



Results Based Financing for Primary Care Services with focus on Immunization

Evidence Summary

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Purpose of the Document

The document aims to present brief summary of evidences on application and effect of Results Based Financing (RBF) schemes in primary care in Low and Lower-Middle Income Countries (LLMIC) with focus of immunization services. The summary is based on review of latest evidences. It is intended for operational readership: for policy makers, health care managers and other actors interested to learn more on RBF schemes. More detailed information and full resources could be accessed at www.zotero.org - https://www.zotero.org/groups/rbf_for_mch/items

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Background

Results-Based Financing (RBF) is a health-financing model designed for improving health system performance. The main area of its application is a Maternal and Child Health (MCH). It has been implemented (as a pilot or nationwide) in many countries to accelerate progress towards the millennium development goals (MDG) for women's and children's health (MDGs 4 and MDG 5). MCH services have been the major area of the RBF reasoning, possibly the main one.

Different forms of the RBF

RBF for health is defined as a cash payment or non-monetary transfer made after predefined results have been attained and verified.¹ After its introduction, there has been shaped various forms of the RBF, that work at different levels of the health system, mainly differentiated as supply- and demand-side approaches:²

- Performance-Based Contracting (PBC)
- Performance-Based Financing (PBF)
- Results Based Budgeting (RBB)
- Vouchers for health
- Health Equity Fund (HEF)
- Conditional Cash Transfer (CCT)

Table 1: Incentives and chief supply- and demand-side RBF approaches

RBF	Approaches	Provider
Supply-side, with a demand-side component	Performance-Based Contracting (PBC)	Contract defines expected performance (in quantity/or quality) as well as level of payment, plus rewards or sanctions
	Performance-Based Financing (PBF)	Level of payment is based on achieving performance targets, often quantity and quality indicators
	Results-Based Budgeting (RBB)	All administrative levels have an incentive: bonus or larger budget on the basis of pre-agreed performance targets
Demand-side with supply-side component	Health Equity Fund (HEF)	Incentives are equal to the fee paid for each eligible patient treated. Since short pilot with quality indicators
	Vouchers	Incentives are equal to the fee paid for each eligible voucher. Quality indicators used for selection; quality assurance
Demand-side	Conditional Cash Transfers (CCT)	Provider does not receive incentives, but there is provider selection which can include quality indicators

(from Gorter AC, Ir P, Meessen B: Results-Based Financing of Maternal and Newborn Health Care in Low- and Lower-Middle-Income Countries. Evidence Review, 2013)

RBF schemes, designed considering the context-specific issues, aim to increase autonomy, strengthen accountability, and empower frontline providers and health facility managers to make health service delivery decisions that best meet the needs of the women and children in the communities they serve.

Evidence from RBF piloting

The RBF has been piloted in many Low and Lower Middle Income Countries (LLMICs). Although some forms of it still lack the proper evaluations. For example, the reviews suggest that Vouchers have been applied and evaluated earlier in health systems, compared to PBF and have showed robust evidence that they can impact on health outcomes investigated, while the PBF impact on health outcome has not yet sufficiently studied.^{2,3} As of July 15, 2015 the World Bank-managed Health Results Innovation Trust Fund (HRITF) continued to support ongoing work in its portfolio of 36 RBF projects in 30 countries (mainly located in Africa).

Major indicators evaluated

Positive and negative effects of RBF on access to and **quantity/utilization/coverage** of health services:

- Family Planning

- Antenatal care package
- Skilled normal delivery
- Referral of complicated delivery
- Neonatal and Postnatal care, including Immunization

Besides the quantity indicators researchers tried to investigate RBF impact on **quality of health services provided** and **beneficiaries satisfaction** with those services, **health equity and targeting** issues have also been evaluated in some cases.

Main Findings

Before moving forward, in this summary we would like to concentrate on supply-side RBF interventions that had been introduced for improving the MCH services in many different countries. We will present the findings of PBC and PBF impacts on the MCH.

The latest review of RBF intervention for MCH services produced by Gorter et al. emphasizes the lack of robust evidence from LLMICs despite the growing number of studies on this topic from LLMICs.

Although it is often difficult to disentangle the effects of the incentives from other interventions, **the findings show that where RBF is introduced, it can make a substantial difference in terms of utilization and coverage of those health services which are incentivised, especially for targeted indicators, including maternal health indicators.** There is growing evidence on the positive effects of RBF on access to and utilization of maternal health services, but evidence on the effects on service quality and maternal health outcomes is limited. Also there has been little or no investigation on the long-term and system-wide effects of RBF on overall health service provision in a country.

The Table 2 summarizes RBF impact on outcome categories. For vouchers there is robust evidence for all three outcome categories, for PBF robust evidence was found for its impact on quality/patient satisfaction, but insufficient evidence for other categories. As with vouchers, when more studies become available it will become more clear if indeed PBF can increase utilization. PBC have robust evidence for increased utilization and insufficient for quality.

Table 2: Summary table impact of RBF approaches on the three outcome categories

Type of effect	Robust evidence (>3 studies)	Modest evidence (2-3 studies)	Insufficient evidence (<2 studies or no effect)	# rigorous studies positive effect
PBC				
Quantity/ utilisation/ coverage		X		3

Type of effect	Robust evidence (>3 studies)	Modest evidence (2-3 studies)	Insufficient evidence (<2 studies or no effect)	# rigorous studies positive effect
Quality/ satisfaction			X	1
Equity/ Targeting		X		2
PBF				
Quantity/ utilisation/ coverage			X	1
Quality/ satisfaction	X			4
Equity/ Targeting			X	1
Vouchers				
Quantity/ utilisation/ coverage	X			10
Quality/ satisfaction	X			8
Equity/ Targeting	X			9
RBB				
Quantity/ utilisation/ coverage			X	1
Quality/ satisfaction			X	-
Equity/ Targeting			X	0

Although no study focuses on negative effects of RBF, **anecdotal evidence suggests that some potential undesirable effects of RBF, such as motivating unintended behaviours, distortions, gaming or fraud, dilution of professionals' intrinsic motivation, are possible and need to be carefully monitored and evaluated.** The authors or experts involved in RBF impact evaluation documenting reveal that the evaluation techniques used are relatively weak (which is inherent to this type of investigations, where it is notorious difficult to design and apply a fully controlled experiment over a longer period of time taking into account all confounding factors).

All RBF schemes address one or more barriers related to supply-side availability, such as **waiting time, motivation of staff, readiness of the facility to provide services (availability of drugs, supplies, equipment), and improved referral.** The same counts for acceptability such as staff interpersonal skills. Most RBF schemes address barriers related to demand-side availability, mostly through the **provision of information on health care services and providers.**

Performance-Based Contracting

The Cochrane review of the impact contracting out intervention on health services utilization (3 separate PBC interventions located in 3 countries: Bolivia, Cambodia and Pakistan) provides evidence that PBC resulted in **increased access to and utilization of health services, mainly for targeted indicators**. The study in **Pakistan** showed an immediate increase of more than 130% in consultation visits to the basic health units (+144% on daily visits and +135% for monthly visits), but this increase did not sustain as both outcomes declined considerably in the 18 months following the start of the intervention. In Cambodia, there revealed an increase in the use of public facilities by 29%. But PBC had not had a significant impact on immunization rates (authors conclude that the increase may be explained by the general secular increase of service provision in Cambodia at the time).⁴

The review identifies a number of different components in contract out services to non-public providers that may be **instrumental in the observed effect**. These include the *possible role of a new management style*, the *potential role of the incentives and objectives included in the contract*, or the *implementation of thorough monitoring systems and sanctions* (which are usually absent in the delivery of health services within the public sector). Several elements might potentially **alter the effects of contracting out strategies**. Firstly, *Weak capacity within the government might therefore compromise the successful implementation of contracting out strategies*. The broader the services contracted, the harder it will be to define a contract precisely. The feasibility of adequately monitoring service delivery in remote areas is also a key implementation issue.⁴

The review recommends that the governments should pay particular attention to the elements included in the contract they draw up with private providers, in particular the targets on which their performance will be assessed. For example, if the contract focuses on a defined set of outcomes, there is a risk that contractees might divert their effort from unmeasured to measured outcomes.⁴

PBC was introduced in Haiti where NGOs (3 in total for pilot stage) were contracted to deliver healthcare services. Piloting revealed positive impact of PBC to an increased child immunization coverage. However it was not possible to isolate effect of RBF, because RBF scheme was confounded by with other factors (combination with fixed price contract, increased funding, aggressive technical assistance, data validation, shared learning activities).^{5,6}

Table 3: PBC piloting results in Haiti

Indicator	NGO 1			NGO 2			NGO 3		
	Baseline	Target	Results	Baseline	Target	Results	Baseline	Target	Results
Immunization coverage	40	44	79	49	54	69	35	38	73

Performance-Based Financing

PBF experiences have been documented in Burundi, DRC, Tanzania and Zambia, where considerable difference of staff and health service productivity was found between before and after the introduction of PBF in several projects; with an increase in health service utilization for almost all targeted indicators, including maternal health indicators and in quality of care as perceived by the clients; and no perverse effects were directly observable.⁷

For PBF robust evidence was found for its impact on quality/patient satisfaction, but insufficient evidence for the other outcome categories. As with vouchers, when more studies become available it will become more clear if indeed PBF can increase service utilisation, and when it does if this is then in favour of the more vulnerable and poor.²

In Rwanda, 56% and 132% increase was observed in the number of preventive care visits by children aged below 23 months and aged between 24-59 months respectively in the treatment facilities. PBF improved quality of prenatal care (an increase of 0.157 standard deviations (95% CI 0.026–0.289) in prenatal quality as measured by compliance with Rwandan prenatal care clinical practice guidelines: 7.6% more women received a tetanus vaccine during pregnancy than at baseline.), but no improvements were seen in the number of women completing four prenatal care visits or of children receiving full immunization schedules.⁸

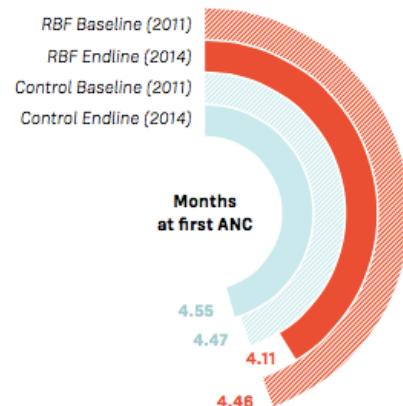
After the introduction of PBF in Indonesia, 2 program years, 8 targeted MCH health indicators (e.g. ANC, assisted delivery, immunization, growth monitoring) were an average of 0.03 standard deviations higher in incentivized areas than in non-incentivized areas.⁹

In Egypt PBF had little impact on child vaccinations, which might be explained in part by the fact that baseline immunization rates were already high: close to 65 percent. But PBI did increase the probability that a child 0-23 months visited a health center for preventive care (a 64% increase over baseline) and the probability that a child 24-59 months had a preventive visit – by a whopping 133% over the baseline probability for the treatment group. Significant improvements in the quality of family planning, antenatal care, and child health services reported by women seen in clinics where the incentive payment scheme was in operation.^{10,11}

Canavan et al. reviewed not only the effects, but also institutional arrangements, including factors determining success, costs and sustainability of RBF in LLMICs. They found that **the introduction of RBF in various settings led to remarkable improvements, mainly in targeted output and outcomes indicators such as utilisation, coverage and emergency referrals, with enhanced quality of provider performance**. While RBF achieved some positive results on the level of meeting qualitative health indicators, the extent to which it contributes to improved quality of care remains a question. As for RBF, **there is a risk of compromising quality of care to meet utilisation targets**. The per capita cost of RBF varies from US\$0.25 in DRC to US\$4.82 in Afghanistan.

Trends in operational data indicate that since the PBF program was implemented in Cameroon 2012, the coverage of key health services such as institutional delivery, antenatal care, family planning, and immunizations has increased. Free outpatient care for the poor and vulnerable has also increased. The quality of care, as measured by the average total **quality of care score increased** from 43 percent to 64 percent between 2012 and 2015.¹²

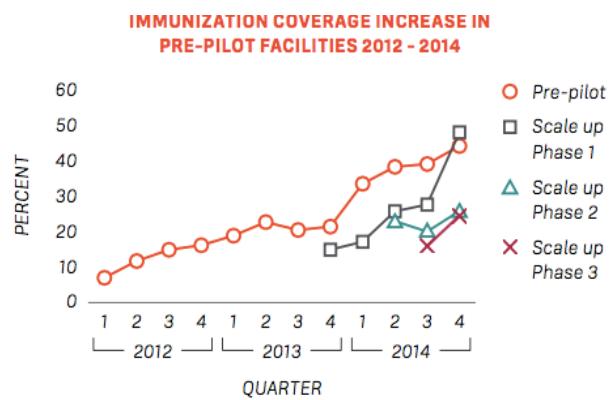
Preliminary results from the impact evaluation in Zambia indicate that RBF (introduced in 2008) significantly increases utilization of select MCH services, such as early antenatal care (**ANC**)-seeking behavior and in-facility delivery when the RBF districts are compared to the districts operating as “business as usual”— women from health facilities in the RBF districts sought ANC about three weeks earlier than women receiving care in non-RBF districts. Performance on some post-natal care (PNC) measures increased in RBF districts. **PNC** coverage and immediate breastfeeding increased by nearly 10% and 14%, respectively, and were statistically significant.¹²



The preliminary results of PBF intervention in Benin, introduced in 2012, show that there is improved some aspects of health worker performance. They indicate a positive impact on quality of care and responsiveness towards patients but no significant impact on clinical productivity. For example, a comparison between PBF treatment and control groups highlights: **Improvements in the quality of ANC in PBF facilities**, with increases in the quality of physical examinations conducted, history taking and advice given by a health worker (measured through Direct Clinical Observations), as compared to both control groups. **Increased consultation time with almost 4 additional minutes for ANC** in PBF facilities compared to facilities with no intervention. **Increased responsiveness of health workers towards patients in PBF facilities**, with pregnant women receiving ANC visits and patients getting curative care being

respectively more satisfied with staff attitude and staff competence (as measured through Direct Clinical Observations and exit patient interviews). A significant impact of PBF on the politeness of staff during ANC visits.¹²

After Nigeria launched a PBF pilot uptake of services has been very encouraging, with utilization of core MCH services like **immunization**, deliveries in facilities, and family planning, showing much improvement. Figure shows an immunization coverage increase in pre-pilot facilities from 5 percent to 44 percent; an increase from 14 percent to 44 percent in the first phase scale up facilities; and showing promise in the most recent scale up facilities.



Increase in immunization coverage has been identified since completion of scale-up in December 2014 (post-scale up immunization coverage increase). In two states immunization coverage increased from 30% to 50% and higher levels. Moreover, data show that quality of services also improved, along with the increases in coverage. A quality checklist applied on a quarterly basis found that structural and process quality measures saw rapid and sustained improvements. Finally, PBF facilities achieved good patient satisfaction, with ratings of 80 and 95% in Nasarawa and in Ondo States, respectively. It is worth highlighting that these results have been achieved at a marginal additional cost of \$0.8 per capita per year.¹²

The RBF program in Zimbabwe was launched in 2011. Impact evaluation was implemented with controlled before and after method. The results described in the 2014 Annual Report indicate that there were substantial improvements in the quantity and quality of services delivered in RBF districts, when compared to their non-RBF counterparts. **Results from the qualitative component of the impact evaluation** indicate that when the RBF program is implemented as intended and planned, it triggers and facilitates changes in the facility staff's performance; and it influences the performance of health facilities, and the motivation and satisfaction of staff at these facilities. **RBF facilities have more effective monitoring and reporting mechanisms**, and better staff coordination than non-RBF facilities. Results from the PME indicate that improving feedback mechanisms along with supervision improves the quality of services.¹²

Conclusion and recommendation

The evidence base of RBF is not yet stabilized and is still growing. There is an emerging body of evidence showing that RBF is able to improve relevant parameters related to MCH services. Impact on utilization of those incentivized services has been the most investigated issue and

findings are rather supportive, even if the evidence is rarely of a randomized controlled trial standard. The fact that RBF increases the amount of services utilized by the target population (or coverage rates) is true for specific priority groups (with vouchers) and also for large populations (with PBF for instance).

There is also some evidence that RBF can lead to improvement in quality of services, specifically for PBF and vouchers. There is good evidence for vouchers and emerging evidence for PBC that these approaches can impact on equity in health care utilization.

The efficiency of RBF compared to the status quo or other health financing approaches has been under-documented and obviously for other dimensions even more complex to document such as the long-term effect of RBF on providers' behaviors and expectations. There is no substantial evidence on the negative and unintended side-effects of RBF. mainly hypotheses exist. Other dimensions, such as sustainability is neither well documented.

Another area still insufficiently studied is the effect of a combination of two or more RBF approaches which might have a greater impact than each on its own. For example a nationally implemented PBF, which increases the quality combined with vouchers to reach the most underserved populations.

In order to ensure whether the health sector – whatever the affiliation of their providers – delivers quality health services to all in an efficient way, without pushing households into poverty, it is crucial to acknowledge the status of the country's health sector. Today, health systems of many LLMICs are characterized by i) a public health system which does not perform as expected and ii) an unregulated private health market whose quality is not assured and prices not regulated. On these two segments of the market, there are both supply side and demand side barriers which prevent the population to access critical services. RBF creates systemic opportunities (e.g. it is an opportunity for the ministry of health to be more acquainted with strategic purchasing), but also risks (e.g. if the RBF approach leads to improved MNCH care to the detriment of the provision of other priority services).

As a general recommendation RBF intervention have to be designed considering other contextual, public health, health system factors. It should be a part of a package of reform or overall strategy in the health sector. RBF should cover more than a sub-group of MNCH problems. RBF approached may be valuable for their ancillary benefits (like increasing competition and engaging with private sector), however these effects need to be carefully monitored.²

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