The simultaneous introduction of the district health system and performance-based funding: the Burundi experience

L’introduction simultanée de l’approche du système de santé de district et le financement basé sur la performance : expérience du Burundi

Introducción simultánea del enfoque del sistema sanitario de distrito y la financiación basada en los resultados: el experimento de Burundi

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Electronic version
URL: https://journals.openedition.org/factsreports/2351
ISSN: 1867-8521

Publisher
Institut Veolia

Electronic reference
Georges Nsengiyumva and Laurent Musango, "The simultaneous introduction of the district health system and performance-based funding: the Burundi experience", Field Actions Science Reports [Online], Special Issue 8 | 2013, Online since 13 February 2013, connection on 05 January 2022. URL: http://journals.openedition.org/factsreports/2351

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The simultaneous introduction of the district health system and performance-based funding: the Burundi experience.

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ABSTRACT. Burundi recently introduced two fundamental reforms to its health system: a district health system (DHS) and performance-based financing (PBF) of the healthcare facilities. The authors of this article set out to conduct a simultaneous trial on implementation of DHS and PBF. The assessment refers to the six building blocks of health systems proposed by the WHO, and demonstrates that PBF can either have a leverage effect or hinder the following functional elements of the DHS: the group dynamics of the District Health Management Team (DHMT), the way the district hospital functions in relation to the primary health care level, the curative and preventive health services provided by health centers to provide health cover for a target population, the provision of essential medication by a fully-functional district pharmacy, the action-focused on the health management information system (HMIS) and funding that ensures fair provision and guaranteed resupply, supported by a transparent organization.

The authors recommend that these aspects receive the attention they deserve as part of initiatives that combine both reforms, especially in the start-up stage. The health system regulator – the Ministry of Health – must remain vigilant to make any necessary adjustments and to avoid negative consequences.

Keywords. Performance-based financing, Health system, Health district, Functionality.

1. Introduction

The purpose of the district health system (DHS) is to implement primary health care, a strategy defined by the 1978 Alma Ata International Conference (WHO/UNICEF, 1978), whose relevance was recently reaffirmed in a world health report on Primary Health Care (WHO, 2008). In the case of Africa, the policy to reintroduce the primary health care strategy was redefined at the Harare Conference in 1987 by setting out the DHS guidelines and was reaffirmed in April 2008 by the Ouagadougou Declaration (WHO, 2008). As a result, the health district appears to be the cornerstone of health systems based on primary health care (Monekosso, 1991; Duponchel, 2004; Grodos, 2004; Gruénais, 2010; Gauvrit and Okalla, 2010). This element is more or less autonomously separate from the national health system, and is sufficiently big to enable concentration of human, technical and financial resources, but at the same time, it is small enough to be able to hold out the possibility of communication with local populations and community involvement. The health district remains by far the most appropriate operational level for implementation of the National Health Policy (NHP).

In recent years, a number of countries in Asia and Africa have introduced performance-based financing into their health systems as a strategy for improving performance (Perrut et al, 2010). The contribution made by PBF to improve the production and quality of health services by boosting staff motivation is beginning to be documented (Soeters and Griffiths, 2003; Soeters et al, 2006; Rusa et al, 2006; Toonen et al, 2009; Morgan, 2010).
PBF is sometimes presented as an alternative to the failing institutional arrangements currently in place (Meessen and Van Damme, 2005). However, despite more critical literature on PBF (Oxman & Fretheim, 2008; Eldridge and Palmer, 2009, Kalk et al, 2010; Morgan, 2010), to the best of our knowledge, only one author has been interested in the impact of PBF on health district operation (Meessen, 2009).

In Burundi, DHS and PBF were introduced almost simultaneously. The PBF arrangements apply to healthcare delivery facilities (health centers and hospitals) and the administrative bodies (health provinces and district healthcare).

Wishing to avoid, at this early stage, to appraise a reform which is only just beginning, the purpose of this article is to highlight the possible synergies between the DHS approach and the PBF approach in a given context. The article also analyzes the risks of negative effects on the DHS if PBF is not used advisedly. We begin with a brief introduction, and then move on to describe the background and the methodological approach, followed by a description of the facts based on the diagram of the six building blocks of the health system, and we conclude with a summary of the key messages presented.

2. Background

In Burundi, the process of structuring the country into health districts began in 2007 following a long sociopolitical crisis (1993-2005). The PBF experiment (also known as “contractual approach”) began in 2006 and was extended to several of the country’s provinces in the years that followed, with the support of a number of technical and financial partners. This contractualization was based on a contract between a third-party agency independent of service providers, such as the Ministry for Public Health (MPH), and the service providers (health care delivery points). It was this third-party agency that was responsible for evaluating performance and subsidies, as well as acting as purchaser and inspector. The principal contributor was the NGO Cordaid, which replicated its Rwanda experiment in Burundi (Soeters et al, 2006). In April 2010, with funding from the World Bank, the government and other financial partners, the Ministry for Public Health set up a PBF system, which was managed internally within the Ministry, involving no independent purchasing agency. However, the verification and validation of performance on which payment by the Finance Ministry is based are the responsibility of provincial verification and validation committees (PVVCs), which are mixed structures made up of government representatives (civil servants and contract staff) on the one hand, and representatives of ‘civil society’ on the other. The PVVC secretariat’s responsibilities were taken care of by provincial medical directors of health. The institutional funding package for PBF and those involved in it have been discussed by other authors (Basenya et al, 2011).

The PBF funding of health delivery points (health centers and hospitals) is based on two types of criteria:

- quantitative (care production), evaluated monthly by PVVCs on the basis on 24 indicators
- qualitative (various aspects of quality service), evaluated quarterly by the MPH bodies on the basis of a matrix containing a very large number of different indicators

The goal of care production funding is not only to reward the performance of the healthcare delivery points (HDP), but also to remove user fees in the health sector to children under five and pregnant women. Until April 2010, this measure to provide “abolition of user fees”, introduced by the Head of State in May 2006, was funded from the debt relief fund as part of the heavily indebted poor countries (HIPC) initiative. This mechanism enabled service providers to be reimbursed for the cost of free treatment for those eligible (children and women). The option to fund the free treatment package through the performance-based financing strategy was thought to be preferable to the old reimbursement system which was felt to be inadequate. The service provider incentive system, the procedures used to authenticate the provision of free services and the release of funds by the Ministry of Finance all left a lot to be desired in terms of management. So since April 2009, performance-based financing has been introduced for the “minimum package of activities” (MPA for health centers) and for the “complementary package of activities” (CPA for hospitals). This funding includes “abolition of user fees” based on flat-rate pricing.

3. Methodology

The analysis described in this article is based on the implementation of the DHS and PBF experience as part of the “Santé Plus”1 (Health Plus) project and on joint evaluation results of the PBF project. As part of his job, one of the authors of this article (GN) has first-hand grassroots experience of the various stages of DHS and PBF implementation. The second author coordinated the mid-point evaluation of the PBF project conducted by the WHO, the World Bank (WB) and the European Union (EU).

In presenting the results, we have adopted a framework of analysis based on the functional structure of the health district which also addresses the six health system building blocks recommended by the WHO (WHO, 2008). The following table sets out the key elements of the six building blocks and the corresponding topics analyzed by ourselves.

The salient points raised concerning this experience in DHS and FPB synergy are inferred with reference to certain counterproductive effects that can result from the effect of PBF on the process of DHS introduction. To avoid these

1 The “Santé Plus” project is a link project between aid relief, rehabilitation and development of the 9th FED, which began in April 2008 in four provinces, and extended in February 2008 to six provinces, representing 30% of the country’s population, 14 health districts, 15 hospitals and more than 200 health centers. The project ended in June 2011. Its two major strands are the implementation of the DHS and PBF. Between January 2009 and March 2010, the “Santé Plus” project subcontracted the implementation of PBF to the NGO Cordaid, an independent third-party agency. The zone covered by the project applied the national PBF policy with effect from April 2010 (with the exception of a few provisional secondary points).

The experiment conducted in this zone forms the basis of our analysis of the interactions between DHS and PBF.
adverse effects, we suggest a number of corrective measures which we hope will attract the attention of those initiating these reforms.

This article does not deal specifically with the issues of leadership and governance. However, some issues relating to this point are included in our remarks regarding the management and coordination of districts by the district management team (DMT).

3.1 Results / Description of facts

The reform of the health system into health districts in Burundi was launched by the government in 2007, although technically-speaking, none of these districts were really functional as such. The “Santé Plus” project began work in the field during the second half of 2008: one of its missions was to support the government in the introduction of the DHS and PBF. Below, we present the results obtained in accordance with the plan described in the methodology.

3.1.1 A district management team to assume responsibility for the coordination and smooth-running of the district office as an integrated department

The district management teams were introduced throughout the country in September 2008. The priority of the “Santé Plus” project, which covers 9 districts in its area of operations, was to make these districts technically competent and psychologically open to the relationship aspects of district health system management by the end of 2009. The aim was to ensure that DMTs would be made up of people with the same level of responsibility to manage the district, on the basis of sharing technical responsibilities based not on individual specialties, but on the wider multi-skilled versatility of the team as a unit, and with the ability to self evaluate and correct decisions. PBF was introduced in January 2009. In terms of positive effect, the PBF gave district offices the opportunity to access budget planning, although this was late in coming and was granted in small tranches, and remained largely insufficient (Basenya et al, 2011). Furthermore, as can be seen in Figures 1 & 2, the use of services improved appreciably, although it is impossible to

### Table 1. The six building blocks of the health system and factors analyzed.

<table>
<thead>
<tr>
<th>The six building blocks of the health system</th>
<th>Topics addressed by building block impacted by the concomitant implementation of the DHS and PBF system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health workforce</td>
<td>A district management team (DMT) responsible for the coordination and smooth-running of the district office as an integrated department</td>
</tr>
<tr>
<td>Health service delivery</td>
<td>A district hospital delivering the “complementary package of activities” with a referral and counter-referral system The inclusion of curative and preventive treatments delivered by a multi-skilled team in health centers on the basis of a “minimum package of activities” aimed at an identified target population</td>
</tr>
<tr>
<td>Health technologies and products</td>
<td>Provision of essential medication based on a district pharmacy</td>
</tr>
<tr>
<td>Health information systems</td>
<td>An action-focused health information system</td>
</tr>
<tr>
<td>Health financing systems</td>
<td>Funding that ensures fair provision and guaranteed resupply, supported by a transparent organization</td>
</tr>
<tr>
<td>Leadership and governance</td>
<td></td>
</tr>
</tbody>
</table>
However, in his day-to-day activities, he chooses the option of his main role which is to guarantee quality of care. It is his responsibility to validate the verification process.

This trend was further strengthened with the principle of absolute free choice on the part of the patient (i.e. no extra charge payable by the patient to see a doctor directly). This state of affairs does not encourage the grading of treatment delivery (the non-overlapping complementarity of the DHS primary and secondary levels), it undermines the credibility of nurse consultations in the eyes of the population and it tends to overburden the hospital medical consultation process.

Our proposal aligns with that of the joint PBF evaluation mission to Burundi in October 2010 (Musango et al. 2010). The subsidizing of services must respect the referral and counter-referral system, and be applied only to those services provided to patients referred to the hospital on the basis of this principle.

All (but one) of the districts in the zone covered by the “Santé Plus” project had a district hospital, but these functioned to varying degrees. However, none functioned as a district hospital, i.e. as part of a structured network of relationships with the health centers. The appointment of DMTs in 2008 was intended to improve this situation. The DMT has become the senior coordinating body for the hospital and health centers. Within the DHS structure, the hospital delivers its CPA without overlapping the MPA delivered by health centers. This situation has led to the hospital carrying out tasks devolved to the health center, thereby undermining the credibility of health centers, overloading the hospital unnecessarily, and negates the principle of referral and counter-referral and the gradation of care levels (Van Lerbergh & Lafort, 1990). If it is to strengthen the DHS, PBF must therefore remain consistent with the role of the district hospital.

So, when PBF was first implemented in the project zone, the system put in place did not fund the activities of the primary (health center) level of care where this was provided by the hospital. But the PBF system operating at national level since April 2010, prior to the revision of the Procedures Manual2 in September 2011, did not adopt this principle, which resulted in undesirable competition between health centers and hospitals. Because doctors’ consultations are highly paid, the tendency was to increase medical consultations at the hospital to maximize hospital funding. No distinction was made between a referred patient and a patient seeking direct consultation from a doctor for a commonplace condition that could have been treated in a health center. This situation has led to the hospital carrying out tasks devolved to the health center, thereby undermining the credibility of health centers, overloading the hospital unnecessarily, and negates the principle of referral and counter-referral and the gradation of care levels (Van Lerbergh & Lafort, 1990). If it is to strengthen the DHS, PBF must therefore remain consistent with the role of the district hospital.

3.1.3 The inclusion of curative and preventive treatments delivered by a multi-skilled team in health centers on the basis of a “minimum package of activities” aimed at an identified target population

Within the DHS, the health center is the primary level of care, and as such constitutes the basic operational level (WHO, 2008). PBF is a method of providing direct funding for this primary level of care based on its production.

One of the criteria governing health center location is normally population to be covered by the health center. The health center is responsible for an identified target population, so the actual performance of the health center concerned is measured in terms of public health, and not simply in terms of the number of consultations and/or treatments. Within the PBF system, all the MPA indicators used are quantity indicators (MPH, 2010). Regardless of the indicator (prenatal consultations, deliveries, curative consultations, etc.), it is the number of consultations that is taken into account, quite independently of patient origin. As Meessen et al. (2006) explains, there is no doubt that this option favors the funding of services on the basis of use, and allows HDPs to be remunerated in direct proportion to their workload. But if the evaluation of performance indicators does not take account of the population for which the health center is responsible, the information regarding its performance relative to its health coverage mission is lost. So performance can be evaluated from two different angles: firstly, on the basis of the healthcare facility workload, and secondly, on the basis of the performance of the healthcare facility in relation to its area of responsibility.

As far as the workload is concerned, there should be incentives for all the activities healthcare facilities are required to carry out. Each time a user uses a service, the healthcare facility should receive payment to reflect the service concerned. This system has several disadvantages: (i) There is no threshold imposed that obliges the health center to produce x new users before its level of remuneration increases to a new level; (ii) It is the absolute activity itself that is taken into account when calculating the payment and not the marginal improvements in relation to what is currently being produced; (iii) This system is an advantage for health centers responsible for a large target population (Meessen et al., 2006).

In relation to the population covered: the healthcare facility must have an overview of the care needs of the population within its area of responsibility, and a mission to provide effective cover in this area. Working in collaboration with other stakeholders, the DMT must be familiar with the problems affecting the population for which it is responsible and must be accountable for the latter (WHO, 2008).

When evaluating performance, both aspects must be considered to avoid the effect of concentrating on other population groups “outside the region” in order to receive higher funding.

It is recommended that: “To draw up a roadmap for health which will also provide a clearer definition of the PBF objectives in terms of health coverage and set out performance-based remuneration on the basis of good coverage” (Musango et al., 2010). The subsidizing of services must respect the referral and counter-referral system, and be applied only to those services provided to patients referred to the hospital on the basis of this principle.

3.1.4 Provision of essential medicines based on a district pharmacy

Within its six building blocks for health systems, the WHO recommends a health system that guarantees fair access to essential medicines and medical supplies, as well as vaccines and other technologies that are of good quality, present no danger and are available at the lowest cost (WHO, 2008).

The essential medicines strategy adopted by the government of Burundi aims to promote the rational use of essential generic medicines of known provenance, and to discourage recourse to a large number of branded – sometimes superfluous - commercial formulations, imported without controls and sold at excessive prices. Not only does this reduce costs for the health system and patients, but it also avoids patients taking large numbers of ineffective medicines, thereby exposing themselves to undesired side effects (GTZ, 2004).

The following table sets out the measures taken to ensure the implementation of the sourcing strategy for essential medicines in Burundi.

Table 2. Measures adopted for the sourcing strategy for essential medicines.

<table>
<thead>
<tr>
<th>Organization and administration of the sourcing and distribution circuit on the basis on actual requirements, in accordance with the population to be treated and the most common illnesses, or on the basis of actual consumption recommended by precise prescription instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding of the management system (for example, the introduction of working capital)</td>
</tr>
<tr>
<td>Management of medication stocks and resupply for the full range of health services by reducing the direct and indirect costs of transportation and sourcing</td>
</tr>
<tr>
<td>Quality control of medication. This policy is generally implemented on-site via the “district pharmacies”</td>
</tr>
</tbody>
</table>

Source: Burundi Ministry of Health.

Such a policy runs contrary to the “free” sourcing of branded pharmaceutical products which benefits the pharmaceutics industry, the wholesalers and private pharmacies, offering no guarantee of lowest cost, quality control or transparent transaction management. This is also the reason why the implementation of a policy favoring essential medicines encounters such
major resistance (GTZ, 2004). To ensure that these measures are implemented in Burundi without any of the drawbacks imposed by possible sourcing system failures and to avoid stock-outs, the Minister for Public Health, in his role as regulator, has set out clear instructions that take account of all eventualities and set out clear rules governing the methods to be used by district pharmacies in obtaining stock from approved private wholesalers to guarantee quality at a competitive price. Health service providers must not be encouraged to source products at will under any pretext of maintaining free market principles. This option is certainly not compatible with the DHS.

The authors are aware of the limitations of the national purchasing center and the resulting stock-outs that may occur in district pharmacies. Circular letter no. 630/1359/2009 of June 17, 2009 specifies what is to be done in the event of stock-outs at the Purchasing Center. One possible solution would be to strengthen the purchasing center by defining performance indicators to be regularly evaluated as part of PBF. This would be the responsibility of the Ministry of Health which would ensure permanent availability of tracer medications at purchasing center level.

3.1.5 An action-orientated health management information system

An effective health management information system (HMIS) guarantees production, analysis, dissemination and use of reliable and timely information on health determinants, health system performance and population health status (WHO, 2008). PBF should capitalize on the existing health management information system already in place in Burundi, instead of encouraging the different levels of the health system to implement parallel systems for the purpose of gathering data specific to PBF. This is what is happening in Burundi, resulting in healthcare providers collecting data on indicators remunerated by PBF, and verified by the PVVCs. However, this verification does not cover non-funded performance and does not feed data back to the national health management information system. This represents a lost opportunity to ensure that PBF contributes to improving the MPH health information system. Worse still, there is a risk that this could destroy the existing system, without being capable of replacing it in any meaningful way.

The authors are aware of the limitations of the HMIS and the quality of data held by this system in Burundi. However, it would be preferable to strengthen and structure the existing national HMIS rather than to create another system specific to PBF. Our recommendation aligns with that of the joint mission: to reinforce the existing health management information system and to ensure proper coordination to guarantee the reliability of data gathered and avoid duplication of use (Musango et al, 2010).

3.1.6 Funding that ensures fair provision and guaranteed resupply, supported by a transparent organization.

It should be noted that the introduction of PBF has contributed to the financial viability of health facilities and delivery points, although this contribution remains insufficient. Nor does it guarantee management transparency in isolation. Figures 3 and 4 illustrate the improving trend in revenue (in millions of Burundi Francs - BIF) for district health offices and provincial health offices.

![Figure 3](image-url) Health district office revenue prior to PBF – 2009 and during PBF- 2011, Bujumbura, 2011

![Figure 4](image-url) Provincial health office revenue prior to PBF- 2009 and during PBF-2011, Bujumbura, 2011

It has meant that certain HDPs make small investments enabling the delivery of the MPA or the improvement of service quality in general. HDP patient frequency has also increased. But it is impossible to separate the effect of PBF introduction (January 2009) from the introduction of abolition of user fees for pregnant women and children under five (May 2006), the progressive stabilization of the country (2006-2007) and the direct or indirect influence of the project itself. These factors have certainly acted in synergy, and this same synergy has also contributed to performance outcomes in general. The combining of PBF and abolition of user fees for pregnant women and children under 5 has had its influence on demand. Furthermore, it should be noted that an effective funding system means that it is possible to secure sufficient funds to ensure accessibility of the population to treatment and services, at the same time as protecting it from catastrophic expenditure in achieving them (WHO, 2008). This route to funding demand should be analyzed in order to address other categories of the population not subsidized by the PBF/abolition of user fees combination. These include other forms of payment for treatment, such as national health insurance (NHI) and/or community based health insurance (CBHI).

4. Conclusion
This experience in Burundi which combines the introduction of DHS and PBF is an original approach. It would be worthwhile to capitalize on the strengths identified during its implementation and to address its weaknesses.

The experiment offers an opportunity to introduce successful reforms that could be further extended. But if we are not careful, the functionality of the health district could be threatened at any time by some of the performance-based funding methods. In this respect, we would highlight the DMT which addresses only PBF to the detriment of other activities, PBF-specific HMIS, the health coverage not included under the scheme, the free sourcing of pharmaceutical products and the referral and counter-referral system that is not covered by PBF.

In the early years of implementing any reform, the health system regulator (in this case the Ministry) must remain vigilant, must make any necessary adjustments and avoid any slippage, especially where there are multiple stakeholders involved. So early evaluation allows any start-up problems to be addressed and corrected.

Those responsible for the implementation of PBF must take account the public health issues, because these are an important factor in improved health system performance. PBF is a reform to be used by the health system, and contributes significantly to implementation of the DHS.

**Box 1. Key messages**

- Performance-based financing is a powerful resource for the health system and can reinforce the introduction of a district health system (DHS)
- The introduction of performance-based financing (PBF) must take account of the basic principles of primary healthcare if it is to avoid imposing counterproductive impacts on the process of structuring the health system into health districts.

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