a population) whilst others are elements that one cannot change (the climate for example). In identifying these factors, it is obvious that there are some that can be changed through appropriate action (e.g. the revenues of certain population groups), whereas others cannot be changed (e.g., one cannot act on climatic conditions).

- Factors associated with characteristics of the supply

The results achieved by a health care provider will also depend on its characteristics. These include:

- **The human and financial resources:** to carry out an activity, a health care provider needs resources and the level of these resources will affect its results. For example, it is quite obvious that, all things being equal, if a nurse does not have enough dressings, she cannot adequately care for patients who need them. If an X-ray unit has no films adapted for certain examinations, it cannot perform these examinations, or will poorly perform them, by using less appropriate films;
- **The know-how,** which reflects individual competence in the control of the production process within an organization. This know-how depends on individual capacities or the organizational set-up brought about by these capacities. Know-how may be improved, particularly through investment in knowledge and through practical experience (investment in human capital). But, one should also accept the fact that there are inequalities in the capacity to master know-how. Investment in human capital may partially improve this situation. At the level of an organization, the differences in the individual know-how may be compensated by the establishment of protocols. Training, providing protocols and transfer of know-how contribute to improved performance. Hence, knowledge of how to dress a wound will impact on the result of nursing care, and the knowledge of how to adjust X-ray machine settings will lead to better X-ray exams.

- The efforts³ made are linked to several determinants:

Efforts = f (sanction, level of professionalism, relative remuneration, work value, context, incentive ...)

- . Sanction: it presupposes a wrongdoing. For example, the person does not provide the minimum work expected or his behaviour harms the functioning of the organization that employs him. A higher authority (the manager) may then sanction him. The sanction may take various forms and can be gradual: warning, indictment, transfer, dismissal, etc...;
- . Level of professionalism: it refers to the desire of the employee to perform tasks assigned to him, ensuring that he does it to the best of his ability. This value may find its source in religion or in other social systems, and it also stems from professional training;
- . Relative remuneration: all things being equal, an employee will correctly perform his task if he considers that he is well remunerated; otherwise, he might not do it well. What is important is not what is objective but what is subjective (the employer may judge that he is paying a good salary, whereas the employee might feel that he is inadequately remunerated for the work done);
- . Work value: this refers to the importance that the individual attaches to the paid work that he is doing in competition with other social activities – family life, social relations, personal development ...). Work value gives social and personal satisfaction that exceeds the accomplishment of tasks compensated by remuneration.⁴
- . Context: a person rarely works alone. There are other employees in the institution in which he works. The behaviour of these other employees will have an effect on his effort. Hence, a person who sees that his colleagues have a tendency of regularly coming late to work without any sanction being imposed on them will also tend to arrive late, for he does not see why he should dissociate himself from the others. The context is different from the environment, for it makes reference to behaviour of individuals within a given group;
- . Incentive: it is the granting of compensation, a bonus, an allowance, a grant to individuals or institutions depending on the results achieved. This incentive may be financial or non-financial. This is the determinant we will focus on in this document.

The components of effort are not independent variables. The nature and intensity of the relations however are difficult to establish and to model. The nature of social relations and in particular social constraints affect the intensity of the effect of these variables on effort. For example, in a totalitarian State, sanction will play a more preponderant role than in a State where the protection of individuals is highly developed.

³ Effort = concentration of the physical, intellectual or moral forces with a view to achieving an aim.

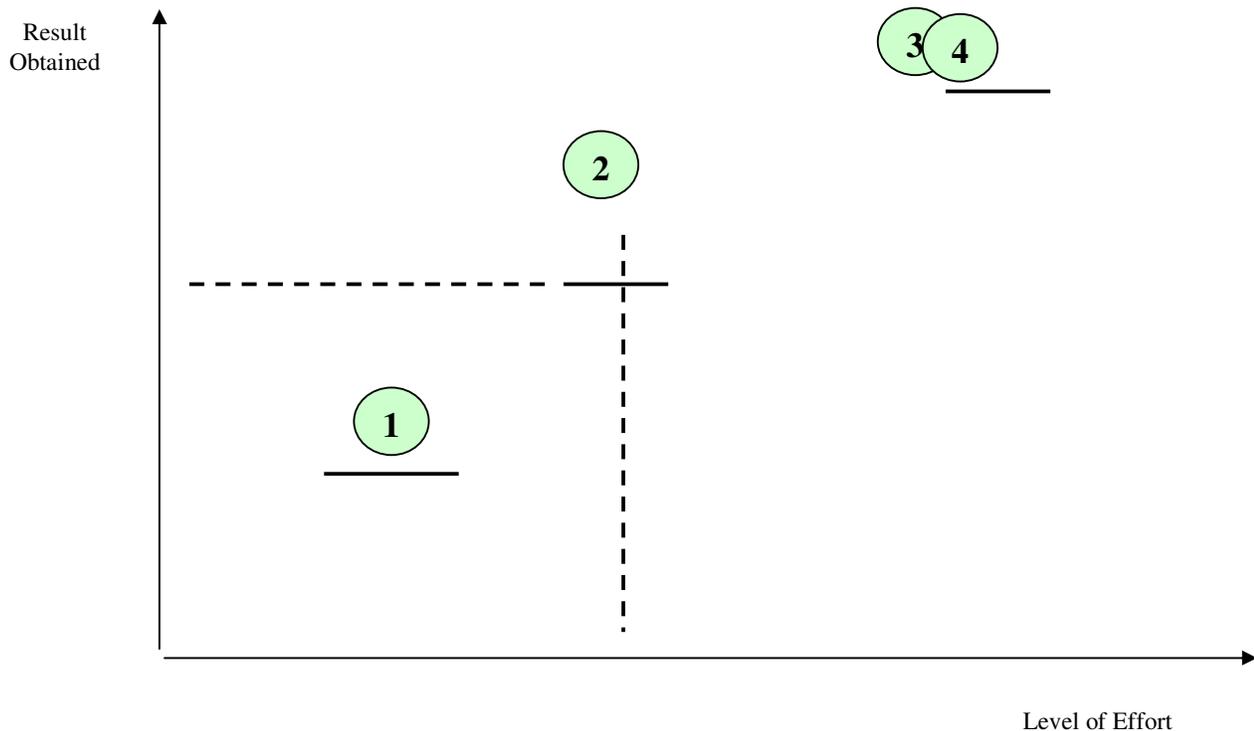
⁴ A distinction is made in the literature on intrinsic and extrinsic motivations: Intrinsic motivation is related to the fact that one exercises an activity for the pleasure and satisfaction that one gets from it. An intrinsically motivated individual carries out activities voluntarily driven by interest in the activity itself without expecting payment for it.

- extrinsic motivation is defined by the fact that the individual is working in order to obtain a consequence that is exterior to the activity itself; for example, receiving a reward or esteem are extrinsic motivations.

Let's take an example: You need some information and, to get it, you need to go to an information centre of the Ministry of Health - the office hours are 8am-12noon and 2pm-5pm, there is a break between 12noon and 2pm.

- **First Situation:** you arrive at 9:30; you observe that the person who should inform you is not there. A security guard informs you that he has not yet arrived. You come back at 11:30: the same person tells you that you are not lucky, for the person who can inform you just left! You should, therefore, come back at 14:00; he should normally be here!
- **Second Situation:** you arrive at 11:55. The person who can inform you is around, but he tells you that he closes at 12:00 and cannot inform you within such a short time; he will resume work at 14:00.
- **Third Situation:** you arrive at 12:00. The person who can inform you should be going for his break, but, understanding that you have come from far, he kindly receives you and informs you diligently and competently. You leave at 12:30. The person who informed you then goes for his break with no other formality.
- **Fourth Situation:** you arrive at 12:00. The person who can inform you must go for his break, but understanding that you have come from far, he kindly receives you and informs you diligently and competently and mobilizes colleagues to answer questions that are beyond him. You leave at 12:30. The person who informed you then goes on break, but he does not forget to note that he has worked for an additional thirty minutes, which should be paid to him or requests you that you complete his "appreciation book" (which is used to establish the service bonuses).

This example can be represented by the following graph:



Situation 1: corresponds to the situation in which employees and their institutions make a “**minimum effort**” and, consequently, obtain poor results. Only extreme sanctions may be imposed, and that is why staff will make a minimum effort. On the other hand, even common sanctions are not applied, even if provision is made for that. In fact, it is practically impossible for officials to apply them for various reasons: the unions are powerful, the group pressure is very strong, habits are ingrained, the manager himself is frequently in situations where he himself should be sanctioned, etc. Similarly, dedication is very low. For both the staff and the institution, dedication is not a shared value. Consequently dedication is not a factor that could encourage the employee to make an extra effort. Inadequate accomplishment of one’s task is not considered a serious offense. If the employee does not correctly accomplish his task, it means that there are good reasons that take precedence over this task. For example, if the person does not get to work on time, it is because he has to take care of his family, find additional revenue, or it is because he lives far away from his workplace and finding a means of transport is not easy, etc. Work is not valued, as individuals prefer to mobilize their energy for other social activities. Besides, the person feels that he is inadequately paid and, therefore, reduces his efforts to a level commensurate with the remuneration. Finally, the institution has no mechanism to recognize those who fully accomplish their tasks. Generally speaking, we are dealing with organizations where liability is virtually non-existent. This often reflects situations of weak governance in which the public interest is of little importance and in which civil society is weak.

Situation 2: corresponds to the situation what is generally presented as “**normal effort**”. Activities to be performed are defined by the hierarchy. The staff or institution will respect this norm for one or several reasons:

- the use of sanction is possible and, consequently, the staff or institution has interest in carrying out the planned activity;
- Level of professionalism is an acknowledged value: the sense of public service, duty or devotion is expression of the level of professionalism. The staff or the institution will consider it normal to produce the necessary effort to attain the required result. The terms of reference are defined and what is demanded is accomplished. But, there is no reason to do more;
- Remuneration is considered acceptable and the person is not compelled to spend his time on other activities;
- The work or activity is considered important by those who carry it out; they therefore give it due priority.

For example, in a hospital staff is present during the required working hours. They perform the tasks that are defined in their job descriptions. They perform these with honesty, mobilizing their technical skills and using resources made available to them. They fill out the files as expected. They work with colleagues they have been asked to work with, and they address clients respectfully. BUT NO MORE! They will not initiate efforts to improve their skills; they will not try to find out how they can do better. They will make no particular effort towards users, etc. This is the attitude described as “being present behind one’s desk”: waiting for the client and serving him correctly; but without anticipating the client's needs. For example, if the mother has not brought her child to the health centre to be vaccinated, the employee of this health centre will not attempt to find out why she has not brought her child, he will not try to mobilize means to try to vaccinate that child. In this situation, the concept of ‘time required for this activity’ is important, for it is expected that the remuneration paid corresponds exactly to this level of effort.

Situation 3: corresponds to the situation in which employees or their institutions consider that it is normal to make all possible efforts. This is another notion of ‘level of professionalism’ that goes beyond the idea of making only the necessary efforts to meet what is demanded. This specific level of professionalism does not define itself any longer by accepting a level of effort that is about sufficient to reach result. This specific level of professionalism judges normal to do whatever it takes to get a maximum result. The level of professionalism and work values are, therefore, highly valued. We can find this situation when individuals have a keen sense of duty and devotion: serving the State, serving one’s neighbour. It goes beyond the mere exchange of a product (one’s work) against remuneration in order to accomplish an activity. The notion of time devoted to work or activity to be provided becomes less important in the relationships between providers (those providing a service) and purchasers (those receiving a service, or clients, or those paying for others to receive this service).

For example, the health staff of a hospital will consider that they should seek to improve their skills and to stay abreast of technical developments, they will look for ways and means to improve their performance in the tasks entrusted to him, they will try to see how they can improve the documentation which is required of them, and they will attempt to provide additional support to clients/patients who are felt to be in need of this. By this attitude, one leaves his desk and anticipates the wishes of the client.

Situation 4: corresponds to the case where the staff or their institutions are prepared to “**make an effort beyond the normal**”, as long as they are compensated for this additional effort. Level of professionalism is replaced here by incentives. Performance improvement is facilitated by the use of incentives. It is the incentives that will encourage the staff or their institutions to maximize their efforts. It is in their interest to do so.

For example, the health centre of a particular zone has vaccinated 50% of the children in its catchment area, and this 50% corresponds to those that have come to the health centre themselves. They are received and vaccinated correctly once they come to the health centre. However, the health centre is prepared to make special efforts (outreach activities, sensitization campaign among local authorities, etc.), as long as it gets an additional budget to do so when reaching coverage rates beyond 50%.

NB: it is worth recalling that the libertarian provider payment practice falls within this fourth category. Indeed, the practitioner paid on a fee-for-service basis will earn a lot more if he works more (supposing that he does not perform useless acts) or when he has attained an outstanding reputation. However, he will frequently concentrate his efforts on activities where he can ask to be paid for his services, which excludes a number of preventative activities, when these activities are either not paid, or poorly remunerated.

What is the situation today?

There are very few cases where one finds himself in situation 3. It may, however, be present in certain circumstances:

- religious contexts: in many religions, the believers should make maximum efforts to serve their neighbours; the compensation will be an immediate or subsequent, internal or social recognition;
- humanitarian NGOs: the staff, like the institutions themselves, find it normal to maximize their efforts; they are guided by convictions, the realization of which will give them personal gratification;

- in the public sector, there is another value system, which considers that the civil servant must always do the maximum; he is at the service of the public; this rationale is based on social recognition;
- some Marxist offshoots (Stakhanovism, for example) pushes individuals towards a certain ideal, the accomplishment of which is compensated by collective recognition;
- Certain forms of paternalism: the employee will do everything possible for his employer, for he is indebted for the efforts made by the “good” employer.

Some NGOs operated for a long time according to this logic. They could obtain from those with whom they were working maximum output without having to use incentives. Today, some of them tend towards situation 2: devotion to the cause is no longer strong enough to naturally attain situation 3. Other NGOs work with staff or institutions that do not operate according to this logic. They cannot get the latter to adopt behaviours that would lead to situation 3.

Situation 3 is the most interesting for the employer, for he obtains a higher result without making particular efforts in terms of remuneration or incentives. But, these situations are finally quite rare in reality, since they presuppose that work value coupled to level of professionalism are the main drivers of level of effort.

The normal situation would, consequently, be situation 2, which is generally at the basis of the definition of public service: you have a job that is placed within a legal regulatory framework and you should comply with these legal regulatory requirements. However, there is no reason why you should do more than what is requested of you (e.g., if you are legally required to work 8 hours a day, you have no interest working for an additional hour, for nothing is offered to compensate for this effort which exceed service obligations). In this situation, the work provided is assessed in its quantitative (you are present at the time you are supposed to be) and qualitative (you do your work according to the rules of your trade or prevailing procedures) aspects. You are there to accomplish correctly an assigned task. Ministries of Health pretty much subscribe to this situation. In some countries, the Ministry of Health would be happy to see its entire staff and all its institutions attaining this level. However many Ministries of Health slide towards situation 1, notably when the hierarchy is weak or when the social pressure does not promote work value. This is also true when workers feel that they are inadequately remunerated.

In the face of slipping standards, and to reverse this downward trend, some people are resorting to the use of incentives in order to attain situation 4. Certainly, this situation is more expensive for the financier, since it requires putting in place a mechanism for providing these incentives and supervising them, but it helps to maximize the level of effort of staff and their institutions. Maximizing efforts means working faster (accomplishing a task with greater efficiency), working longer and working better. Such an approach implies making formal the relationship between effort and compensation. Hence, some actors, believing that staff should maximize their efforts, but observing at the same time that situation 3 has no chance of occurring naturally, will therefore tend to turn to situation 4, i.e. using incentives to maximize efforts. Hence, they will obtain a result comparable or higher than the one obtained in situation 3, but at a much higher cost since the financier has to set up a mechanism for organizing and measuring performance and distributing performance incentives.

The use of incentives to enhance performance becomes interesting when the results obtained are higher than the costs incurred. This statement seems obvious in a classical market situation where supply meets demand. It is less obvious for services that are linked to public goods. In this case, it makes more sense to improve the quality of service and to determine its marginal cost in order to decide whether or not to finance an additional expenditure to pay for the incentives.⁵ When one takes a long term perspective, there is no doubt a risk of getting used to incentives, thereby creating a situation where the staff and their institutions will always ask for higher incentives for the efforts they are prepared to provide. It is, therefore, necessary to institute a mechanism for reducing, over time, the risk of diminishing returns for the incentive. It is in this spirit that organizations use the prize list system to compensate the employer who achieves the best result. There is constant competition between individuals to be included on the prize list. This will be all the more true if the inscription on the prize list is accompanied by a specific bonus and if the mechanism is set up in a transparent manner and based on objective criteria for measuring the results.

3. THE LOGIC BEHIND THE PERFORMANCE INCENTIVE

3.1 Admitting failure of the classical approach

For a long time we adhered to the hypothesis that, all things being equal (e.g., in a constant environment), the performance of an institution will be better if factors of production were present in greater number and of a better quality. According to this approach, called “input-based” approach,⁶ the health care provider would achieve better results as long as it has sufficient and well-trained staff, adequate equipment, state-of-the-art technologies, drugs at affordable prices which are delivered on time, and efficient and easily-accessible (geographically) infrastructure, etc.

Preconditioned on this availability of inputs good results would be achieved because an adequate combination of these inputs would help attain the best possible result. In the classical production logic, it is command and control that will facilitate the achievement of such a result. Commands are given in linear and hierarchical fashion. The all-knowing hierarchy knows the objectives to be attained and the best way of combining inputs. The command can use sanctions to ensure the respect of orders. This operating procedure is valid for both the public and private sectors. You do your work: all your work, nothing but your work. As we shall see later, there are other mechanisms that can lead to an optimal use of inputs.

The results of this approach are not always as poor as is too often said, notably in health systems where methods are not too limited by a lack of resources. On the other hand, in poor countries where funding constraints are considerable, it should be noted that those few resources available produce results that are often insufficient, given the immense needs of the populations. To attain the objective of improving results, the traditional strategies, based on the supply of inputs and hierarchical command and control as a means of ensuring the optimum combination of these inputs, are quite inefficient. Furthermore, health service

⁵ This cost-benefit analysis is of course quite difficult to execute. Identifying the cost is not easy, and determining the benefits is even more complicated; unless using DALY type of instruments, it will be difficult to measure the benefits of a vaccination or of multiple preventive activities. Measuring the incremental health gains from much improved quality of services would also cause a challenge for health econometrists.

⁶ Also called ‘inputism’

providers with equal resources and working conditions do not produce equal results (identical inputs \neq results); resources are thus not the only determinant of health service providers' result.

3.2 A new approach: incentives

Therefore, let us change our strategy in a radical fashion by the use of *incentives*. The latter would become our strategy for enhancing performance. Incentive is defined as *the interest one has in doing better*. Incentive mechanisms, therefore, presuppose two types of actors:

- There is, first of all, the *incentive provider*: This is the institution that has become aware of the importance of encouraging health care providers to improve upon their performance, and which has identified that the best strategy for doing so consisted in the use of incentives, and which has the necessary resources (notably financial resources) to carry this out. This incentive provider will chiefly be the Ministry of Health. But it may also be a development partner, who will operate through the Ministry of Health (e.g., the World Bank which might incite the Ministry of Health to introduce performance incentive mechanisms), or a partner that is capable of acting directly (e.g., an international NGO, which provides support through performance incentive mechanisms). It may finally be health insurance institutions, which institute performance incentive mechanisms with health care providers they deal with. The aim of these institutions is to encourage the latter to enhance their efficiency in terms of services they render to their clients. Given the fact that the incentive is generally monetary, some people prefer to use the term "purchaser". It is also possible to use the term "financing agent" which is used in the OECD accounting system and which refer to institutions and entities that purchase or finance health care services;
- There is also the *incentive beneficiary*: it is the health care provider (hospital, clinic, health centre, community health worker cooperative, etc.), who is being encouraged to change its behaviour and, consequently, improve its performance. But, the incentive beneficiary could also be the health administration, notably the local administration, which is being encouraged by the incentive provider to adopt a new behaviour in order to enhance its performance. The target of this approach is thus the institution: it is the institution that will need to improve its results. The implementation strategy is frequently, but not uniquely, as we shall see later on in this chapter, based on incentivizing staff working for these institutions. There is some experience with incentive schemes directly targeting staff; whereas such an approach might yield some results in pilot schemes, it might be challenging to scale this up.

The agency theory

Facing incentive schemes, economists resort to the agency theory, which defines the agency relationship as a contract under which an organization (the principal) - i.e. the incentive provider - engages another organization (the agent) - i.e. the incentive beneficiary - to perform, on its behalf, any task entailing a delegation of some decision-making power to the agent.

The first important notion of this theory is to take into consideration the fact that the two parties may have diverging interests:

- it is in the interest of the incentive provider (the principal) to ensure that its agent (the incentive beneficiary) maximizes its efforts to attain the best possible results;
- For the incentive beneficiary, it is in its interest to minimize its efforts to receive the rewards.

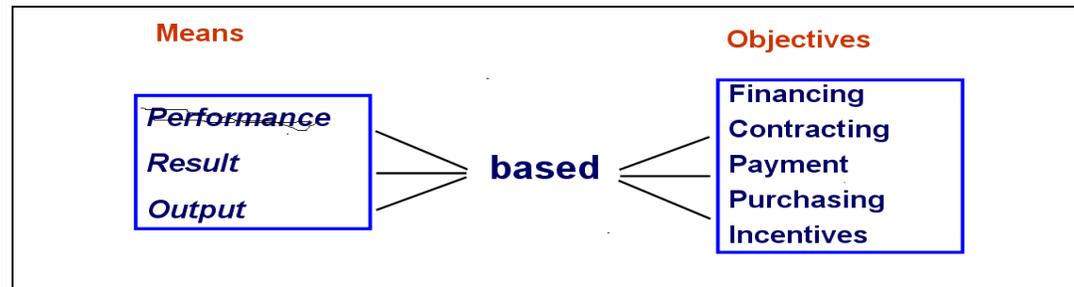
The purpose of the incentive, which will be defined in a contract, will be to reconcile the interests of the two actors, who from the onset do not have the same objectives, to get them to pursue the same objectives.

The second important notion of this theory lies in the difficulty for the principal to assess the effort of its agent so as to offer a fair remuneration for this effort. It should, moreover, be underlined that one cannot observe the effort, but only the result of the effort. The agent, therefore, has some information the principal needs (particularly on the process of production) but for which the agent has a disincentive to make overt. It is due to this notion that the principal will be putting a particular emphasis on measuring results, to pre-empt underachievement by the agent.

Issues related to Terminology

The performance incentive, as used in a health systems context, is described differently by different people. The differences between these descriptions are often only a question of terminology, as the different terms used have basically the same semantic structure.

They are mostly structured as follows:



What is interesting to note in the logic of the current terminology, as above, is that it reverses the logic. Concerning the performance incentive, the objective of the action should be the performance (or the result, or direct realization) and the different tools used to influence performance should be considered as means.

Strategy **Objectives**
Incentive *for* *Performance*

The reversed logic of current appellations could find its origin in the fact that they reflect the point of view of the donor: the objective of the latter is to disburse and channel the funding; there are several ways of dealing with the issue and one of the methods consists in establishing a link between financing and performance.

One of the terminologies is in line with basic logic: *Pay for Performance (P4P)*. However, the fact that the latter includes only the payment concept (which may cover the financing of inputs as well as the incentive for direct achievements), whilst excluding the other non-monetary aspects of the incentive, makes its use problematic.

Finally, it should be noted that the terminology currently used has not conceptualized the logic of *performance incentive* and that, in reality, there is a consensus around the term Performance-Based Financing (PBF), at least concerning the health systems in developing countries. This terminology has been adopted in a generic sense in most publications.

3.3 Incentives for demand and supply

To get the incentive beneficiary to improve its performance, the incentive provider has, at his disposal, two main types of strategies:

- **Actions on demand**, essentially on individuals, but these may also be communities. This presupposes that the population (notably the poorest, but there may be other determinants) do not consult health care providers because they do not have the means or because they do not see the interest in doing so. Incentives will rely on tools that will encourage these populations to use health services and, thereby, increase their demand for the services of health providers. These tools may be:

- A policy that is based on price differentiation depending on the medical history or the nature of the individual. These price related incentives may be applied in both ways, by charging the target persons a lower price, or by fixing penalties for those who have access to services considered excessive (e.g., those who directly consult the specialist physician, without first consulting a general practitioner);
- The voucher system prioritizes the pro-active identification of a target population whereas the preceding mechanism is limited to the care provider. Here, a financier - the Ministry of Health, a development partner or a health insurer - distributes to the target populations vouchers they can use for either accessing freely, or against a reduced fee designated health services. This free access or fee reduction boosts greater demand for health services by the designated population. There will be an increased utilization of health services due to increased demand.

Experiences based on voucher systems

Since 2006, the KFW has been supporting a voucher programme in 3 rural districts and in the outskirts of Nairobi. It is aimed at assisting poor families to have access to quality maternal care and family planning services. The KFW is financing similar programmes in Uganda and Tanzania.

These programmes have been established in Nicaragua for prostitutes, drug addicts, homosexuals and young people at risk, in Indonesia to facilitate access of poor women in rural areas to private midwives, in India and Pakistan, etc.

- Insurance or user fee exemption schemes: by encouraging the populations to subscribe to insurance schemes or by financing the exemption from user fees, the financiers will encourage populations to use health care providers. Since the population knows that use of health providers will no longer result in catastrophic expenditure, these populations will hesitate much less to seek care. Hence, the institution of voluntary health insurance schemes, unless a major gate fee is introduced, will result in an increase in demand for the services of health care providers. Similarly, under the poverty reduction programme, payment for subscription to a health insurance scheme by a financier (development partner, for example) will result in an increase in demand from this population group.
- Conditional cash transfers: these mechanisms consist, for a financier (Ministry of Health or development partner) in giving money to a target population (usually the poorest) conditional on achieving certain socially beneficial activities. These conditions may concern health or education. The financier will request that the beneficiary of the aid sends her children to school, that she ensures that they are vaccinated, or that she uses mother and child health services when pregnant. These conditionalities will encourage these population groups to visit health facilities and to send their children to school.

Experiences of “conditional monetary incentives”

Many countries in Latin America and the Caribbean - Brazil, Colombia, Honduras, Mexico, Nicaragua, Jamaica – have put in place CCT systems, involving conditionalities concerning health¹. Since 2000, the Nicaragua social protection network (*Red de Proteccion Social* or *RPS*) offers CCTs when children of the family remain in school and submit themselves for medical visits. Studies have shown that the RPS programme had helped to protect households from a vast range of shocks, particularly the decline in coffee prices.

¹. A. Glassman, J. Todd, M. Gaarder (2007) "Performance-Based Incentives for Health: Conditional Cash Transfer Programmes in Latin America and the Caribbean" CDG Working Paper 120.

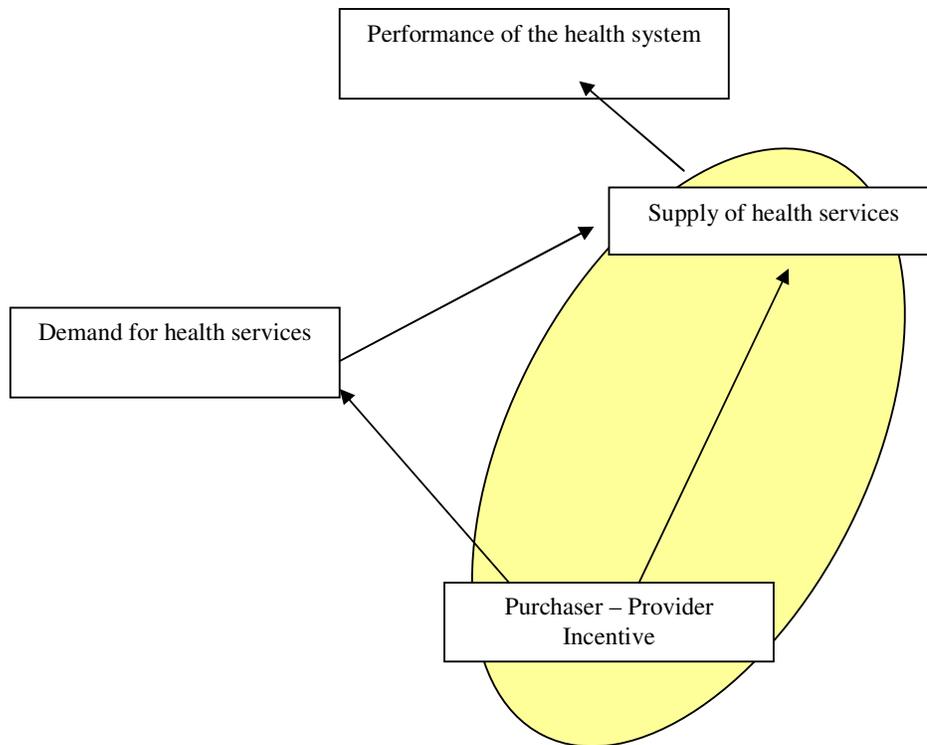
This financing of the supply of health services through demand will have an effect on the performance of health care providers. Indeed, generally, this implies an increase in the volume of services consumed, accompanied by better equity in the use of these resources. There is certainly an improvement in the supply of health care and, therefore, of its performance (and consequently of the performance of the health system), but it is the financing of the demand that has led to the improvement of the offer and not the direct funding of the supply. It is of course not appropriate to talk about performance of the demand, but performance of the supply induced by the demand (which is different from the concept of supplier-induced demand);

- **Actions on the supply of health services.** Through appropriate incentives, the incentive provider acts directly on the health care provider by encouraging him to change its behaviour and practices in a positive sense. Through this action, the incentive provider incites the health care provider to enhance its efficiency and its effectiveness. Later on we shall see that this logic can be translated into different types of approaches.
- **Actions on supply and demand.** There have also been actions taken simultaneously on supply and demand. A development partner can put in place an intervention that has an element targeting the supply of health services and another targeting the demand. In some cases two development partners can be present in the same geographical zone, one acting on the supply the other acting on the demand. There are also schemes in which the incentive financier acts on the supply in order to motivate the health care provider to increase its results and, consequently, the provider will act on the demand in order to increase its outputs (supplier-induced demand in a positive sense). These measures can be either agreed between the financier and the provider, or they can be implemented as a creative initiative by the provider.

An example of simultaneous action on demand and supply (certain health centres in Rwanda)

- The incentive financier (the Ministry of Health) pays 2500 FRW, about \$5, to the provider (health centre) for uncomplicated deliveries; the provider purchases second hand baby clothes for each new born for 500 FRW and keeps the rest as net reward from the incentive. Moreover, women who come for an antenatal checkup during the fourth month of pregnancy are offered a soap bar and water purification tablets. These in kind incentives have their advantages but they can also create some problems; there is in particular the risk of resale of gifts received.
- Some health centres pay Traditional Birth Attendants (TBA) FRW 500, for each referred delivery and in addition to that, for 10 referred cases the TBA receives an annual subscription for the community based health insurance.

The logic of performance incentive of health care providers may be summarized as follows:



In this document, we have limited our attention to supply-side incentives for health providers (the yellow circle above), also implied by the title of this manuscript.

4. PERFORMANCE INCENTIVE IMPLEMENTATION MECHANISMS

The logic is now established: through appropriate actions, the incentive provider will try to get the health care provider to improve his performance. The incentive provider proposes⁷ these incentives, but, of course, he cannot impose them. The health care provider, for his part,

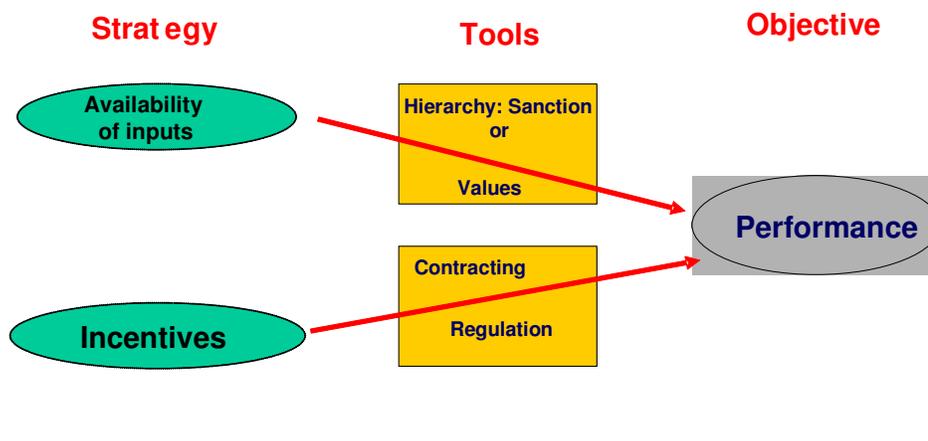
⁷ We shall later in this document that the incentive provider's proposition can be more or less compelling, and, in some cases, it will be comparable to an imposed regulation that will leave the providers with little choice.

has an option i.e. he will react to these proposals by adapting his behaviour. Obviously, his reaction will depend on the interest that these incentives arouse in him. If the latter are substantial, it will be in his interest to make efforts to improve his results. If on the other hand he finds these incentives inadequate he will only make very little effort and, consequently, will increase his results only marginally.

Generally speaking, the performance incentive scheme will be made operational following three stages:

Stage 0: Before any action is taken, a decision on whether to use performance incentives has to be made. The diagram below indicates that the financier could use the classical strategy which consists of providing the necessary inputs to the health care provider and using either 'command and control methods' or relying on the providers values in order to attain a desired level of performance. Here, the strategy consists of using incentives, and the path to increased performance is based either on regulation or through contracting.

Results and Performance



Stage 1: This stage is composed of two phases:

- Phase 1: Setting up the rules of the game. Every performance incentive scheme needs a set of 'rules of the game' which define its objectives, the domains covered by it, a credible performance measure, the modalities of attributing incentives, the exclusion rules, etc. These rules of the game can be defined unilaterally by the financier and such being the case the public authorities will establish an official text that applies to everyone. But more often, the rules of the game will be established in consultation with providers and development partners. These rules of the game will be recorded in what is often referred to as an "Implementation Manual".

- Phase 2: Formalizing the agreement between the purchaser (incentive provider) and the provider (incentive beneficiary): there are two types of tools that the incentive provider can resort to:
 - **Regulation-contracting:** in this case the incentive provider will define the rules of the game, in consultation with the health providers who will be covered under the scheme. This consultative approach will lead to a consensus that is more or less solid. But it is important to realize that it is the incentive provider that will unilaterally make the final adjustments and finalize the implementation manual. Generally, the health care provider will be free to participate in the scheme, but as these mechanisms do not generally provide for negative incentives, it is always in the interest of the care providers to participate even if their chances for gains are low. This adherence may be expressed in different ways: by a letter from the health care provider indicating its desire to participate or through a contractual arrangement;⁸ in all cases there is some form of contractual relationship because some form of agreement has been reached and formalized. However, this agreement is not based on negotiation but simply on acceptance of the rules of the game as defined by the incentive provider. This support may appear hypocritical in some cases. Indeed, in many cases where this regulation is established by the State the latter becomes virtually mandatory as public health providers cannot exempt themselves from the established regulation;
 - **Contracting:** in this case, the rules of the game are defined through negotiation between the incentive provider and the health care provider; they constitute the purpose of the contract. The agreement is, therefore, complete and can be specified in each contract, unlike the case mentioned above.

The use of regulation or contracting is a choice of which every decision-maker must be aware. As we will see later, the use of contracting is a common approach used in the pilot phase by development partners. On the other hand, the going to scale, i.e. scaling up the performance incentive strategy for the entire country, leads near automatically⁹ to the use of regulation. Indeed the rules of the game must therefore be the same for all actors and only the State may impose this regulation.

The rules of the game will define all necessary technical and institutional aspects of implementing performance incentives and will be elaborated upon below. But it also defines in the first place what the objective of the performance incentive scheme is. We can distinguish two different models which differ significantly:

- The objective of the performance incentives is to install an incentive-based regular provider payment mechanism. This situation is referred to as a service purchase arrangement. The incentive financier purchases a defined set of services from the provider. This incentive based financing constitutes a (substantial) part of the

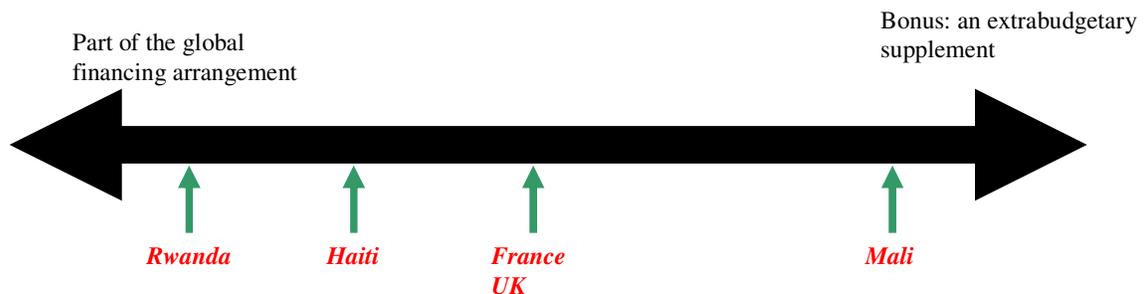
⁸ In this case the implementation manual will be integrated in the contract and will be the same for all participating providers.

⁹ In certain cases, the scaling up can be done by conserving the different modalities and functioning mechanisms in different geographical areas. This situation is in general transitory and it precedes the adopting of a general set of rules for the country. Moreover, in some cases a development partner sponsoring a specific intervention can accept the national rules but still implement a specific contract between itself and the providers in its intervention area: for example MSH and other US government financed purchasing agents in Rwanda, or Cordaid, HNI-TPO and the Swiss Agency for Development and Cooperation in Burundi.

regular budget of the provider. In this approach the gap in time between the effort provided and the settlement of the incentive payment will be short: the payment will be monthly or quarterly. This arrangement is a genuine provider payment method;

- The objective of incentive scheme is to install a bonus system that has no direct linkage with the general budget of the provider. The bonus system introduces a supplementary funding which is not strictly needed for running the provider's activities. The use of this bonus will happen outside of the general budget of the provider.¹⁰ The payment of the bonus will occur relatively seldom, for example once a year. This gap in time between the effort and the reward is a factor that reduces the effectiveness of the incentive and it is thus preferable to reduce this gap as much as possible; although a wider time gap does have the advantage of reducing the cost of monitoring.

In reality, these two models are rarely found in a pure form, there are often intermediary situations:



European experiences

In France a new agreement between the National Health Insurance and the general practitioners (GPs) was implemented in 2009. The GPs can sign the agreement on a voluntary basis. The agreement aims to incentivize the GPs to get strongly involved in screening and prevention activities, in improving the care for chronic conditions and in promoting efficient drug prescribing. Based on a defined set of indicators the GPs will receive an end of the year bonus that will depend on the results obtained.

In the UK a similar scheme was implemented in 2004. This scheme focuses on incentives to GPs that are based on improvements in the quality of care, especially in the area of monitoring certain conditions (heart failure, asthma, diabetes). The bonus can amount to several thousand pounds a year. As there is an annual payment, the rationale is that of a bonus, but as the amount of the bonus is relatively large, it forms a substantial part of the GPs' revenue.

Another major distinction can be made between schemes that cover all or most of the providers' activities and those that cover a limited set of activities. The schemes that cover all or most of the activities of a health care provider have the objective of increasing the overall performance of the institution, although some activities can be emphasized through the choice and weighting of indicators. Other schemes target from the outset only certain activities: for

¹⁰ The administrative modalities of this type of arrangement will of course have to be specified.

example the European experiences described above, or the HIV/AIDS services related incentives in Rwanda¹¹.

Stages 2 and 3: Having analysed the tools that enable the incentive provider to act on the behaviour of the health care provider, it is now necessary to know how this incentive mechanism is put in place. Two successive phases may be distinguished:

- Stage 2: it concerns the distribution and attribution of the incentives. Operationally, the situation is presented as follows: the health care provider starts his operations and after a certain period of time, one observes what happened. By relying on the rules of the game (defined by the regulation or contract), the reward for the activities of the health facility can then be calculated. The results observed are converted into incentives, which the incentive provider must pay to the health care provider. This amount is generally called “an allowance” or “bonus” for on the one hand it constitutes only a part of the budget of the health care provider and, on the other hand, of course varies depending on the results attained by the health care provider. The reward is generally financial; but it can also be compensations in various forms: trophy, best health centre label, etc.¹². At the end of this phase, the health care provider/manager¹³ has a sum of money, which he will have to use.

Incentives can be other than financial. In Mali, the quality service label, the *Ciwara d'Or*, is awarded on the basis of a set of criteria fixed by community representatives and care providers. The criteria define strict norms governing the services offered by the health centre, the equipment and material. They also require the presence of adequate health staff as well as the effective participation of the management committee of the health centre. Before awarding the prize, the quality supervisory committee organizes a competition between community health centres (COMHCs) to encourage them to improve the quality of their services. The *Ciwara d'Or* quality label is awarded jointly by the team in charge of quality supervision in the health area, the local administrative and political authorities and the National Health Department at the COMHC, which would have obtained the highest score in terms of provision of quality health services."

- Stage 3: the use of the reward. During this phase, the health care provider will use the financial amounts he has received as remuneration for his performance. Two types of uses may be observed: individual or collective. In the first case each employee of the health institution will receive part of the reward: salary bonuses, specific training, etc. In the second case the reward is collective. It may for example be the refurbishment of the room for staff on duty in a hospital, the acquisition of specific equipment, which could not be acquired on the regular budget, etc. We can also have a combination of the two. For example, the reward could partly be used as bonuses to staff and partly for increasing the current operational budget of the health care provider. In all cases, it presupposes that this use of the reward will result in a motivation

¹¹ However, in the Rwanda scheme, the payment for performance for HIV services is linked to the level of quality of general services: the higher this quality the more will be reimbursed, the lower the quality, the lesser will be reimbursed.

¹² However, when the incentives are not financial, they are not meant as a provider payment method and have a different impact on provider behavior. This distinction is crucial.

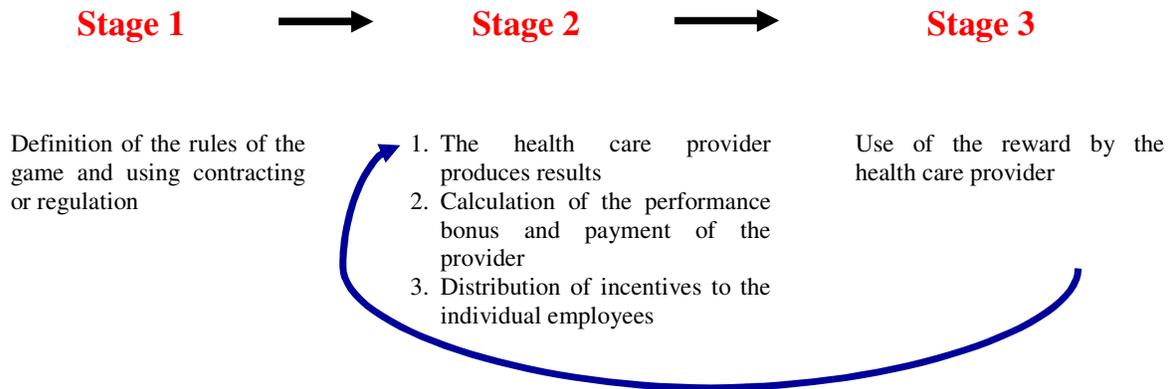
¹³ We assume here that the health care provider is the health care institution, for instance a health center or hospital. The 'health care provider' is then synonymous with the management of this institution.

which in turn will enhance the performance of the health care provider. One may wonder whether individual incentives are more effective than collective incentives or vice versa. Of course one can opt for a combination of the two types of incentives: part of the reward going into individual incentives (e.g., bonuses to staff) and another part used to finance incentives that cannot be individualized (e.g., the purchase of a television set for the room for staff on duty in the hospital).

Moreover, the health care provider may strategically decide to compensate not individuals directly but service units instead. Hence, because such a service unit might have performed better than another – e.g., contributing relatively more to the overall health facility performance improvement – the health care provider may decide to allocate a greater part of the performance bonus to the former and less to the latter. The issue of whether or not to individualize incentives can be posed at this lower organizational level, with the head of the unit deciding to use one or the other. Taking this intermediate level into account will be all the more opportune if the health institution is complex. This is the case when the results achieved do not depend on a single person, but on the interaction of several people and teams. The result of team work will be better than that of individual efforts.

Whether they are individual or collective incentives have their advantages and disadvantages. Individual incentives reward the individual effort but results in lower levels of cooperation. Yet, the latter may be a factor of efficiency (for example, team work is absolutely necessary in the operating theatre). Collective incentives (or per team) enhances the value of the result of the team but will result in phenomena known as the “illegal passenger”, namely that it is in the interest of the group individual to minimize his efforts and take advantage of the effort of others.

The process of implementation of the performance incentive may be summarized as follows:



It is important to take into account the three stages of the incentive mechanism. Stage 1 defines the rules of the game and will be valid as long as the performance incentive mechanism lasts. Stage 2 comprises three phases: i) the health care provider, who is aware of the rules of the game, produces his efforts and achieves a certain result; ii) it is then possible to calculate the performance bonus, and iii) the incentive provider, based on this calculation, must pay the health care provider. In stage 3, once the health care provider has received the funds from the incentive provider, he will use these. After the mechanism has been launched, there is a feedback loop between Stage 2 and Stage 3. Indeed, the funds used will constitute a

motivation for the health care provider (himself directly and/or his staff) to produce even better results (first phase of Stage 2), and this will lead to a new cycle.

Quite logically, stage 1, i.e. the definition of the rules of the game, should take into account both stages 2 and 3. Yet, we can observe that in certain country-experiences there is rather more of a delay in the phase of distribution of the reward¹⁴ than that of its use. For example, in certain pilot schemes in Rwanda, until quite recently, the phase of utilization of the reward was left entirely at the discretion of the health care provider, who used the reward solely for paying staff bonuses. Today, in Rwanda, the rules of the game have changed and have become more sophisticated: the bonus payment to staff cannot exceed 75% of the performance reward. Allowing the health care provider to freely use the funds received is in line with libertarian thinking. It is, therefore, assumed that it is the health care provider who knows best his needs and that he will know how to take the best decisions regarding the use of the funds for improving, in a second cycle, the production of results. In this case, the rules of the game do not need to cater for stage 3. On the contrary some will say that the incentive provider, under the rules of the game adopted, cannot lose interest in stage 3 concerning the use of funds. A first reason is the fact that it is generally public money and that the incentive provider is liable for its use. Another reason relates to the fact that the use of this money is in itself strategic, since it targets a better production of results in a second cycle. The incentive provider should therefore ensure that the health care provider will make best use of these funds. A final reason relates to the need to harmonize practices in the use of funds. Hence, it will perhaps not be in the interest of the incentive provider to allow everybody to do as he pleases and he might create guidelines for the use of performance funds.

In concrete terms, once the performance bonuses are calculated, the incentive provider makes the money available to the health care provider:

- If the use of this money is not conditioned or earmarked it means that the health care provider can use it as he judges best. This money is added to the budget of the health facility and therefore aggregated with other income. It is then spent on actions decided by the health care provider. For example, in Rwanda, it is stipulated that at least 25% of the performance bonuses should be used for non-salary recurrent expenditures. This 25% will, therefore, be added to other sources of income of the health care provider and used to finance operational activities, including investments needed to improve quality of care. Consequently, due to the pooling of funds, it becomes less visible what the exact attribution of this additional financing of quality improvements is;
- If this money is designated it can only be used for the intended purpose as per the prevalent rules of the game. For example, if it is stipulated that it should be used to pay staff bonuses, the health care provider cannot put it to other use. In some cases, the designation concerns a specific type of expenditure: hence, the money cannot be added to other incomes and should be used for specific purposes. In some cases, governments do not like performance bonuses to reach health staff, and stipulate that this money can be used for all possible expenditures, bar the payment of performance bonuses.

The use of regulation or contract will not necessarily be the same for the two phases above. Hence, in Rwanda, it is the regulation that takes precedence in the two phases at the level of the relationship between the incentive provider and the health institution. The contractual part

¹⁴ The reward has to be perceived as something that is directly linked to the performance incentive scheme.

concerns only the inclusion of the health institution in the performance bonus scheme. In other cases, the contract will concern the two phases. Still in other instances one may resort to regulation for phase 1 and the use of a contract for phase 2. In this case the distribution of rewards will be defined by a general rule valid for all health institutions, but phase 2 will be specific to each health institution and will be the subject of a contract based for example on a “*business plan*”.

The Dutch NGO CORDAID introduced the concept of Business Plans in its Performance-Based Financing (PBF) pilot schemes in Rwanda. These business plans are currently an integral part of its PBF schemes in Burundi and DRC. There were several reasons for this introduction.

First, It was observed that after an initial phase of rapid improvements in quantity but also quality of care, a ceiling was reached for most services. Rapid gains from economies of scale were made initially and the providers had become satisfied with increased revenues. Reaching the remotest individuals would have needed significant marginal efforts that were not in correlation any longer with the fixed unit fee reward that was offered for this service. For this reason, CORDAID constantly renegotiated the targets which were then put down in a "Business Plan": thus, the providers and the purchaser could negotiate on specific quantitative targets, and they could discuss and agree on the strategies and resources that would be needed for reaching these targets. Furthermore, the business plan allowed the purchaser to intercept moral hazard: some providers might focus on certain high-yielding services to the detriment of other services, but close monitoring of their production would enable the purchaser to adjust the volume of services purchased.

The Business Plan is an integral part of the purchase contract established between the provider and the purchaser and it is used as a "stick" that is additional to the incentive "carrot" (the "reward for services"). Conceptually, these Business Plans are similar to the "Action Plans" that have been used by most health facilities in the past. However, these Business Plans are more closely monitored by both parties (since there are financial consequences). Calling the action plan by a different name served also as a signal that things were not 'business as usual' any longer.

The second reason for introducing the Business plan concept was to get inside the "black box" at the managerial level. In the first PBF pilot experiences the managers were thought and trusted to make good use of the resources and they were given large autonomy; it would of have been unnecessary and even inopportune to monitor too closely the use these resources. The Business Plan was designed to redefine this principle as it was deemed that the managers did not always make use of the most suitable strategies for increasing their performance.

In the Rwandan national PBF scheme, the Business Plan was reintroduced in the beginning of 2008 in order to tackle the problem of stagnating performance after a rapid expansion of the quality and quantity of health services across the country.

Let us turn our attention to the performance bonuses. What are the criteria used by the incentive provider to determine the level of desired performance of the health care provider? There are, in reality two methods which are fairly distinct:

- A first method is to consider that the benefit is entirely defined by the result.¹⁵
For example we might propose that the health care provider will receive a

¹⁵ Terminology: **Inputs** are resources that you put at the disposal of your project for its direct implementation. They include time, money and premises. **Outputs** are the services offered. They comprise the number of services produced, training, the supervision, and the advanced strategies undertaken. Some of these are processes (such as the 'supervision' or 'training'), but can also be put under performance schemes. **Outcomes** are all the changes and effects induced by your work. **Impact** concerns a more enlarged and long-term horizon. It concerns your own objective. It may be very difficult to appreciate the long-term changes in a short-term project.

certain sum per fully vaccinated child. There is therefore a direct relationship between the quantity or level of effort (which may be influenced by the quality if the purchaser decides to do so) of the services produced and the payment received by the health provider: *"working more and/or better to earn more"*. Libertarian medicine is in line with this logic. It is also practiced in Rwanda where health care providers are remunerated according to the activities they have carried out (taking into account both the quantitative and qualitative aspects). However, these types of schemes are a departure from pure market logic from various points of view. First, we see that the price fixed does not generally reflect the cost of production of this activity. If the level of the incentive would have been commensurate with the level of effort, then in that case a very low price for a service will not have an encouraging effect and a very high price will introduce a very strong incentive to produce more of this service. It is also necessary to underline that it is not a classical purchase act, since the incentive provider (the purchaser) knows the price of the activities, but is less certain about the quantity to purchase.¹⁶ It is, thus, preferable to talk about purchase obligation, namely that the incentive provider will be obliged to buy at the price defined in the rules of the game all the quantities produced by the health care provider. This remark is important because, unless you have solid estimates on the quantities that will be produced by the providers the purchaser faces an unknown budget which may put him in difficulty. This also does not correspond to budgetary practices, notably those of the State. It presupposes that the purchaser can adapt his purchasing budget to the activity of the provider which is not always obvious when the purchaser is the State. As a countermeasure the State takes into account projected purchases and model these against budget available, in order to prevent budget blowouts. Finally, it may compel the provider to focus on certain high-yielding services only without the latter being always judicious all the more so since he knows that the buyer is solvent;

- A second method consists of no longer associating results in terms of service provision but instead focussing on certain behaviours and practices. For example, in Mali hospitals, activities are funded from the operational budget defined according to classical input modalities. However, the Ministry of Health has established a special grant for improving performance. This grant makes it possible to pay a bonus to those who improved some of their practices (a bonus which is for example tied to the percentage of medical files correctly filled out). Hence, the processes are incentivized postulating that better processes of care will lead to better quality services and ultimately a better outcome. You act on contextual factors or processes which you believe will have an effect on the results. For example: a health care provider who reduces the waiting time of patients during consultation, will have an effect on patient perceptions, and possibly also on actual quality of care. The hypothesis here is that in order to improve results one cannot be interested only in the number of

¹⁶ In the Cordaid PBF pilot schemes, which cover distinct geographical areas such as a province or a district with a given population, the quantities to be purchased have been made overt through the business plans, and form part of the negotiated contract. This allows the purchaser to send out signals of what he wants to purchase, and presupposes a perfect knowledge from the purchaser side on the public health situation in the province or district. If such a system is scaled up to the national level, perfect information on baselines, and differing implementation modalities (through government instead of through an NGO) make such approaches more difficult or costly.

patients seen during a consultation but that it is important to open the 'black box' of the production processes.

We should of course always pursue the most efficient strategy. Advocates of results-based management will state that there is no need to enter the black box. The actors know what needs to be done and will put in place the production process that will yield desirable results. Others will claim that it is necessary to act on the production processes and that it is only by changing bad practices that one can influence (perhaps in a sustainable manner) the performance of health institutions and their health workers. We should note as is the case in Mali and in Rwanda, that it is possible to mix output indicators with process indicators for an effective performance framework.

How shall we determine the performance objectives? There are two slightly different methods to do so:

- The first method consists in defining at the beginning of the incentive mechanism a result to be attained. Hence it will state, for example, the vaccine coverage rate to be attained by the end of a certain period of time. This target is, therefore, defined in the beginning of the mechanism (through a regulatory or contractual framework). For example, in Haiti, 95% of the negotiated budget is paid to NGOs in quarterly installments (output-based tied to certain deliverables), and 5% is put at risk. If the NGO reaches predefined performance targets, it can regain these 5% plus an additional 8% performance bonus¹⁷. The advantage of this technique is that the incentive provider and the health care provider agree on a target to attain, i.e. on what would be good to do. On the other hand, there is a risk that the health institution may not pursue its efforts beyond the target, as it has no interest in doing so;
- The second method does not initially determine the target, but ensures that each additional effort made by the health institution is compensated. It is, therefore, in the interest of the health institution to pursue its efforts as long as the marginal benefit is higher than the marginal cost of an additional activity unit. Hence, if the incentive provider pays \$1 per fully-vaccinated child, it is in the interest of the health institution to pursue its efforts as long as the additional child will not cost him more than \$1.

Each of these two techniques has its advantages and disadvantages. The interesting aspect of "no target" is that no limit is placed on the effort of the health institution below the point where the incentive is higher than the cost of the marginal effort. However, it places the

¹⁷ The most powerful intervention in NGO financing here is not really the bonus...it is paying NGOs output-based budgets instead of input based ones...they do not have to stick to budget lines, and can freely move around money in their negotiated budgets, without having to ask the donor for permission every time they want to shift money from let us say salaries to other inputs such as trainings or so. This is also the case in Afghanistan's Performance Based Contracting. The performance bonus in these types of approaches is much hyped, but really, and in reality, it is the different way of financing providers that is of importance here. Conceptually, the difference between the PBC and the PBF approach is, the level of intervention: for PBF (Haiti and Afghanistan and Cambodia) it is the NGO, whereas in PBF, it is the health facility. NGOs in Haiti and Afghanistan still manage their health facilities through 'inputism', whilst they themselves are under a donor performance scheme. But in reality, these performance bonuses, awarded perhaps once per year, do rarely if ever reach the health workers on the frontlines. This is why for instance in Afghanistan, the new phase of PBC involves stipulations that the much enlarged performance bonuses for at the least 50% need to reach the health workers.

incentive provider at a greater risk for the quantities that will be produced and also gives no indication on the desired level of performance.

To sum up, to analyse the implementation of performance incentive mechanisms, five main elements may be retained:

1. Are the rules of the game defined in the sense of using regulation or using contracting?
2. Do the rules of the game concern Stage 2 (nearly) exclusively or simultaneously Stage 2 and Stage 3?
3. Does the appreciation of performance concern the outputs or also the production processes (behaviour change or process improvement in the implementation of activities)?
4. Is the objective of performance incentive to get the health care provider to attain a pre-defined target or to maximize his results?
5. Do performance bonuses represent a significant or a small share of the health care provider budget? are the rewards in cash or in kind and are they regular (e.g. monthly), or irregular (e.g. yearly)?

In order to see how its different elements are taken into account in the field, three experiences may be retained:

- The "Performance-Based Financing" (PBF) experience in Rwanda;
- The experience in hospitals in Mali;
- The experience of NGOs in Haiti;

The latter are presented in the annex.

	Rwanda Experience	Mali Experience	Haiti Experience On the 'award fee portion (5-10%)
1. Are the rules of the game defined in the sense of using regulation or using contracting?	The rules of the game are mainly defined by regulation, except the adherence of health care providers, which is the subject of a standard contract.	The rules of the game are mainly defined by regulation, except the adherence of hospital staff, which is the subject of a single contract signed by all participating hospitals.	The rules of the game are defined by a contract, whilst the award fee portion is regulated, with considerable constraints on how to use this award fee due to US government restrictions on the use of this money.
2. Do the rules of the game concern Stage 2 (nearly) exclusively or simultaneously Stage 2 and Stage 3?	The rule of the game concerns nearly exclusively Stage 2. A new rule related to the use of funds was introduced in 2006 during the national scale-up, and revised in 2008.	The rule of the game concerns explicitly Stage 2 and Stage 3.	The rule of the game concerns Stage 2 and cannot concern Stage 3, since the reward constitutes a part of the estimated operational budget; and the utilization follows the same modalities as for all the other funding streams outside the incentive scheme.
3. Does the appreciation of performance concern the outputs or also the production processes (behaviour change or process improvement in the implementation of activities)?	The performance assessment concerns the quantitative outputs attained by the health care provider and the process of care (quality aspect).	The performance assessment concerns some outputs but also processes (change of behaviours and practices in the activity production process).	The performance assessment concerns the public health results achieved by the health care provider, but also include certain process measures (quantitative and qualitative aspect).
4. Is the objective of performance incentive to get the health care provider to attain a pre-defined target or to maximize his results	The objective of the incentive scheme is to get the health care provider to maximize its efforts and thereby its results. In addition since January 2008 the provider establishes in consultation with the administration a 'business plan' in which it will indicate the main population based targets that it will seek to attain for a more limited set of health indicators.	The objective of the incentive scheme is to get the health care provider to maximize his efforts and, thereby, his results.	The objective of the incentive scheme is to get the health care provider to attain pre-defined population based targets which have been defined at the beginning of the performance incentive cycle.
5. Do the performance bonuses represent a significant share of the budget of the health care provider or a small share; are the rewards in cash or in kind and are they regular for instance monthly, or irregular for instance once per year	The performance bonuses represent a significant share of the budget of a health centre: about 30% of their overall recurrent budget. The staff gets paid performance incentives up to about an estimated 100% of its net base salary, which depends on the overall health	The performance bonuses represent a minor sum compared to the actual hospital budget and are conceived as a bonus which is not intended to increase the hospital budget. The bonus is paid once per year.	The award constitutes only a minor sum related to the overall budget of the managing NGO. Health facilities under the management of the NGO could receive some share of this award fee, for instance in the form of a 13th month salary if the performance bonus was

	Rwanda Experience	Mali Experience	Haiti Experience On the 'award fee portion (5-10%)
	facility performance, the staff is paid its performance bonus regularly once per month (after the health facility earns its performance bonus quarterly and distributes earnings once per month to its health staff).		received by the NGO. The most important incentive for the participating NGO is the 'output' budget which allows it a high degree of flexibility in the management of project funds as compared to the traditional 'advance and then cost-reimbursement against receipts' micromanagement. The focus on results, due to the 5% of the budget 'at risk' and the 5% or so 'award fee' will focus the managing NGO more on what it needs to achieve.

5. PERFORMANCE ASSESSMENT: INDICATORS

Every performance incentive scheme will need to use tools to assess the performance of a health care provider. Indeed, the distribution of the performance bonuses can only be done on the basis of accurate assessments. Yet, the assessment of the performance of a health care provider is complex; its role is multidimensional all the more so as you go up the health pyramid. It is necessary therefore to adopt a method to measure performance; defining the indicator and its data-collection tools and methods is an indispensable part of this approach.

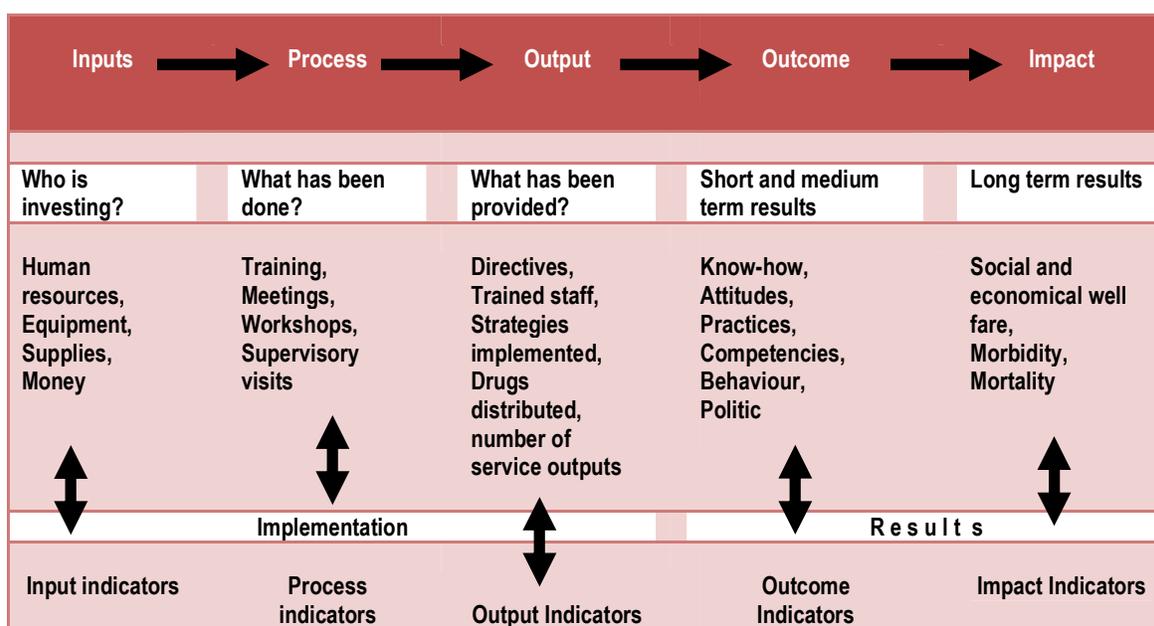
In general, there is quite some confusion surrounding performance indicators. In principle, the appropriateness of the types of indicators is related to the performance framework. For instance, in Haiti or Afghanistan, the performance framework consists primarily of certain desired public health targets related to the catchment population (percentage of fully vaccinated children; percentage of women coming for their first antenatal care visit, percentage of women delivering in health facilities etc). In Afghanistan, once per year a balanced score card score composed of various elements such as the results from health facility surveys also impact on the intermediate bonus payments for the contracted non-governmental organizations. These performance frameworks function in a ‘contracting-out’ situation, in which non-governmental organizations are contracted to deliver a defined package of health services to a distinct population. Different performance measures exist in Rwanda. In Rwanda’s health center Performance-Based Financing model a Fee-For-Service system for 23 services/indicators is impacted by a composite quality measure which consists of a checklist of 1,058 data elements from 111 composite indicators. In Rwanda’s hospital Performance-Based Financing model, a balanced score card is used with 57 composite indicators, and over 350 data elements. In the Rwandan models provision of health care is through individual health facilities which are a mix of public and faith-based organization managed facilities and who are individually contracted by the Government and bilateral donors and their agents. Purchase of performance in Rwanda is through a ‘contracting-in’ arrangement and an ‘internal market’.

The tools used in various Performance-Based Financing systems differ depending on the kind of approach and the monitoring and evaluation system pertaining to their idiosyncratic approach. However, and fundamentally, patient register books and individual patient cards form an important backbone of any PBF system. In fact it is very important in the design phase to avoid introducing indicators that are not commonly known by the providers and for which no registers exist. Also, indicators chosen would preferably need to be SMART¹⁸, should be collected by the HMIS, and be verifiable through community client surveys. This seems all logical, but practice shows a large misunderstanding of policy makers and technicians on the exact ‘how to do’s’ in PBF systems. For instance, it is generally considered unwise to link an indicator to age or a socio-culturally stigmatizing condition. If you were to pay bonuses for all new malaria cases in children under five years of age, you will be unable to verify this result in the registers or the community and introduce perverse incentives for the provider to cheat (there will be many more children under five years of age than expected, and also many more malaria cases than expected). If you pay providers to find women with a vesico-vaginal fistula (a debilitating condition necessitating surgery), you might not find even one in a whole country over one year, although you offer a high premium for this (evidence: Rwanda). If you attempt to monitor and pay for improved quality of care through using documents, be aware that some tools are hard to use and easy to fake, for instance the partogram (a tool used to monitor the progress of women giving birth in a health facility).

¹⁸ SMART: Specific; Measurable; Achievable; Realistic and Time-bound. In Performance-Based Financing there is a further departure and specification of the term ‘SMART’; not all SMART indicators can be purchased...this is due to the peculiar fact that one attaches a financial incentive for each service, and as a consequence, the actual provision of such a service might become unreliable. The purchaser has to put into place mechanisms to verify performance using community client surveys. Some on the face of it ‘SMART’ indicators, might prove to be less SMART as the actual service might become hard to verify using community client survey techniques due to recall bias or ignorance of the client or surveyor on the exact elements of this service.

5.1 Definition

It is useful to come back to the notion of an indicator. The definitions of an indicator are quite plentiful but the following may be retained: *an indicator is a statistic created in order to assess as objectively as possible certain activity dimensions of an actor*. Hence, an indicator helps to assess a state (today the health centre of such locality has two nurses) or a development (between year t and year t+1, the number of nurses will increase by 50%). It is also necessary to adopt a typology of the different indicators. Here too, the typologies are extremely many; the following will be retained:



- **The input indicators:** help to measure the resources at the disposal of the health care provider.

Example: the number of doctors in a certain health facility, the number of beds, the operational budget, etc.

These indicators are necessary to assess the efficiency of the actions carried out, for it is necessary to establish a link between the resources used and the results achieved. It could also be possible to design an incentive system that would incite the managers to make the best use of the resources at their disposal. A health insurer for example can incite a provider to lower its operational costs by resorting to outsourcing in order to diminish the reimbursement claim amounts.

- **The process indicators** provide information on the professional practices applied during the different stages and tasks, as well as on the operational and coordination modalities of activities carried out.

Example: delay in obtaining an appointment, rate of completion of the medical file, number of days of stock-outs of essential drugs, etc.

If the incentive provider believes that these factors are prerequisites for obtaining good results he may attempt to reward health care providers that will make efforts to improve these indicators.

- **The output indicators** help to assess the immediate and concrete consequences of the measures taken and the resources available.

Example: number of new family planning acceptors, number of new curative consultations, number of fully vaccinated children, etc.

These indicators reflect the level of productivity of the provider but they frequently fail to inform on the nature or quality of this production. These indicators are of particular interest to the incentive provider as he will attempt to incentivize these services as these are easier to measure and are mostly linked through a logical chain with outcomes and impact.

The outcome indicators: indicates the level of health outcomes for the patients.

Example: change in the health status of well being of the patients, the level of anaemia in children under five years of age, the level of stunting of children under five years of age, etc

These indicators are of particular interest to the incentive provider. This is what the incentive provider aims to achieve, however, these types of indicators cause measurement problems. For instance, these effects can only be measured through expensive surveys which are held at long intervals, in addition to leading to confidence intervals which needs interpretation; therefore the incentive provider cannot use these indicators if his purpose is to pay providers a regular performance incentive.

The impact indicators: assess the long-term effects on population health. It is obvious that these indicators are those that should primarily be of interest to the incentive provider. But these indicators are very difficult and expensive to assess. Moreover, it is not easy to disaggregate in population health status what is attributable to the financial incentive and what is attributable to other causes such as an improvement in the economy, or conversely poor harvests due to prolonged drought. Finally, impact is usually measured over long time periods; this is only weakly compatible with the short cycle of action and reward. For these reasons, the performance incentive mechanisms never retain impact indicators to distribute a reward to a health care provider.

Example: life expectancy, percentage of women suffering from breast cancer, maternal mortality rate, etc.

5.2 Quantity and quality indicators

In performance incentive mechanisms, we need to consider another characteristic of indicators, namely the difference between quantity and quality indicators. In some cases, the incentive provider may only be interested in getting the health care provider to always produce more. In this case, he will retain indicators that assess quantities. On the other hand,

the incentive provider may also be interested in certain characteristics of the product (e.g. absence of nosocomial infections, relevance of the treatments given to patients, no complications after a surgical operation, etc.) or the production process (good conservation of vaccines, conditions of confidentiality during the post natal care visit, correct management according to the guidelines of the National Tuberculosis Control Programme, cleanliness of the pharmacy premises, etc.). For the incentive provider these elements may be considered essential since he assumes that these conjointly determine the quality of the care and services that will be provided. The incentive provider can then take that into account in determining the compensation to be given to the health care provider, and the latter will be encouraged to change his behaviours and practices. The objective therefore is not just producing more but also producing better.

Finally, the incentive provider may be interested in the satisfaction of patients and the population in general. For that, he will retain indicators assessing this satisfaction. The reward may then take into account these factors as well. For example if an indicator measures and pays the provider according to client perceptions on how he or she is treated, or how long he or she had to wait before being attended, the health care provider will most likely attempt to satisfy the client's perceptions.

5.3 Choice of indicators

In the face of a complex reality a single indicator or even a limited set of indicators will not make it possible to account for the results of a health care provider. In order to take into account the multiple facets of the action of this health care provider it is tempting to enlarge the number of indicators: indicators will be retained for vaccination, delivery, family planning, treatment of diseases, reception of emergencies, etc. The more the number of indicators is multiplied, the more the chances that each of the missions of the health care provider will be taken into account. It can then be affirmed that such care provider is efficient on such indicator, is less efficient on such other indicator and is not at all efficient on yet another indicator. The compensation provided by the incentive provider can take into account these performance differences. Finally, the approach, which is based on specific indicators helps to take into account a target to be attained: e.g., if we retain as indicator the number of assisted deliveries at the health centre, we can relate the number attained by a health care provider to the number that was expected to be attained¹⁹.

¹⁹ For a basic package of health services, offered in health centers, about 15-20 services are purchased in PBF systems. The quality measures of these services, which impact on the payment for performance in various ways and degrees (either as a stick or a carrot), can consist of a multitude of these indicators, up to hundreds of indicators and composite elements, as these attempt to measure process of care (or 'quality of care').

It is also useful to recall criteria used to define the quality of an indicator:

Quality criteria for a performance assessment

Attributes	Explanation
<i>Comprehensible</i>	<ul style="list-style-type: none"> • Clear (defined in a clear and uniform manner) • Placed in the context (explained) • Concrete (measurable) • Without ambiguity on the orientation
<i>Pertinent</i>	<ul style="list-style-type: none"> • In relation to the objectives • Significant and useful for users • Attributable to the activities
<i>Comparable</i>	<ul style="list-style-type: none"> • Possibility of comparison over time or comparison with other organizations, activities and standards
<i>Weak</i>	<ul style="list-style-type: none"> • Quite representative of what is measured (valid, not biased) • Of which the data required may be reproduced (verifiable) • Of which the data and analysis are devoid of error • Not susceptible for manipulation • Capable of balancing (completing) the other indicators
<i>Practical</i>	<ul style="list-style-type: none"> • Feasible at the financial level • Possibility of obtaining up-to-date and regular data

The multiplication of the number of indicators has several disadvantages. Apart from the fact that the collection of these indicators will be heavy and expensive, the multiplication of indicators of all sorts leads to a great difficulty of interpretation and especially prevents one from seeing the essential. Certainly, the latter disadvantage may be compensated by weighting the indicators, i.e. by assigning a significant difference to each of them, or balancing this weighting carefully. In a performance incentive mechanism, a concrete way of weighting indicators may consist in granting a lesser weight to the less important indicators or services and a more important weight to indicators or services deemed more essential.

On the other hand, it will not be possible to have a general idea of the performance of the health care provider, based on a juxtaposition of indicators of all sorts and of equal importance. One may, therefore, resort to a composite or synthetic indicator. A composite indicator is an indicator that aggregates different indicators into a single value. The interest of a composite indicator is obvious: with only one value, it is possible to compare the performance of various health care providers. The calculation of a composite indicator demands that particular attention should be paid to the following two points:

- Indicators which will be part of this composite indicator will obviously be valued in different units of measure. Example: percentage of medical files correctly filled out + number of assisted deliveries at the health centre + average number of laboratory tests conducted per person hospitalized. It is not possible to just add up these three indicators to come up with the average. One technique, therefore,

consists in using a scoring system, i.e. a rating that helps to transform indicators with assessment units into addable scores;

- To take into account the unequal importance of the different indicators retained in the composite indicator, it is possible to use a weighting system. The latter are discretionary. In other words, it is up to the officials of the performance incentive mechanism to establish these weights. They will depend on the importance that these policy-makers attach to each of the indicators. Choosing indicators and weighing them is often difficult. Each stakeholder will have their favourite indicators and finding a consensus is time consuming and laborious. Nevertheless, there are some techniques and tools, such as the DELPHI method, that can make more efficient and transparent this decision making process.

Performance assessment becomes important when it is used for decision-making. The pupil will be attentive to his marks, since they condition his graduation to a higher class, the sportsman will attempt better scores in order to advance in his ranking, and the enterprise will look for better results in order to maximize profits. The search for performance is motivated by the benefits that one can derive from it and this is what will motivate individuals to make efforts to achieve the best performance. If there are no benefits attached to performance, individuals or organizations will just contend themselves with a minimal effort or decide to invest no effort at all. Consequently, in a performance incentive mechanism, the indicator becomes a stake. It is no longer as in classical planning an objective that one will try to achieve. It becomes the tool with which one can change the funding that will be made available to the health care provider. Hence, the latter will be attentive to the indicators that will be retained. It is not in the interest of the health care provider that the indicators retained are those where he knows he is not efficient. Hence, during the negotiation, and if the purchaser or incentive provider goes along with this, the provider will try to ensure that the indicators retained concern areas are those where he knows he is efficient.

We need to point out that these indicators should not be considered static elements. They need to be permanently redefined following the developments in each country. A scheme can include an indicator that is linked to an activity for which the results are very low (for example institutional deliveries); after a certain period this indicator can have witnessed a remarkable improvement and there might be reasons for dropping this indicator or change its weight in the total scoring system. On the other hand new indicators can be introduced: for example indicators that take into account activities related to Influenza H1N1, if the need arises.

It is difficult to imagine that we could establish a standard list of indicators valid in all the countries and applicable to all contexts. Nevertheless, it should be possible to come up with a list of essential indicators that could be a source of inspiration for schemes in a low income country context. This type of list could be established once a critical mass of empiric lessons learned is reached; this is not yet the case, although valuable experience has been gained with effective PBF indicators over the past ten years or so.

It should also be born in mind that the choice of indicators should be closely monitored by the incentive financier since wrong choices in indicators can produce perverse effects, conversely right indicators can lead to wrong choices made by providers; the box below gives some examples.

New curative consultations (new cases) reflect the utilization of health services by the catchment population whereas the re-attendances (old cases) can represent either a high level of follow up (which is positive) or an ineffectiveness of the treatment (which is negative); this indicator is vulnerable for falsifications or visits that are done as a favor; if the provider wants to exploit the situation, the patient can be asked to return as often as possible, even without a real need, or, the provider can re-classify a re-attendance visit, which is not paid under PBF schemes, under a 'new curative consultation' and make additional money.

Deliveries: in most developing countries the number of institutional deliveries is low. In order to decrease maternal and perinatal mortality, this indicator needs to be considered; nevertheless there is a risk that the provider will keep the future mother tightly in its grip in order to benefit from the incentive; to avoid this problem and to promote a better global follow up and care during pregnancy, the rewards can be distributed to the facility that receives the first visit but also to the facility that receives the pregnant women during a referral for more specialized care. The second risk in this particular case is that the first contact facility will become a simple gateway for referrals since it will get its reward for this.

Antenatal consultations: antenatal consultations (ANC) help to detect and prevent maternal and infantile health risk factors; using ANC visits as an indicator seems to be ideal for monitoring the follow up of pregnancies; however, women can make 3 ANC visits in three months, when it is recommended that there should be one visit every three months. In order to avoid confusion tetanus vaccination can be used as an incentivized indicator since it will be related to a certain interval between two ANC visits and to the regularity of services provided for the future mother; the incentive financier should cover these two activities - ANC visits and tetanus vaccination separately. Another solution would be to incentivize the pregnant women to make their first ANC visit during the first three months of pregnancy; indeed, the principal reason for failing to accomplish the recommended four ANC visits is that the mothers start their visits too late. Thus, incentivizing pregnant women to make their first ANC visit during the first three months would be a way to sensitize them on the importance of accomplishing the four recommended visits.

6. HONOURING COMMITMENTS

Once a performance incentive mechanism using regulation or contracting or a combination of the two tools, has been put in place, it is necessary to consider the elements that will ensure that the two parties – the incentive provider (purchaser) and the incentive beneficiary (health care provider) – will comply with the mechanism. Indeed, it is important to recall the prerequisite that this mechanism cannot be imposed by the incentive provider. Hence, either the mechanism is completely established under a contract or it is established under a regulation, which should be accepted by the health care provider, and which will consequently be based on a contract. It is not possible to rely on command and control and its corollary the sanction to get the parties in presence to respect the new mechanism.

Honouring commitments is based on the credibility of the actors, reputation, confidence, and good faith. These contracts are ‘self-enforcing’. In other words, it is in the interest of each party to respect the agreement if he wants to maintain his reputation and credibility. For example, if similar contracts are signed by all hospitals in the country, it is likely that some form of emulation will be instituted to promote the respect of commitments. Similarly on the side of the health administration the non-respect of commitments affects credibility. The administration will therefore witness a reduction of its influence due to the non-respect of the contract, for the memory of the latter will compel the health provider to protect itself rather than having confidence. This form of contract is particularly significant when the results of the contract are difficult to verify and when the parties to the agreement are in a predictable situation such as for example the donor and the health services or between the health insurer and the health care providers.

When the contract corresponds to a task to be carried out punctually, there is no reason for the contractual relationship to continue beyond that. It is therefore tempting for the contracting partner who should accomplish this task to adopt an unfavourable opportunistic attitude towards the other contracting partner. Only the threat of sanction may dissuade him. On the contrary some contracts are renewable unless particular events intervene. In this case the sanction will be imposed mainly at the end of the contract. It will be in the interest of the contracting partner who knows that his contract ought to be renewed to not to adopt opportunistic attitudes. This depends to some degree on whether he places himself in the perspective of an “automatic renewal” or rather a “renewal of the competition”. Generally for contracts that are renewed it is in the interest of the contracting parties to comply with the terms of the contract and not adopt an attitude aimed at maximizing profit to the detriment of the other party. The theory of “relational signs” is in line with this logic: a partner will send to the other partner signs to show that he is worthy of his confidence and that consequently the contractual relationship may be pursued. The non-renewal of the commitment within the mechanism or even suspension of the contractual relationship amounts to sanction. It is not a sanction in the classical sense such as forcing commitments through a tribunal, but rather a suspension of the relationship between the incentive provider and the health care provider.

In reality commitments that are made in performance frameworks are generally of short duration. The results are appreciated over periods varying from one month to one year, but never beyond that. The commitment of the incentive provider and the health care provider alike is therefore limited to this duration. The incentive is therefore related to this short-term commitment and consequently should be repeated constantly. When the incentive is considered in relation to the direct achievements it is clear that there are no sustainable effects since the purchase act must be repeated all the time; the remuneration of time $t+1$ does not

depend on remuneration at time t . The institution must therefore at each period renew its efforts in order to take advantage of the remuneration according to the activities carried out. On the other hand when the incentive is considered in relation to the production process, we can consider that once the behaviour change is attained the effect will be sustainable. For example, health personnel that have become habituated filling out medical files might continue doing this as a routine task. Yet studies show that, at best, behaviour change takes a lot more time before becoming sustainable and that quite often the disappearance of the incentive (the abolition of the bonus) will lead to a return to the status quo ante. This is because the incentive does not act on the underlying causes of non-performance. Hence, if the latter have not changed, we will find ourselves in a situation where the same causes produce the same effects. Behaviour change will only last for the period of the incentive, which mobilizes a particular effort with a “cost” for those who carry it out.

Moreover, so far we have been assuming that the health provider was an institution, and that all its composing elements would be sensitive to the same incentives. Yet, the interests of each of these elements are not the same. Let’s assume a hospital: it is composed of three elements. First, there is the institution itself, then each of the units and, finally, each of the persons working in this institution. The hospital institution on the whole will be sensitive to any indicator that acts on its fame, whereas the staff of this institution will be less sensitive to that. The health institution will prefer incentives which are not tied to individuals, whereas the staff will be more interested in bonuses tied to individuals. The head of a unit will be interested in taking into account team work, whereas the staff will be much less interested in such. It is therefore important that the incentive provider pays particular attention to the elements to be encouraged. The choices to be made will have a major effect on the results obtained by the health institution. Indeed, if the incentive provider decides that the benefits of the incentive be specifically reserved for staff bonuses, it is not meant for improving the situation of the staff but to ensure that the resulting motivation has an effect on the effort of the latter and, consequently, on the results that will be achieved.

7. ADVANTAGES AND DISADVANTAGES OF THE PERFORMANCE INCENTIVE STRATEGY

A strategy which uses incentives to enhance performance of health care providers in low income countries has many advantages, of which several have been mentioned above. The rare publications on this strategy often show highly favourable results, even if these studies are not exempted from bias. An important reason why publications are rare is that the approach is fairly new, less than ten years old, and therefore not much has yet been documented in the peer-reviewed literature. The objective here is not to question these results but rather to draw attention to the difficulties and risks that will surely appear when you want to implement this strategy.

7.1. Advantages

We will try to summarize below principal arguments in favour of using performance incentives:

- 1. Provider enthusiasm.** In all supply-side PBF systems, the greatest proponents seem to be the providers themselves: whether the providers are the NGO managers, or the health facility managers. Both groups are positive about the increase in resources, and the freedom to determine where and how to use these increased resources. Whether to use it for improving the quality of services, for instance by purchasing missing

equipment, or rehabilitating a building or an office, or to pay staff a bonus, or a mix of the two is up to the manager. Whereas policy makers, unacquainted or relatively unfamiliar with PBF systems, might strike a cautious note when one speaks with the end users who are the providers and practitioners in the field, one notes a high degree of engagement, and plenty of ideas and opinions on how to move forward with the current systems.

- 2. Increased use of data throughout the system.** PBF systems provide a more limited set of data which are scrutinized much more carefully by all stakeholders than typically would be the case in non-PBF information systems. Data in PBF systems tend to be of a higher quality, more reliable, timely, and lead to managerial action, whilst being used at all levels in the system.
- 3. More reliable data to work with.** Due to much enhanced data validation systems, which include rigorous data quality audits and surveys, data tend to be 100% complete, timely and reliable. This by itself is an enormous benefit of PBF information systems. Quite simply: if performance data are not available, there will be no payment.
- 4. Focus on harmonizing and aligning HMIS systems.** PBF information systems tend to be innovative in the sense that these focus on limited data sets. In any given poor-country context, many parallel information systems exist, for project specific information needs and as a rule the national information system would be infamous for incomplete or unreliable data (which formed the impetus to create parallel information systems). Creating PBF data sets typically involve many stakeholders and always lead to intense discussions on what types of indicators to choose and how to monitor these. Such an intense discussion can form a fertile basis from which to contemplate existing information systems, and can lead to reforms attempting to harmonize systems (such as is the case with Rwanda).
- 5. Improved Equity (certain projects).** PBF systems can improve equity in various ways. From an equitable financing point of view, PBF systems can take stock of other financial flows and correct certain imbalances if need be (by providing a higher budget to certain facilities, this is the case in for instance the Haiti RBF system). Second, in FFS style PBF systems, some providers have found that by decreasing the co-payment for a curative visit, they would get more curative consultations (for which PBF would pay a FFS), which would also lead to a higher number of preventive care services offered (for which PBF would pay FFS), as the port d'entrée in preventive care services frequently are the curative services. Small-scale household surveys done in Rwanda, DRC and Burundi show that such systems have the potential to lower the total household expenditure on health in catchment areas of PBF facilities (this would predominantly be achieved through health services of better quality, a higher uptake of preventive services, and an earlier consultation in case of a disease episode due to lowered out of pocket expenses combined with a higher quality of services offered). The incentive providers can also 'compensate' health providers by allocating a specific 'equity bonuses' over and on top of the PBF earnings, to provide these providers more money to improve their services faster.
- 6. Community perceptions feedback.** Certain PBF systems such as in DRC, Burundi and Rwanda rely on community client surveys to (a) detract phantom patients and (b) to elicit feedback on the patient's perception of the level of quality of the services

received. This feedback from the patients is communicated to the health center management and to the district/province level. In CORDAID PBF systems, the community client survey results contribute to determining the level of bonus payments for the health facility (on top of the earnings from the FFS system).

- 7. Focus on quality (various mechanisms).** PBF systems allow for including quality measures in the results/performance framework. Whereas most PBF systems have a singular focus on results expressed in increased coverage rates (typically increasing vaccination coverage of children less than five years of age, or women delivering in health facilities), quite a few PBF systems have sophisticated measures that attempt to measure various dimensions of quality. For instance in the Afghanistan PBF, a comprehensive balanced scorecard measures structural quality through a facility equipment list, among many other elements. In Rwanda, a quarterly checklist with 1,058 data elements checks a variety of quality dimensions in all health centers, leading to a quality score that impacts directly on the health center earnings (Quantity * % Quality = Earnings). In the Rwandan district hospital PBF model, a balanced scorecard focuses on processes, all attempting to measure and qualify, quality.

- 8. Focus on innovative strategies (demand side interventions).** PBF systems are never static but are ever-evolving, based on lessons and insights learned during implementation. There is a push to ‘do what it takes’, to experiment and to find innovative solutions to barriers to access and to provide services. Quite a few PBF systems have started looking holistically at health systems, and have started adding demand-side interventions to complement the supply side interventions. For instance, demand side PBF which includes conditional cash transfer, or conditional in-kind transfer programs aim at attracting more beneficiaries to health services. It is thought to work by lowering the financial barriers to access services, by compensating beneficiaries partially for their costs to access services (these costs can be direct and indirect costs). Demand side interventions can also consist of health insurance schemes, such as in Rwanda, where health insurance has been made obligatory and over 90% of Rwandans can now access health services for a contribution of USD\$ 2 per person per year. Health facility managers can decide to attract pregnant women to deliver in their facilities by for instance offering a ‘welcome baby package’ consisting of e.g. soap and baby clothes. Or managers can mobilize traditional birth attendants by paying them a fee for every woman that they bring to deliver in their health facility (they might pay \$1 per woman, whilst they earn \$5 per woman plus get kudos for achieving public health targets). In Rwanda, the MOH will investigate whether offering a large scale conditional in-kind transfer program would increase the coverage for certain essential mother and child health services.

7.2. Inconveniences

We will summarize below some of the major difficulties and risks related to the use of performance incentives:

- 1. Assessment:** performance must be measured in order to qualify the difference between actual performance and the target, to know when corrective measures are necessary. The results of the assessment will generally be compared to the expectations expressed by a performance objective (which could be based on a better reference practice, a technical norm or some progress indicated in relation to a basic

value). Performance assessments should, therefore, correspond to performance objectives and indicate how the organization meets its performance expectations. The complexity of performance assessment should not be under-estimated. This issue has already been tackled and will be further developed in the following paragraphs.

2. **Expected benefit:** performance assessment assumes all its importance when it is used to take decisions. The search for performance is guided by the expected benefits, and this is what will motivate institutions and the individuals working in these institutions to unleash efforts to achieve the best performance. If there are no benefits associated with performance, the actors might content themselves with minimum effort.²⁰ From the point of view of the incentive provider the benefit expected must be appreciated from the notion of net profit. Indeed, profits in terms of improvement of the performance of health care providers must be added to the costs incurred on establishment of the mechanism; costs for remunerating performance but also costs of surveillance of the mechanism. Yet, many studies have shown that these costs are often high and may call into question the overall appreciation of the mechanism and efficiency of the use of incentives. This analysis of net profit is not always conducted and we often content ourselves with the appreciation in terms of gross output. Certainly, in the context of developing countries these types of studies are difficult to conduct due to the lack of data. But the absence of these studies gives arguments to those who are reticent towards the strategy of performance incentives.
3. **Equity:** we should always consider that the health care provider is dealing with a population that does not need to be penalized for the poor performance of the care provider, especially when the latter has a de facto monopoly. It could even be said that the performance incentive mechanism may induce a double punishment: first of all, because of the poor performance of the care provider and secondly, since the latter has not been efficient, he will not have the necessary resources to improve his services. In this case, corrective measures can be taken. Once the problem has been identified, conditional incentives can be used, these incentives would take into account the deficits (in equipments, in personnel) if the provider commits itself to make the necessary efforts for improving the performance.
4. **Context:** contextual factors are always difficult to take into account. Performance contracts are based on the principle that if a care provider has not been efficient it is because he did not make sufficient efforts. Although this effectively reflects the reality in many situations, there are also situations in which care providers have done their best, despite the constraints encountered: lack of necessary human resources, non-delivery of drugs, reduction in the income of the local population for economic or climatic reasons, etc. Rather than penalizing this care provider for not achieving the expected results, we should instead assist him to look for ways and means of correcting this contextual situation. Under these circumstances if performance agreements value the effort by taking into account the context, then these contextual factors may be mitigated. It is also true that incentive mechanisms can resolve

²⁰ Although it is not “politically correct”, we can consider that the principle of least effort guides behaviors. Making an effort “is expensive” and, consequently, we are prepared to make efforts if we derive some benefit from it as compensation. This benefit may vary feeling good by doing well; it may vary from attempting to get material gains, but also through the search for well-being to attain harmony. The actors are, therefore, guided by aspirations, values and the context.

problems that seemed to be unsolvable before. For example, in Rwanda before PBF was implemented, health centres sent their tuberculosis and malaria samples to the capital city for quality control, but they rarely if ever got the results back. When the PBF mechanism introduced an indicator related to the quality control of laboratory results the problem was solved. In fact, health providers took adequate measures to convince the national laboratory to execute their work and to ensure that the quality counter-verification results were sent back to their facilities. Also, it is always possible to integrate contextual factors into a performance incentive mechanism. For example, even if the indicators are the same for all of the providers nothing would forbid different values for the indicators. Some experiences have introduced coefficients for isolated facilities : for example if every new consultation is worth 1\$, this could be increased to 1.2\$ dollars for remote and isolated health facilities (this is currently the case in the Burundian PBF model)²¹;

5. **Flexibility of the financing:** we need to ensure flexible financing arrangements. We cannot fully predict the level of budget execution (in effect, if the budget is consumed near 100% we have either done a brilliant job calculating and forecasting, or a lousy job because we have paid insufficient attention to financial risk forecasting but got it accidentally right). Hence, the financier will put in place mechanisms to ensure that he will be able to deal with the financial effects of an exceptional performance. On the other hand, in case of insufficient performance, the financier will be saddled with unused budgetary capacities, which may be reflected by a loss of opportunity, if the financing is provided in the framework of the annual budgeting. Hence, to deal with this risk, it seems necessary to envisage compensation or reservation mechanisms that are excluded from the annual budgeting cycle. The techniques thus exist for responding to these situations; nevertheless, the decision makers need to keep in mind that they are not always easy to implement;
6. **Opportunistic behaviours:** performance incentives may lead to opportunistic behaviours in favour of the care provider but, not desired by the incentive provider:
 - a. One of the problems treated in the literature is "Gaming."²² Since he knows that he is rewarded on his results, it is in the interest of the care provider to ensure that he will look good. The idea is not to cheat, i.e. make false declarations, but simply arrange, embellish the reality. The care provider may also, during the negotiation, insist that only indicators on which he is sure of getting good results are retained for the assessment. He may also negotiate for modest objectives, where he is sure of achieving results. Finally, he will concentrate his efforts only on activities that are assessed by indicators and neglect the other activities;
 - b. Another problem is "Dumping". It is in the interest of a care provider to get rid of clients with serious health problems and who, consequently, cost him

²¹ C.Bredenkamp "The puzzle of isolation bonuses for health workers", The World Bank, September 2009, www.rbfhealth.org

²² Mingshan LU (1999) "Separating the "True effect" from "Gaming" in Incentive-Based Contracts in Health Care", *Journal of Economics and Management Strategy*, 8 (3): 383-432

- Yujing SHEN (2003) "Selection Incentives in a Performance-Based Contracting System" *HSR: Health care Research*, 38:2 535-552

- Margaret COMMONS, Thomas G. McGUIRE, Michael H. RIORDAN (1997) "Performance Contracting for Substance Abuse Treatment" *HSR: Health care Research*, 32:5 631-650

- a lot of money and, for whom it is (all things being equal) more difficult to achieve results. This health care provider is only interested in getting good clients, i.e. clients who are not expensive and through whom it is easy to achieve results: "cherry picking". Hence, the care provider will have a better performance and can earn a higher bonus;
- c. The third problem is that of "multitasking". A health service provider is an entity that has several tasks which can be grouped in three categories: curative, preventive and promotional. When this entity allocates its resources between these tasks, it will often arbitrate between the costs of the tasks and the relative advantages. Same applies to the employees of this entity when it comes to their working time. If the implemented incentives pay for a certain task, the provider or its employee will be tented to shift their effort on this task on the expense of the other ones. This effect will produce more frequently when there is a task that is easily measured and by consequence rewarded and another one that is difficultly quantifiable and does not thus easily open to rewarding. This is why it is easier to reward quantitative aspects of an activity over its qualitative aspects.

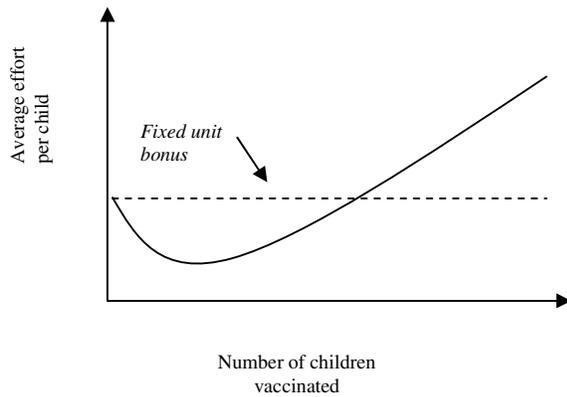
The behaviours presented above, luckily, do not occur all the time. Those who wish to set up performance incentive mechanisms should however be aware of them; the objective of this document is to portray them so that they can be avoided. To avoid the effects mentioned above the incentive provider must ensure close monitoring of the contract. He must also assess the compliance of the behaviour shown by the care provider. Yet it is obvious that it is not easy to provide evidence and hence this surveillance will entail costs thereby reducing the profits from the contract for the incentive provider (purchaser). Besides this surveillance or monitoring is difficult to implement by the incentive provider, since there could be a conflict of interests (especially when working through a 'contracting-in' or 'internal market' mechanism). The function of surveillance should therefore be entrusted to a "neutral" body, on behalf of the contracting parties.

Finally, we should never lose sight of diminishing returns at the margin. Let's take the example of vaccinations in a health centre. It is obvious that not much effort need to be made to reach the first children to be vaccinated. Populations close to the centre might naturally come. On the other hand, it will be more difficult to reach certain children, particularly those living far away and those from the most disadvantaged families. The health centre should produce greater efforts to reach these children. It will have to put in place communication strategies, an advanced strategy, all of which require efforts and entail costs. Vaccinating all children under five years of age, demands increasingly greater effort.

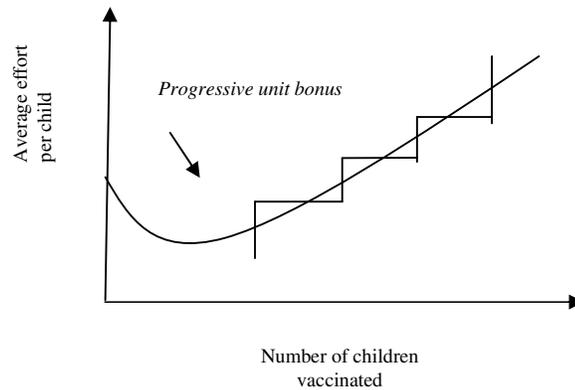
In light of the above, a performance incentive mechanism should have a reward mechanism based on the logic of increased costs at the margin. Hence it is not really necessary to incentivize the provider to vaccinate the first children. They will be vaccinated without incentive anyway as they will present to the health centre. On the other hand, the incentive should be commensurate with the extra effort made to reach additional children, perhaps those in the last 20% or so that need to be vaccinated. Yet, all the performance incentive mechanisms currently put in place are functioning with constant monetary incentive. This approach assumes a constant cost at the margin which obviously does not reflect the reality. One consequence is that this constant incentive cost leads to an insufficient incentive in the real world. In any case, when it is less than the marginal cost, the health centre might quickly interrupt its efforts since the reward would be less than the cost of the effort. On the contrary,

with a reward that increases with the effort the health centre might be encouraged to make a greater effort.

Let's take the case of vaccination of children under five years of age. The representation diagram is as follows:



Graph 1



Graph 2

In Graph 1, the fixed unit bonus increases quite rapidly along the curve of the average effort; this means that quite rapidly the health care provider will have no interest in pursuing its efforts since the unit bonus is not sufficient compared to the additional effort that it should provide. On the contrary in Graph 2 the progressive unit bonus follows better the curve of the average effort and consequently it is in the interest of the health care provider to pursue its efforts. There are, however, some disadvantages in the progressive unit bonus approach. First of all, it can encourage the health care provider to cheat simply because its interest is higher than in the fixed unit bonus. Moreover, it can get the health care provider to overproduce. In the example given here – vaccination of children – this risk does not exist since the interest of the incentive provider is to ensure that all the children are vaccinated. On the other hand, if we take an indicator such as hospital inpatient days the hospital might not let the patients go, even if there is no real clinical need for hospitalization, in order to increase the number of total inpatient days.

Certainly, the establishment of a progressive rather than uniform compensation mechanism is not easy. First of all this progressiveness should no doubt be organized in stages. Moreover, it should be established through successive trial and error in order to test the adaptability of health care providers to this progressiveness. Such an approach is undoubtedly promising. With a constant budget, we should expect greater efficiency of the progressive reward mechanism, compared to a uniformed reward mechanism.

8. PERFORMANCE INCENTIVE IMPLEMENTATION MECHANISMS

The performance incentive mechanism is implemented within a particular institutional context. To understand its specificities it is important to review the development of the mechanisms observed during the past years. To simplify matters we should conceptualize that a health system performs three major functions: health care provision, health care financing and health administration. For a long time, in the public sector the State ensured these three functions.

Health systems belonging to the State are deconcentrated services which receive their operational budget as defined by the central departments of the Ministry of Health. The ‘Ministry of Budget’ establishes the amount of the performance budget, the Ministry of Health is the fiscal officer, and the Ministry of Finance is the accountant of this expenditure. In the private sector, once their authorization to operate has been obtained from the health administration, health facilities operate with their resources (cost recovery, grants from donors and eventually a grant from the State).

A first series of reforms concern the notion of separating the provision of health services from other functions. Hence, we resort to autonomous health facilities and decentralization. Because of these reforms the Ministry of Health can no longer use conventional command and control in its relationships with public sector health facilities.²³ This separation of functions is never perfect especially due to the fact that, financially, public health facilities continue to depend largely on the Ministry of Health. Nevertheless, gradually the notion takes shape that the relationships between these health institutions, which still depend on the public sector but no longer directly on the health administration, must be based on a formalized agreement, i.e. a contract.

The establishment of the performance incentive mechanism opens a window of opportunity, which is based on two considerations:

- The financier, i.e. the incentive provider or purchaser, no longer produces virtually automatically his financing in favour of the health care provider. A mechanism is put in place to vary certain financing facilities depending on the efforts and, therefore, the results achieved by the health care provider. The incentive provider receives funding from either a development partner or the Ministry of Health. He will use these financing facilities as a means of exerting pressure to get health care providers to intensify their activities notably those he considers as priority activities;
- The incentive provider is not necessarily the Ministry of Health. PBF pilot projects are frequently initiated by development partners who establish the mechanisms. In other cases the lead is taken by the Ministry of Health with support from development partners; this has been the case for example in Rwanda, Burundi, Ethiopia, Eritrea, Liberia and Afghanistan.

Consequently, the function of financing becomes a full-fledged function and should not be mistaken for the administration function. In reality, this new separation of functions is currently organized according to two models:

- Model 1: consists in putting in place complete separation between the two functions of purchasing and provision. To that end, a new distinct entity of the administration is created. This entity generally takes the form of a “Purchasing Agent”;
- Model 2: the separation of the two functions results in the creation of two entities within the Ministry of Health: a unit in charge of health administration and a unit in charge of financing the provision of health services.

²³ Since the Ministry of Health is no longer responsible of the health facilities it has no direct authority over them. Nevertheless, the Ministry of Health will keep its regulatory powers which in some cases can translate into a supervisory authority.

The creation of a central procurement agency raises a basic issue: who can play this role? A development partner may directly play this role. This is generally the case when a local experience is put in place. But to go on scale, the organization of health services must be formalized. We can then create a private law agency, a specific body grouping eventually development partners around the Ministry of Health. But it is generally a public law establishment created by the Ministry of Health to manage the funding intended for the provision of health services.

The entity or agency thus created may play a multi-purpose role. It may take on a general mission from conception to implementation of the mechanism or even that of verification (cf. above). But very often, the health administration reserves for itself, the conception of the mechanism and requests a specific entity to ensure the implementation.

Each of these two models has advantages and disadvantages, as summarized in the table below:

	Advantages	Disadvantages
Model 1: Purchasing Agent or private entity	<ul style="list-style-type: none"> - Separation of functions is clear - Independence, which facilitates greater efficiency in the implementation of the mechanism 	<ul style="list-style-type: none"> - The public authorities lose their direct control over financing - The Ministry of Health is not usually well prepared for fulfilling the stewardship function . Implementation an administrative costs of this entity -The Ministry of Health does not want to part with this function
Model 2: Service by the Ministry of Health 'contracting-in' approach	<ul style="list-style-type: none"> - No creation of a new external entity, hence possibly reduced costs - The health administration maintains considerable supervisory powers 	<ul style="list-style-type: none"> - There is a risk that the separation of roles is only cosmetic,²⁴ since the health administration considers itself as the responsible authority

Besides, the introduction of performance incentives has created a new function in the organization of health services: that of certification. Indeed, performance incentives require that the output expected by the health care provider is verified, validated and certified. This can go through either one of the following methods, or a combination of these two:

- The care provider declares the results that he has achieved. He is paid according to the results he has claimed without further ado, and an external control is instituted (ex-post control, that is after payment for performance) to discourage fraud;
- Certification by an external controller of the results achieved before payment is done (ex-ante control). The care provider should, therefore, provide this controller with all the information he needs to accomplish his mission.

In all cases, it is in the interest of the care provider to give the impression that he has achieved high results: cheating²⁵? Arranging the truth? The financial stakes are important for both parties. The health care provider expects the reward to finance certain actions (bonuses to staff, additional activities, etc.). The incentive provider wants to ensure that he does not

²⁴ It will all depend in the end on the organic framework. If the two units are attached to the same management, the risk of a purely artificial separation is high; on the contrary, if the two units are attached to different managements, the risk will be lower.

²⁵ The need for monitoring and verification is going to be even more important when contracts are incomplete, since incompleteness leaves room for opportunistic behaviour from the providers

disburse money (often public money for which he is liable) to finance imaginary or overestimated results.²⁶

The agency theory (*cont'd*)

The agency problems are related to informational asymmetry. In other words, the agent has some information that the principal needs for remunerating at its just value the effort of his agent. But out of opportunism it is not in the interest of the latter to disclose all information fully.

Hence, the principal may be contended with the declaration of his agent, but he runs the risk that the latter does not reveal to him the correct information thereby compelling him to disburse more than necessary. This opportunistic behaviour of the agent may be penalized by the non-renewal of the contractual relationship, in case the principal discovers the fraud. The behaviour of the agent will be determined by his risk aversion and the likelihood of detection of the fraud by the principal.

To avoid any opportunistic behaviour on the part of his agent, it is in the interest of the principal to put in place a mechanism for gathering sufficient information on the agent's performance. He will need to control the declarations of his agent or directly observe his behaviour. However, the agent, finding that the principal is both judge and defendant in this observation, may require that this control be made by an external entity.

The issue is identifying the entity that can perform this function. It could be conceivable that the incentive provider himself takes on this role. The advantage of this solution is that it might reduce considerably the costs of this function; however it is obvious that the incentive provider will then face a possible conflict of interest situation. This function may also be entrusted to the health administration. The latter has lesser conflict of interest, but is verification really its role? In playing this role, it interferes in the relationship between the incentive provider and the health care provider and can no longer play in all neutrality its main health administration role. On the other hand if this verification is coupled with the monitoring of activities then the involvement of the health administration may be justified. In this case the health administration takes advantage of the verification activity to initiate a real discussion with the health care provider on analysis of the causes of the outcome observed. This may result in an improvement of the situation.

The independence of the verifier is therefore absolutely essential. Who else could play this role?

- A foreign audit firm: it is the spirit of a scoring agency. This solution is no doubt the one that best guarantees (though not totally) independence. But this solution will obviously be very expensive and can be used only if the financial stakes are very important;²⁷

²⁶ For an illustration of this problem, see Stephen S Lim PhD, David B Stein BA, Alexandra Charrow BA and Prof Christopher JL Murray MD " Tracking progress towards universal childhood immunization and the impact of global initiatives: a systematic analysis of three-dose diphtheria, tetanus, and pertussis immunization coverage", The Lancet, p.2031-2046, December 2008.

²⁷For example in Afghanistan, Johns Hopkins University in collaboration with the Indian Institute of Health Management Research, have taken up this role by managing the "Balanced Score Card" M&E tool.

- A national consultancy firm: the independence will be lesser and this solution is expensive;²⁸
- A local NGO with which a contract is signed for this work. There is some experience²⁹ gained with this approach. It assumes that the NGO represents the voice of the population concerned by the activities of a given health care provider, and also assumes that the NGO is sufficiently impartial and that the results of its work will be credible. Nevertheless we may try to know whether this auditing and consequently policing role can be played by an NGO. Moreover, many NGOs are not channels for community voice since they are often organizations composed of a handful of individuals who can be easily influenced by external pressure;
- A "clients - patients" association: this solution is interesting for assessing client satisfaction and providing information to the incentive provider. But, they are not easy to put together and, in the poor-country contexts, they generally have several capacity constraints;
- A group of care providers from another region of the country: peer auditing has many advantages, notably the guarantee of having qualified persons to analyse the results produced by colleagues. But the disadvantage of this solution will be the relative independence of these persons. Indeed although coming from another region it is certain that they will know the persons whose performance they will have to verify. In fact it is never easy to challenge the performance of your colleagues (especially not when large sums of money depend on your assessment). Moreover, this certification may be vertical (conducted by peers of a higher level of the health pyramid) or horizontal (conducted by peers of comparable level in the health pyramid).

Furthermore, this issue of independence of the verifier becomes more acute when dealing with the financing of the verifier. In reality, this component is often entrusted to the incentive provider. This being the case it is clear that the independence of the auditor is not guaranteed. Undoubtedly, there is no perfect solution. The alternative solution is perhaps the one that consists in instituting a financing scheme that associates all the actors concerned by this mechanism: incentive provider, health care provider, health administration and development partner. In addition, it is extremely important that these mechanisms are operated transparently and that the results are known by all the stakeholders involved.

Certification is always an expensive function in the implementation of a performance incentive mechanism. The main actors of this mechanism, particularly the incentive provider, should be aware of that and ought to strive for a solution for achieving reliable results whilst balancing costs and risks. The balance is not easy and will depend a lot on the societal and cultural contexts. In any case, it will be necessary to compare the cost with the gross outcome of the performance incentive mechanism. The following equation may then be obtained:

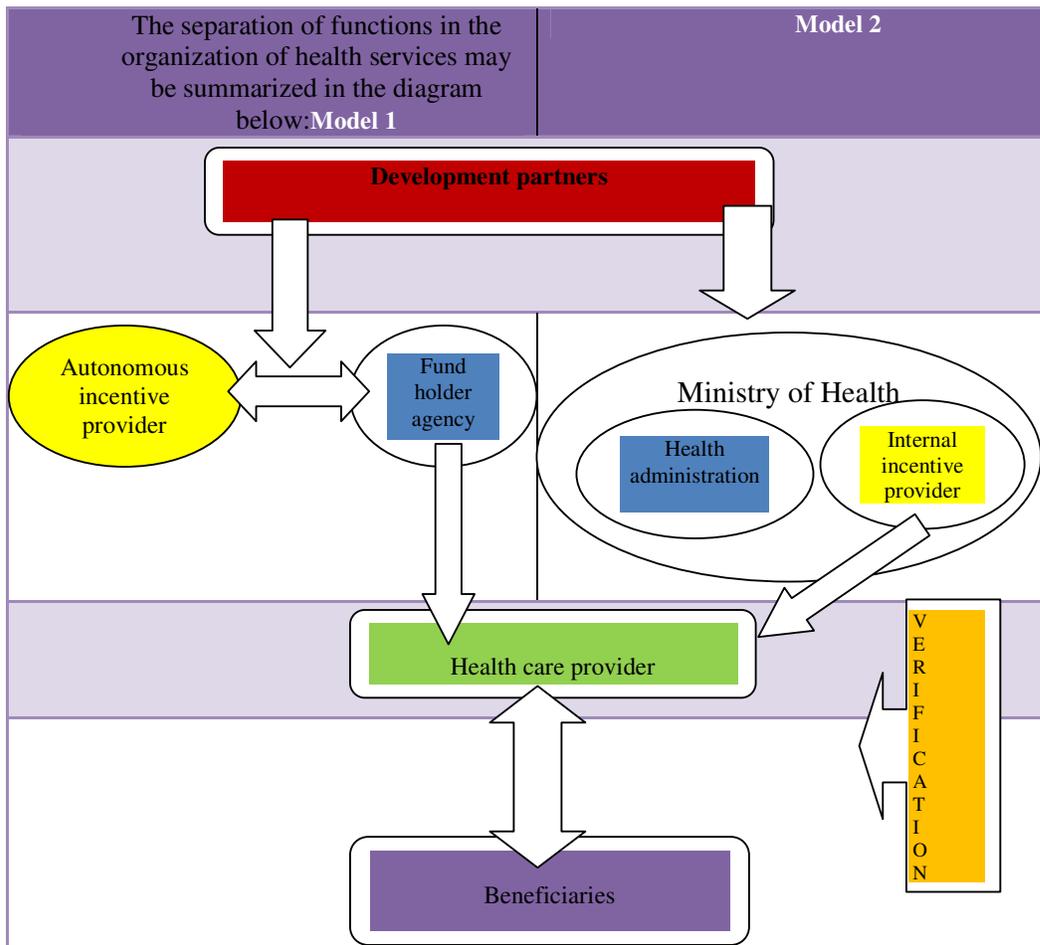
$$\text{Net profit} = \text{gross profit} - (\text{administrative costs of the mechanism} + \text{auditing costs})$$

Also, it may turn out that the health gains from a performance incentive intervention are only slightly positive, if not negative, once the costs induced by the implementation of the

²⁸ In Rwanda, the Ecole Supérieure Professionnelle de Kigali (ESP) did take up this role during the piloting phase.

²⁹ In Rwanda the NGO "Health, Development and Performance" (HDP), created from the former Cordaid Rwanda team, has this role

performance incentive mechanism are taken into account (although we do not have data on this yet).



This figure indicates the different relationships that exist between the stakeholders in the context of a performance incentive scheme. The relationships represent agreements between the actors; these agreements are generally formalized in contracts. However, the nature of the contract will vary depending on the context:

- In some cases a classic contract will be used: an actor purchases services from another actor - both have their full legal autonomy : this is the case in model 1, where a purchasing agent belonging to the private sector through its statutes, "purchases" performance from a public or private health care provider. This type of arrangement is often referred to as "contracting out" situation or service delivery contract;
- In other cases the scheme will be based on internal contracting since the contract will be established between two institutions of a single legal entity. This is the case for model 2 where the contract is established between an internal incentive financier and a public health care provider that does not have legal autonomy. We can refer to this as a "contracting in" situation, and this concept is linked with the concept of an 'internal market' or 'quasi market';

- In some cases the contracting will be quasi-internal. This is the case when there are two separate public legal entities which are not fully independent. This type of situation is portrayed by the model 2 when the contract is between an internal incentive financier (an integral part of the Ministry of Health thus linked to the legal position of this Ministry) and a public health care provider that has a legal autonomy through its statutes (and thus has a separate legal position that is nevertheless linked with the public authorities (in different ways in different legal contexts)).

In reality the situation is often more complex and several types of relationships can cohabit.

9. A DIFFERENT VISION

In the preceding paragraphs we made the hypothesis that performance improvement depend mainly on incentives. The actors are not sensitive to the request for an increase in performance if this improvement of result does not lead to compensation, a compensation which is directly linked to the level of effort. Doing better because it is normal to always try and do better does not seem to reflect a normal behaviour. This focus on the link between result and financial encouragement is derived from an approach that places market mechanisms at the centre of the economic approach and which, consequently, seeks to please economic agents in a situation close to this logic within a paradigm built around value-utility and the theory that seeks to maximize its utility. Hence, the incentive is reduced to a form of purchase of an act/service produced by an economic agent. The impact of this incentive will be linked to the manner in which the agent expresses his preferences. Whilst sticking to this paradigm, we will attempt to look at non-financial factors whose importance is also acknowledged by economic actors.

What are institutions and their personnel prepared to do without hoping for an immediate and material reward? Several factors may help to achieve better results:

- Training: one can do better when one is better trained. Hence, better trained staff will be more efficient because they know better how to carry out their activities. Training enhances know-how. However, it is also observed that training is not always followed by improvement in productivity. Training is not always adequate and/or of good quality, and therefore does not guarantee the improvement of know-how. In addition, know-how will only be reflected by a result when staff is capable of using and applying this know-how.
- Another method is based on performance assessment. The starting point is the analysis of the favourable factors and impediments to performance. Hence, performance assessment is used to identify the situation and the subsequent stages will be related to improving performance. This approach identifies strong points and weaknesses through an analysis of all variables that intervene in the production function. But what differentiates it here is the use of contracting. Two types of contracts could be imagined:
 - o One consists in a situation whereby the two parties agree to provide solutions to the situation that has been analysed on the basis of the performance indicators retained. These two parties may, for example be a hospital and a health administration or the components of a hospital. The two parties both

benefit from the agreement which is based on a strong dialogue on the means to improve the conditions for producing results;

- The other consists in making a reward not only for the results achieved but also for the solutions that would have been proposed. Hence, if we retain an indicator like completing medical files, the reward does not only concern the number of well- completed files but also the measures taken for improving the completeness of the medical files.

In many performance-related approaches the incentives act directly on the outputs i.e. on the immediate performance but do not act on the causes that led to this outcome. Hence, just like the leaky barrels of Danaides, we might be forced to constantly provide incentives in order to maintain the best outcome. Changes are supported solely through the incentives and are artificial. If the incentive disappears the outcome will also disappear. To avoid that, this approach is often accompanied by funding modalities instituting the principle of service purchase. For health services, a large part of which is based on the logic of public good, this service purchase principle has some limits. It favours certain clearly identified services, the production process of which may be standardized, as for example vaccination. It is much less adapted to services like emergencies, which cannot be organized on a mere principle of pricing per activity. It is also much less adapted to complex medical care and support, which are developed with the ageing of the populations.³⁰ Finally, the analysis of the dynamics of organizations shows that the output is the result of the capacity to combine each of the variables that influences this output. This capacity is related to the management of organization methods and personal dynamics. In the above approach, the focus is on the fact that sustainable change requires that you act on the causes. Incentives are then mobilized on the one hand for identifying the causes and on the other, for implementing remedial actions. In such a strategy performance incentives are not used to obtain short-term outputs/outcomes but to analyse the causes of inadequate performance. Performance incentives will not be conceived as a mere reward mechanism leading to a mechanical response from the health staff, but as support for the change in practices. This type of approach needs to be based on trust between the contracting parties; this will build up progressively during the relationship and will consequently need time.

Is it possible today to steer away from a confrontation between the supporters (the champions) of incentives and those who, for some of the reasons discussed above, are fiercely (perhaps ideologically) against or are simply skeptical and are having some questions about it. One possible answer could be the following.³¹

An OECD study reminds us that while some studies show a positive effect of financial incentives on administration and civil servants, that others have pointed out that the effects on performance have been moderate or even negative. This conclusion is by no means a reason for abandoning performance incentive mechanisms. These mechanisms should not be seen through the simple mechanical effect of increasing individual remuneration based on the result. Implementing performance incentives always induce, more or less strongly (depending on the design), a change in the health system. A performance incentive mechanism will bring about a redefinition of the objectives of an institution, it will facilitate the dialogue between the

³⁰ Despite the sophistication of the homogeneous patient group systems (DRG), and the possibility of adding aggravating factors for establishing a mixed box, it is difficult to define the fair price of each service.

³¹ The arguments of this answer are essentially inspired by the OECD study: " Performance-related Pay Policies for Government Employees ", 2005

different components of the institution and with the authorities, it will facilitate the evaluation of results by introducing explicitly defined indicators, it will stimulate the monitoring of the activities, etc. The reward that comes with performance incentives should be seen as a catalyst that will enable this transformational change, or reform of the health administration. The effect of the reward does not depend on the financial motivations of the staff; it affects the performance through the organizational and managerial changes that this strategy provokes.

These arguments could help to better understand the current situation in Rwanda. Indeed, the recent improvements in health service provider performance seem to be undeniable, even though there could be room for some discussion on the exact figures. On the other hand, it is also clear that there is no more room for the explication according to which all of the improvements were due to the implementation of "Performance-Based Financing"; we know that there were several other administrative reforms implemented simultaneously such as decentralization with performance contract written between the President and his Mayors; making health facilities more autonomous; decentralizing salary budgets of health staff) and the scaling up of community based health insurance. These reforms are factors which have contributed to the enabling environment in which PBF was scaled up as a national strategy. Nevertheless, this does not mean that PBF did not have its place in the performance improvements. Indeed, the introduction of PBF was also an opportunity for implementing important managerial and organizational changes. For example PBF has brought along profound modifications such as better definition of health service providers' objectives through the definition of indicators and their valuation, redefinition and redesign of supervision and monitoring functions for provider activities, and a revaluation and recognition of the health workers' effort and results (intrinsic motivation).³²

The main question that should be asked is thus to know if similar results could have been obtained by focusing only on these reforms without using performance related pay (in the form of variable revenue bonuses).

CONCLUSION

The notion of performance opens new avenues for improving the practices of health care providers and consequently for getting them to contribute more to the health of the populations. But as shown in this chapter, the technical and methodological problems are important and far from being completely resolved. Beyond these difficulties, the main issue is certainly political acceptance which may be viewed at two levels:

- At the content level: performance is related to the adoption of the market logic, which is not accepted by all. The vision, according to which the public service mission guides activities to be accomplished with the resources available, is still strong in countries where this notion is part of the values of the social pact. Yet such a vision is hard to reconcile with an approach that reduces the notion of performance to the sole achievement of specific objectives, and which depends on internal motivation only to produce results. Certainly there is a vast movement of reforms at the level of the administrations which largely adopt strategies such as "results-based management ". It is therefore necessary to go beyond health and see how these reforms are accepted on the whole by the State. The acceptance for other public good services such as justice, education, police or even the national defence;

³² In econometrics, when performing a regression, we know that we can explain part of the variable explained by one explanatory variable that plays as a "proxy" for other variables.

- At the strategy level: even if a Ministry of Health may be personally convinced about an approach using performance incentives, it may also fear the social consequences of such a reform. The change of social relationships is so profound that reluctances and resistances will be all the more intense since actors will have the feeling of losing part of their well-being (or perhaps their degrees of freedom). Undoubtedly, such a reform must be implemented by allowing sufficient time; time for discussion but also time for negotiation and experimentation before a nationwide scale-up is contemplated.

Despite the limitations and the doubts, there is an unavoidable movement towards implementing approaches that promote health service provider performance. It is too soon to judge how these approaches will fit in the spectrum of reforms that target health system performance improvement. However, the early results allow us to assert that the schemes need some refining and if there is an approach that becomes preeminent it is probable that it will not be the only one. Improving health service provider performance will need to be based on a combination of several approaches which all have their specificities but which seem complementary. The specificities of each country will determine the way the combination of approaches will be implemented. Indeed, the evolution of health systems will be guided by several concomitant reforms. In this scenario it is difficult to attribute the results to one of these reforms. It is also probable that certain combinations of reforms will yield better results than others. Thus one would think that performance incentives will be more effective if other actions are taken at the same time. For example, performance incentives will be more effective if at the same time the autonomy of the providers is reinforced or if there is an intervention improving drug supply.

ANNEX

This annex groups and describes three experiences of performance incentive.

Experience of Haiti

USAID, through Management Sciences for Health (MSH), has provided financial support for many years to local NGOs operating in the health sector in Haiti. These NGOs are owners of health facilities (notably Health Centres) which they manage. Until 1999 financial supports to these NGOs followed the classical logic: an amount was budgeted at the beginning of a period and the NGOs had to justify the expenditures they had incurred during the execution of their project. The objective was to finance the necessary inputs for carrying out health related activities.

In 1999, MSH introduced a new logic based on results. A pilot experience with three local NGOs, serving 534,000 people was launched. During this period, the mechanism was based on a contractual agreement between MSH and these three local NGOs. MSH agreed on a budget required for carrying out defined activities. This in fact was no more or less the historical budget (from the previous year). In the course of the fiscal year, MSH would pay by instalments 95% of this budget without asking for financial documentation of all minor expenses and allowing the implementing partner NGO to manage the various budget lines with fair degrees of freedom (it wrote an output based contract of a type called 'fixed price plus award fee schedule'). 5% of the historical budget was put 'at risk' that is, the implementing partner risked losing it when their performance would not reach pre-agreed basic performance results. Also 5% additional 'bonus' or 'award fee' was budgeted, which the implementing partner could gain if performance was exceptional. At the end of the year, and after evaluation MSH:

- would not pay the remaining 5% if the results were not sufficient;
- would pay the 5% if basic results were achieved;
- would pay 5% on top of these 5% if all performance results as stipulated in the contract would have been achieved.

The change of logic is therefore profound. MSH was not interested in how the implementing partner managed to achieve the objectives defined at the beginning of the period. It is up to the implementer to organize itself with the resources at its disposal to be the most efficient ...including by motivating its staff.

Two points of this mechanism must be underlined:

- objectives to be achieved are defined at the beginning of the contractual period: one-year contract;
- The performance bonuses are part of the ordinary budget and consequently the issue of use of the bonuses does not arise.

To determine the performance of NGOs, the following indicators are retained:

Indicators	Objective	% of the Bonus
1. Women using oral rehydration therapy to treat diarrhoea episode in children	15% increase	10%
2. Children aged 12 -23 months fully vaccinated	10% increase	20%
3. Pregnant women who have had at least 3 prenatal visits	10% increase	10%
4. Rate of abandon of injectable oral contraceptives	25% reduction	20%
5. HCs proposing at least 4 modern FP methods	100% of HCs	20%
6. Average waiting time for child consultation	50% reduction	10%
7. Participation in UCS and coordination with the Ministry of Health	Defined by the UCS	10%

The first 5 indicators concern the increase of the health services. Indicator 6 relates to the satisfaction of clients and indicator 7 to the level of community participation and coordination with others.

The results obtained by each of the NGOs were not declared by these NGOs but calculated by the *Institut haïtien de l'enfance* (IHE), through population-based surveys.

Since 2005 this experience has been scaled up to include 32 NGOs working for an estimated catchment population of about 2.8 million people. These NGOs were selected by MSH on the basis of their capacities to carry out the defined activities. Factors taken into account include their organization, human resources, information system, financial management, management of drugs, etc.

Since 2005, the system has changed a bit. It may be summarized as follows:

Elements	% of the annual negotiated budget
On signing the contract	10%
Upon receipt of the annual action plan	15%
Upon receipt of the annual report	1/12 of 10% of approved budget each month
Request for quarterly payments	20% in March 20% in July 13 % in October 6% in November
80% of children under age 1 fully vaccinated (target for all NGOs)	1.5%
50% of pregnant women who paid at least 3 prenatal visits (target for all NGOs)	1.5%
Random choice of 1 indicator from the following list:	3%
– 50% of children under 5 were weighed	
– 63% deliveries were assisted by a trained staff	
– 44% of women who delivered received one home visit	
– 50% of pregnant women were tested for AIDS during a prenatal visit	
– 75% of new TB patients were also tested for AIDS	
– Timely submission of quarterly reports	
– Supervision system with defined criteria is in place	
Additional bonus if all above targets have been attained	6%
Maximum possible	106 % of the negotiated budget

Today, the mechanism is defined by the incentive provider -MoH- in consultation with the NGOs. We have therefore gradually moved from a system largely based on contracting to a system based on a rule defined by a development partner, as the contractual aspect is limited to a subscription contract established between the MoH and NGOs acknowledged as capable of being part of the mechanism.

This experience, apart from being among the first to have adopted the performance incentive mechanism, poses some problems. The approach based on targets to be attained has some consequences. Indeed, there is no incentive to maximize efforts but simply to maximize efforts to attain the targets set. For example, when we have attained the target "50% of children below 5 years have been weighed" it is in our interest to limit the efforts on this target and transfer these efforts to other targets.

What encourages NGOs to attain the targets set is not so much the financial bonus that can be derived from it but the non-renewal of the contract of the NGO, when the latter has not attained the targets defined. The sanction is, therefore, exclusion from the output based financing scheme rather than the non-payment of the bonus.

The budget of the health facility and the bonus received through MSH, which complement other sources of financing of health activities of these facilities, cover all activities of the health facility, whereas the indicators retained only concern certain activities. Consequently, such a system encourages implementers to adopt opportunistic behaviours, whereby they accord priority to efforts related to the indicators retained and do not make any effort on activities not related to an indicator of the mechanism.

Experience of Mali

In 2007, when Mali decided to institute a performance incentive mechanism in hospitals, the context was as follows:

- the country had 12 regional and national hospitals, mainly public hospitals (one hospital had the status of a private foundation, for historical reasons);
- since 2002, public hospitals have the status of “Public Hospital Establishment (PHE)”, which gives them an autonomy in the legal sense, with, consequently, the possibility to sign contracts at their level;
- there is a National Hospital Evaluation Agency (ANEH), which, as a public institution, can conduct independent evaluations;
- the "project establishment" system is ongoing, enabling hospitals to have a vision of their future and strategies to be implemented;
- the operational budget of these hospitals is prepared on the basis of an annual planning called "operational plans" (OPs).

Despite these reforms, the performance of hospitals is still inadequate. Because of an inadequately rigorous management, the following constraints are observed:

- stock-outs of essential drugs are frequent
- recovery of incomes is far from being total
- medical files are not always completed
- intra-hospital mortality remains high
- hospital wastes are not always managed according to established standards
- users are not always satisfied.

In the face of this situation, the Ministry of Health wished to institute, with the support of the World Bank, a performance incentive mechanism. The Ministry of Health entrusted to the ANEH the mission of developing a system in consultation with the hospitals. Several meetings were organized with the hospitals to discuss the mechanism to be put in place. Through targeted incentives, the Ministry of Health, as an incentive provider, wanted to encourage institutions to change their behaviours and practices. The Ministry of Health does not impose changes. It proposes to use incentives to make hospital institutions aware of the interest in changing their behaviours and improving their performance. No target is defined initially. Incentives are built in such a way that hospital institutions have every interest in maximizing their efforts in order to attain the highest level of performance with the resources at their disposal. The mechanism retained is based on the following approach:

- the Ministry of Health, in agreement with the Ministry of Finance, adopts a budget line entitled *Special Grant for the Performance of Hospitals*. This line will be fully distributed to hospitals that will have accepted to participate in the mechanism. To mark their support, the hospitals should sign a contract entitled "*participation in the*

mechanism of award and use of a special grant to hospital establishments with the objective of improving upon their performance their performance, measured through a series of indicators";

- the share allocated to each hospital will depend on the results they will have achieved on a number of criteria, but also on the performance of the other hospitals. For better understanding, the situation can be illustrated with the picture of a cake. The size of the cake is defined at the beginning of the process, and, consequently, the size of the share a hospital will receive will depend on these efforts, but also the efforts of the other hospitals participating in the mechanism. To mark this interdependency, it was retained that only one contract should be signed between the Ministry of Health and hospitals that have agreed to participate in the mechanism;
- the originality of the approach retained by Mali relates to the fact that the contract signed between the Ministry of Health and the hospitals covers not only the distribution of the performance bonuses but also the utilization of the amounts received;
- the mechanism explicitly targets hospital institutions and not their staff. Hence, the mechanism stipulates that the amount received by the hospital cannot be used to pay bonuses to staff. It should also not form part of the operational budget of the hospital. The amount should be spent on collective actions, which are clearly an addition. For example, with this amount, the hospital can buy a television set for the room for staff on night duty or an equipment, which was not provided for in the operational plan.

Over time, the mechanism is as follows:

Contract



Previous Year	1 st Year	2 nd Year	Subsequent Year
- Budget	- Production of results	- Allocation of the grant	- Control
- Subscription	- Collection and verification of results	- Use of the grant	- External evaluation
- Signature			

The contract between the Ministry of Health and hospitals that had agreed to participate in the mechanism was signed for two years. During the first year, the hospital produces its efforts and at the end of the year, the results achieved can be assessed. During the second year, the relevant grant is paid to the hospital and the latter has the rest of the year to use the grant according to the plan established at the beginning of the contractual period.

Before entering into the contractual period, certain prerequisites have to be met: inclusion of the item in the budget of the subsequent year, declaration of subscription to the mechanism from hospitals and signing of the contract.

During the year following the signing of the contract, certain controls must be carried out (e.g., the efficient use of the grant by the hospital) including, eventually, some external assessments of the mechanism put in place and the results achieved.

At cruising speed, there are always two projects ongoing, as shown in the table below:

	2007	2008	2009	2010	2011
Contract signed end 2006	1 st Year	2 nd Year			
Contract signed end 2007		1 st Year	2 nd Year		
Contract signed end 2008			1 st Year	2 nd Year	
Contract signed end 2009				1 st Year	2 nd Year

Indeed, it is not necessary to wait for the end of the second year of the contract to initiate a new contract. A hospital must constantly make efforts to improve its performance.

In this mechanism, the ANEH is in charge of collecting data, verifying their accuracy and calculating the grant to be paid to each of the hospitals that subscribed to the mechanism.

To assess performance, the mechanism retained 14 indicators, which are frequently produced in the framework of the monitoring of the planning and budgeting. Some of these indicators relate to the inputs and the production process: e.g., "*Rates of conformity of medical files*" or "*Number of days of stock-outs of essential and generic drugs*". Other indicators concern the results achieved by the hospital: e.g., intra-hospital mortality rates (measures by the number of patients deceased at the hospital / total number total of patients admitted at the hospital) X 100).

The method for calculating the grant is described in detail in the "*Manual of procedures for implementation, under contract, of the mechanism for improving the performance of hospitals*". All these 14 indicators are grouped under a synthetic indicator, which presents a general picture of the performance attained by each of the hospitals. It is this synthetic indicator that is then used to calculate the grant for the hospital.

It should suffice to mention that this performance mechanism was put in place. The contract of the first year was signed and the hospitals pledged to improve the indicators retained. Thereafter, the process was stopped. There is no point attempting to explain the reasons for this situation. However, it may be underlined that the establishment of such mechanisms requires a strong political commitment, which was lacking during the implementation of the performance mechanism in Mali.

Experience of Rwanda at the level of the health centres

Two main observations led some development partners to launch performance incentive experiences at the level of health centres:

- the activities of the health centres were inadequate and population was suffering from a lack of access to services, and poor quality services;
- The health staff were poorly paid, unmotivated, and therefore, inefficient and lesser effective. Notwithstanding significant salary 'top-up' payments by NGOs, there was no measurable result in population health.

Two experiences were launched in 2002:

- A pilot project was initiated in the Cyangugu province with the support of the international NGO, CORDAID. Two districts were concerned, with a total population of 620,000 inhabitants;
- A second pilot project was initiated in the Butare province with the support of the international NGO, HNI-TPO. Two districts were concerned, with a total population of 384,000 inhabitants.

By mid- 2005 a pilot project was initiated in the Kigali region with the support of the Belgian Technical Cooperation. It concerned five districts, with a total population of 1,402,000 inhabitants. Under this project, the Contractual Approach Support Unit (C.A.A.C.) was created.

From 2006 the Ministry of Health decided on the one hand, to gradually extend the performance incentive approach to the entire country and on the other hand, to harmonize the practices by adopting a single model.³³ The main elements of this model, called "Performance-based Financing (PBF)", are presented below.

The logic is the same as for the other incentive projects. It involves improving the performance of health centres using an incentive strategy. On the other hand, Rwanda's PBF experience is different from an implementation point of view.

The Ministry of Health, more specifically the Contractual Approach Support Unit developed with strong and consistent support of partners a national performance incentive mechanism. This mechanism recalls the principles and establishes in detail all the implementation modalities of the mechanism. The health centres are free to subscribe to this mechanism. The subscription is done through a standard contract in which the health centre indicates that it acknowledges and accepts the mechanism, and the Ministry of Health pledges to pay the amounts due. This contract is part of the tools defined in the mechanism. It is therefore only a contract on a subscription to the national performance mechanism; there is no possibility for negotiation.

The contract is presented as a purchase contract, namely that the incentive provider – the Ministry of Health – pledges to purchase the production of the health centres.³⁴ This production is defined according to a number of priority indicators focussing on mother and child health.³⁵ 14 indicators are currently retained:

- *number of new cases in curative consultations*
- *number of new antenatal care attendances*
- *number of pregnant women with 4 antenatal care visits*
- *number of pregnant women who have received the 2nd, 3rd, ... anti-tetanus vaccination*
- *number of pregnant women who have completed the 2nd dose of Sulfadoxine Pyrimethamine*
- *number of pregnant women referred before the 9th month*
- *number of children aged 12 – 59 months consulted at the health centre*

³³ "Guide to the contractual approach for health centres – User's manual", Ministry of Health, May 2008:

<http://www.pbfirwanda.org.rw>

³⁴ This is in reality a purchasing obligation contract. Indeed, unlike a classical contract, the Ministry of Health knows the price of what it is going to buy but not the quantity that it should mandatorily buy.

³⁵ A second category of indicators is defined around HIV. The mechanisms are quite similar but will not be presented here.

- *number of women newly registered for modern contraceptive methods*
- *number of users of modern contraceptive methods*
- *number of children fully vaccinated*
- *number of assisted deliveries at the health centre*
- *number of women referred for delivery*
- *number of children aged 0-59 months referred for severe malnutrition*
- *number of other referrals (other than for delivery, antenatal care and severe malnutrition)*

For each of these indicators, a price is defined in the mechanism. For example, the health centre knows that for each new case in curative consultation, it will receive FRW 100. It should however be noted that the prices do not necessarily refer to a notion of cost of the activity. It is rather an amount arbitrarily decided taking into account budgetary possibilities and as assessment what could be considered as adequately motivating. This assessment was done by a panel of experts, deliberating on the relative value of a health service in relation to public health targets.

There are therefore no targets to be attained. It is in the interest of the health centre to maximize its efforts in order to maximize profits.

The indicators therefore refer to quantities. However, the performance mechanism takes also into account the quality of services provided by the health centres. Hence, a composite index is calculated. It takes into account factors like "*existence of cleaning products*", "*do the beds have mattresses with covers that are intact?*", "*absence of dispersed wastes*", etc, or about 1,085 such data elements, through 111 composite indicators covering 14 services, and yields one composite quality percentage.

The revenue that a health centre may obtain from performance is calculated as follows:

$$\text{Revenue} = \sum (\text{Quantity} \times \text{Price}) \times \% \text{ Quality [0-1]}$$

From an operational point of view: controllers from the district health administration pass by the health centre each month to control at the source the monthly invoice. After control and validation, these controllers bring the validated invoices to the district. The Hospital separately applies the quality supervisory checklist once per quarter. Both data sets are entered into an internet-based management information system, a 'real time database'. Once per quarter, district PBF steering committees discuss and validate the 'quarterly consolidated PMA and HIV invoices' in the obligatory presence of civil society actors and purchasing agents. The validated paper invoices are compared with the printed invoices from the database, and eventual data entry errors are noted, documented, and corrected. After approval, the signed quarterly consolidated invoices ('consolidated' refers to the fact that the quantity has been consolidated/merged with the quality measure) together with the minutes of the meeting are sent to the CAAC, which does due diligence; it verifies whether processes have been followed as required through the procedures manual. After due diligence a national payment order is printed from the database, and sent to the Ministry of Finance for payment (payment goes directly to the bank accounts of the health facilities). Once per quarter, an independent third party carries out community client surveys following a national protocol. Its purpose is to (a) detect phantom patients and (b) to elicit feedback from the community. Results are communicated to the clients, the health centres, the district and the national level. After four such community client surveys, less than 5% of clients reported in the registers cannot be

traced in the community, which is an encouraging finding. Also, important information related to the quality of care of certain health centres is obtained and action is being taken by district directors to correct eventual anomalies. In addition, once per six months, a national protocol to counter-verify the quality of care measured at health centres is carried out.

The performance mechanism details how performance incentives are allocated, but is almost silent on the use of these performance bonuses by the health centre. The standard contract, which is signed stipulates simply: *Article 11: "The use of the revenues earned with the performance-based financing strategy is left to the discretion of the Management Committee of the health centre"*. However, in Article 5, it is said: *"reserve at least 25% of the revenues of the PBF for the operational expenses of the health centre"*. Consequently, up to 75% of the revenues may be used to pay bonuses to staff. Indeed, we should not lose sight of the fact that the logic of this mechanism is as follows: it is necessary to enhance the motivation of the staff working in health centres predominantly in the form of bonuses, in order to effectuate a performance enhancement by the health institution. There are few collective performance bonuses to be used by the institution for interventions other than performance bonuses (stipulated at about 25%). This approach somehow focuses unilaterally on the presumption that if we incentivize institutions directly, but indirectly its staff, that this will lead to an improved performance.

Presently, on the average, the revenues of the PBF represent between 25 and 30% of the budget of the health centre (50% come from the Ministry of Health for payment of salaries and 25-30% from cost recovery, notably through mutual health schemes). The monthly bonus supplement often represents between 50-100% of the salary of an employee (depending on the combined effects from various sources of income).

Experiences similar to those of Rwanda were initiated in 2006 in Burundi and the Democratic Republic of Congo. Moreover, development partners that are supporting these experiences are practically the same as those that initiated the first experiences in Rwanda.

Conclusion

It is interesting to observe that the three experiences presented above follow the same logic of using performance incentives to enhance the performance of health workers.

However, they use quite different methods to apply this logic.

Furthermore, the stability of the political context, in which they are implemented, is an important question. Contracting, in its "contracting out" form, is no doubt more appropriate in unstable countries (Haiti, but also Afghanistan, Liberia, Burundi, Democratic Republic of the Congo) than in the more stable countries (Rwanda, Mali) in which the Ministry of Health has the capacities to steer the performance incentive scheme.