

Performance-based financing for health

Lessons from sub-Saharan Africa

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Executive summary

In recent years the ‘Performance Based Financing’ (PBF) approach has received increasing attention. Evidence to date has largely demonstrated that the actual ‘modality input planning’ does not incite health providers to perform better, because money flows are not linked to results. The professionals and constituencies that are in favour of PBF support the hypothesis that enhanced productivity and quality of care are contingent on linking outputs to financial incentives. However, benefits of performance based financing are still inconclusive with suggestions that it is not sustainable, it will not have a pro-poor effect, or it may create perverse incentives. The evidence up to now cannot fully substantiate either debate sufficiently in the absence of more extensive operational research and formative evaluations.

This synthesis report thereby explores the lessons learned on design, implementation and effects of financial incentives in the form of performance based financing in the health sector, as supported in Sub-Saharan Africa by the two Dutch NGOs Cordaid and HealthNet TPO. Towards this aim a multi-country study was undertaken led by the Royal Tropical Institute of the Netherlands (KIT) in collaboration with World Health Organization (WHO) Geneva and the implementing agencies in DRC, Burundi, Tanzania and Zambia. Rwanda was also visited to study scaling-up from pilot projects to a national program.

In the health sector, PBF utilizes terminology such as, ‘results based financing’, ‘payment for performance’, ‘performance based financing’; all of these terms describe the levels of incentives and performance rewards awarded, whether organizationally or individually focused. In this case we have adopted “performance based financing” as the working terminology with specific attention to the arrangements at health facility level and the results from the different pilots and scale up initiatives.

The study was designed as a formative evaluation, meaning that the purpose was not accountability of the programs studied, or a fundamental research on the effectiveness of PBF, but rather learning lessons on the contribution to health service improvements, including the positive and negative effects of the approach. The study commenced with a desk review of recent performance based financing initiatives and its findings, which informed the design of the methodology including the research instruments. The field methodology involved sampling of health facilities where PBF is operational and where PBF had not been introduced, while appreciating that this is not a longitudinal case-control

study. Using an open systems approach, quantitative data were analysed for all performance based indicators as derived from health management information system (HMIS) sources with additional data analysis for non-PBF indicators as well as financial data available. Extensive qualitative analysis was conducted through semi structured interviews with health staff and patients in addition to meetings with key stakeholders at district and national levels to discern determinants of performing and non-performing health facilities. Following each country study, interactive debrief workshops were held in country capitals involving all significant stakeholders and country reports were shared with all relevant national and international stakeholders.

This synthesis report is based on distilling the evidence and experiences from the countries studied, thereby presenting a meta-analysis of the results and providing lessons that may incite the partners involved to adapt their policies and practice. Some key findings show the potential of PBF as a health financing approach while also pointing to institutional dimensions and organizational processes that require further improvement. Our findings are not altogether conclusive but map out areas which require further research, with an extensive research agenda described in the final section of this report.

What are the effects of PBF on the institutional architecture of the health sector?

PBF is intended to contribute to improvement of health provider performance and ultimately to improved quality of health service delivery at the operational level. At the same time it means a fundamental change in the way the health sector is financed with a shift from input to output funding. This requires changes in accountability structures and concomitant redistribution of tasks and responsibilities between the different actors. Accordingly, the findings show that PBF influences the institutional architecture in the health sector as structures are needed at the operational level for fund holding, mechanisms for accountability and transparency, and agencies to carry out the verification efforts, inclusive of community level.

As PBF is, actually, about payment for results, a split of responsibilities between providers, purchaser and regulator is essential whereby greater transparency is implied through checks and balances. In relation to the local fund holder, often called the Fund Holder Agency (FHA), a certain degree of autonomy is needed for the contracting arrangements. Equally, the regulator, already holding the extended role in stewardship and oversight of the health system now becomes one of the main signatories to the contract, thereby taking an active role in verification of commitments at facility level. An important lesson learned is that, to ensure that institutional embedding actually takes place, it is vital to engage with all local

and national level health management and providers from the inception of the PBF, even if at pilot stage. Where such an inclusive approach did not exist, PBF proved to be less effective in its contribution to health system strengthening. In a parallel set up, the caretakers tend to be existing non government organizations who undertake multiple roles of fund holding, management functions and verification, which limited a regulatory oversight and ownership by the district, provincial and central level MOH.

Boosting performance and quality of healthcare delivered to the beneficiaries is the *raison d'être* of this model. The principle of autonomy is central to PBF whereby providers are to be directly involved in the negotiations on contracts. Where contracts were used successfully, they became the negotiation and management tool which manifests in clear commitments and targets to be met by the providers. It was found that in contexts where the systemic model is established (DRC, Burundi, Rwanda) providers gained a greater degree of autonomy due to their role in negotiating the price of indicators and in determining the allocation of incentives to individual health providers, all based on their developed business plan. Establishing contracts, not only between purchaser and provider, but between all the different actors involved, i.e. purchaser, regulator and provider and even between facility and its health workers, at different levels assisted in clarifying and stipulating mandates, expected results as well as consideration of risks and assumptions that are associated with actual implementation of the agreed plan.

The emergence of viable institutional arrangements for PBF in fragile state contexts was noteworthy and may be due to a vacuum in the existing governance and policy environment which allows for the building of 'new' institutions appropriate to the need. On the contrary, the more stable states were found to witness greater challenges when finding a place for the local fund holder within existing institutions, for community involvement and for increased autonomy at health facility level. It may be that pre-existing institutional arrangements as found in more stable contexts are less flexible to assume extended roles and parallel modalities were therefore more in evidence.

Does PBF contribute to health service productivity and quality of healthcare?

While PBF has gained ground in terms of its contribution, it is not the magic bullet to boost health worker performance, nor is it a ready-made solution to resolve a fragmented health system. However, having considered the contextual factors, the confounding factors, and the reliability of the available information, we conclude that in general PBF indeed *can* be instrumental in achieving better results in the health sector if compared to the traditional input financing approach.

Most notably, productivity of health workers did increase in several of the programs studied, with important differences noted between “before and after” introduction of the PBF approach. For example, remarkable results were observed in utilization trends for institutional deliveries, family planning and coverage for antenatal services, which is in line with findings from previous studies. For general outpatient consultation services, an upward trend was noted in some projects but in other contexts PBF had a smaller and mixed effect. One of the limitations when assessing health service performance proved to be the scope of the indicators; these were often limited to the important programs for maternal and child health or HIV/AIDS. A broader scope (e.g. disease control, promotional activities) is recommended to reach the outcome level while adaptation to national or local priorities, instead of global or donor priorities, are needed.

The attribution of improved results to PBF is not undisputed. Results are encouraging in certain contexts, yet wide discrepancies were noted in results between PBF zones and between PBF facilities, whereby sometimes similar improved results were found in non-PBF facilities or improvements had already started before introducing PBF. Improvements could also be explained by confounding factors. For instance, the introduction of health insurance schemes in Rwanda (“mutuelles”) had a positive effect on utilization trends which are difficult to disaggregate from the PBF effects in the same health facility. Additionally, lower user fees represented a confounding factor in attributing results to PBF. We therefore suggest that singular attribution to PBF is not feasible in this study and advocate for critical analysis of attribution of results to PBF.

The quality of care as perceived by the clients had improved, as derived from exit interviews and interviews with community representatives. The improvements in quality of care as perceived by the professionals was evident only in some contexts and more widely health workers and managers viewed pre-conditions for providing quality of care as the solution to achieving actual quality improvement. Quality was therefore more often monitored in terms of “conditions to provide quality care” rather than actual outcome measures. One of the major challenges in PBF is to ensure that tools to monitor quality of care as an outcome will be developed and built into routine program monitoring, as well as the development of capacities for quality assurance measurement.

Does PBF boost health worker performance through motivational enhancement?

With respect to health worker motivation, one of the major questions is the level of importance of intrinsic versus extrinsic motivators in contributing to improved performance. Intrinsic factors such as responsibility for results and authority for decision making were

found to play an important role. In some cases we found that the facility based incentive, while appreciated, is seen as a top-up by the individual which is not necessarily directly associated with improved performance of the same individual. Consequently the effect of the individual incentive on motivation is often more limited to social action within the facility's team whereby the intrinsic effect was more potent than the actual extrinsic (or cash) reward. Conversely PBF bonuses can lead to de-motivating the health worker due to lack of transparency or inequitable distribution of the performance bonus. This dichotomy of intrinsic and extrinsic factors requires more formative research in order to achieve an optimal balance in support to sustained performance of health workers.

In the interviews, health workers expressed that they were more creative in their approach to use of resources for health service delivery. Nevertheless, it became evident that this was contingent on autonomy, management capacities and understanding of the PBF concepts. Significant aspects in this case included; the health workers having clarity on what is expected of them and this being linked to positive (reward) or negative (penalty) consequences of their actions. In cases where PBF had catalysed greater cohesion and dialogue with increased worker solidarity this was attributed by the staff to opportunities provided by the introduction of performance based incentives.

What are the other determinants of success for PBF – from communities to national level?

The study found that there was no specific approach linked to PBF in order to enhance community involvement. Community monitoring relied on classical tools such as household surveys and community health committee reports. For performance in terms of utilization and quality of care to improve, services need to be responsive to community needs. PBF holds a strong promise here through the involvement of the community in the steering committees (SC) and in their role in verification as conducted by contracting agencies. Further exploration of a more active involvement of community members in the cycle of decision making and accountability mechanisms is necessary. Certain key areas have not yet been addressed including; gender balance, targeting the poor and vulnerable as well as the capacity building required for the community representatives.

While the 'locus of control' for PBF lies within the domain of the health systems inclusive of community involvement, external determinants were also found to play a critical role in influencing the approach and outcomes of PBF. The study highlights the need for further consideration of donor and government policy, governance, capacities of the stakeholders, socio-economic and political factors that all impact on results of PBF. While the approach is still nascent, it is too early to expect profound effects on the sector wide development.

However, Rwanda has demonstrated clear commitment to the national scale up of PBF and PBF was integrated within the national policy by 2006, following the NGO run pilot projects. In Burundi and DRC effects of PBF are felt on health systems at the local level while in Tanzania and Zambia the PBF had no direct effect on the health system due to the parallel approach used and the fact that contracting was not directly with the providers responsible for results.

Funding arrangements and buy-in from national governments is one of the major determinants that will influence the progress and scale up of PBF. Historically, PBF evaluations point to the successes attained where pilot projects were initiated by NGOs. There is no doubt that the “piloting effect” in the context of PBF is central to the issue of attribution. As with other piloting initiatives, extraordinary resources are invested with concomitant attention to the opportunity to prove that the approach will work. The issue of scale up requires increased budgetary commitments and accelerated government ownership and responsibility. To date, only Rwanda has succeeded in bringing PBF to national scale, albeit with large donor inputs and with an efficient centralised management for PBF, which appears to have compromised decentralization and community involvement.

Some of the more tangible organizational successes that were evident in most countries included improved procedures and reporting systems, albeit in some cases these running parallel to the national systems. Where the systemic model is in operation, enhanced governance structures for accountability and transparency were seen, through improved analysis of indicators of performance and holding service providers accountable for results. There is, however, room for further improvement in terms of mainstreaming the data management, for results based conditionality, into the national health information system.

We are unable to provide any solid evidence in terms of contribution of PBF to health outcomes as this is not feasible to study within the confines of a formative evaluation. A call is made for investigative research to study the contribution to overall health systems performance, but also significant is to uncover the issues of attribution; this can be done through longitudinal comparative studies with other health financing approaches.

What is the cost of PBF?

Previous reviews of PBF have alluded to the high costs of implementation and management to be made when scaling up from pilots to national level. It has also been argued that the additional costs of the PBF arrangements can be too high for the countries to bear after the withdrawal of external funds.

Firstly we found that it is still difficult to judge the efficiency of the approach, due to the diverse budgeting modalities used by the non-governmental organizations (NGOs) where disaggregation of budget lines to reveal true administration costs from other program costs was not attainable. Where financial trends were available, analysis reveals that costs are high: costs for the administration of PBF vary between 15-30% of the per capita health expenditure. However, solid evidence is not available for comparisons with the costs incurred in input based financed projects. In such comparisons increased outputs, improved quality of care, responsiveness of the services to the clients, improved accountability, improved monitoring and evaluation (M&E) systems and efficiency gains made should be taken into account. In virtually all contexts where PBF is operational it relies on financial donor support, not only for piloting PBF but also for capacity building, for creating necessary preconditions, for scale up: this will continue to require external funding to augment national government revenue.

A more detailed prospective costing study is necessary if we want to elicit the total investment costs for design and set up of PBF both in country and for donor technical assistance (TA) investments; the information that is actually available does not allow for such an analysis. This is therefore only possible in a prospective study carried out in a clearly delimited area, where it is possible to find comparable control areas and to study only the variable indicators. As a consequence it is difficult to make a judgement on the financial sustainability of PBF in the countries under study.

Is PBF a sustainable approach for boosting of health service performance?

Based on our analysis and synthesis of the findings we concur that PBF brings the attention to downstream accountability and transparency, to the operational level, where the results are focused on delivering more and better quality healthcare for the ultimate beneficiaries. So, PBF is about improving the performance at service delivery level.

To enable the embedding of the PBF approach in the national health policy, the central level of the MoH should participate from the start in piloting the approach. It is necessary that the scale-up proceeds at an appropriate pace if the approach is to retain the basic decentralized principles of PBF. The process of introducing PBF needs to be incremental, not only while extending PBF on a national level, but also a phased approach when introducing in a district: the actors need to understand their new roles.

The place of a local NGO in the process is in accompanying local actors, helping to establish structures, instruments and local capacities of each of the stakeholders. The local

NGO should have an exit strategy from the start, and not take the sole responsibility for important institutions for PBF like the local fund holder. The ‘new’ institutions (e.g. FHA) established for PBF create a challenge in fragile states for scaling-up to a national approach. These FHA furthermore provide an important additional cost and need to be integrated in the national governance structures. This study clearly indicates that scaling up requires new institutional arrangements at both central and local level which has implications for compatibility with existing structures and for sustainable funding of transaction costs. While the Ministry of Health (MoH) has assumed a lead role in the national implementation framework in most cases, it is evident that reliance on external aid is necessary to support building these additional operational structures. The question of “building on” or “building back better” implies that where post-conflict health system recovery is concerned, it is likely that new structures and systems are required as in Rwanda and Burundi, or existing ones need to be adapted to PBF requirements.

Overall, this study shows that PBF is a promising approach, but that more research and critical reflection are necessary to enable PBF to continue to adapt to each context and to evaluate if it is indeed the most effective approach for delivery of improved health services. The methodology of introducing the PBF approach requires operational research and field-testing of different approaches to understand which one leads to the most sustainable and successful results. The research agenda defines the priority areas that call for more evidence based analysis in order to strengthen the approach while ensuring that it becomes embedded within the health system.

Acronyms

AIDS	Acquired Immunodeficiency Syndrome
ANC	Ante Natal Care
BPHS	Basic Package of Health Services
BTC/CTB	Belgian Technical Cooperation/Coopération Technique Belge
CAAC	Cellule d'Appui a l'Approche Contractuelle; performance-based financing Department of the Rwandan Ministry of Health
COSA	Comité de santé; community health committees
Cordaid	Dutch Non-Governmental Organization; a conglomeration of three Dutch NGOs: Memisa, Mensen in Nood, and Vastenactie
CSO	Civil Society Organization
DFID	Department for International Development (United Kingdom)
DRC	Democratic Republic of the Congo
EC	European Commission
ECHO	European Commission Humanitarian Aid
EDF	European Development Fund
EU	European Union
FHA	Fund Holder Agency
FP	Family Planning
FBOs	Faith-Based Organizations
GFATM	Global Fund for HIV/AIDS, TB & Malaria
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit GmbH
HealthNet	HealthNet TPO; a Dutch Non-Governmental Organization
HMIS	Health Management Information System
IDA	International Development Association
INGO	International Non-Governmental Organization
M&E	Monitoring & Evaluation
MCH	Maternal and Child Health
MoH	Ministry of Health
MSH	Management Sciences for Health
MoPH	Ministry of Public Health
MTE	Mid-Term Evaluation
NGO	Non-Governmental Organization
OPD	Out Patient Department
PBF	Performance Based Financing

PEPFAR	President's Emergency Plan for AIDS Relief; a project of the American government
PHC	Primary Healthcare
P4P	Payment for Performance
PMR	Project Monitoring & Review
PPCC	The Provincial Piloting Committee for Contracting
RCH	Reproductive and Child Health
SC	Steering Committee
SWAp	Sector Wide Approach
TA	Technical Assistance
UN	United Nations
UNDP	United Nation Development Programme
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
USAID	United States Agency for International Development
USG	United States Government
VCT	Voluntary Counseling and Testing
WB	World Bank
WHO	World Health Organization

1 Introduction

For decades, efforts by international development agencies focused on investing resources (input financing) to invigorate poorly functioning health systems in developing countries, with variable success. Empowerment of providers and users of health services is viewed as an important prerequisite for enhanced accountability, increased responsiveness of services to community needs and sustained investments thus leading to improved access to and quality of healthcare. This thinking has inspired new approaches and innovations to boost health system functioning, through adoption of performance targets that are closely tied to incentives for organizations, individual health facilities and for health providers, depending on which model is adopted.

There are various definitions for Performance Based Financing (PBF). (For the purpose of this paper, we will use the definition of the Global Partnership on Output Based Aid (GPOBA) which defines performance based financing as “A strategy for using explicit performance-based subsidies to support the delivery of basic services where policy concerns would justify public funding to complement or replace user-fees. The core of the approach is the contracting out of service delivery to a third party, where payment of public funds is tied to the actual delivery of these services”. In the health sector, PBF has been introduced and discussed through the use of terminology such as; ‘results based financing’, ‘payment for performance’, ‘performance based financing’; all of these terms describe the levels of incentives and performance rewards awarded, whether organizationally or individually focused. For the purpose of this paper, we will adopt “performance based financing” as the working terminology with specific attention to the health facility/individual provider arrangements and indicative results from pilot projects.

As part of the multi-country study, a desk study was undertaken to review some of the recent performance based financing initiatives. The following countries were selected to identify what, if any, results were reported and what questions remain to be explored:

- Afghanistan, where the government decided to contract out health service delivery to private providers post-conflict in 2002. Funded by the World Bank, European Union (EU) and the United States Agency for International Development (USAID), the country was geographically stratified based on donor investment and where NGOs were contracted for delivery of basic health services. The World Bank use a performance based bonus targeted at implementing NGOs aimed at enhancing efficiency and quality of services delivered.

- Great Lakes region, where performance based financing was first introduced in Rwanda in 1998 by HealthNet TPO and Cordaid, and later scaled up to the national level in 2002 as adopted by the MoH. DRC had a number of performance based projects by NGOs. Subsequently, the World Bank introduced PBF in 85 health zones as part of a contracting of health services with built in performance based incentives.
- “Paying for performance in Haiti” as part of a package of interventions in a USAID funded bilateral health project that commenced in 1999 and was scaled up from five to twenty-five NGOs in 2000 based on the initial successes of PBF.

1.1 Literature review: some lessons from PBF approaches¹

A shift from traditional financing to alternative approaches has been demonstrated to have the potential to elicit improvements in health service performance in developing country contexts. The basic principle is “the money follows the patient”; if health facilities attract more patients and provide quality services, they will receive more subsidies and incentive payments on a scheduled basis (monthly, quarterly or bi-annual). The expected methodology, results and incentives to arrive at the improvements are laid out beforehand in a contract – as such PBF may be seen as a type of contracting approach. Most of the literature converges on two key objectives of PBF:

- 1 To increase equity, accessibility, quantity and quality of health care provided to the population.
- 2 Efficient organization of health services.

PBF results in the selected countries showed improvements in utilization of health services and enhanced quality of health provider performance from DRC, Rwanda and Burundi to Haiti and Afghanistan. Results have indicated positive trends due to the introduction of financial incentives; however attribution of effects is difficult to discern in virtually all projects reviewed. Other observations on the likely effects of the use of PBF, as reported in the literature include:

- Despite positive results for utilization of health facilities, the studies did not define comparable service indicator trends for non-PBF projects or use control comparisons, thus reducing the scope for attribution. Nonetheless the trends in coverage and utilization are positive, especially in the domain of mother and child health interventions.
- Projects which target NGO performance do show efficiency gains with positive trends in both supply and demand side indicators for healthcare. However, the impact of financial incentives versus other reforms in the system (technical assistance, capacity strengthening, and overall increase in expenditure by the NGOs) has not yet been isolated.
- Equity of access and affordability of services was attained whereby out of pocket payment for services decreased, thus reducing the cost burden on households. The studies did not undertake an analysis of controls nor extend to an analysis of confounding factors such as the introduction of health insurance, abolition of user fees or equity funds.

- In terms of the unintended effects, it has proved difficult to isolate such events due to attribution and the limited operational research within PBF projects. Potential for perverse effects were discussed but not directly identified in any of the projects studied.

Several studies, however, have pointed to enabling factors that ensure the success of PBF, including health worker ratio and skills mix and a more rigorous health information management system that is built into the PBF approach. Innovations that have made a significant contribution to PBF results and to wider systems strengthening include: (i) use of a balanced scorecard in Afghanistan whereby qualitative measures are integrated within the routine monitoring system; (ii) quality of care metrics introduced within HealthNet TPO projects; and more recently (iii) quality of care indicators built into the Rwanda national PBF system. These instruments combined with regular community feedback are intended to stimulate improved accountability and quality of health care by providers, and enhanced measurement reliability of performance indicators. The PBF approaches studied however were too nascent to yield any results on their contribution to the program outcomes.

Effects of PBF on health worker and organizational performance

The effects of PBF on health worker performance is of significance and studies have paid due attention to the effects both on the organization and on the individual health providers with three notable positive findings extrapolated from a number of studies².

(i) Health worker performance does improve with the introduction of PBF

The shift in organizational culture to a more results-oriented way of working has demonstrated increased levels of staff motivation (self reported and via direct observation) and has in many instances promoted innovations in service delivery such as subcontracting community groups or private sector providers. This is explained in the literature by intrinsic rewards such as (i) the opportunity for flexibility and more autonomy in management at service level; (ii) enhanced opportunities for professional development and capacity building; and (iii) opportunities for staff empowerment through self and team directed problem solving leading to higher motivation in their work. Questions remain about whether such positive results are a result of intrinsic motivators or stimulated by additional financial (extrinsic) investments for the health facilities.

(ii) PBF can enhance health sector institutional strengthening

PBF is also seen to play an important role in institutional development. This has manifested in improvements in existing health functions (HMIS, quality control) and integration of new functions (fund holding at local level, verification and provider/community participation) with potential for more autonomy at local level and increased transparency. It is notable that PBF provided opportunities to stimulate the provider/regulator/fund holder

consultative processes thus enhancing transparency and more locally defined approaches, e.g. through business plan arrangements for service delivery.

(iii) Sustainability of PBF is still a question

Concerns expressed by Levisohn (2005) in the context of Afghanistan include; (i) feasibility of scaling up; (ii) overhead and/ or transaction costs that are higher than governments can afford; and (iii) governments may have limited capacity to manage such complex approaches, which are by implication, unsustainable. To date there is a limited body of evidence, outside the Rwanda experience, that PBF or payment for performance can actually be sustained beyond the initial pilot and scale up period.

Overall, the review of selected PBF literature from developing country contexts shows that the early results of using such approaches are promising and demonstrate potential for improvement in health service utilization and quality of healthcare. However, the question remains if PBF is the panacea or does it create distortions and unexpected effects within relatively nascent health systems. This report addresses internal and external determinants that influence the results and the longer term impact of performance based financing approaches.

1.2 Scope of the study

The study was called a *formative evaluation*, meaning that the purpose was not accountability of the programs studied, nor a fundamental research on the effectiveness of PBF, but rather learning lessons on the potential contribution (positive or negative) of the approach and its implementation.

This paper has its origins in an enquiry initiated by Cordaid on the potential effect of PBF on access to quality health services for the catchment population, through an assumed link with the provision of incentives to health service providers for meeting agreed health service delivery targets. Secondly, and of equal interest, is the assumption that PBF has potential to exercise enhanced equity through regulation of user fees and thus minimising out of pocket expenses for the poor and vulnerable users. Thirdly, it is assumed that PBF enhances participation and influence in health care provision by the users of the services (and consequently suiting the needs and priorities of the poor), through increased community involvement in health care delivery. The collective experiences and lessons from the diverse PBF project locations were expected to provide invaluable insights into these assumptions.

The (potential) risks that are highlighted in the international literature and subsequently explored in the country studies include:

- PBF may be an incentive for health workers to inflate records for remunerated activities, or even to note ghost patients in the records, to obtain more incentives. As a consequence,

they may neglect activities that are not remunerated, prioritize ‘low hanging fruits’ (services with high demand and a relatively low burden of work) and induce unnecessary demands for the activities that are incentivized.

- Health workers may see themselves forced to deliver the activities in their contract, in spite of insufficient capacity and thus neglect the quality of services. The provision of quality assurance is integral to the PBF model, in order to guarantee that quality of healthcare is not compromised as a trade off for reaching service targets.
- The economies of scale are critical to the success of PBF; the overheads for a small target population may be too high. The transaction costs that are needed to establish the systems and structures necessary to implement PBF are costly, e.g. time spent on monitoring and HIMS may compromise programming implementation time.
- Most often the payer decides; in the case of input planners this is the central level in the MOH, in the case of community financing this is the community representatives, in the case of PBF this may be the donor. The risk is then that PBF may become donor-driven and donor-dependant; providers will look to the donor (Cordaid) to set the priorities in terms of health needs and demand for health care, rather than being responsive to the needs of the community.

1.3 Methodology

The selection of countries includes PBF projects supported by Cordaid and HealthNet TPO, which in some cases were early stage pilots while others were at a more mature stage of developing the approach. The following countries and associated projects were selected for the study:

- 1 *Burundi*, where Cordaid initiated PBF in the Provinces of Cankuzo and Bubanza and HealthNet TPO did so in the district of Kibuye in the Province of Gitega, since November 2006. In February 2008, two additional Cordaid projects started in the district of Nyanza-Lac (province of Makamba) and the district of Rumonge (province of Bururi). The review team visited all project areas where PBF is currently being implemented.
- 2 *DRC*, where Cordaid currently supports two projects in Kassai (initiated in June 2007) and South Kivu (2006), while HealthNet TPO supports the North Kivu project (2006).
- 3 *Tanzania* (Jan 2006) and *Zambia* (July 2007) where Cordaid’s support evolved from input based financing to output based financing through the introduction of a results based approach to health service delivery.
- 4 PBF in *Rwanda* was not included in the study but was reviewed with a focus on scaling up the approach to national level.

The generic terms of reference was co-written by Cordaid and KIT and tailored to each country context in consultation with local partners. For the purpose of the multi-country

studies, standardized data collection instruments and semi structured questionnaires were developed and subsequently adapted in line with country context characteristics.

As the focus of the study was on lessons learned rather than on accountability, sampling was not aimed at being representative but on searching for the optimal amount of information on lessons learned. Data collection was carried out in areas where PBF was implemented and in areas where this was not the case, in the absence of a typical case control study. In both types of areas, facility based routine information was gathered on the total of the district, then 'better and less performing' health facilities were selected, in order to understand why one was performing better than the other and the inherent differences between PBF and none PBF supported facilities. In the facility, more data analysis was carried out, interviews were undertaken with health staff and representatives of the community and other stakeholders including government and civil society authorities and community representatives.

The field work was followed by the development of individual country reports that were shared with the respective country partner agencies in national workshops and with Cordaid HQ. This synthesis report is based on distilling the evidence and experiences from the countries studied; it presents a meta-analysis of the results and indicates the major lessons learned. The evidence and experiences are to be found in the country reports: it will not be repeated here, only reference to it will be made.

1.4 Layout of this PBF synthesis document

In this paper, we will explore the lessons learned on the design, implementation and effects of financial incentives in the form of PBF in the health sector, as supported in Sub-Saharan Africa by Cordaid and HealthNet TPO.

This section (Section I) provides a background on PBF including a brief analysis of the findings from relevant literature, while identifying the unanswered questions, risks and assumptions inherent in PBF in the contexts studied and attention to the methodology of choice for the multi-country study. It provides the scope of the study and its methodological approach.

Section II explores the institutional architecture and strategies used for PBF in the context of different country contexts while analysing the determinants of success within and across contexts.

Section III explores the results of both the quantitative and qualitative effects on health service delivery and on the quality of care provided as informed by the PBF supported and non-PBF health facilities visited. Consideration is also given to findings of potential

unintended consequences that manifest in the form of both negative (perverse effects) and positive effects (staff development, institutional reform) as based on the results from the country studies.

Section IV take a closer look at monitoring of PBF and also explores the capacities of both health providers and managers to deliver the PBF approach.

Section V includes the synthesis of the seminal findings as evidenced by the results from the respective countries. The results in turn inform the conclusions and recommendations made.

Finally Section VI addresses a research agenda for future operational research into the PBF approach.

2 Determinants for success – performance based financing

2.1 Institutional framework and set-up of PBF: the actors involved

PBF is deployed as a modality to motivate public and private providers through the use of incentives in relation to performance against agreed outputs. It is informed by the principles of (i) autonomy in management and planning by service providers; (ii) separation of functions of regulation, financing, and service provision; (iii) involvement of the community in management of the services; and (iv) use of standardized instruments including business plans, contracts, verification and monitoring tools that are agreed at a decentralized level by district managers, community representatives and health facilities. It means autonomy of the health provider as a pre-condition, with enhanced participation through a consultative process among the fund holder, regulator and health providers. The inputs, outputs, incentive payments and processes are subsequently articulated in a health facility based contract between the fund holder and provider.

Since the PBF approach is about changing the funding modality from “input” to “output” it is generally assumed that there is a need to change the institutional framework to implement the approach. One of the basic assumptions is that a split of responsibilities is needed to ensure checks and balances. Usually the roles are distributed between the regulator (usually a decentralized public health authority, the funding agencies (donors or Ministry of Finance), the local fund holder (an NGO, a new local institution, local administration or the donor), the health providers (public and private) and the community involved.

In general, the “rules of the game” are defined as follows. The health provider (be it public or private sector) develops a plan for the facility (in PBF terms known as a “business plan”) guided by national policies, norms and standards, describing how it aims to attain its specific objectives for its curative and preventive and promotional services. This business plan will be negotiated with the purchaser of care, the local fund holder, to establish a mutually agreed contract describing the expected results and the resources (financial, human, physical, time) needed to attain these results. The contract is approved by a steering committee, in which the different stakeholders (regulator, purchaser and community) are represented. To ensure that the contract commitments for service delivery are fulfilled, two types of verification activities are undertaken. At the facility level the (financial and morbidity) records are checked, usually by the MoH from district or at intermediate level. At the household level the reality check is carried out in order to confirm if services are

indeed delivered as stated in the records. Household verification is often contracted out by the local fund holder to a local NGO, a village health committee or students.

In principle there is no standardized modality for PBF and different contexts should tailor the approach based on pre-existing policies, operational architecture and resources available. In Rwanda, DRC and in Burundi, the implementation resulted in a similar systemic set up architecture, which relied on 'new' institutional elements established solely for PBF and on the inclusion and remodeling of existing institutional elements, so that they would serve to operationalize the PBF approach. This resulted in a clear role distribution between the different actors involved, consistent with the split in roles and responsibilities, with the inclusion of health authorities at the different levels. This systemic approach was found to improve MoH ownership and overall sustainability which contributes to the success of PBF. The PBF set up in Tanzania and Zambia on the other hand is characterized by a parallel approach, which evolved from Cordaid support to existing faith based health facilities. The approach established operates parallel to the district health system; with limited engagement of public health authorities at local and central level. Consequently there was a limited effect on service delivery at the health facility level.

The institutional framework for PBF can be categorized into four major actors including (i) local fund holder; (ii) regulator; (iii) provider; and (iv) PBF steering committee; giving the community a voice. In the following sections we shall see how these actors were involved in the different PBF projects in different contexts.

Local fund holder

One of the major differences between the systemic and the parallel model lies in the role and function of the local fund holder. In the systemic set up architecture the local fund holder is a new institutional element: the Fund Holder Agency (FHA), which is a product of the PBF implementation. In the cases where PBF has been implemented with a specific FHA, this organization has played a pivotal role in operationalizing the PBF approach. The FHAs usually cover a given geographical area (a district, a zone or a province) and consist of several qualified staff (~5-10) that are responsible for the management of the PBF approach. More specifically, the FHAs are in charge of signing and managing the contracts with the health facilities, with the local health administration and with the community based associations in their operating region. They are responsible for the fiduciary administration of the project and involved in the definition of the indicators and their pricing, in consultation with the donor. In most cases they also provide technical assistance on PBF implementation and monitoring to the regulator and the providers.

In the parallel set up in Tanzania and Zambia there was no new institutional elements introduced in the health system for PBF, the role of the local fund holder was assumed by

an existing organization, namely the Diocesan Health Office (DHO) which is the intermediary fund holder for Cordaid. The PBF related contracting was limited to an agreement between the donor and the DHO, no contracting between the DHOs and providers had taken place.

Regulator and verification

The regulator has in theory several roles which includes the following:

- 1 The regulator, as the Ministry of Health, has overall stewardship function which includes oversight of planning, management and monitoring of health activities within the context of national policies. In cases where PBF is coordinated by faith based agencies, the regulation was controlled by the donors and NGOs involved, leaving limited regulation by the MoH as occurs in Zambia and Tanzania.
- 2 In the classical PBF set up (Rwanda, Burundi, DRC), the regulator is one of the main actors and signatories to the contract which is usually tri-partite between the fund holder, regulator and providers. These contracts associate the local health administration in formalizing the tasks and commitments and setting the remuneration to be paid to the local administration.
- 3 The regulator has an extended role of monitoring and verification at facility level in the context of PBF to oversee that (i) standards for quality care are in place; (ii) patients are treated according to (national, MoH, program) norms; and (iii) respect of national policies and priority programs.

The split in functions (purchaser/provider/regulator/verifier) does not assume a standardized approach. Rather, the issue is one of the extent of the split in roles and functions and where it needs to be located and how the roles and tasks are distributed. The most important split is recognized as the purchaser/provider split, which is evident in all cases. However, frequently it is the purchaser (FHA) that assumes the role to maintain oversight of the outputs, while the regulator oversees if these were delivered according to norms and the verifier checks if the services were indeed delivered.

Health service providers

The health service providers, in relation to their clients, are of course the *raison d'être* of PBF, but in the projects explored here, they do not routinely have a specific "role" when it comes to the modalities of setting up and managing PBF. However, it is important to note that in the systemic model, providers had a greater degree of autonomy including development of the business plan (DRC, Burundi), negotiating the price of indicators (Burundi) and in determining the allocation of incentives to individual health providers (all). In the parallel model as described, participation was limited to the actual provision of services with few incentives at individual health facility level.

It is evident that the scope and scale of provider involvement in conceptualization and decision making is guided by the arrangements between the fund holder and the regulator (MoH). This manifests in a decentralized system in operation in DRC and Burundi; however performance *contracts* are signed in DRC and Burundi between the FHA and individual health facilities.

PBF was found to be a stimulus for health providers to be more pro-active but only when this is built into the design. Although it is to be recognized that there is not always fair distribution of the incentives within the health facility. The architecture also needs to take account of devolved responsibility to avoid negative effects such as inequities across health facilities and individual health workers. For example, in Burundi PBF was only implemented in some regions, which meant that the workers in PBF areas got twice as much pay, consequently creating a shift of workers to the PBF areas, especially when regulation was weak.

PBF and community involvement

There are variable levels of community participation. In some cases pre-existing structures allowed for engagement of a community voice. In Burundi and DRC, community involvement for PBF at facility level is channeled through the Health Committees (COSA - Comité de santé) which are constituted of members elected among the population. These are administrative bodies that work with the facility management on operational management; they form an interface between the providers and the community, although the degree of involvement differs strongly. COSA are implicated in several cases in developing the business plans in collaboration with the facility management, having a role in decision making on issues such as investment, drug purchasing, user fee exemption policies, but only their representatives in the steering committee may influence PBF incentives. Capacity gaps were evident among COSA members which have been addressed in part through training supported by the fund holders. Community involvement in the “verification system” is another way to engage communities but this was not integral with the design in most cases or was at an early stage of its development.

At a macro level stakeholder involvement varies from the case of Burundi, where it extends beyond the immediate fund holder and regulator to national and regional level multi-stakeholder bodies (in which community representatives participate) to Rwanda, where national level engagement is largely at the discretion of Cellule d’Appui a l’Approche Contractuelle (CAAC) (MoH regulatory body); leaving little community involvement at the operational level, while it was strong in the original pilot phase. In Tanzania and Zambia PBF remained at district Diocese level within the confines of the Faith-Based Organizations (FBOs), while community involvement in the decision making at the health facilities was officially through the management committees. However, few of them were active in the PBF supported facilities.

Clearly, this area is still weak and insufficient consideration is given to the diversity of community involvement as there are many entry points to enable consumers of services to be involved. For example, there is limited attention to “demand side incentives” to increase access e.g. incentives for pregnant women to deliver in a facility. PBF does not automatically lead to participation of the community. It is dependent on how it is implemented and what are the organizations and structures that are put in place to involve the community. PBF prioritizes improved quality of care and user satisfaction while health service performance for its users is pivotal in the approach.

2.2 Strategies and approaches

PBF calls for a tailored approach to the context with alignment to the national health policy as in the case of Rwanda or in Burundi. Specific strategies and approaches have evolved in each country as a consequence of its introduction and its maturation. We examine here the contextual factors including issues of decentralization, degree of alignment and harmonization and the role of civil society (NGOs and wider community). In terms of the internal frameworks, we explore the functionality of contracts and business plans, selection of targets and indicators and the actual nature and use of the performance incentives by facilities and providers. Ultimately, we come to the question of institutional sustainability of PBF and its readiness for mainstreaming within the health system and government structures, while also exploring financial sustainability given the current budgetary implications.

Coherence of PBF and national policies and strategies

The question whether PBF will comply and cohere with the strategies that have been articulated by a given health sector will be influenced by a number of factors including the status of governance, strength of institutional structures and processes and existence of policies and strategies that will guide the health service delivery. Here we examine the influence of such contextual factors to determine what, if any, effects it will have on the success of PBF.

What we find is that the advent of PBF has stemmed largely from fragile states where a policy vacuum exists (e.g. Cambodia, Afghanistan, DRC, Rwanda, and Burundi) and where governments are unable to fulfill service delivery functions due to poor capacities and lack of resources. Where health systems are in the process of reconstruction or early recovery in post-conflict contexts, national health policies and strategies are still in development, so cannot guide the introduction of PBF. PBF is one of many opportunities that can bolster fragile health systems while the context allows institutional structures to be tested and strengthened. A number of significant results have emerged from PBF initiatives in contexts where (i) health systems are nascent; (ii) dependency on external aid and concom-

itant TA (strongly promoting PBF) is high; and (iii) where opportunities for public private partnerships become essential to address health service deficits.

Within contexts of transition from relief to development approaches e.g., in DRC, the project is built on a shift from input based financing by an NGO (HealthNet TPO North Kivu and Cordaid Kassai and Katana projects) to paying for performance. Harmonization of the approach and alignment with national policies and strategies is difficult, as these are not yet well defined. At the operational level health providers are not guided in their compliance with national guidelines and protocols, with limited support and supervision from the authorities. In this context of regulatory vacuum, there is an opportunity to rethink the roles and responsibilities of each actor; this is where PBF has offered a catalyst for improved regulatory processes at local and national levels.

Examples of the evolution of PBF in such contexts include Burundi, where the MoH prioritized the contracting approach for delivery of health services guided by the national contracting policy. In practice, the locus of PBF operations is at district level, with a phased approach that allows for testing of PBF, and innovation on how to adapt it to the local context. This in turn informs the national level policy and strategy, thus opting for an incrementalist approach to systems building. Early efforts, although the project was led by HealthNet TPO and Cordaid, were already laying the foundations for a national PBF approach. Meanwhile, the Rwandan government demonstrated political and technical interest for adopting PBF as a national approach to boosting health services.

Conversely, in more stable states, where established institutions exist and where governance is stronger (Tanzania, Zambia), building on existing structures is vital rather than super imposing new institutions or agencies. However, the efforts to introduce PBF have not taken this path, with PBF implemented by FBOs using “parallel structures” such as Diocesan health offices. Although it is recognized that PBF piloting is currently being introduced to the MoH strategy supported by the World Bank in both Tanzania and Zambia, initial Cordaid efforts have not aligned to national policies and practices. It was therefore not possible in this study to draw lessons from PBF in the context of more stable health institutions.

Moreover, introducing PBF in more stable states seems to be an important challenge for the approach. It would imply either the development of new institutions or changes in the existing governance structures, which may meet resistance of existing interests. In the context of health financing, where a local FHA is needed, the question of which institution should take up this role arises. Should it be the health insurance scheme, or the Local Government or should a new institution be created? And will it be possible for the FHA to take up the purchaser function? Is it possible to separate the functions between purchaser

and regulator as most often these functions are combined by the MoH? The PBF related incentives, paid for by the donor in fragile states, will need to be taken into account in the macro-economic appraisal of Bretton Woods institutions, while existing funding mechanisms and regulations are often very rigid, not easily allowing for major changes needed for output funding. *Further research into suitable ways of implementing PBF in more stable states is warranted.*

Exploring PBF in the context of decentralization

In PBF, a certain degree of autonomy is needed to allow for health service providers and their partners to come to context specific approaches for results; providers need to have the freedom to be creative and innovative in their search for improving the services. To date, the most important strategy in PBF to foster autonomy is linked to the set up of new structures and implementation of approaches such as decentralization, devolution and community involvement. Here we focus on some of the internal and external determinants of national governance that influence PBF outcomes and could contribute to the objectives of health sector reform in the longer term.

National health policy is a major determinant in developing the PBF approach with attention to *decentralization and promoting autonomy*. Upstream willingness and capacity of government to decentralize and donor behaviour as well as downstream availability and capacity of human resources, coupled with the level of civil society engagement, are all critical factors. In this study, the context differed in terms of deconcentration with *delegation* of some tasks and responsibilities to operational level within the MoH. The vacuum of support from central level in DRC creates semi-autonomous local level arrangements by default. The decentralized approach in Burundi and Rwanda is an explicit policy. In PBF supported health facilities in non-fragile states autonomy was found to be limited. Devolution (transfer of responsibilities to local governments) is increasingly important in many countries and provides an opportunity for the approach.

Progress on development of health policies and strategies that guide implementation of PBF in health services is variable across countries studied. We did not find evolved strategies for PBF implementation in *stable contexts* like Tanzania and Zambia and further exploration is required. Even Burundi, becoming progressively more stable and strengthening its governance structures, is actually struggling with integrating new structures that were developed during piloting, in a national approach. The issue of mainstreaming PBF within existing structures or establishing new structures is as yet inconclusive in most contexts. Meanwhile, Rwanda has made strides with inclusion of PBF within its national policy with a fast roll out of PBF in the country. This has resulted in standardizing the approach for all districts but at the risk of an overly centralized approach to PBF. In fact, the MoH has assumed direct responsibility for both regulation and verification with a national entity as

fund holder (CAAC), in the absence of a local fund holder, with donor management at central level. Such practices are counter to Rwanda's decentralized efforts and to aligning with other national health initiatives such as the introduction of the "mutuelles" health insurance schemes which are decentralized with devolved local level structures.

The process of developing the PBF approach is not found to be well documented, nor developed. Many scenarios exist currently whereby different contexts demonstrate varying levels of maturity of structures and regulation. Questions remain about the order in which PBF is introduced: Is it better *not* to start with building governance structures for health; or first accompany existing structures in entering health management; or build capacity in the existing structures; or develop accountability mechanisms first? To date there has been too little testing of different approaches. *The methodology of introducing the PBF approach requires operational research and field testing of different approaches to understand which one leads to the most sustainable and successful results.*

Role of international NGOs in supporting PBF

As international NGOs (INGOs) like Cordaid are redefining their role in the New Architecture of Aid, they should decide if they continue to channel their support through their faith based partners (only) or focus on strengthening health systems as a whole. Here we examine the role of INGOs as primary or intermediary fund holders and often sole provider of technical assistance for PBF.

The role of INGOs in funding services has in some contexts been reduced as a consequence of (sector) budget support and Sector Wide Approach (SWAp). However, the involvement of NGOs (Cordaid, HealthNet TPO) in PBF over the past ten years demonstrates newfound opportunities for innovative and promising approaches, at the same time supporting the implementation strategies and development of instruments and related capacity building, all key aspects of PBF.

Cordaid and HealthNet TPO have played an important role in conceiving and piloting the PBF approach by hiring consultants to support the countries technically. An important issue here concerns *who to support?* Traditionally Cordaid supported Diocesan health structures in DRC, Burundi and Rwanda. Extended roles are required to implement the PBF approach including strengthening the regulatory role of the district team, adapting the M&E system and TA to the basic functional health unit as a whole thus avoiding 'islands of excellence'. It also implies supporting the local agents and management in developing the set up and implementation of the approach.

The regulatory role of the relevant health authorities is key in the PBF approach to ensure the respect of national policies and of the norms and standards (e.g. for quality of care) and

supervision carried out is an important aspect. There are many interrelated issues here regarding the processes and engagement of the respective agencies; should the supervision by the regulator (including transport, per diem, and bonus) be paid by the INGO, and if so, should this payment be performance based? This puts a challenge on the MoH outside the pilot area as for supervision in other districts where these arrangements would not count. This constraint may only be solved through the central level of the MoH.

Capacity building by NGOs tended to be reactive rather than an agreed incremental human resource plan that would ensure the necessary competencies at all levels. Issues to be addressed more fully include that of a 'whole systems approach' whereby attention is focused on an incremental approach to building the capacities of health providers and purchasers and managers and community representatives as part of a wider capacity development strategy, and not in isolation.

In the majority of cases, INGOs assumed (initially) the role of independent fund holders with INGOs initiating the pilots in Rwanda and Burundi and local NGOs taking up the role in DRC, with varying levels of autonomy and responsibility observed. Sustainability comes into question when considering the longevity of international support to this role and if equivalent capacities can be acquired by local entities (NGOs, district councils, other) with a defined exit strategy for INGOs.

Development of contracts and business plans

PBF represents an alternative financing approach with an important contracting component as a means to boost efficiency and quality of healthcare rendered. One of the major determinants of success includes clarity on contractual arrangements whereby all parties are consensual to the inputs and measurable outputs as articulated in a business plan developed by the facility. Here we explore these contractual obligations further to determine their contribution to the success of PBF.

In Rwanda contracts are signed between each of the different levels involved; by central to steering committee, and by steering committee to health facility, and thereafter by the facility to health workers. Each contract contains the devolved mandate, the expected results, and the resources needed to attain the results. Unfortunately the contracts are too often standardized instead of tailoring them to the specific context. Rwanda is the only country where national level contracting has been achieved to date, as PBF is integral with the overall national health strategy. In other countries contracts are established between the local fund holder and the facility, only sometimes extended to a contract between the facility and its personnel.

The case of Tanzania and Zambia showed the importance of when contracting deviates from this more traditional modality. Here there was an immediate transition from input based to output financing for the same faith based health facilities as previously supported, using the same personnel and administrative structures (namely the Diocese). In both countries, the contract had not been established between the fund holder and the relevant health facilities responsible for results, but between Cordaid and the Diocese. One could not expect that performance would increase without contracting the facility directly. The providers furthermore had limited understanding of the approach. Moreover, funding provided to the health facilities contained certain maximum levels on expenditure items set by Cordaid, i.e. 40-60% for staff motivation, 20-30% on equipment. Consequently, two core objectives of PBF, namely entrepreneurship and empowerment, had little chance to evolve.

In the original approach, each facility develops its own 'Business Plan' usually stipulating the strategies of the facility to increase its performance. This business plan, developed by the facility, is at the base of negotiating the contract with the FHA. It is intended that in the contract the needs and wants of the local fund holder balance with the needs expressed by the professional health staff in the business plan. Contracts are renegotiated at intervals (3-6 monthly) to accommodate changes within given health facilities. Where business plans existed they did vary in quality; often related to the quality of the facility's management, capacities of management and democratic approach by the fund holder. A major finding here is that the methodology of developing business plans needs improvements in view of the importance of involving the providers and full consultative process in order to arrive at their potential. *Overall, more evidence on the process and the effects of contractual obligations is required.*

Setting of indicators and pricing

Paying for performance implies contractual relations on the level of financial incentives that are linked to the expected results. Is the use of performance indicators the single most effective strategy to come to increased performance?. How can indicators best be selected?

The selection of indicators may lead to perverse effects; risking diminishing attention for other health care interventions creates an administrative overburden, challenges the financial capacity to pay the bonuses related. Choice of indicators can thus have a major effect on selectivity of services provided. Perverse effects could not be studied comprehensively, as limited comparative indicators, others than those linked to PBF, were collated and analyzed within the given health facility or across comparable health facilities in the district. This in itself could already be seen as a perverse effect. It is critical to build into the design of PBF projects non-rewarded indicators to discern trends and avert the possibility of neglect to other intervention areas.

It is also vital to balance quantity with quality whereby quality indicators are to be included in the package; this was not comprehensive in the countries studied with exception of some pilots. Conversely, in Rwanda the payment of the outputs was made proportional to the results of an assessment according to national quality norms and standards. In Rwanda, the barème (price of the indicator) is set at central level by MoH in collaboration with donors; payments are built on equitation between the two types of indicators. The 14 Payment for Performance (P4P) Indicators for productivity include select indicators from the Basic Package (all are Reproductive Health indicators) and some from the 13 HIV/AIDS indicators.

The number of indicators selected in Zambia (four) and Tanzania (five) was limited – in Burundi (HealthNet TPO program) the number of indicators was initially large but later rationalised to a manageable package of measures. The type of indicators is usually heavily influenced by the donor which resulted in virtually all programs using the same type of indicators. In Tanzania and Zambia the corresponding indicator targets were uniform for all the facilities, regardless of baseline and conditions in the health facility. This is not considered coherent with the PBF approach as for some facilities the targets will be difficult to attain while others will regress when the targets are attained. Selected indicators may be in line with MoH policy but concerns have been raised that the focus is more often on clinical services rather than integrated health care with a balance of supply and demand side indicators. In Rwanda, for example indicators are specific to the PBF program rather than to the national health strategy.

Selecting indicators and differentiation in pricing within the PBF approach provides an important instrument to express priorities in the health sector but often strategies used in the countries studied to select these do not, as yet, reflect priority setting of the overall national health strategic plans, nor are they based on specific health priorities at local level. This delicate balance should follow from negotiations in an improved contracting approach in PBF, while the introduction of a 'business plan' provides a promise here, albeit this instrument needs further improvement.

Determining the performance bonus

The performance bonus is considered a facility based allocation based on achievement of agreed outputs while individual performance incentives are usually determined at facility level. Here we explore whether the performance bonus strategy is appropriate and efficient?

Within the respective projects, the health facilities are eligible for a performance bonus in relation to the number of health services that were provided and in some cases to the quality of those services. The influence of donors on awarding the bonuses is still very strong, if not decisive, limiting the decision making of the FHA. NGOs (Cordaid, HealthNet TPO and Management Sciences for Health (MSH) in Rwanda) require separate financial and per-

formance reports before the release of funds. A separate report on the PBF project implementation is requested while the financing procedures are not yet aligned with the national ones so independent reports are therefore submitted for PBF.

In all cases studied, only *financial incentives* were introduced, either through direct financial bonuses for health staff or through upgrading working and/or living conditions for staff. It was often found that the facility based incentive, while appreciated, is seen as a top up by the individual which is not always directly associated with improved performance of the same individual. Consequently the particular effect of the incentive on staff motivation is often limited to social action within the facility's team. Quite often, bonuses were distributed amongst health staff that may even lead to *de-motivation* because of a lack of transparency or inequitable distribution.

Payment of financial incentives actually focuses mostly on incentives for the individual health facility while health managers have asked for guidance on how to distribute the bonus in an appropriate and equitable way, that will enhance both motivation and retention of staff in the facility. Some health facilities had been proactive in developing such systems with a 'pay for performance steering committee' in place. In some facilities, based on a local initiative, individual performance incentives were determined through a scoring that weighs elements like attitude, initiative and discipline.

Burundi witnessed success in staff retention in PBF facilities with migration of staff to the health facilities in PBF zones. Positive effects on health workers especially in rural areas were also noted in Rwanda. In most cases, the health workers underlined the changes in the working environment (i.e. improvements in availability of drugs) positively affecting the motivation of staff. In Katana, Burundi, for example, the health workers linked these improvements with the contract, most likely as it has brought a clear planning and financing tool that has led to the positive actions: "now it is clear what is expected from us, and what are the consequences". The fact that the health facilities are more autonomous is also motivating and encouraging the health workers as they become more involved in management, thus acknowledging the contribution of intrinsic motivators, which were evidently contributing to health worker improved performance. It was not possible in this study to determine the added motivation power of intrinsic versus extrinsic motivators where both were in operation, more detailed operational research on PBF versus intrinsic health worker incentives is required.

Community involvement in PBF

Conceptualization of strategies and approaches to address 'community involvement' was lacking in all programs. It was often an add-on whereby existing structures (health committees) were requested to take part.

The potential in PBF for community involvement on health and health care is very strong: PBF is about the client-provider relationship, about autonomy at the operational level, about seeking results in terms of increased utilization, verification takes place at household level, and there is a place for community involvement in the institutional architecture of contracting.

The study found important differences in the way the community was involved. In Tanzania and Zambia, PBF did not bring a change in this regard. In Rwanda involvement was promising when piloting, but diminished in an institutional way after scaling-up. In the DRC, in fact, the local NGO took the place of the community in the contracting, although including representatives of the community in their activities. The case of Burundi presents an interesting scenario where the health authorities are seeking, with support from Cordaid, to create structures that allow for community involvement. In the steering committee and in the FHA there are representatives of both Civil Society Organization (CSO) and Local Governments.

Experiences varied in the country studies; while it seemed there was clear understanding in the programs that the community needs to be involved in PBF, there was not always a clear idea on the strategy to arrive at community involvement. For example, the issue of having mechanisms to ensure adequate community involvement is not made explicit in the PBF approach at country level. Is there representation by the different ethnic, socio-economic strata and are the poor represented adequately? In the study we found no evidence that 'if ever' community representatives had been included in the institutional framework, they had no structural links to communicate with the community. For example, most villages had a village health committee but these did not play a role in the PBF context. In addition, community monitoring relies on more classical tools such as household surveys, exit interviews and community health committee reports with no specific adaptations made to accommodate the accountability mechanisms for PBF. There was no specific capacity development approach linked to PBF in order to enhance community involvement.

In which phase of the management cycle should community representatives be involved?

Usually, they are involved in verification and in ex-post agreement on presented accounts; they have a control function only. For the services to become responsive to the community's needs, their representatives should be involved in (i) priority setting (the indicator choice, their relative pricing); (ii) objective setting of the Agence d'Achat de Performance, the local fund holder. Also they have a key role to play in negotiating the contracts based on the business plans of the facilities; (iii) in monitoring and evaluation of the PBF results; (iv) in co-financing the costs of PBF.

Further piloting and exploration of issues like representation, gender balance, targeting the poor and vulnerable as well as required support for capacity building in the community and their representatives is necessary.

Scaling up PBF (pilots) to national level

The origins of PBF, as we have shown, invariably lie in piloting through a project approach as supported by INGOs and funded by external aid, this in turn risks degrees of verticality and 'islands of excellence'. The architecture of the project approach will differ significantly from what is required to embed PBF within a national system. Here we explore the viability of scaling up of existing pilots and the institutional reform that is required to accommodate the nationwide introduction of alternative financing models such as PBF.

Moving away from input to output financing in national systems, calls for the reorganization of resource mobilization and allocation, for institutional reform and for management of change. Rwanda has shown that scaling up to national level is possible, Burundi is well underway. These experiences show that scaling up requires new institutional arrangements at both central and local level, which has implications for compatibility with existing structures and for transaction costs. While the MoH has assumed a lead role in the national implementation framework, it is evident that reliance on external aid is necessary to support building these additional operational structures. The question of 'building on' or 'building back better' implies that where post-conflict health system recovery is concerned, it is likely that new structures and systems will be required as in Rwanda and Burundi, or existing ones will need to be adapted to PBF requirements in countries that are stable for longer periods.

Examples of requirements for new institutional arrangements are; (a) structures for fund holding; (b) structures for community participation; (c) mechanisms for accountability and transparency; (d) administration and finance; (e) agencies to carry out the verification efforts; (f) changes in the M&E system; and (g) distribution of tasks and responsibilities and arrangements for partnership working.

The case of Rwanda has demonstrated that scaling up means important investments of resources of which 'time' is one of the most important. A fast roll out to all districts was made possible by a task force that was supporting districts. It meant a vertical approach where a new department (CAAC) was created at central level to be responsible for rolling out, supporting districts and monitoring PBF. PBF is still a special program, not yet mainstreamed, and CAAC is located outside of the MoH, showing national leadership, but depending heavily on work done by the TA provided by donors (MSH, Belgian Technical Cooperation/Coopération Technique Belge (BTC/CTB)). A fast roll out was possible through standardization such as adoption of uniform indicators and fixed prices per output for all facilities in the country. Initially specific 'business plans' for each facility were not

part of the approach as standard contracts were offered instead. Developing community involvement structures takes time and usually means a complex process, so this aspect of the approach became limited to two representatives in the steering committee with a 'voice no vote'. The steering committees are dominated by clinicians, so medicalization of care may result from this implementation approach.

Rwanda has shown that it is possible to roll out (quickly) the approach nationwide if the political will is strong. But there are often trade offs and in this case the approach may be at the expense of existing decentralization processes and the principles of PBF such as community involvement in decision making and autonomy of the structures at decentralized level.

PBF scale up, therefore, has major implications for organizational change and a call for reform of outdated management systems, including financial and administrative systems. This review demonstrates several selective changes at both central as well as operational level. Decentralization in terms of devolution (transfer of responsibilities) instead of the actual deconcentration (delegation of tasks), is a key issue and in reality may prove to be a major challenge in scaling up PBF to national level. National and local authorities have to assume new tasks and responsibilities (also from donors and NGOs in supporting the operational level) and buy-in may not be equal at the various levels of the system. Scale up, therefore, requires attention to the pace and timing in order to adjust to local level developments and ensure upward and downward accountability through appropriate adjustments to governance structures.

Scale up of existing pilot approaches is not readily feasible in the absence of national structures that will accommodate these necessary processes. This includes the extended roles assumed by the regulator and their interface with the fund holders/donors and providers. It also calls for more attention to the nature and capacities of decentralized structures, whereby the national scale up in Rwanda demonstrated a return to a more centralized management in the absence of such capacities at local level. *Further action research is required into the challenges and opportunities for scale up of PBF.*

Sustainability

When referring to sustainability in the context of PBF we include here national ownership from the start, which is essential to achieving institutional sustainability of a program. National ownership translates a project into a program that is linked with (adapting) the national policies and planning methods, that is ultimately aiming at integration into general budgeting modalities and strategies. The question of whether PBF can be sustained in the light of such institutional demands, overhead costs and technical capacities required is addressed here.

The case of Rwanda shows that strong leadership (both government and non-government) is critical to the success of the approach. A donor-driven approach to PBF can dilute the potential for local ownership and alienate health providers who are not invited to negotiate on the contract and related performance targets. For these reasons, a more systemic approach is to be preferred to a parallel approach. This would necessitate involving the central level in developing the pilot from the start and by supporting a functional unit of the MoH such as a district wide unit.

There are several different organizational set ups in Burundi and DRC, but they all have in common a systemic approach which is characterized by the creation of new specific organizational structures. We specially refer here to the local fund holder (l'Agence d'Achat) which manages the contractual relationships with the providers and the (public) regulator. Even if there are differences between the different project set ups in these countries, it should be noted that an organizational structure has been put in place. However, its sustainability is in question as this fund holder structure will need to be embedded in the national structure once PBF will be scaled up. Actually, the FHAs are already embedded in the local structures through a contracting approach with the regulatory public bodies. In some cases (Burundi) the FHAs do participate in the meetings of the peripheral and regional level committees that supervise health matters at these levels. By contrast, where PBF has been implemented outside the national MoH structures there are no bridges built between the PBF project and other stakeholders such as local and central public (health) administration, the community or even the national FBO umbrella organization. There is, thus, no ownership of PBF that would serve as a basis for future scale up and integration of PBF in the health system. However, currently at national level, plans have been ratified for results based financing in both Zambia and Tanzania in collaboration between the MoH and donors.

Finally, it has to be added that there are differences in the institutional sustainability prospects between Burundi and DRC. In DRC the government is still mainly absent and the transfer and scale up of PBF could be hindered by the lack of basic government resources and capacities. The introduction of a World Bank supported PBF project covering 89 health zones with a total population coverage of 10 million people, will yield additional evidence of the potential for scale up of PBF approaches and comparisons of modalities adopted across projects.

In Burundi there is currently a political will to replicate the Rwanda model by scaling up the PBF approach from the current PBF projects. This of course echoes the Rwanda evolution where the same INGOs now present in Burundi were instrumental in the successful scale up of PBF.

3 The effects of PBF on health service productivity

The concept behind PBF originates from the idea that even though resources are limited in low income countries/middle income countries, it should be possible to improve the effectiveness in the health sector by increasing the performance in terms of both productivity as well as quality of services. Therefore, some of the key issues for this review focus on questions to confirm findings from previous studies such as; (i) did performance indeed increase; (ii) to what extent was this attributable to the PBF approach; (iii) were there confounding factors that could explain the effects; (iv) were there issues within the PBF approach or model that may have influenced the results (in a positive or a negative way); and (v) if there were effects, are these likely to be sustainable.

In general, it may be stated that following from our studies of facility based routine data, performance indeed did increase in several of the programs studied, with important differences noted between 'before and after' introduction of the PBF approach. For example, remarkable results were observed in utilization trends for institutional deliveries, family planning and coverage for antenatal services. For general outpatient consultation services, an upward trend was noted in some projects (Kassai, Burundi, North Kivu) but in other contexts PBF had a smaller and mixed effect (Tanzania and Zambia), while elsewhere it did not appear to have a positive effect on utilization (North Kivu). Another interesting example is the increase in minor surgery in Burundi in PBF facilities. Such findings are in line with those of previous studies where the primary effect of PBF were evident in health service performance and in particular in the Maternal and Child Health (MCH) services (ANC, deliveries assisted by skilled personnel, vaccinations, <5 growth monitoring) as well as at the secondary hospital referral level where services for emergency obstetrics and surgeries improved.

The influence of variables (confounding factors) on positive or negative trends should not be discounted when comparing areas 'with and without PBF' interventions. In some cases it was found that in non-PBF areas similar improvements were found, thus attribution to PBF comes into question. Often (e.g. Rwanda, DRC and Burundi) improved performance had already started before the introduction of PBF. Much of the differences could be explained by the context (post-conflict, fragile or not, policy context, for example) and pre-conditions (non-availability of human, financial and physical resources). Also, inside the geographic areas where the study was undertaken, some facilities performed better than others and finally, also results (and bonuses) differed between health workers.

We present selected examples on productivity and quality of care to address the above questions, whereas more evidence on performance can be found in the specific country reports. Particular attention is paid to issues regarding the probability that results were a result of introducing PBF, deriving from comparison with areas where PBF was not introduced and comparing between 'before and after' (introducing PBF) in order to explore the issue of feasibility of measuring effects of PBF.

3.1 Productivity

- Utilization increased in virtually all cases including maternal health indicators (ANC, institutional deliveries) but variance is found even across PBF health facilities within the same districts.
- No perverse effects were directly observable but attribution continues to be an issue
- Contextual factors, especially in fragile contexts, play a major role in the success of PBF.

A clear example of increased performance stems from Kassai (DRC). If we take only the Out Patient Department (OPD) consultancies deriving from our facility based study in the same province, we see that indeed in the three PBF areas (Mikalayi, Tshikula, and Bunkonde) the utilization increased after the introduction of PBF in July '07, as may be read from figure 1.

This figure not only shows that there is a difference between 'before and after' the introduction of PBF, it also shows that this is not the same for each of the three PBF areas. One area (Mkalayi) shows a continuous growth at the point of team data collection for this

Figure 1 The evolution of the attendance of OPD consultations (new cases) over time in three PBF zones in West Kassai Province (DRC)



study, while the other two PBF areas were already moving towards an improved utilization rate but at a lower rate of growth.

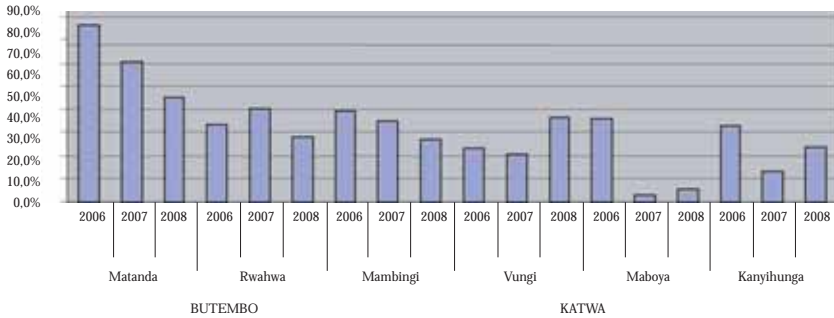
The other performance indicators in the country report from Kassaï province, such as assisted deliveries, EPI and family planning services show the same tendencies over time. Certainly the considerable increase (three to four fold) in family planning utilization is remarkable, as this indicator is usually regarded by many to be strongly related to population acceptability determinants (cultural, beliefs, gender power relations) rather than to provider determinants (motivation, professional perception of quality of care). In the areas where no PBF was introduced these positive trends in family planning coverage were not found. Similar trends existed in DRC, Burundi and Rwanda.

Contrary to assumptions about *perverse effects* where it is assumed that staff may keep patients at the health facility because of financial incentives, the referral rates to the regional hospitals have increased from virtually zero to 100-300 cases per month, while there was no change in non-PBF areas. At the same time, admissions in PBF hospitals have increased including emergencies. The utilization had increased, although results varied. Skilled attendance of normal deliveries in two out of three hospitals improved while in the third PBF hospital these figures decreased to almost zero after an initial increase. This increase in hospital deliveries did not take place at the expense of deliveries in the health centres (where utilization of deliveries by skilled personnel had increased too) thus, pointing to the likelihood of an improved referral system.

In Butembo, North Kivu, and more generally in the region of North Kivu, the political-economic situation is still particularly fragile (unlike Burundi and Rwanda), with virtual decimation of infrastructure and huge gaps in critical health system elements such as drug supply networks. In this type of context it is quite obvious that even the most generous performance incentive program will struggle to make a difference, at least in the short term, since it is impossible to increase the production. This is amply demonstrated in figure 2 where utilization for curative care actually decreased following the introduction of PBF while non-PBF also shows equally volatile utilization trends. The difficult situation in North Kivu has been taken into account by the donor (HealthNet TPO) who has also been allocating resources through input financing with an objective to reconstruct the health system.

In Burundi the indicators are again more positive. The graphs in figure 3 show that the tendencies (here for assisted deliveries) in the PBF area of Bubanza already break through the 'cible' (the target set by the national level for the total of the country) in less than 1 year – see figure on the left below.

Figure 2 Utilization of OPD consultations in PBF (Butembo) and non-PBF (Katwa) areas in DRC (North Kivu Province)



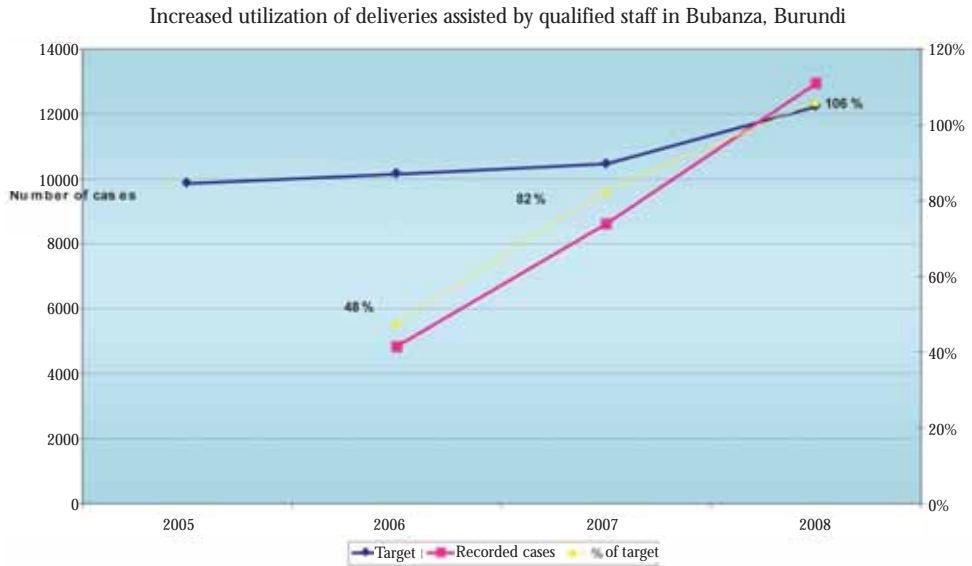
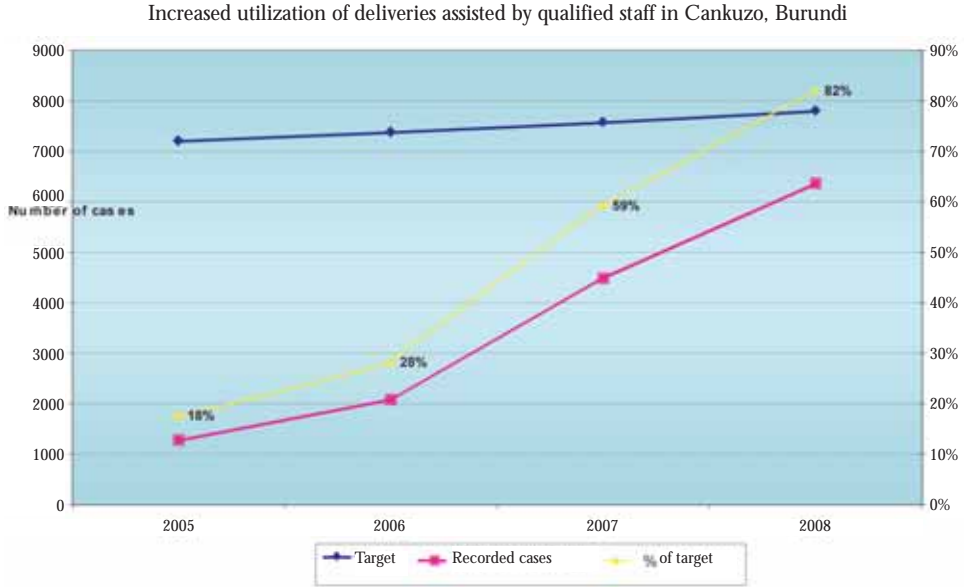
In the same figure one can compare this tendency with another PBF area (Cankuzo, on the right) to understand that the tendency here is positive, but slower, and it is still far away from the target; not all PBF areas perform equally in the same period.

To compare, we looked at similar areas where PBF had not been introduced (as this is not a prospective study). The evidence provided us with an idea of what could have happened when PBF had not been introduced. Comparing with a non-PBF area we note that in ANC and family planning, the results are clearly better in PBF areas than in non-PBF area. However, assisted deliveries also show increasing trends in non-PBF after a slow start. This increase is probably a consequence of increased input funding from a donor that provided support to this non-PBF area, after a relief NGO had withdrawn from this area. This illustrates that although PBF has the ability to show improvements in outputs, input funding, if well organized, can have the same effect.

In many of the studies on PBF, the effects are measured by comparing baseline data with data after a certain period of implementing PBF, regardless of what happened before the baseline. One of the difficulties the evaluation team faced during the different country studies was the absence of information on the situation prior to the introduction of PBF, whereby the data was not readily accessible. The lack of such data also has implications for the reliability of the existing HMIS, one of the pillars PBF relies upon.

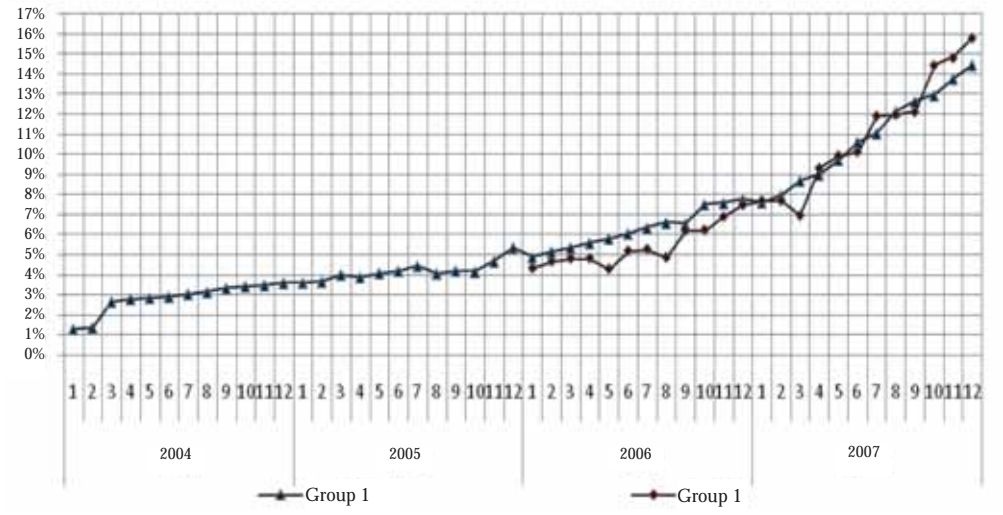
In Rwanda, scaling up PBF from a few pilot projects (initiated by Cordaid and HealthNet TPO) to the entire country happened in two phases to reach all 30 districts by 2006. In Group 1 districts the PBF approach was introduced first; PBF was introduced later to Group 2 by following the same approach. BTC/CTB had also collected data in the years before introducing PBF which are reflected in figure 4.

Figure 3 Tendencies in deliveries assisted by qualified staff in two PBF areas in Burundi against targets set by the MOH at central level



In figure 4 it may be noted that the increase of the number of institutional deliveries already started in Rwanda before the scaling up of the PBF pilot in 2006. Most remarkable is that the Group 2 districts, where PBF was introduced later than in Group 1 districts, start at the same level as Group 1 but they immediately catch up with Group 1 values at the time PBF was introduced. Hence, Group 2 districts had increased the number of deliveries

Figure 4 Trends in institutional deliveries in Rwanda (BTC/CTB) after starting PBF in the Districts of group 1 (2004) and group 2 (2006)



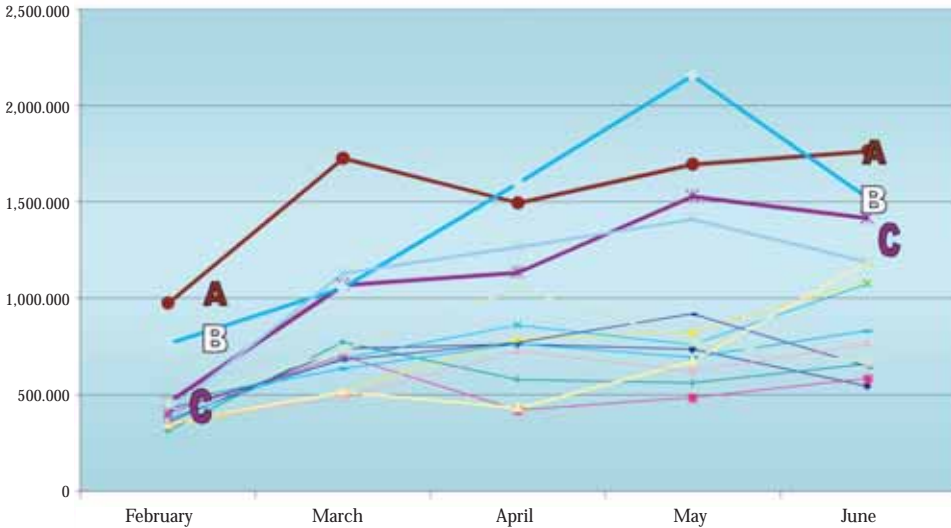
the same way as Group 1 *without introducing PBF*. Attribution to PBF on the increase of deliveries is therefore not certain.

Besides differences between PBF provinces there are also notable discrepancies within PBF areas. As the analysis for this synthesis report is at a higher aggregation level, it certainly hides differences between the individual health facilities, as can be seen in figure 5.

As an indication Figure 5 shows that in a given district there are clear differences in “responsiveness”; there are facilities that did not change much after introducing PBF, while others have taken the opportunity to undertake initiatives and made fast progress. For example, figure 5 information for health centre C supports the hypothesis that in this particular facility PBF has indeed sparked changes in the way the facility functions. Hence, much of the PBF success will depend on individuals and the entrepreneurship of the managers in the facilities.

It can be concluded that results may improve in PBF areas in important ways, although not always in the same way. Even so, results differ between and within PBF areas, even between facilities and often the same results come up in comparable non-PBF areas. In addition, these examples all come from pilot projects and can therefore be considered ‘islands of excellence’ as all conditionalities are under the control of a supporting NGO.

Figure 5 Evolution of payments according to performance in different health centres in Burundi (2008)

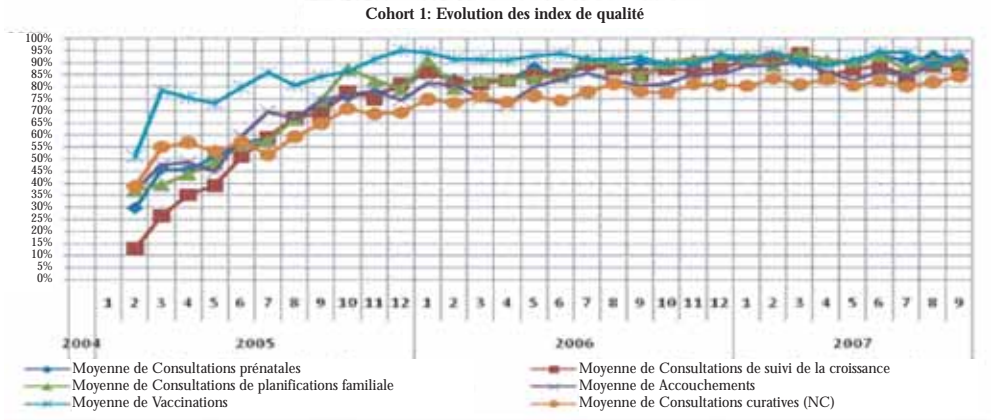


3.2 Quality of care

Overall, PBF assumes that quality of care will improve as a consequence of appropriate investment in organizational functioning, leading to improved health worker motivation and thus resulting in improved quality of care. Another hypothesis is that quality will improve as the health worker will assume that more patients will be attracted, hence the financial incentive. Here we make a difference between examining 'ex-ante' (are conditions in place in order to guarantee improved quality of care, like (infection control, hygiene measures, protocols and standards) and 'ex-post' monitoring (were the services delivered are indeed of good quality).

In Rwanda, according to providers, the MoH by introducing PBF had provided clear and explicit norms for quality of care, *inspected these* and set consequences for compliance (or not) to these norms. The indicators for quality of care and for productivity are nationwide norms as set at central level. Payments are built on equitation between the two types (productivity and quality) of indicators; the bonus for outputs is awarded to the proportion of quality norms that were in place. The norms sheet gives the criteria for quality, the valid quantities and the maximum score to calculate the proportion. In reality, there are no indicators measuring (ex-post) outcome related quality. Instead, the indicators used are measuring 'conditions for being able to provide quality services' and are thus process related. In Rwanda, a total of fifty-two quality conditions are monitored. The payment for the quantitative indicators is influenced directly by the quality score, according to a proportional relationship; 100% meeting quality criteria means 100% payment of the score attained through the quantitative (productivity) indicators. The indicators are uploaded

Figure 6 Evolution of quality of care indicators in Rwanda³



onto a website (www.pbfrwanda.org.rw). This way each facility can compare its results obtained against other, comparable facilities. Results demonstrate improved quality of care based on standardized quality assurance measures:

Other projects report improved quality of care based on anecdotal reports, consumer surveys and provider observations. In fact, most projects do not systematically monitor quality of care (ex-post) and focus solely on whether conditions are met to provide quality of care (ex-ante system).

Based on interviews with users of health facilities criteria for improved quality, including patient waiting times and attitudes of clinicians had improved, with notable improvement in patient satisfaction levels reported in Rwanda and Burundi. In other contexts such as DRC there was no noticeable difference in patient satisfaction levels as levels and quality of service fluctuated.

In Burundi and DRC quality of care is monitored in the facilities by the intermediate level of the MoH. In the PBF areas in Burundi and DRC, supported by HealthNet TPO, an attempt has been made to develop an M&E system to monitor quality of the service delivery provided. It contains indicators (like in Rwanda) on the conditions to provide quality care (including minimum staff levels), but it also contains ex-post indicators to monitor quality of care, like continuity of care. In addition, verification in the community is linked to a survey on client satisfaction and healthy behaviour.

Quality in PBF was often found to be monitored in terms of ‘conditions to provide quality care’ which does not mean that actual care delivered will then be of good quality. It should be noted that Cordaid has made an effort to evaluate the patient’s perception of quality

care. One of the major challenges in PBF is to ensure that quality of care monitoring tools are routinely built into the program design and capacities are developed for quality assurance measurement as part of program monitoring.

3.3 Attribution to PBF – analysis of context

Attributing results to PBF is more complex than comparing outputs between a baseline study and a follow up study. Findings from this multi-country study reveal once again that context is a major determinant in terms of influencing the institutional set up and for that reason the results of PBF.

In this study it was observed that in PBF areas positive trends are evident although the positive tendencies had already started before introduction of PBF in some cases (Rwanda). In some non-PBF areas results were the same, although not always at the same pace or level or even better than in selected PBF facilities while conditions were often not the same.

The context of *fragility* as seen in DRC raises a number of issues in light of exploring the effects of PBF and wider health system recovery. Currently, the prevailing conflict in the Kivu's gives rise to chronic insecurity which has influenced access and scope to deliver basic health services, where health workers cope with uncertainty, leaving health facilities under utilized and sometimes abandoned. Introduction of PBF in such unstable settings will inevitably present challenges to achieving targets, yet it was seen as an opportunity to incentivize poorly paid and unsupported health workers. Clearly, there is evidence of some momentum taking root in PBF zones if compared to non-PBF areas, based on the results of selected projects in DRC. This may suggest that PBF can indeed play a role even in unstable contexts, in order to encourage commitment to delivery of essential services.

By contrast, transitional contexts such as Rwanda and Burundi enjoy the benefits of improved governance post-conflict and thus access to health services has increased even prior to PBF. Adversity was transformed to opportunity in such settings where the government perceived PBF as a chance to stimulate growth in health service productivity. The contexts also differ in terms of the conditions that prevailed before the introduction of PBF; with Rwanda having greater levels of donor investment, strong partnerships with INGOs and thus advancing in its development prior to PBF. Burundi demonstrates the opportunity to solidify provincial level efforts for service delivery while also developing a locally tailored approach to PBF. It is significant that the most formative results have been found in fragile contexts, which may lead us to conclude that opportunities may be seen to grow more readily where a vacuum in institutional structure, policy and services exists.

On the contrary, in *more stable states* such as Tanzania and Zambia, performance in PBF facilities was not improving. Reasons are to be found in the strategy and the architecture

including absence of negotiated performance contracts with the providers, limited understanding of the principles of PBF that existed, with limited verification taking place. In more stable states different challenges prevail; established stakeholder interests may exist that are not always conducive to institutional change and innovation, or innovative processes may meet with resistance at the central level, where the power is traditionally located. This leaves limited space for autonomy at operational level to inspire entrepreneurship and management for results in PBF. In fragile states 'new' institutions have been set up for the contracting mechanisms, so the question remains how we can best deliver PBF in more stable contexts.

There is still need for thorough, technically sound research on PBF and the attribution of results. This will require quasi experimental design studies that will assess the contribution of PBF to the results as well as the confounding factors. It would study service data as well as population data.

External determinants that influence PBF outcomes

While exploring the determinants of success that lie within the institutional structures, it is also critical to attend to external determinants that may play a role in influencing the approach and outcomes of PBF. Though not exhaustive, we call attention to some of these key external determinants based on specific country contextual variables.

Most notable is that the 'piloting effect' in the context of PBF is central to the issue of attribution. As with other piloting initiatives, extraordinary resources are invested with concomitant attention to the opportunity to prove that the approach will work. Pilot projects are thereby often viewed as 'islands of excellence', as they receive extra attention from donors (internal or external financing agencies) and all conditionalities are under control of the NGO. So, it remains a question how much, if at all, of the resulting 'good performance' is due to additional attention paid during piloting and how much is due to PBF. This question remains unanswered but the results of the comparison study (in the absence of controls) suggest that; (a) PBF is instrumental in achieving results that are unlikely to be found in the context of traditional input financing projects; and (b) that results have sustained in projects where the MoH and NGOs were committed to improving performance. Scale up in Rwanda also reassures that even with less resources at their disposal, the MoH succeeded in achieving 100% coverage with PBF.

External variables also influence PBF outcomes such as the socio-economic status of the population which was shown to improve the number of human resources available in PBF zones compared to non-PBF areas. Despite availability of household survey results in the case of DRC and Burundi, knowledge of extraneous variables and their degree of influence on the results is notably absent, while what was reported is a particular status of the popula-

tion which does not allow for dynamic flux of population. Attributing positive results to PBF also proved to be difficult due to changes in wider *policy and governance*. In Rwanda concurrent developments and changes in national policy for health insurance resulted in remarkable increases in utilization of health facilities. The co-existence of PBF parallel to such developments within a given district health system can confound the contribution of PBF. Still, comparison of areas with PBF and areas without PBF in the same situation showed that there were differences that probably are attributable to PBF, but which require further analysis. For example in Katana, the results were better in zones where the user fees were reduced, thus making services more affordable for the poor. Utilization was higher than in zones where user fees had not decreased. One could state that this represents a confounding factor; but on the other hand it was introduced as part of the PBF approach.

The co-existence of other health financing reforms inevitably influences the status of user access and buoyancy of the health system in general. The introduction of health insurance “mutuelles” scheme in Rwanda had a positive effect on utilization trends which cannot be disaggregated from the PBF effects in the same health facility. Additionally, user fees represented a confounding factor in attributing results to PBF.

Does PBF have an influence on the health system as a whole?

Given the nascent stage of PBF developments, one cannot expect a remarkable contribution to, or impact on, sector wide development. Rwanda may have already adopted PBF as part of the national policy, other countries are still in the piloting stages. In Burundi and the DRC, effects of PBF are felt on health systems at the local level while in Tanzania and Zambia the PBF had no direct effect on the health system due to the parallel approach used and not directly contracting the providers responsible for results.

The existence of *political will and capacity* which induced a strong national level decision was responsible for the delivery of a national PBF approach in Rwanda, where piloting in three districts expanded to reach thirty districts within a five year period. The existence of NGO led successful pilots (Cordaid, HealthNet TPO, BTC and United States Government (USG) supported NGOs) played a major role in establishing the framework and structures, appropriate for scaling up, thereby exercising strategic influence based on lessons learned. NGOs worked in full partnership with the MoH to build on experience and evolve the approach incrementally. While piloting, the NGOs had developed instruments, approaches and institutional frameworks for implementation which were adapted by the national authorities in the health sector with ongoing support of these NGOs after withdrawal of the NGOs from the pilots. The Rwanda experience provides the lesson that it is possible to create political will for scaling up PBF pilot projects to nationwide health system reform, if piloting is carried out from the start with the central level, showing the results of PBF and creating ownership.

In Burundi expansion is at a slower pace than in Rwanda and supported by Cordaid, who have been instrumental in the set up at district level. The major challenge presented to the Burundi government and partners is how to scale up to national level while sustaining the decentralized nature of PBF. In DRC, the pilots have been set up at the operational level; namely at district and health zones with a link to provincial level but with limited involvement of the central level. DRC is thereby presented with a challenge to its fragmented approach to health systems, not only to PBF. The results of the current World Bank supported PBF across 85 health zones may offer new insights in how 'going to scale' can be achieved in such a complex context.

PBF strongly influenced health system development at operational level in the PBF projects in DRC and Burundi. Health providers explained that they feel more responsible for the results and more motivated to attain these. Monitoring systems have improved considerably at all facility and district levels. Governance structures have been put in place to analyze results and hold the service providers accountable for results. Verification activities and evaluations are undertaken to measure effects on household level. Instruments have been introduced to make the changes institutional. In some cases, community representatives are involved in the management of PBF.

Given the notable advances in structural reform, there are still gaps that require more consideration for health system strengthening at the operational level including paying more attention to:

- i Strengthening hospital and referral systems within the context of the PBF approach.
- ii Support functions in the PBF approach, e.g. laboratory services and drug supply. In DRC the idea is to create a private sector provider for drugs, bringing a PBF approach (management for results) to the existing drug supply system that may in the end be more sustainable and beneficial for the clients in terms of financial, technical and geographical accessibility.
- iii Strengthening development of normative functions, including accreditation and quality assurance systems. Here Rwanda presents some good practices, such as the norms and standards for the facilities to comply before productivity bonuses to be paid, including regular inspection to control if norms and standards are respected.

Does the performance bonus influence staff motivation?

What did become evident is the need for transparency, predictability and a clear connection between the bonus and improved performance to ensure paying for performance leads to increased staff motivation.

Some reviews suggested a gap in the conceptual link between performance and the applied bonus. This is contingent on whether the approach is introduced adequately to health

workers and how management view the opportunity to introduce PBF. To illustrate, different country studies revealed that the bonus can be used to provide individual incentives; other types of bonuses such as training, housing or transport for the workers; or to improve the working conditions and the quality of care provided. The form of the incentive award (i.e. intrinsic versus extrinsic), and the manner in which it is concretized appeared to have a direct impact on the effect of the incentive bonus. Alternatives that have proven effective in motivating health staff include both intrinsic and extrinsic motivators like opportunities for (diploma and other) training and enhanced responsibilities in the workplace often leading to better career prospects. While such motivating aspects were partly explored in the facilities studied, more systematic efforts are needed to pilot and monitor the relative effects of intrinsic and extrinsic motivators in relation to PBF.

Findings demonstrated that PBF can *induce creativity* in how the financial bonuses are deployed, whereby health managers invested in supplies and decreased user fees to attract patients. In other cases, we found that decisions were made to enhance the conditions of the health facility that motivate staff and improve clinic standards for the users. The key issue here may be to invest in management and planning capacities at facility level, to ensure that managers at that level have an entrepreneur mentality and know to use the opportunities offered by PBF to optimize performance of services. Furthermore, a '*marge de manoeuvre*' is needed to allow for creativity and innovation, without interference from senior management roles and functions, in order to cultivate autonomy and entrepreneurship among health providers. Again, autonomy is found to be one of the major pre-conditions to ensure sound results based performance whereby health providers assume decision making responsibility and are accountable for results.

Where autonomy of health providers has been compromised, it is evident that hierarchical processes undermine local level decision making and can potentially be counterproductive to the aims of PBF. The shift from input based financing, whereby investment is expected to achieve outputs, to one of creating conditions where staff can utilize the resources at their disposal with relative autonomy is undoubtedly entrepreneurial by nature. Such opportunities will only be optimized if health workers feel empowered to make choices and negotiate the contractual obligations. Findings here are in line with this assumption and demonstrate more positive results in the presence of local level autonomy, while not in isolation from supervisors and regulators.

It was shown to be important that staff in the health facility are involved in determining how to utilize the funds, instead of the funding agency (Zambia and Tanzania) or central level (Rwanda) deciding. Staff are involved in determining allocation of the performance bonuses according to an internal score for each worker or a vote between all the workers. Negative effects related to incentives were associated with; (i) higher incentives for medical

doctors compared to other cadres of staff; and (ii) reductions in incentives were seen to lead to decreased staff motivation, which reveals the importance of monitoring staff satisfaction. Moreover, questions come to mind from a sustainability perspective; e.g. what will happen when the bonus is no longer available.

There is a strong need to test approaches addressing intrinsic as well as extrinsic motivators among health providers and managers as part of PBF to identify most suitable approaches to motivate staff to improve their performance.

Preconditions – are they necessary for the introduction of PBF?

In low income countries health system strengthening is not only about scarce resources leading to a lack of preconditions, it is also about how to use existing scarce resources as efficiently as possible to arrive at the best results possible for the population in need of basic services. Here we question whether it is necessary to have pre-existing conditions prior to the introduction of PBF?

The classical view is that well functioning health systems require sustained resources with adequate supplies of personnel, infrastructure and commodities, to ensure quality health-care. Examples of preconditions highlighted in previous studies include; human resources in terms of the right size and right skill mix combined with working conditions and management capacity to run the facilities. There is scepticism whether PBF can actually achieve results in contexts where such preconditions are not met. On the contrary, our findings show better results in ‘fragile states’ than in more stable states, with the inference that it is not appropriate to wait for the ideal conditions and standards to be in place before the introduction of performance based incentives. Indeed, we confirm that introducing an individual or collective performance reward system can prove to be an impetus towards overall health systems improvement.

Health services require at least a minimum level of staffing in order to perform well. With gaps in staff levels, both in terms of numbers and of skills required, it may prove to be a great challenge for hospitals, in particular, to deliver its essential package of health services. In many of the Sub-Saharan countries, facilities are unable to meet human resource criteria for right skill mix and right size of health staff, due to staff migration and high attrition rates, which greatly compromises the quality of healthcare provision. It is undetermined whether this is different for classical input funding than for a PBF approach whereby the same minimum package of service is to be delivered.

The issue of human resource gaps is common, and not only applicable to countries emerging from conflict. Typically, we observed acute shortfalls in essential staff with Tanzania and Zambia having a 40-60% shortfall in key cadres of staff against the MoH human resource

norms. Although the availability of personnel is better here than in the fragile states. So, there is also a problem in establishing the norms that are often theoretical and not based on the outputs to be delivered, but on the requirements set by (priority) programs. In addition, improvement in the internal human resource management is required with the aim of an efficient and appropriate distribution of tasks and in developing best practice towards recruitment and retention of staff with appropriate skill levels. Nevertheless, the effects of PBF incentives on staff retention and motivating the often limited human resources in more remote areas, should not be underestimated.

Efforts to redress the human resource shortages in Rwanda and Burundi included task reallocation and incentives for remote postings, which are funded largely by other donors (Global Fund, USAID). DRC relies on NGO support to health facilities, frequently with a top up to staff salaries. PBF therefore can often be seen as additional 'salary top up' where individual health providers are rewarded with bonuses. This resonates with findings from the World Bank DRC review where management anticipated that health staff may become 'immune' to bonuses as remuneration, without linking the bonus with performance.

An important precondition is represented by the *working conditions*. In the more stable states, but increasingly in Rwanda and Burundi, constructions and a minimal package of medical equipment are available in the facilities of these countries. In DRC, and certainly in North Kivu, this situation is below each standard. The issue of investment in preconditions such as infrastructure is difficult to resolve. Some may consider that a decent building and a minimum of medical equipment represents a condition for a facility to perform well. An interesting solution was developed by HealthNet TPO in North Kivu. In their approach, facilities with below standard conditions would receive a relatively higher bonus than the better off facilities, if they attained the results as set out in their business plan. The extra funding could then be used for investments which indeed did happen; facilities bought delivery tables to increase the number of assisted deliveries or tension meters to increase the utilization of OPD services. Based on this study, the question of whether preconditions such as human resources in terms of right size and right skill mix combined with working conditions and management capacity are necessary pre-requisites for PBF results, yields some interesting findings. It is evident that minimum conditions are desirable to ensure the basic functioning of the health facility, but optimal preconditions are not necessary as evident from fragile state contexts.

3.4 Cost of PBF – sustainability and financing the approach

It is often underlined that implementing and managing PBF can result in a high level of additional costs, including transaction costs. By consequence, it has been argued that the costs of the PBF arrangements can be too high for the countries to sustain after withdrawal of external support. In this section we evaluate the level of costs in the PBF

projects and we discuss how to determine the costs that should be considered as ‘transaction costs’. In the second part of this section we make some hypothetical projections on the financial sustainability of scaling up the PBF approaches. This will be done by evaluating the total amount of resources that a scaled up national PBF program would require in different contexts.

It has to be underlined that there are investments needed to develop the approach – these costs are not taken into account in our analysis since they do not have to be considered when assessing the costs the country will have to absorb when incorporating PBF in its national policy. In this evaluation we are taking into account all the costs that are located at the local level; this excludes for example, INGO’s project costs at the HQ level, as these were difficult to disaggregate from the INGO’s administration costs. A more detailed prospective costing study is necessary if we want to elicit the total investment costs for design and set up of PBF both in country and for donor TA investments.

Transaction costs, inputs and outputs, technical efficiency

When observing the cost of PBF projects from the country’s point of view, one of the main interests lies in defining the transaction costs of the approach. There are several ways that economists define transaction costs; we consider here that the transaction costs derive from the contractual nature of the PBF approach, and by consequence, from the additional institutional elements that are needed for managing the contracts (monitoring, reporting, verifying, etc).

One way of analyzing the transaction costs for PBF is to focus on the financing agents’ (the INGO and the country) inputs and outputs. The objective of this analysis is to define the levels of inputs both agents have mobilized for achieving the outputs. The inputs defined here cannot however represent the totality of the transaction costs since it only takes into account the payments to the different institutions made by the external financier.

In order to arrive at the *real transaction costs* another type of study would be required; this study should take into account costs such as those of the internal evaluation (baseline and follow-up study), the separation of functions, and the costs at regional/ central level of the MoH. In other words, as we have observed from the architecture of PBF, *new* institutional elements are required or *reshaping of existing structures*, so that they can cope with the new tasks assigned to them. But also, it is assumed that the PBF approach would bring efficiency gains, it is impossible within the scope of this study to calculate these gains. The real transaction costs can be revealed only by a direct costing exercise at the level of these institutions. This kind of analysis should come from a quasi-experimental prospective study; it is dangerous to draw firm conclusions on the fragmented project information that we found.

The input/output ratio from different perspectives

The simplest way to look at the transaction costs is to consider them as an input/output ratio as the ratio that compares the value of the performance bonuses over all the resources needed to ‘deliver’ these bonuses. In sum, the performance bonuses, the incentives paid to the facilities, are considered as the outputs and all the costs related to institutional management needed to deliver these incentives are considered as inputs. The resources needed to ‘deliver’ the bonuses can be appreciated through three major categories of costs:

- 1 Fund Holder Agency running costs – excluding payment of incentives.
2. Monitoring and evaluation costs – including regulator and external verification.
- 3 Capacity building costs.

The first two of these cost categories correspond to the costs of upholding the purchaser and regulation functions, as defined in the PBF architecture. The third cost category can be regarded as a supporting cost but one that needs to continue after withdrawal of the INGO. It is assumed that these costs will be borne by the FHA.

From the data that we *did* find, it seems in general that the inputs (as described above), needed for mobilizing the outputs (performance payments), vary somewhat between the different projects. The inputs in the projects under study are circa 30% or more of the total cost of the PBF project. For example, in Bubanza (Burundi) the FHA costs are evaluated at 17.8% in addition to the cost of the contract with the local regulator which is valued at 13% of the total project cost. Thus, the inputs represent 30% of the total costs of the project, with 70% going to the performance payments. While in DRC the inputs represent over 40% of the total project costs. One example of the costs of PBF derives from the West Kassai project.

Table 1 Expenditures of the Fund Holder Agency in the West Kassai Province of DRC (May 2007-May 2008)

Details	Expenditure (in \$US)
Output subsidies at health centre	218.273
Output subsidies at hospitals	124.440
Local associations and quality surveys	24.962
FHA human resource costs	84.093
FHA equipment [†]	15.403
FHA running costs	6.960
Regulation contracts	86.624
Regulation equipment	2.610
Regulation running cost	9.000
Ateliers, trainings, meetings	41.248
TOTAL	613.613

As shown in Table 1 the subsidies represent 55.9% of the PBF expenditure. The remaining 44.1% are dedicated to PBF institutional costs; this consists of 17.3% of the total for the FHA and 20% for regulation and verification and 6.7% for capacity building. These figures provide an indication of additional costs made to enable payment of the incentives within the context of PBF.

However, it is possible to consider the input/output ratio also from a different perspective. In essence it should be considered that the approach also results in better monitoring systems for the health facilities, in strengthening local public administration and in capacity building and should thus be considered as outputs. From this point of view the PBF projects are seen, not only as financial arrangements that are destined to channel a certain amount of funding to the health facilities, but as health system interventions that have a wider impact.

For example, in the case of West Kassai, if only the FHA costs (salaries, functioning costs, verification costs) are considered as inputs and the regulation and training costs as outputs (alongside with the incentive payments), the inputs would represent only 21% of the total project costs. So, to appreciate if the input costs are high or not, a thorough prospective quasi-experimental economic analysis study focusing on these input/output ratios needs to be compared with an alternative, probably with the classical 'input-planning' approach.

As this evaluation is not about accountability, our objective was not to fully analyze the transaction costs. However, the information available points at a number of lessons in costing PBF interventions. Firstly, only costs that will be assumed by the national health budget after the INGO withdraws should be taken into consideration. Secondly, the costs of FHAs are considerably higher if compared with the PBF functions to be undertaken, such as payment of incentives and verification. Thirdly, an INGO assumes the role of the FHA in most cases, which incurs additional running costs. And finally, there are variations in the budgeting whereby budget categories are not standardized across projects. In order to study efficiency and transaction costs in more depth a detailed costing study is required.

Financial sustainability of PBF

The financial sustainability of the PBF projects relates to the financial burden of PBF. Most PBF projects in this study were entirely dependent on external aid, with funding from NGOs and donors. *Continuous* NGO support is irrelevant from the sustainability aspect, since the essence of the sustainability question does not lie in the willingness and capacity of donors to commit resources to the projects but on the extent to which there is a shift of funding towards domestic resources or a mix of funding sources (Kutzin et al, 1997). We concur with this view, as the expectation that an exit strategy will conclude donor support in the medium term is unrealistic in most contexts. Commitment therefore to long term investment is required to ensure scale up.

PBF projects will need to evolve to become national programs that will be funded either entirely by the government or co-funded by the government and donors. The national scale up can refer to a situation where the PBF approach becomes fully implemented in the whole country, as in Rwanda, or during a transition phase (e.g. Burundi or DRC) where scaling up to a national level is very challenging.

The Rwanda case provides some insight here. The current national PBF program is financed by the government (60% of the total funding), in addition to external aid from US government (30%), BTC-CTB (9%) and by some INGOs (CORDAID and HealthNet TPO, 1% for technical assistance). The government funding largely has its origin in a designated World Bank grant for PBF. *No figures exist on the PBF funding sourced from domestic resources*, which may point to the actual PBF initiative derived largely from external donor sources.

The CAAC reports⁵ that the costs for the national PBF in Rwanda in 2007 was circa \$US 2 per capita. This cost is comparable to the cost of a Rwanda pilot project in one of the provinces in 2005. The estimated cost of this pilot project was also \$US 2 per capita⁶. It should be noted though that these are only the costs directly related to PBF. More thorough financial analysis is required, however, to identify the real additional costs of a given package of health services including contingencies for additional costs such as disease outbreaks and services that are often not costed in a basic package (e.g. mental health, nutrition).

Based on these figures a rough estimate of the costs of scaling up to national level can be made. For example, in the Kananga DRC PBF project, the total cost per capita is \$US 1.78⁷. In 2006 the total per capita health spending in DRC was around \$US 6 per capita per year⁸. In line with the hypothesis laid down above, given that the per capita cost of PBF is likely to stay at the same level in a national program as in a pilot project, a national PBF program would represent 30% of the total health expenditure, if the per capita spending would remain at this low level. The minimum per capita expenditure on health expenditure usually referred to is \$US 34.

In Burundi, in the Bubanza province, the cost of the PBF project is \$US 0.75 per capita. The total health spending in Burundi is \$US 4 per capita; thus a nationally rolled out PBF would represent 19% of the total health expenditure (and 75% of the government expenditure on health).⁹ In the Rwanda experience the \$US 2 per capita PBF program was possible only because of a general increase in health spending, and the PBF program actually represents only 4% of the total health spending. The national PBF program in Rwanda reports a 20% administrative cost. The pilot project PBF had an administrative cost of 25% (when the external TA and donor HQ work not included). Thus, it is likely that the administrative costs will decrease with a larger scale intervention. This will, of course, be an

argument for the scaling up of the current PBF projects, which have fairly high administrative costs.

Thus, it is obvious, that with the current level of health spending, countries like DRC and Burundi cannot roll out a national PBF program in any meaningful way without additional resources if quality of care should not be reduced. This is of course true only if considering PBF as an additional funding channel. It could be argued that PBF is not in fact an additional element/program, but that it should be considered as a replacement to other 'conventional' input based funding mechanisms. In this case the nominal amount of resources allocated to PBF is less important; what matters is the difference in efficiency that it can create if replacing an input based funding model.

We may conclude that a national level, sustainably financed, PBF program will need a well financed health sector and most probably there would also be required additional resources targeted at the PBF approach.

4 Monitoring and managing PBF

Performance based financing assumes that the following capacities will pre-exist or be developed in the early stages of the program:

- Reliable reporting, monitoring and verification systems are essential to PBF functionality
- Capacity to triangulate data (health facility, community and quantitative/qualitative) is required to detect over reporting, discrepancies in quality of care and patient satisfaction
- Independent verification is desirable and regular audits at health facility level for checking validity of data is encouraged
- Capacities for PBF include soft skills in writing business plans, improved human resource management skills, negotiation, decision making and invoking participation as a pre-cursor to improved performance

Monitoring systems in PBF

As indicated in the architecture for PBF, output based financing requires more rigorous attention to data flow and quality due to the results based conditionality of payments. As the approach calls for continuous tracking of agreed indicators and targets, tools and information systems are needed to report such measures, aggregate them and verify results.

Findings from the multi-country study demonstrate wide variations in the standards and use of health information systems, household surveys and routine monitoring of community level information (exit surveys, patient perceptions of quality of care). While robust health information systems are critical to PBF, wide variance across projects and countries exist in terms of reliability of data reported, frequency of cross checks and use of data for informing decision making. In addition, systems for audits and verification differ; in some contexts independent audits are carried out by local NGOs, while in other contexts the district or provincial level health authority is responsible for supervisory visits, and yet in others a peer review system for district level health facilities has been established (Rwanda) as a means of verification. Such choices are at the discretion of the regulator and fund holder in consultation with service providers, while there are also differences found in the level of decentralization and local capacities. Community participation, with the use of regular exit interviews and patient satisfaction surveys are essential but are only operation in some contexts, for example DRC and Burundi.

According to the original principles of PBF, the choice of targets for performance measurement should be developed within the context of the *local health system priorities* and based on disease burden, utilization, community wants and needs and quality of care. In DRC and Burundi indicators are indeed locally determined (e.g. ANC, institutional deliveries, OPD utilization) and based on national priorities. Efforts to diversify indicator selection need to be considered in the context of inclusion of demand side indicators, quality of care measures, disease control and health promotion and preventive interventions. However their integration within existing PBF projects studied is limited. Overall, there is still a gap in determining the most appropriate and relevant indicators to select for the purpose of performance measures at local level (global priorities are used), with gaps in guidance on indicator selection, triangulation and measures for outcome of PBF.

In our studies, tracking of results at facility and aggregate district level data initially proved problematic due to gaps in data and poor data quality, with exceptions in Burundi and Kassai (DRC). However PBF has equally been shown to be a stimulus to invest further resources in improving HMIS. The risk here is to focus only on performance measures, which fragments the national system and denies the opportunity for a systems strengthening initiative. A strong health information system is therefore a priority but not necessarily a prerequisite.

While routine monitoring is established in all projects, few have incorporated operational research as an integral part of piloting of PBF, for example to test different approaches. The emphasis was put onto measuring outputs only. There are limited means to map the unintended consequences of such interventions. This leaves a number of gaps regarding evidence on the appropriateness of the approach, identification of confounding factors and attribution of effects of PBF in specific contexts. Evaluative studies have been conducted in Rwanda during the piloting phases while Burundi and DRC projects had not benefited from *independent* evaluations since their inception. It may be too early to judge the effects of PBF in some contexts; South Kivu (2007), Tanzania (2006) and Zambia (2007), however the projects would have benefited from operational research.

Building the capacities to deliver the PBF approach

Capacity building as implied within the context of delivering PBF includes; (i) capacities of the regulator to provide efficient and effective technical oversight, control respect of national policies and quality of care; (ii) capacity of the local fund holder to contract providers, plan, manage and monitor PBF; (iii) capacities of the health facilities to develop business plans and execute the delivery of services in line with the agreed plan; and (iv) capacity of the community to interact with the provider (or other stakeholders in a steering committee)

who will enable community representation. In addition, consideration for capacity to scale up and support the technical capacities required at national level should be integrated within the longer term strategy for PBF.

Constraints in capacities are not unique to output financing projects as they are found across developing countries and in particular in post-conflict countries where health systems were decimated and health workers fled or migrated during the war. Delivery of appropriate quality care assumes a minimum staffing and skill level in order to perform, so certainly to meet the agreed performance results; this is usually in line with the national norms or adapted to local context. However in many contexts the right skill mix and size are absent due to an inappropriate distribution of staff, migration and high attrition rates. The requirements *within the context of PBF* demand an extended set of skills at the operational level beyond the ordinary technical skill sets; this raises the question of what capacities are expected and what efforts are made to provide capacity building where such skills do not exist.

The review found that in most programs the necessary instruments (guidelines, training materials, standard forms, criteria for quality care, standard financial administrative materials etc) have been developed and ready for use. This was achieved largely through external TA and resources from donors and NGOs in Rwanda, Burundi and DRC. In general, staff in the pilot projects were trained to use these instruments. However, not all health providers, their management or other stakeholders, had the skills to use these newly developed tools and instruments or lacked technical skills to increase productivity, performance and quality of care due to limited professional training.

How have countries responded to such demands for skills needed for PBF? Scale up to national level requires a rethink of capacities as occurred in Rwanda. Over the past ten years, donors and the MoH have made significant investments in capacity building to ensure that such major reform would be a success. For example, training teams were set up who dedicate 2-4 days per health facility for PBF induction for all staff. Meanwhile, in other contexts such investments are incremental.

In Burundi and DRC, capacity building for PBF is largely at the discretion of the supporting NGOs that provide the resources for training and supervision. In DRC the Diocesan offices provide technical support and 'on the job' training through its NGO, the Medical Diocesan Coordination Bureau, to the FHAs and providers. However, the country report underlines that there are big disparities in these efforts from one region to another. In Burundi there is, besides support from Cordaid and HealthNet TPO, also some support from the central and peripheral governments. This support is linked to the general contracting policy framework in Burundi. In Tanzania and Zambia no formal technical

assistance for capacity building was provided. In Zambia, the Diocese (which receives 20% of PBF funds for coordination and training) do not have the required skills, knowledge or resources to take on this role. In Tanzania, capacity building is limited to a small number of training workshops in each Diocese as decided by the individual health facilities in collaboration with the Diocesan health office; examples were given of training in the use of HMIS records.

The Rwanda capacity development model for PBF may therefore be a prototype that can be adopted by other countries. A trainer's manual was developed and eight training teams were established who dedicated 2-4 days per health facility for PBF induction for all staff. Standardization and monitoring is under the auspices of CAAC (MoH) who regulate and support the developments and strategies through technical working groups.

With regard to who provides the financial and technical resources for PBF development; the locus for capacity building can be shared between the funding agency and the MoH as regulator. The NGOs have limited resources available for training and mentorship, which denies the health providers sufficient support in augmenting their capacities for PBF. Such gaps would require significant resources and ideally would fall in line with wider health system strengthening including planning, management, HMIS, monitoring and administrative skills.

In order to be sustainable PBF needs to address capacity in the health facilities, at different levels of public health administration and at the level of civil society. But 'capacity' in a wider sense than only technical and managerial capacities are obviously needed. Also capacity is needed to adapt to changing environment, being able to review, to relate to other stakeholders, to bring coherence to the sector and to being motivated and being in the position use those capacities to increase performance. This would mean building a critical mass of capacities that will institutionalize the approach at the health facilities, throughout hierarchical levels and among the different types of stakeholders. This would also lower the marginal costs for a PBF program which will thus become more effective and more efficient. For bringing PBF to national scale, joint donor work on a program approach is needed. One option could be to jointly develop a number of potential approaches for PBF, to jointly field test, follow and monitor these and then agree on the best practice to become 'the' national approach. This is compatible with the Paris Declaration of Aid Effectiveness regarding aid alignment and harmonization through providing policy support to strengthen national policies.

5 Conclusions

This is a synthesis report based on a formative evaluation which was aimed at learning lessons on implementing PBF, rather than fundamental research on it. The early PBF pilot results as reviewed from relevant literature showed promise and demonstrated potential for improvement in health service utilization and quality of healthcare. It provided this review with a framework of issues and topics to be studied. This evaluation focuses on lessons learned on these issues, while also extrapolating unanswered questions which are translated into an agenda for future research.

PBF continues to be an approach of interest not only to stable countries but, in fact, is gaining even greater attention in the context of health system recovery post-conflict. It is not a magic bullet to boost health worker performance, nor is it a ready made solution to reform a fragmented health system. However, having considered the contextual factors, the confounding factors, and the reliability of the available information, we may conclude that in general, PBF indeed may be instrumental in achieving better results in the health sector if compared to the traditional input financing approach. This evaluation did address each of the components of a classic evaluation; relevance, appropriateness, efficiency, effectiveness, impact and sustainability in the context of the country case studies. This synthesis report, however, focuses on the lessons learned from those country studies. Ultimately, the enquiry leads us to the question whether PBF is a viable means of boosting health services and if it should be adopted as a national approach for performance improvement of health systems.

Key results of the PBF review

Almost all indicators in this study had improved when compared to before the introduction of PBF. Contexts had a determining influence, such as those found in North Kivu, where instability and poor infrastructure overrides investment in output financing, thus having an effect on the utilization of services. In other projects positive trends were found particularly in relation to and in reproductive health indicators, where an increase in interventions, such as family planning and institutional deliveries, that historically are difficult indicators to improve due to the multitude of causal factors like acceptability, do effect their uptake. Of equal interest is that HIV related indicators (e.g. Voluntary Counseling and Testing (VCT)) reported important increases which may be accounted for by other donor inputs

(Global Fund, PEPFAR). Overall, the scope of indicators was narrow whereby the majority were focused on MCH or in some cases mainly on curative care (in Zambia and Tanzania), but seldom addressed a more comprehensive basket of indicators, including for example, priority programs, disease control programs, promotional and prevention activities.

Performance is not only about healthcare outputs, as it is also intended to improve the quality of care for the user. If quality had improved in the PBF context then what were the drivers of change? Frequently, the providers in PBF facilities explained that they had already anticipated to improve the quality of care as they expected this would increase utilization, hence increase their bonus and because it was made clear what was expected from them and that this was monitored and results had positive or negative consequences. In the case of Rwanda and part of Burundi, after introducing PBF, one can judge on quality of care but only if conditions are met to provide quality of care, not if the care provided was of good quality. Most commonly, quality of care focused on provision of the conditions; equipment, drugs, and infection control and this is a limited definition of 'quality care' and only from the 'professional' perspective. The patient-provider interface and the patients perspective of quality are measured, but only in costly one-off studies which are not replicable. Hence, only in some cases could we show measurable improvements in quality of care provided; measuring the quality of services delivered to hold service providers accountable to, still needs more attention, being a key element in the PBF approach. Patients (or their representatives) and providers expressed, also in this study, that in their perception quality had improved after introducing PBF. Due to the lack of standardized tools for measuring quality of care provided this remains anecdotal and ad hoc. With mainstreaming of client satisfaction surveys and more community oriented feedback efforts, and with introducing indicators on quality of services provided, the quality of care would gain more attention in future PBF initiatives.

Did PBF do better than other approaches? In terms of productivity the study shows that in some places it was likely that PBF led to better results compared to areas where PBF had not been introduced. However, the variance of results between and within PBF zones was important, and often non-PBF zones showed similar or even better results. We are faced with multiple confounding factors that could explain the 'good' results, even in non-PBF areas, such as the case of health insurance (Rwanda), or user fee abolition or decrease in fees (DRC, Rwanda, Tanzania, Zambia), installation of equity funds (DRC) or simply because socio-economic conditions and the safety of the environment had improved. Hence, to prove attribution of the results to the PBF approach, more research needs to be undertaken. This study brings up several issues for future research in line with the need for more rigorous attention to the progression of PBF and concurrent indices in relation to the wider determinants associated with health service outcomes.

It may have been expected that PBF would have less effect in fragile states, as preconditions (such as human resources, equipment, etc) are not always in place. Surprisingly, the most impressive results of PBF in this study were found in fragile states, where many of the preconditions did not originally exist at the time of PBF inception. It should be noted that in Rwanda (and in Burundi to a lesser extent) many indicators already showed a positive trend before introducing PBF though, probably related to the post-conflict return to normal life and improved access to health facilities. However there are also outliers within the fragile state contexts that do not produce expected results such as North Kivu where the most basic conditions were not in place and results had not improved.

Determinants of success for PBF

Ultimately, this study is not about proving whether PBF is working better than ‘input planning’, it is concerned with learning about how PBF can make health services perform (better). This study revealed a number of issues that pertain to the macro level governance and the local level operational structures that collectively can have a positive influence on provider performance and outputs of the health facility. The key determinants that emerged from this study in relation to PBF effects include; (i) autonomy of health providers (e.g. to prepare business plans) and other key stakeholders at the operational level; (ii) creating national ownership from the start of introducing PBF; (iii) use of contracts with agreed upon expected results between all actors at different levels; (iv) the presence of a local fund holder; (v) split of responsibilities between providers, the purchaser/ fund holder and regulator; (vi) a functioning monitoring system that includes outputs, quality assurance and monitoring of quality of services provided; and before all (vii) linking consequences to improving performance.

To elaborate further on the key determinants; firstly, a results driven approach seems to elicit more positive outcomes, contingent on clarity of purpose regarding the results expected, autonomy of providers to develop their own strategies (they developed in their own business plan), to attain the agreed indicators and thereby holding them accountable for delivering the performance. The link with national ownership and buy in from national authorities from the start is central to the success of PBF. Where PBF became a national policy in Rwanda and in Burundi, it is no longer an isolated vertical approach but embedded within national plans and directives.

Secondly, success relies on the set up being achieved in a predictable and systematic way and a clearly expressed contract, as agreed between the local fund holder and the health providers, and most importantly in compliance with a split of responsibility functions to ensure that judgment on the results and deciding on the incentives are impartial.

Thirdly, this leads to an important condition *sine qua non*; a high degree of autonomy at the operational level is needed. This may be easier in (former) fragile states than in 'more stable states', as here different hierarchical levels are not (yet) fully operational. Important issues to be mentioned here include; (i) the presence of an autonomous local fund holder that has the mandate to purchase services; (ii) contracting providers to obtain expected results; and (iii) deciding on rewards in case of attaining good results. It is argued here that PBF contracts are relational, whereby the parties involved negotiate the terms and conditions including performance indicators at the level where results are to be achieved. This offers greater autonomy to the health providers and ensures adaptation of their interventions to local conditions. Hence, PBF is not merely a matter of changing funding mechanisms. It is about holding people responsible for the results they obtain, making sure that providers are autonomous in decision making at the operational level and ensuring that providers are accountable to the clients.

Does that mean that providers should be completely autonomous in their decision making at the operational level? Boundaries are, through agreed contractual commitments, reinforced by national stewardship and monitored by the regulator. In the end, PBF provides also the opportunity to translate national health priorities in funding terms, to link results to national funding. The study revealed that the providers themselves understood that they needed to be (more) responsive to the needs of the clients when they were designing their strategies to increase utilization (hence incentives). Hereto, it is imperative that the population (or its representatives) has voice and vote in managing the facility's health interventions. There is an important potential in PBF to enhance involvement of the community but the PBF approach still lacks a clear concept of community involvement in health services.

PBF requires reliable systems for reporting, monitoring and validating results at facility and district level where individual health facilities are receiving bonus payments. Data from the routine monitoring system should contribute information that informs whether performance is improving on key indicators according to the contract. Independent verification is vital, which needs to be carried out by other stakeholders, not providers alone (for instance in Rwanda providers in the MoH are the main actors to verify outputs and quality). In addition, countries may want to track progress on a list of indicators that are not being rewarded to identify unintended consequences of the PBF scheme. Responsibility for development of tools, instruments and guidelines necessary for monitoring usually resides with the MoH in full consultation with the fund holder and the providers. Technical assistance is usually provided by the NGOs or directly financed by the donors. Evaluation of progress, however, needs to be contracted to a third party.

Based on the evidence from country studies, agreement needs to be reached on; (i) mechanisms for determining performance outputs; (ii) modalities for monitoring performance,

client satisfaction surveys and compliant reporting; (iii) incentive mechanisms and motivation for employees; and (iv) independent verification mechanisms.

Basic principles in PBF are linked to the contracting approach aspects of it; agreement on results between clients, purchaser and providers, defining clearly what is expected, rigorous monitoring if commitments are being respected and linking incentives to the results, in the case of PBF, financial consequences.

Institutional development and PBF

When it comes to the question of institutional development, what contribution has PBF made and what is its potential in the future? Changing the institutional framework is a *sine qua non* when addressing a split of functions and decentralization. In other words, the approach requires institutional reform and adaptations including a rethinking of extended roles of the regulator, the health providers and the voice of the community. It is concluded here that little has been undertaken to test different options or approaches, e.g. the degree of alignment with the existing structures: more operational research is needed.

PBF is essentially a contracting approach with a change in the funding mechanism from input based financing to output financing through a results based approach. While certain preconditions are assumed vital for this purpose, it is now evident that minimum conditions are necessary to initiate the PBF approach. Investment in capacities, in supplies and in adequate information systems needs to be considered as part of the project design; this investment may take the form of input funding, but also as output related funding as occurred in DRC by HealthNet TPO.

Real decentralization may prove to be more important in the PBF approach in improving results than the financial incentives. Thus, the question arises; are the financial incentives in fact the most important aspect of this approach? They do undoubtedly play an important role, but perhaps staff would also become more motivated and improve their performance based on enhanced autonomy and improved opportunities for empowerment in their work. There has been relatively little testing in whether other types of incentives could be added to the PBF approach, or could receive more attention. Intrinsic incentives may have an equally powerful effect on health worker motivation and productivity while other tools in support of a client oriented provider efficient approach have also shown to contribute to improved health outputs. Comparative studies have not been undertaken to establish the relative benefits of provision of intrinsic versus extrinsic rewards.

Promising practices in implementing institutional change at the operational level came from Kassai and Burundi. A lesson learned from Kassai may be that an institution (here an NGO) is needed to accompany the process, supporting the different kinds of stakeholders in learning and getting used to their new roles and responsibilities. The lesson from Burundi is similar, but here it is that an interesting type of 'new' institution was set up (like in Kassai) which is elaborate and expensive, albeit interesting when piloting, this may become an important issue in scaling up from pilot to national program

Changes in the health system as a whole are limited, for now. Only in Rwanda PBF is part of the national health strategy and instrumental in boosting health at a national level; Burundi will follow shortly. Lesson learned from Rwanda include that standardization for a rapid scaling up of PBF to national level may result in neglect of some of the essential issues mentioned above, mainly decentralization, community involvement and a split of functions which was limited to the different levels inside the MoH. The incremental growth in Burundi over the last few years may prove to be more successful given the continued investment by NGOs in collaboration with local health authorities to ensure a decentralized approach.

It should be remembered that results may improve initially as a first effect of the financial bonus while it is too early to determine if this has a long term lasting effect. There is a risk that after a certain period, the health workers get used to the bonus; hence the effect of the PBF approach will decrease again. It will be critical to predict the long term effects as linked to the determinants mentioned above. As results of the PBF approach and attribution are not yet well evidenced, this calls for more comparative studies that can test the different approaches and the compatibility and mutually enhancing effects of alternative health financing interventions (e.g. PBF and co-existence of social health insurance). It would be worthwhile to study the contributing factors and determinants for increased performance by a quasi-experimental study design and/or intervention studies.

Finally, a lesson to be learned would be to split the responsibilities of TA in the project cycle; not leaving the model, the approach, the set up, the monitoring and the evaluation to the same person(s) to ensure a critical analysis of developments. PBF as an approach is conceptually still growing, so it needs critical guidance during its development to make the approach stronger.

Financial and equity considerations for PBF

This study could only provide a number of elements to answer the questions on efficiency and in all cases there are additional costs in terms of bonuses and administrative costs (salaries and functional costs of the local fund holder), while the outputs varied and

efficiency gains were not made. These costs were significant (about 15-30% of the mean costs of health care), even when the investments by the INGO, like TA to develop the approach or the increased evaluation activities, were not taken into account. Prospective research is needed; many of the types of costs (mentioned in the financial sustainability chapter) were not accessible for this study, while comparison with another approach (like input planning) is recommended. A solid base of costing data is compulsory for simulating the financial consequences of introducing PBF nationwide.

Theoretically one could state that PBF is not about changing the type of services or about changing treatments. It is about changing funding mechanisms, modalities, institutional arrangements and changing the organization and most importantly about changing the 'enterprise culture' in health services by the way of financing health services. Another important outcome would be the effect on equity and on targeting the poor. More sound and methodological complex studies are needed to provide evidence as one can currently only address the issue in terms of probability. The internal evaluations give an indication that the poor are not excluded. The fact that in some cases the consultation fees were decreased to increase utilization in a number of health areas, may point to the probability that some of the PBF programs even increased inclusion of the poor and vulnerable. However, this is still to be confirmed by further research.

We are concluding that at a national level, sustainably financed PBF will need a well financed health sector and most probably there will be a need to get additional resources especially targeted to the start up of a PBF program. The origin of these additional resources will vary depending on the context, in a fragile context this will most probably come from the donors and in a more stable and prosperous context there could be more fiscal capacity to allocate internal resources. The latter of these options depends on the political will to (re)allocate more public money firstly into health and secondly in PBF. But political will is also important if the resources come from external sources, since the general and sector budget support mechanisms are gaining importance. In any case, there will be a need to have a high level of external funding in low income countries, certainly if introducing PBF will not be accompanied with a reform. The level of additional funding needed will affect financial sustainability in the form of reliability and predictability of the resources available.

If outputs indeed did increase, and outcome followed, would these results be sustainable? In terms of financial sustainability, it is clear that additional external funding will be needed. However, as long as the budgets that are available for health in these countries is far below the estimated need of \$US 34 per capita (Commission for Macroeconomics for Health, 2006), one may ask if it will be possible to provide quality care without external financing through NGOs or other aid mechanisms.

Sustainability of PBF

In terms of institutional sustainability, it should be noted that in most countries the approach was embedded in, and supported by, national structures and policies. Certainly at operational level (the regulatory function was always in hands of the MoH), and increasingly at the central level too. The exceptions are Tanzania and Zambia where the approach was carried out as parallel to the national system, but this is currently being addressed to align and harmonize with the nationalized strategy on PBF. In each of the countries there is a strong commitment to embark on PBF as a national approach, as strongly promoted by the donor community.

In terms of technical sustainability, there is a clear need for capacity building, both on the approach, as well as on its implementation. Relevant actors need technical support at the level of the public health administration and at the level of civil society. It should furthermore not be forgotten that the providers also need technical support to strengthen their management capacities, thus building a critical mass of capacities that will institutionalize the approach at the health facilities, throughout hierarchical levels and among the different types of stakeholders. We therefore call for a systemic approach to capacity building with sustained commitments by the fund holder and regulator (MoH) in this vital process.

The study presents many lessons that can be used in improving the implementation of the PBF approach. It furthermore brings up an important number of topics for an agenda for research as we have outlined in the following section.

6 Research agenda

PFB approach issues

- 1 What is the feasibility of replicating the PBF approach in non-fragile states?
 - a Which new structures need to be built, or how can PBF be integrated into existing structures for implementation?
 - b Concerning governance at operational level; what would be the most appropriate strategy for PBF to foster autonomy and accountability for results in a given context?
 - c What level of TA is required?

- 2 The evidence base on attribution of results to PBF is still weak, a comprehensive study based on a prospective quasi experimental study (intervention or longitudinal) is needed:
 - a to assess the attribution of contributing factors to increased performance
 - b to assess the potential perverse effects and unintended consequences
 - c to study if increased performance outputs in the context of PBF is translated in improved health outcomes. Is it possible to predict outcomes in case of an increase of outputs?

The research requires a comparative analysis study of the contracting approach/PBF/output funding modality versus 'classical input funding' in both fragile and in stable contexts. The design should take account of potentially confounding factors, such as insurance schemes, tariffication of user fees as well as the wider socio-economic environment.

- 3 Little is still known on (transaction) costs and optimal efficiency in regards to size and implementation conditions for PBF, once the country would assume the responsibility for financing and following complete withdrawal of external aid. The following variables require study:
 - a Costing the different types of investments needed to start up PBF
 - b Costing the different types of expenses needed to set up the institutional framework
 - c Costing the different types of recurrent costs needed to maintain PBF
 - d Simulation of the costs for a government to scale up PBF from a pilot project to national level
 - e Efficiency gains made if PBF would replace the classical input planning modality
 - f Do transaction costs outweigh the results? Explore scale up costs; at what point does PBF reach its optimal budgetary conditions in terms of transaction costs versus gains?

- 4 How could PBF improve as a contracting approach including; (i) process followed (e.g. consultative processes; (ii) involvement of relevant stakeholders; (iii) consideration for local priorities; and (iv) instruments used including, contracts and the business plans.
- 5 Improving strategies and approaches to involve the community in managing PBF at the operational level, ensuring:
 - a Involvement in the different phases of the management cycle; (i) activities (e.g. mobilization, verification); (ii) priority and objective setting (e.g. indicators selection and their relative importance); (iii) monitoring and evaluation (e.g. in M&E activities, defining criteria & study questions); (iv) co-financing (their contribution by user fees or prepayment and spending)
 - b Representativeness of the community in the decision making structures for PBF (selection, communication, balance in gender and social-economical class)
 - c The community's mandate and influence in the decision making process is defined
 - d Support to the community's capacity development (instruments and training) to assume such a role

Human resources development issues

- 1 To what extent does PBF rely on the right skill mix and right size of human resources?
To what extent does PBF mean a threat or a solution to performance of health workers?
- 2 To what extent are effects on health worker/management performance indeed attributable to the PBF approach? Suggesting here a quasi experimental study in order to compare before/after introduction of PBF and including a comparable control (non-PBF) areas, in terms of:
 - a productivity and quality of care
 - b human resource development (motivation, retention, skills, entrepreneurship, availability and allocation)
- 3 Does PBF have a durable effect on the performance of the health staff:
 - a Their motivation and subsequent retention?
 - b In relation to the distribution of incentives at facility or on an individual level
 - c To what extent are changes related to intrinsic or to extrinsic motivation
 - d Explore specific capabilities (technical, managerial, relational) of the different types of health staff needed to implement PBF
- 4 The attribution of intrinsic and extrinsic motivation in increased performance of health workers; is it about the accountability for results and increased autonomy for decision

making or the financial incentives? We recommend field testing the order of priority of a different mix of incentives from a process perspective.

- 5 How to ensure an inclusive and comprehensive approach to capacity building and service delivery focusing on managing for results, while the major emphasis is on output based performance and incentives associated with targets?

Health system issues

- 1 How can the indicator and corresponding incentive structure be weighted? Should this differ for health interventions according to priority setting or feasibility to achieve and/or with reference to:
 - a National health policies and strategies
 - b Priorities established by local health authorities and CSO
- 2 What are the effects of PBF on a health system and does PBF have implications for wider health systems performance with specific attention paid to a comprehensive approach to health:
 - a How can PBF best contribute to building the health system?
 - b The support functions to run the health services
 - c The normative functions (e.g. accreditation and quality assurance): *ex-ante* monitoring quality of care
 - d What are the unexpected effects or outcomes of PBF?
- 3 Systems need to be developed to monitor quality of care *ex-post* – not only whether conditions *to provide* quality of care are met, but also if care *that was provided* was of appropriate quality. How to ensure that PBF contributes positively to quality of care?
 - a What are the best mechanisms?
 - b How to monitor quality of service delivered (*ex-post*), from a professional perspective?
 - c How to monitor quality of service delivered (*ex-post*), from a patient perspective?
- 4 Systems to monitor as well as verify PBF results are vital. How can these best be established and maintained? Consideration is to be given to cost efficiency versus validity of the means of measuring for payment of performance.
- 5 Does PBF make a difference in terms of equity and targeting the poor and most vulnerable to receive treatment?

Sustainability issues

- 1 To what extent can PBF be mainstreamed into the wider health system? Should PBF be seen as a permanent or temporary approach to financing/organizing a health system?
- 2 How can the systemic approach best be operationalized to ensure institutional embedding of PBF? What are appropriate exit strategies for NGOs to explore?
- 3 To what extent can financial viability of PBF be ensured?
- 4 How can PBF best be scaled up in view of sustainability and the required capacities at decentralized as well as national level, while maintaining autonomy and responsibilities for results at a local level?

Notes

- 1 Canavan, A., Toonen, J., Elovainio, R., 2008. *Performance Based Financing: an international review of the literature*. Royal Tropical Institute of the Netherlands (KIT).
- 2 Country reports and the PBF synthesis report are available on the KIT and Cordaid websites for Tanzania, Zambia, DRC and Burundi. The PBF synthesis report is also available on the WHO and World Bank websites.
- 3 Source: BTC/CTB Werner van den Bulke et al, 2008, not yet published.
- 4 Calculated by using a blanket five year life span and a straight line depreciation technique.
- 5 CAAC (2008), Annual Report 2007. Performance Based Financing in the Rwandan Health Sector. CAAC/MOH (www.pbfrwanda.org).
- 6 Paalman M., and Nyandekwe M., 2007. PHC Support Programme in Cyangugu Province Rwanda 2003-2005 - external evaluation.
- 7 The administrative costs in this total cost are estimations and the performance payments costs are derived from actual disbursement data.
- 8 Average exchange rates (the PBF costs are also calculated through average exchange rates).
- 9 See country reports for full details about these figures.

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