

Output-based health worker payments in Rwanda – an overview

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1. Country Background

Selected Indicators

Population & Economics

Total population:	9 millions (density 318 hab./km ²)
Per Capita GNP:	250 US \$
Poverty Incidence :	* 56.9% (Poverty line 0.3 US \$/day) * The average Rwandan lives on less than US\$0.70/day.
Gini Coefficient:	0.51(2006)

Health Care Supply Keys ressources

Doctors:	1/50,000 inhabitants
Nurses:	1/3,900 inhabitants (17% of nurses in rural areas)
Health Care Infrastrure :	3 referral hospitals, 33 District Hosp, 369 Health centers
Access to Health facilities :	37.9%(DHS, 2005) 71% (EIDS Rwanda 2007-08)
Per capita annual health spending	US\$14 : (donors funding >40%, government~ 33%, and household ~ 25%)

Infant and Maternal Health

Infant mortality:	86/1000 (DHS,2005) 62/1000 (EIDS Rwanda 2007-08)
Under 5 Mortality:	152/1000 (DHS, 2005) 103/1000 (EIDS Rwanda 2007-08)
Maternal mortality:	750/ 100,000 (DHS, 2005)
Assisted deliveries:	48.6% (MOH AR 2007) 52% (EIDS Rwanda 2007-08)
Under 5 years severe malnutrition:	19.4% (DHS, 2005)
Total fertility rate:	6.1
Modern Contraceptive prevalence (Use):	17% (DHS,2005) 27% (DHS,2005)

HIV/AIDS-TB & Malaria

HIV prevalence:	3% (DHS+2005) 8% among women living in Kigali
TB :	Nb cases in 2006 8701(MoH 2006) TB annual Risk 2% (WHO) 60% of HIV patients are diagnosed with TB
Malaria admission cases in hospitals:	36.8% (MoH 2006)

2. Description of PBF in Rwanda

2.1 Rwandan national incentive scheme characteristics

- Known under the name : Approche Contractuelle (AC) or PBF (Performance Based Financing)
- Public to public contract: internal contract between one level of government and another
- Providers participation (in theory voluntary but practically more mandatory)
- Positive incentive in the form of financial bonus on top of salaries
- Linked to production of outputs specified and coated in advance
- Applied to groups of workers (Health Center & District Hospital...).
- Money paid to a team who share the amount between members of the group according to the grade (75% max of amount), 25 % dedicated to investement in the structure

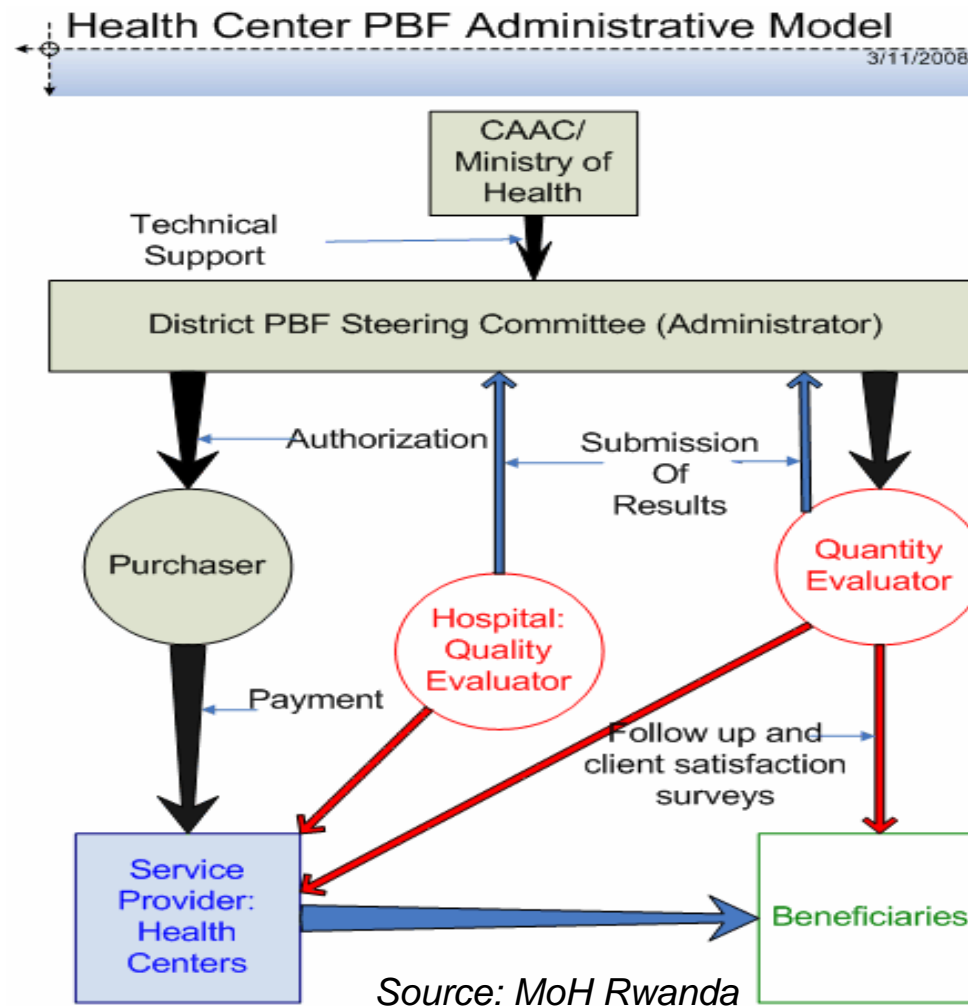
2.2 Process of the Rwandan PBF National Model Creation

Three important steps:

- Pilot phase (2002-2005): Three PBF pilot projects conducted by international NGOs & Bilateral cooperation
- Harmonization phase (end 2005 - 2006): creation of one common national model for Health Centers and Hospitals
- Scaling up phase (2006 – today): progressively in two groups

2.3 Institutional set-up and Contract arrangements

a) Institutional frame



b) Contract arrangements

Common form (3 levels)

- (i) between the Mayors (representative of GoR) and the district PBF steering committees;
- (ii) between district PBF steering committees and health center management committees
- (iii) between health center management committees and the individual health workers (not complete yet)

c) Funding Source

- GoR: There is a PBF Budget line in the GoR budget;
- Many partners through MoH mechanism participate to PBF; specialy partners active in HIV (including Global Fund) paying for HIV indicators in their supported area.

2.4 Tools and functioning

a) Fee for Service/Case Based Reimbursement

- 14 primary health indicators ranging \$0.09 to \$4.55
- 10 HIV service indicators ranging \$0.45 to \$9.09

Basic health services							
N°	Indicators PBF	Quantity Produced by HC	Validity criterion	Quantity Validated	Unit Price		Monthly amount
					RWF	USD	
1	Nb New case PHC				100	0.18	
2	Nb New case ANC				50	0.09	
3	Nb ANC with 4 visites				200	0.36	
4	Nb ANC with 2 to 5 VAT doses				250	0.45	
5	Nb ANC with 2 dose Sulf. Pyrim				250	0.45	
6	Nb Pregnancies risk with refered <9 month				1000	1.82	
7	Nb Children 11-59 month consulted.(Monitoring of Growing)				100	0.18	
8	PF: Nb News users during the month				1000	1.82	
9	PF: Nb users during at the end of month				100	0.18	
10	Nb of Children Fully Immunised during month (BCG,VAP123,Pentavalent 123,VAR)				500	0.91	
11	Nb of Assisted deliveries				2500	4.55	
12	Nb of Woven refered for delivery				2500	4.55	
13	Nb children refered for malnutrition				2000	3.64	
14	Nb of others reference				1000	1.82	
Total						

HIV/AIDS					
N°	Indicators PBF	Quantity Produced by HC	Unit Price		Monthly amount
			RWF	USD	
1	VCT: Nb customers tested for HIV		500	0.91	
2	PMTCT: Nb couple tested for HIV		2500	4.55	
3	PMTCT: Nb women HIV+ under ART during labour		2500	4.55	
4	PMTCT: Nb exposed children tested		5000	9.09	
5	Care: Nb HIV+ tested for CD4		2500	4.55	
6	Care: Nb HIV+ received Ctx		250	0.45	
7	ART: Nb news adultes HIV+ under ART		2500	4.55	
8	ART: Nb news pediatrics HIV+ under ART		3750	6.82	
9	HIV prevention: Nb women HIV+ using PF method		1500	2.73	
10	TB: Nb HIV+ tested for TB		1500	2.73	
Total				

b) Monitoring

- The HC teams collect the quantity of activities monthly (PHC & HIV)
- The district teams validate the quantity produced monthly (not HIV) by applying preselected criteria with a randomized method
(below 15 cases, all are verified and above 15 cases, a sample of 15 cases are verified)
- Quarterly Quality Score is calculated for the HC based on 185 composite indicators across 13 services (excluding HIV services).

Quantity validation

N°	Indicators PBF	Quantity Produced by HC	Validity criterion	Quantity Validated
1	Nb New case PHC		1. N° order 2. First & last name 3. Sex 4. New Cas 5. Address 6. Complaint 7. Clinical Signes 8. Examens Lab. 9. Diagnostic 10. Issue 11. Treatment 12. Others co	

Quality Score calculation

N°	Activity/Service	Score available (a)	Score attributed (b)	%= (b/a)*100
1	General organization of HC	25		
2	hygiene & cleaning up	15		
3	Out & In Patients Service	85		
4	Maternity	65		
5	ANC-service	63		
6	PF-service	57		
7	Vaccination	35		
8	Monitorin of Growing	25		
9	HIV	45		
10	TB	15		
11	Laboratory	15		
12	Pharmacy	30		
13	Financial Management	25		
	Total	500		

C) Payment

- $\text{PMA HC}^{\text{earnings}} = \sum [(\text{Quantity} * \text{"\% Validated"}) * (\text{Unit Fees}) * (\text{Quarterly Composite Quality Index})]$
- $\text{HIV HC}^{\text{earnings}} = \sum [(\text{Quantity} * \text{Unit Fees}) * (\text{Quarterly Composite Quality Index})]$

3. Impact of the intervention: Is it effective?

3 restrictive factors for the analysis

- Too early to evaluate
- Many other strategies implemented at the same time: difficult to attribute effect to a specific strategy or, to measure the weight of specific strategy in the result produced.
- Lack of evidence (need right methodology for rigorous evaluation)

Nevertheless there some indications

3.1 What works or seems to work

- Impact on health staff incentives: each worker can earn per month 30 – 40 % on top of his/her salary
- Since 2006 most of the indicators (outputs) targeted by PBF are in progress.

PBF Indicator	Jan 2006 average/month/HC (258 HC)	March 2008 average/month/HC (286 HC)	Percentage increase
Institutional Deliveries	21	37.5	78%
New Curative Consultations	985	1489	51%
ANC: second dose of Tetanus Toxid	21	52.5	150%
Family Planning new users	15.5	47.9	209%
Family Planning users at the end of the month	175.2	711.6	306%

Source: MoH Rwanda

- But the same indicators are also targeted by others strategies: Mutuelles, Administration Performance (ITNs, MS, FP, safe deliveries, hygiene...).

3.2 Weaknesses and imminent Risks

- Heavy workload and costly mechanisms of evaluation
- Heavy administrative work for the health staff: focus on registration of data more than on patient
- Supply–side constraints not taken into account (ex: no adjustment for difference in INPUTS (infrastructure, personnel))
- Manipulation (rearrangement of data sources)
- Adverse affect on non-PBF indicators (mechanism of assessing business plan is not effective)
- Poor formative supervision: Quality can not be assessed and improved based only on data post-evaluations
- Less capacity to retain staff in rural area (PBF everywhere & no specific benefit)
- Contradiction with other strategies: ex. A child examined according to IMCI method is not quoted for quality (i.e. HC loses money)

4. Key Points for Action & Research

- How to minimize the burden of M&E: Mechanism to integrate the existing reporting system, promotion of effective use of data by those who produce it for improvement of their daily work.
- How to coordinate the implementation of numerous reforms and strategies at the same time: Capacity of Normative level (MoH)
- Better understanding and expectation of PBF
 - it's a complementary strategy (inputs are still needed)
 - not just applicable at the level of provider or consumer, but also at the broader level of the health sector (sometimes responsible for a bad performance)
- Likewise, norms and standards of personnel: what can be an estimation of the expected production (outputs) for each profile in relation to the salary?