

**Purchasing health packages for the poor through performance based contracting.
Which changes in the district health system does it require?**

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ABSTRACT

The Rwandan health service - despite major improvements after the 1994 genocide - still has major weaknesses. The predominantly poor population has insufficient access to clinical care as well as to community based health interventions. Public funding for frontline health facilities is inadequate and its use – based on conventional input financing - is inefficient. In response, from 2001 onwards three Rwandese provinces initiated experiences with performance based financing through the contractual approach. This paper describes the case in one province covering 630.000 people.

The results are encouraging. Curative contact rates doubled by reducing prices and by improving geographic access through the opening of new health posts and the signing of sub-contracts with private dispensaries. The quality of the services improved by regular quality reviews and the payment of bonuses. Probably the most important result was that province-wide family planning coverage increased from 3% to 10%, and one health centre even reached 32% coverage. If sustained, this last result will reduce the fertility rate from 5.8 to 3.9. Thus, families can make choices in their reproductive lives and improve the future of their children. This may significantly reduce demographic tensions in this politically volatile region of Africa. Reaching optimum utilisation levels for selected health package indicators requires \$2,20 per capita per year in direct subsidies to service providers. This should be affordable even in the poorest countries and allow access to public health interventions for the population in general and access to clinical care for the poor in particular.

Performance based financing is more than only a technical fix of developing and signing contracts. Success requires changes in the district health system and this included in Rwanda the establishment of an independent peripheral fund holder for efficiency and transparency reasons. Further lessons learned for successful contracting may include putting into place strict control mechanisms to verify performance, and reinforcing quality assurance by district health authorities as well through patient feed back. Despite encouraging results and the wish of the Rwandan government to scale up performance-based financing, there is a need for more operational research to consolidate the achievements and to assure wider acceptance.

INTRODUCTION

After 1994, the new Rwandan government inherited an impoverished country with a largely destroyed health infrastructure and shortages of medical personnel. A decennium later, and despite several reform efforts, outcomes are still unsatisfactory. The main health problems are related to reproductive health and infectious diseases such as malaria, acute respiratory infections, tuberculosis and diarrhoeal diseases. HIV/AIDS related diseases are a growing concern and 250.000 people are living with AIDS (UNAIDS, 2004). Maternal mortality is high with 1.071 per 100.000 life births and 1 in 15 women risk dying from maternity related causes during their reproductive life. The population has a life expectancy of only 39,3 years and a high fertility rate of 5.8 (UNFPA, 2000).

DEVELOPMENT OF THE RWANDAN HEALTH SYSTEM

The Rwandan government started in 1995 a process of pro-active health reforms.

The *first step* was to establish health districts along WHO orientations from the 1978 Alma Ata Conference (Ministry of Health, 1995). Rwanda adopted the district health model such as explicitly defined by the WHO as the privileged way for implementing primary health care. This implied that district health management teams obtained the full responsibility – or monopoly - for the three classic functions of the health services, namely the regulatory authority, the financing aspects as well as the provision of the health services.

However, Rwanda's general government policy also favoured market oriented policies & decentralisation and therefore started redefining the role of health providers. This resulted in a *second step* to separate the responsibilities between health authorities and providers. Health facility managers could freely set user fee prices and decide how to use the revenues. By 2001, health centres generated 60-80% of their running costs from user fees and district hospitals approximately 50%. This direct financial relationship between patient and health facility had a positive effect on patient perceived quality such as quick attendance and respectful reception by health staff. Despite this financial authority, government health facilities did not yet obtain an autonomous juridical status. As another pro-market measure, Rwandan authorities promoted the involvement of the private sector. This mainly concerned religious owned health facilities, which cover 40% of the population, and they receive public funding according to the same procedures as government health facilities. The private for-profit sector in Rwanda is small by African standards and relatively well regulated by the government, although it does not receive financial support. Other positive developments in the Rwandese health system were the development of a computerized health management information system and a non-monopolistic drug distribution mechanism involving both government and private distributors.

The literature refers to the above described regulatory – provider split as *New Public Management Reform*. Experience mainly comes from industrialized countries such as Great Britain, New Zealand and Spain (Enthoven, 1993; Glennester and Le Grand J, 1995; Le Grand, 1999; Maynard A, 1994; Batley, 1999). Although less common in low-income countries, there are examples of New Public Management Reform initiatives in Zambia, Ghana, Columbia and Zimbabwe (McPake & Mills A, 2000; IHSD, 1998; Russell et al, 1999). Equally, the regulatory – provider split is advocated in key health policy documents such as the WHO World Health Report 2000 “Health System: For a Better Performance” and the World Bank World Development Report 2004 “Making services work for the Poor”.

This was the situation of the Rwandese health services in 2001. However, despite these reform efforts health outcomes were still unsatisfactory. External humanitarian assistance dwindled since 1999 and was not replaced by regular government funding. Annual per capita government health expenditure in 2002 was \$3 of which only a meagre \$1 per person reached the districts and frontline health providers. This lack of public funding put an unreasonable burden on out-of-pocket expenditure for patients in general and the poor in particular. The use of government funds had the characteristics of centralised allocation, vertical programming and unclear linkage what performance it was supposed to achieve.

District health authorities were supposed to benevolently forward public inputs to the service providers, who were then supposed to execute planned activities. This type of centralised input planning created inefficiencies such as that planning did not correspond with the real needs or that inputs were poorly distributed among health facilities. Final responsibility for public funding remained mostly with central planners – and not with the service providers. As a result, providers were unable to take initiatives or to find creative local solutions for issues specific for a certain region. Poor performance had no consequence for both planners and providers. Those providers, who work *less*, can carry out other activities for their personal interest. As such, this centralised input mechanism establishes *perverse financial incentives* as it demoralises good performers and encourages failure.

As a *third reform step* several provinces from 2001 onwards started performance based financing through contracting. Positive results with similar schemes in particular in Asia convinced Rwandan authorities so that they endorsed starting similar initiatives (Keller & Schwartz, 2001; Soeters & Griffiths, 2003). Several aid agencies participated hoping to improve the efficiency of their investments. UNFPA, GTZ, the Swedish, Netherlands & Belgium Development Cooperation in different forms all contributed to contracting and from 2001 onwards, experiments started in Butare, Cyangugu and Kigali provinces (Meessen et al, 2004; Belgium Cooperation, 2004).

THE NEED FOR SEPARATING THE FUNCTIONS OF REGULATION AND FUND DISBURSEMENT

In most mid and high income countries contracting, fund disbursements and output monitoring is not the role for district health teams but for health insurance organisations operating independently from the regulatory authorities and service providers. Insurance organisations in those countries receive revenues through the premium payments of their members and from public funding for example to cover health expenditures for chronic diseases or to cover the costs for the very poor such as in France (Couverture Maladie Universelle). In low income countries such health insurance mechanisms are either non-existing or still in their infancy stage. However, the rationale seems equally strong for separating the regulatory and fund disbursement functions as alternative for more conventional strengthening of district health teams or developing autonomous district entities like in Zambia (Bossert et al, 2003).

In Cyangugu province there emerged *an autonomous fund holder organisation* separate from the district health teams. The first argument for this initiative was that it was unrealistic for district health teams to play this role because they have many responsibilities and masters. District medical officers work as clinicians and may be in charge of the district hospital. Therefore, district health authorities may not give much priority neither may have the skills for developing performance-based contracts with service providers. Secondly, such a regulatory – financing split may create better checks and balances for preventing rent seeking practices of poorly motivated health authorities. Theoretically, well-paid health authorities should defend the public interest, but salaries in developing countries are very low. In practice health authorities may consider, instead of the public interest, more their self-interest or the demands from the better-off or better-connected in their community. Such intrinsic problems are not easy to solve as it would need reforming the public sector in general. A third argument is that while the decisions on how to use public funds are clearly a role for politicians and decision makers that the implementation of such decisions can better be left to professionals without political interference. Local politicians may influence certain investment decisions such as where to build a new health centre, but it is questionable whether they should influence recurrent funding for priority health programmes. Establishing priorities seems more the role for national decision makers based on the complex task of balancing political priorities with technical rationale such as identifying cost-effective interventions for essential health packages or Millennium Goals. A further argument for the regulatory – financing split is that a technical fund disbursement organisation at peripheral level may better serve the Sector Wide Approach philosophy of pooling funds from government and aid agency sources.

**ORGANISATION OF PERFORMANCE BASED FINANCING
IN CYANGUGU PROVINCE**

Due to the above arguments a politically neutral and professional fund holder emerged in Cyangugu province capable of negotiating performance based contracts according to the following scheme (see figure 1):

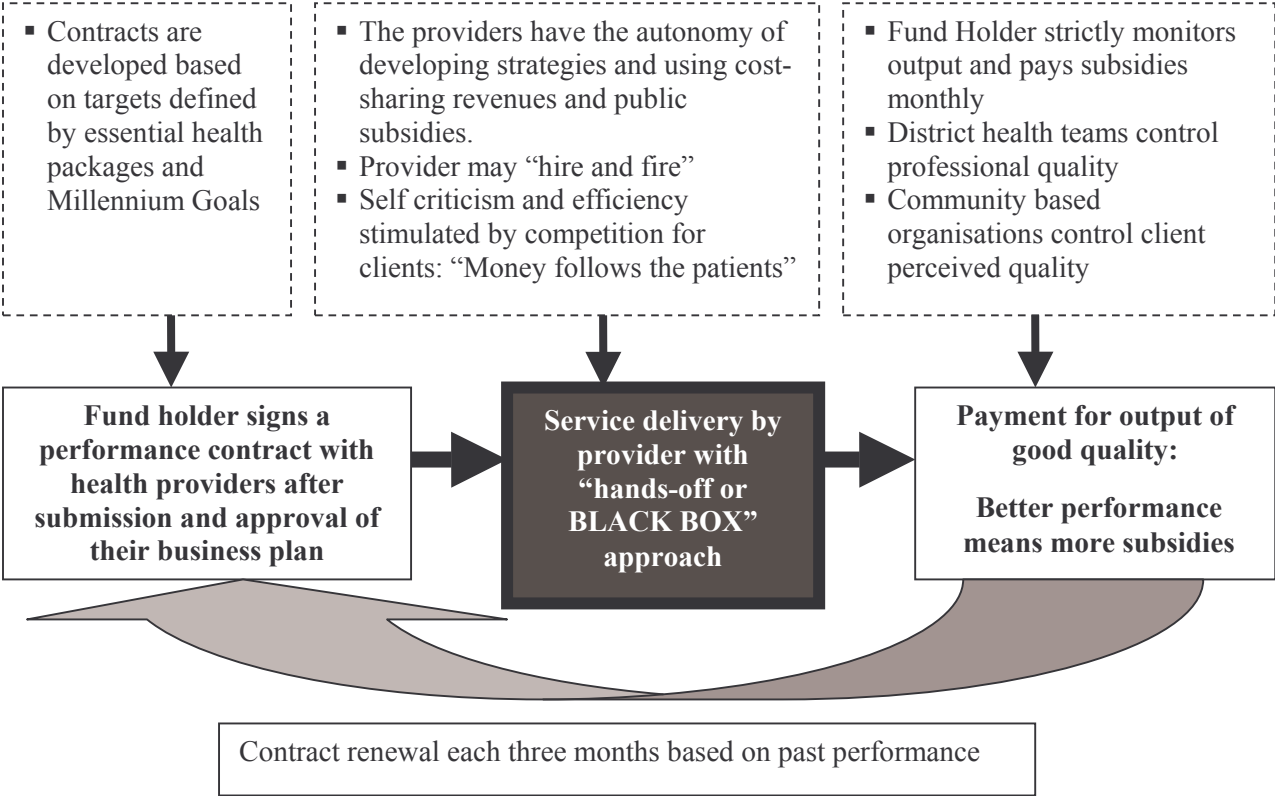


Figure 1: Schematic presentation of the management cycle in performance based contracts between the fund holder and the “black box” health providers.

The development of performance based contracts between the fund holder and the service providers needed changing the organisational set up of the health system in Cyangugu province such as shown in figure 2.

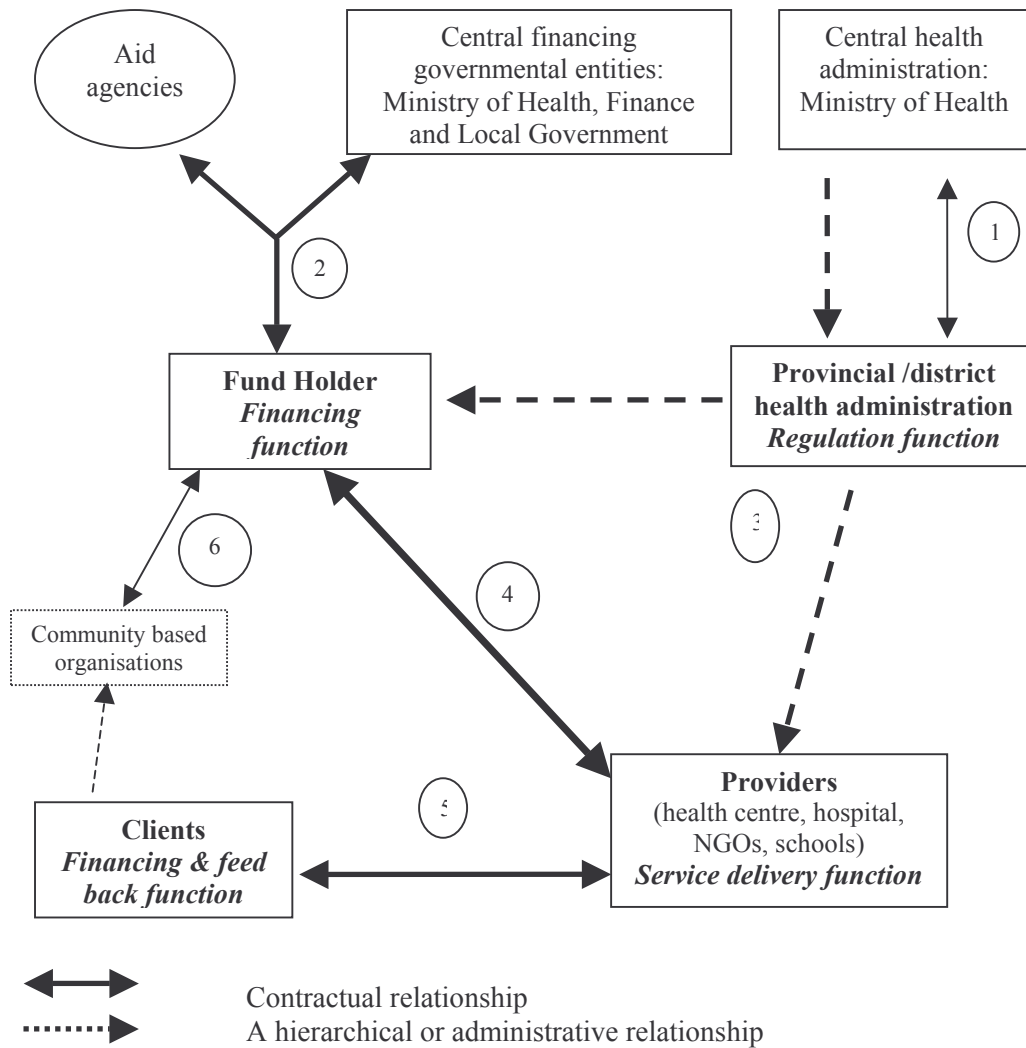


Figure 2: Organizational set-up for performance based financing through contracting.

The responsibilities of and the relationships between the different stakeholders in the case of Cyangugu province are the following:

1. Central authorities within the Ministry of Health have a hierarchical and administrative relationship with the provincial and district health authorities and develop health policies, procedures as well as quality standards. District health authorities provide feedback to the Ministry of Health and local authorities.
2. Other entities at national level are those financing the health services. Funds may come from different sources such as the Ministry of Health (e. g. through vertical programmes), the Ministry of Finance or aid agencies. National financing entities such as the Ministry of Local Government may channel their funds through regional administrative authorities.
3. District health teams play a controlling and regulatory role. They represent the central government and local authorities, assure quality standards in health facilities and control in how far the fund holder implement their contractual tasks.
4. The fund holder assures that providers regularly receive their (monthly) subsidies so that there is a direct financial link between performance and “reward”. The fund holder may be a NGO, a semi public organisation or - in the future - an insurance organization. Currently the international NGO Cordaid plays this role. The basis for the subsidies is a contract signed between service provider

and fund holder after the successful submission of a business plan. The routine Health Management Information System collects the data, which determine the subsidies. The health centre managers are not only responsible for the curative services in the health facility but equally for all services in their catchment areas with in Rwanda on average 20.000 people, including from other public, religious or private health facilities.

5. Patients seek services from the providers and exercise influence over the providers by directly paying user fees or by indirectly paying premiums through community based insurance schemes. Providers attract clients by delivering services for which patients are willing to pay. If the health care product were simple, this would settle the market transaction. However, due to market failures there is a need for additional patient protection, quality assurance, caring for the very poor and to finance community health interventions.
6. The fund holder contracts local organisations in each health centre catchment area for strengthening the consumer voice. These local organisations conduct surveys to monitor client perceived satisfaction of the services in the local health facilities including their perception of the price.

RESULTS

Baseline study

Systematic monitoring of results started with a *baseline study*. The study took place in January 2003 with a household survey and focus group discussions among the main stakeholders. The outcome of the study showed that each person had per year on average 1.35 disease episodes and paid out-of-pocket \$6.38 for health care. This represented 14% of their cash income, but for the “very poor” socio-economic group in the sample health expenditure was even a staggering 53%. The main reason for consulting a health facility was malaria on which the population spent on average \$3 per person per year. The population was aware about the importance of bed nets for the prevention of malaria, but said they were unable to buy them due to high cost. In 42% of the disease episodes patients went to government or church owned health facilities, 31% to private pharmacies or private dispensaries, 13% to traditional healers or quacks, while 13% of the respondents said they had been unable to visit a health centre due to shortage of money. Only 25% of women actually delivered in a health facility while 63% of pregnant women would like to do so. The main reason for not delivering in a health facility was the high price and geographic access problems.

Only 2% of the women in the fertile age used some form of modern contraceptives, while unmet demand for birth spacing was 23%. Sixty-five per cent of the respondents mentioned economic hardships as the main reason for their willingness to use birth spacing, followed by 20% who thought it to be better for the health of mother & child. Fifteen percent simply said that birth spacing was “good”. Rwanda is a religious mainly Christian country and we thought that religious beliefs might have a negative influence on the use of modern contraceptives. Instead, only 8% of the respondents said religion played a role in their reproductive choices and the study suggested that the main constraint was the non-availability of good quality family planning services.

This analysis suggests the presence of the following interlinked demographic, economic and health problems in Rwanda:

- Women have pregnancies too early, too often and too late.
- Birth spacing services are almost absent in particular in rural areas and there is a high unmet demand for family planning.
- Women unnecessarily die during their pregnancy and surviving children then lack a sound educational environment.
- People frequently fall sick, illnesses often remain untreated, and they have inadequate financial access to basic health services.

- Households spend too much of their revenues on health care, which may impoverish them and health expenditure may be for some households catastrophic.
- High population growth rates and land scarcity further complicate matters and all these factors may create social tensions and even contribute to armed conflict.

Starting the contracting process

Preparation for contracting in Cyangugu province started during 2002 by organizing workshops with the different stakeholders. In August 2002, 14 health centres and 2 hospitals signed the first performance based contracts in two of the four health districts. In January 2003, all health facilities in the province signed contracts. The financing of the system was problematic and instead of receiving \$2.20 per capita per year thought necessary for the programme, the province only received \$0.61. The most stable and supportive aid agency was UNFPA, which assured the reproductive health services. Cordaid played a crucial role by providing bridging funds during periods of limited government or aid agency funding.

The essential health package indicators at health centre level were the following; outpatient consultancies, in patient bed days, children fully immunized, institutional deliveries, number of bed nets sold, number of family planning acceptors for oral & injectable contraceptives, implants or IUDs, prenatal care visits. The complementary package indicators at hospital level were the following; in-patient bed days, consultation conducted by doctors, major surgical interventions, complicated deliveries & caesarean section, tubal ligation and vasectomy.

Results of performance based financing at health centre level

We compared routine HMIS data of the first 8 months of 2002, 2003 and 2004. This because contracting started in September 2002 so that the comparison of data for the entire years would bias the results.

Health centre level Essential Package of Activities	Target Cyangugu Province	Jan - August 2002	Jan - August 2003	Jan - August 2004	Increase 2004 / 2002
Outpatient consultancies		116.400	178.600	235.000	102%
Outpatient consultancies per year per person	1	0.29	0.44	0.56	
In patient days		42.100	56.200	48.000	14%
Beds occupied / 1000 population	100%	36%	49%	42%	
Bed nets distributed		894	7.013	18.721	1994%
Bed nets per 100 population	30	0.2	2	4	
Children completely immunized		11.206	15.242	12.813	14%
% children completely immunized	100%	66%	87%	71%	
Institutional deliveries (hospitals included)		4.425	4.816	5.457	22%
% institutional deliveries	100%	26%	28%	30%	

Table 1: Results of providing the essential health package at health centre level.

The number of outpatient consultancies more than doubled from 116.400 to 235.000. Patient surveys showed that the average user fee price per OPD consultancy reduced by 41% from \$2.18 to \$1.29, while the subsidy per consultancy was \$0.26. These findings confirmed that elevated user fees are the main cause of poor utilization of OPD services and those health facilities, which significantly reduced their fees also attracted more patients. A few health centre managers - unwilling to decrease their fees - failed to reach their contractual targets. Patients answering the satisfaction surveys equally made the

point of high user fees in these health centres and the fund holder could – with this information – threaten with the “stick” of not renewing the contract and thereby enforce price reductions.

In-patient days at health centre level only increased modestly. Patients may have started consulting earlier the health centres instead of waiting too long. Another factor may have been that the subsidy for an inpatient day of \$0.26 was too low for allowing managers to significantly reduce the admission fees. The sale of bed nets increased twenty-fold and will reach at the current rate of distribution within 3 years the target of 30 nets per 100 inhabitants. Good coverage for children fully immunized has been maintained as the baseline was already satisfactory. The number of health facility deliveries increased by 22%. Further increases in maternal care are expected from new strategies such as starting maternities in new health posts and stimulating private dispensaries to start delivery services.

There were 10 output indicators subsidized at health centre level, but the number of quality indicators developed for the project was 150. Each three months district health teams check the indicators resulting in a score of between 0 and 100%. The score then determines the quality bonus for each health facility. The maximum quality bonus each health facility can earn is 15% of the sum of the monthly output subsidies. On average, the health centres received 80% of the total possible quality bonus.

Results of performance based financing at hospital level

The results in the four *district hospitals* were better than expected considering that the fund holder had very limited funds for the hospital contracts.

Activities in 4 district hospitals	Target Cyangugu Province	Jan - August 2002	Jan - August 2003	Jan - August 2004	Target achievement 2004	Increase 2004 / 2002
Consultations doctors (5% of pop per yr)	17.600	7.848	12.992	16.278	92%	107%
In patient days (1 bed / 1000 pop occupied)	127.680	80.361	93.779	91.685	72%	14%
Caesarean sections (3% of total deliveries)	528	558	633	692	131%	24%
Complicated deliveries, excl. caesarean sections (7% of total deliveries)	1.184	58	110	321	27%	453%
Major surgical procedures		528	881	649		23%

Table 2: Performance results of the four district hospitals.

Consultations conducted by medical doctors increased by 107%. Major surgical interventions increased by a modest 23%. Caesarean sections increased by 24%; a satisfactory result as this corresponds with 131% of the target based on the criterion that 3% of deliveries should terminate in a caesarean. In 2004, the in-patient days reduced in comparison with 2003 – although still an increase in comparison with 2002. The subsidy of \$0.18 per in-patient day seemed insufficient to reduce the in-patient care prices. Patient surveys confirmed that the average price of hospital admissions in Cyangugu province only decreased by 2%.

Another target was to increase the number of deliveries in health facilities that require a (non-caesarean section) intervention. In 2002, only one of the four district hospitals in Cyangugu province conducted deliveries by vacuum extraction or oxytocin stimulation. Doctors claimed they lacked training in such procedures or that they were short of equipment. As a result, most complicated deliveries terminated by caesarean section at high cost and increased risk for the concerned women.

An underlying problem is also that caesarean sections are an important source of revenues for the hospitals. Performance based financing can influence such undesirable medical decision-making by applying the “right incentives” of increasing the subsidy for non-invasive interventions, and by decreasing the subsidy for caesarean sections. As a result non-invasive interventions of complicated deliveries increased by 453%, although this still only corresponded with 27% of the target. Quality reviews may further provide “change signals” by reducing bonus points for those hospitals unable to conduct non-invasive intervention of complicated deliveries or which have a too high ratio of caesarean sections.

There was an interesting example in one district hospital of what changing input financing towards performance based financing may achieve. Since 1999 until the beginning of performance based contracting this hospital received an annual input support from the International NGO Cordaid of on average \$52.000 for salaries, drugs and infrastructure rehabilitation, etc. This changed in January 2003 to performance based financing. The hospital then more than doubled its output while the subsidy reduced to \$18.000, implying an eightfold increase of cost-effectiveness (see table 3).

	2002 Traditional input financing	2003 Performance based financing = Contracting	DIFFERENCE 2003 / 2002
Consultations by medical doctors	1140	3900	242%
Major surgical interventions	60	180	200%
Normal deliveries	336	456	36%
Caesarean Sections	264	288	9%
TOTAL NUMBER OF Activity	1800	4824	168%
Bed occupancy rate	45%	63%	38%
Subsidies	\$52,000	\$18,000	- 66%
Average subsidy per Activity	\$28.89	\$3.67	- 87%

Table 3: The case of Mibilizi hospital showing their annual output before and after the introduction of performance based financing.

Family planning services

Couple protection rate increased from 3% in 2002 to 10% in 2004. The increase of oral and injectable contraceptives was remarkable and increased 12 times from 0.4% to 5.3%, while equally the other methods improved considerably (see table 4). In one health center catchment area serving a population of 16.000 people the couple protection rate for all methods in 2004 reached 32%. This implies a reduction of the fertility rate from 5.8 children per women to approximately 3.9.

Family planning	Targets	Jan - August 2002	Jan - August 2003	Jan - August 2004	Increase 2004 / 2002
Women in reproductive age		131.098	134.948	138.776	6%
Women using oral and injectable methods		1.474	10.289	20.103	1264 %
Couple protection rate for oral & injectable methods	17%	0,4%	2,9%	5,5%	
Implants & Intra Uterine Devices		16	107	248	
Couple protection rate for implants & IUDs*	6%	0,1%	0,4%	0,9%	
Tubal ligation & vasectomy (1% of	1.350	56	268	390	

couples / yr)					
Couple protection rate for final methods	5%	2.5%***	2,4%**	3,4%**	
TOTAL COUPLE PROTECTION RATE	28%	3%	5,7%	9,8%	226%

Table 4: Results family planning activities.

* Couple protection rate calculated on annual basis whereby the number of implant & IUD provide 3 years protection.

**Couple protection rate calculated on annual basis whereby a tubal ligation or a vasectomy provides 8 year protection.

*** Data from UNFPA Demographic Health Survey 2000.

Changing the mentality of health facility managers

There was a noticeable change *in mentality of health facility managers* from a passive attitude of receiving orders towards pro-active entrepreneurship more common in the private sector. Rwandan health managers – although already handling their own cost sharing revenues - were unfamiliar with receiving public subsidies based on their performance. Without much problems most managers developed their own strategies and spent the additional revenues according to their perceived needs such as for increasing salaries, investing in infrastructure or equipment, for drugs, for profit sharing or anything else. Some managers, unable to adapt to this new reality, were replaced by the owners of the health facilities. This was not difficult because of the strong incentives to solve internal management problems. In case of unacceptable performance, the fund holder may not renew the contract and may inform the owners that management changes are required for contract renewal. This requires different strategies because the ownership of service providers may be public, religious or for-profit. For government owned health facility the fund holder may contact the Health Centre Committee elected by the population, for religious owned health facilities the religious authority, and for private dispensaries the owner.

Other results

More than 120 new jobs for skilled health personnel were created in Cyangugu province as the result of health facility managers employing staff to respond to the increased demand for health services. Most of these newly recruited staff were up to that time without a job. There were 24 health centres under direct contract with the fund holder and four district hospitals. An isolation bonus of either 5% or 10% on top of the performance subsidies encouraged health centres with very poor communities or in remote areas.

The 24 health facilities under direct contract with the fund holder - unable to provide all services - opened 14 new health posts and sub-contracted 19 private dispensaries. The sub-contracting system encouraged private entrepreneurs to open some dispensaries even in remote rural areas. The financing of these strategies by the main contractors became possible with the additional subsidies from the increased activities in these health posts and sub-contracted dispensaries.

The sub-contracts has as additional advantage that it strengthened the relationship between government and private health providers in a given geographic area and thereby creates an instrument for quality control. The sub-contracting mechanism through the main service provider in an area was preferred above an approach whereby the fund holder would contract each public or private provider. The experience showed that the latter solution would have been too complex to develop and monitor as well as that it would lack the advantage of local collaboration.

Fund holder supervisors rigorously controlled the output data generated by each service provider. This requires improving routine data collection by standardizing health facility registers, strengthening the

computerized health information system as well as improving data analysis and feed back mechanisms. The monthly health facility reports – after verification by the fund holder supervisors - serve as an accounting tool, which confirms the performance of the health facility. The fund holder supervisors sign the monthly reports after checking the data and government auditors can verify the documents at any later stage.

The contracting of 24 community-based organisations – one in the catchment area of each main service provider - served as an additional tool for preventing the falsification of data. These community-based organisations operate independently from the health provider and verify that patient contacts for which subsidies were paid indeed took place. A supervisor selects each trimester approximately 50 clients from the health facility registers and the local organisation representatives interview those clients. One confirmed case of data falsification routinely leads to a 10% reduction in the next month subsidy payment while repeated falsification leads to contract cancellation. This approach also allows the collection of information about the satisfaction of the patient concerning the quality and cost of the service. The patient feedback serves as an input for the three-monthly renegotiations of the contracts between the fund holder and the service providers.

DISCUSSION

Purchasing the health package

The Rwandan experience seems to confirm that performance based financing through contracting can deliver health services more effective and efficient than traditional input financing. The scale of the project with 620.000 people is large enough to avert fears of pilot project bias. A few years ago such a programme would have been technically impossible because it requires modern information and communication technology for the monitoring of performance and the calculation of the subsidies. Such equipment only recently became available at affordable cost in low-income countries.

District health systems generally aim at improving geographic and financial access to health packages of good quality for the population in general and the poor in particular.

In performance-based financing, an important tool for improving *geographic access* is to invite any public or private provider to start services in under-served areas or for specific activities not yet offered at all. The main strategy to increase *financial access* for patients is by reducing the user fees. Instead of rigid centralised price fixing, performance based financing may aim at intelligently subsidising health facilities by reducing user fees to such a level that approximately 95% of the population can afford the fees. This still excludes the poorest 5% socio-economic group and for them an equity fund may be the solution whereby the health facility invoices of that group are paid from public resources (Hardeman, 2004). Unfortunately, Cyangu province lacked the resources for such an equity fund. Performance based financing also allows the government to provide higher subsidies to service providers in very poor or isolated areas and may thereby create an incentive for the private sector to start operations in remote areas. Such performance based purchasing of health services for the poor may constitute a supplement to community based health insurance schemes or “mutuelles” as they are called in French speaking Africa. Several authors analysing CBHI schemes also make the case for similar supplementary financing mechanisms (Ekman, 2004; Schneider, 2004).

The subsidies and equity fund payments should not completely replace user fee or premium payments so that the consumer still maintains direct financial influence on the service provider. Community oriented services such as immunizations and family planning can be subsidized to a zero price level for the consumer. Improving quality is done through regular reviews and payment of bonuses. Inputs for the quality review may come from professionals such as district health teams as well as from patient feedback. In Cyangu province, the fund holder subsidizes the quality assurance reviews by the district health teams. However, it would probably be better to organise this through a contract between the districts and the central authorities such as in Zambia (Bossert, 1999; Bossert, & Beauvais, 2002). This would better assure the independence of the district health teams towards the fund holder.

Institutional set up of a fund holder at peripheral level

The World Development Report 2004 makes the case that it is challenging to pool funds at national level due to opposing priorities and conflicting procedures from aid agencies as well as difficulties to measure results nation wide (World Bank, 2004). The establishment of a peripheral and independent fund holder may promote transparency, and increase the efficiency of national programmes by dividing the fixed costs among different funding sources. This can be compared with a Sector Wide Approach at peripheral level. Fund pooling for example for a population of between 300.000 and 1 million may have several advantages. It assures contracts and monitoring with health providers based on a comprehensive health package and thereby avoids the negative consequences of multiple parallel financing systems. Promotion for fund pooling at peripheral level also appears in the literature for national programmes such as tuberculosis (Ullah et al, 2004).

The fund holder needs to be technically well equipped, transparent and autonomous. Recruiting high quality staff capable of negotiating the contracts and assessing output may involve a mix of international and local organisations. It requires senior managers with good negotiation & diplomatic skills; focus to reach targets; as well as sufficient public health, health financing and administrative skills. Health facilities under contract should receive their subsidies regularly (e.g. monthly) and timely (not more than 15 days after the end of the month). Performance based contracts preferably have a limited number (10-20) of verifiable output indicators to prevent that the system becomes too complex. The fund holder can contract around 25-50 main health facilities, and those in turn may sub-contract other health posts or dispensaries. A too small target population of below 300.000 would make the fund holder overheads too high for the fixed cost of human resources, transport, computers, office facilities, etc. A larger target population of over 1 million people and therefore a larger number of health facilities to monitor might make the system too complex. The institutional status of fund holder organisations can be public, NGO or private and may help balancing local interests with central priorities, crucial in the context of decentralisation. With the support of a well equipped fund holder, local authorities may also more effectively advocate for sufficient funds for their area. National health and administrative authorities can purchase such fund disbursement expertise without losing their regulatory control and may identify fund holder organisations based on competitive and renewable contracts.

Mind set

Performance based financing may require a change in the mind set among some *central government civil servants and aid agency* staff. They sometimes retain a top-down attitude of deciding who needs what, when and where. This assumes that central authorities, supervisors and experts *have* the knowledge and skills that those “frontline” field workers *do not have*. Besides that this may be untrue, the performance based financing approach assumes that the selected health providers already have knowledge and skills, and if they don’t that they themselves are responsible for obtaining them for example by recruiting additional experienced staff. Civil servants and aid agency staff should then adopt a “hands off” approach towards the autonomous internal management of providers and not interfere in issues such as the selection or number of staff, salary disputes, investment decisions or training needs. They may better concentrate on their supervising role towards defending the interests of the population and towards monitoring output and quality, while the fund holder independently manages the contractual technical aspects. Government civil servant and aid agencies representatives sometimes also need to consider more favourable the comparative advantages of the private sector and develop collaboration mechanisms to accommodate these advantages.

Contract contestability and consumer voice

An important issue in the contracting literature is whether contracts are contestable (Palmer & Mills, 2000). If a service provider has a monopoly this is likely to reduce the motivation for change and puts the fund holder in a weak negotiation position. Contesters for contracts in rural areas may be few and some observers argue that this situation in Africa resembles a natural monopoly. However, the

experience from Rwanda indicates that this is not the case if the right incentives are in place. Private sector providers are more willing to invest in rural areas than is usually assumed. There is similar evidence from rural Burundi where private for-profit providers were able to fill health service gaps in the absence of well performing government providers (Cordaid 2002).

There should not only be competitive pressure at the start of the contracting process. Contracts should be renewable for example at three monthly intervals. If performance is satisfactory, contract renewal may be automatic. The Rwanda case shows that none of the religious health facilities refused to provide modern family planning services, while the fund holder offered to contract these services to for-profit private providers. Some religious institutions in order to avoid internal conflicts opened health posts separate from the main health centre building. The conclusion seems to be that the contractual relationships between fund holder and service provider is in the first place that of supportive partnership. However, the threat of losing the contract in case of poor performance should always remain in place.

Another important question is how to strengthen the consumer voice towards influencing the quality and access to health services? Community participation in traditional district health systems often meant involving health committees in the internal management of service providers. This was particularly important in the era when governments instructed health facilities to fix user fees at nominal levels and to exempt vulnerable or privileged groups from fee-paying. These committees were then supposed to enforce government instructions. The Rwanda example shows that patients feed back as well as encouraging free patient choice for service providers may also increase consumer voice, drive down prices and improve quality *without* price fixing. This as the result of rewarding health facilities with high utilisation levels with more subsidies. Public money then “follows the patient”.

Cost of performance based financing and who should pay?

Since more than 20 years, there has been advocacy to increase public investment for the health services in low-income countries. The World Development Report 1993 proposed investing \$12 per capita per year for the effective provision of an essential health package (World Bank, 1993). The Commission of Macroeconomics and Health in 2001 thought \$34 per capita investment to be required of which \$19 should be from external sources (WHO, 2001). This higher investment was necessary due to the emergence of HIV/AIDS programmes, while the WHO calculation did not include the effects of cost-recovery. The latter is important in French speaking Africa where cost-recovery plays an important role and may constitute as much as 50-80% of total health expenditure. Based on the Cyanguu experience we think that public funding of an essential health package including family planning services, institutional deliveries, immunization, bed net distribution and curative services would cost approximately \$ 3 per capita – constituting of the following components:

Subsidies for the health facilities	\$ 2.20 (73%)
Monitoring of output, technical assistance, overhead fund holder	\$ 0.55 (18%)
Regulatory functions at provincial and district level	<u>\$ 0.25 (8%)</u>
TOTAL per capita / year:	\$ 3.00 (100%)

The package does not include activities related to HIV/AIDS such as antiviral treatment, treatment of opportunistic infections, promotion & distribution of condoms, and voluntary HIV testing. Low income countries may gradually introduce such indicators similar to the more developed countries (Abramson, 2001; Abramson, 2004). This will then increase the cost of the package.

CONCLUSION

The Rwanda case confirms previous evidence from Asia that performance based financing through contracting may have superior results in comparison with input financing. The public subsidy directly

to service providers of just over \$2 per capita per year should be affordable even in the poorest countries. Performance based financing in Rwanda dramatically increased family planning coverage. This may help reduce demographic tensions and suffering at household level in politically volatile regions of Africa. Already this achievement justifies more attention for performance based contracting.

Performance based financing is more than only a technical fix of developing and signing contracts. Success requires changes in the district health system and may include the establishment of an independent peripheral fund holder, respect for the autonomous management of service providers and the principle that contracts need negotiation and should be renewable. The national health service must establish verifiable targets and indicators linked to health packages. It also needs strict monitoring of performance and assurance that public funds reach the service providers. Finally, it involves developing a performance based quality assurance mechanism and strengthening the consumer voice by taking into consideration patient feedback into contract renewals with service providers.

There is a need for operational research to further improve performance based financing and to learn more lessons from different projects and countries. This may help to obtain the endorsement from government authorities and aid agencies as several still prefer the more traditional input based financing through vertical programmes. This may also seem attractive for central health authorities as it gives more direct central control over the funding. The Rwanda case provides evidence that such input approaches have disappointing results, which in turn may frustrate national and international decision makers in their willingness to allocate sufficient funds. Performance based financing may reverse this negative trend and contribute to effective and efficient health service delivery for the poor in low-income countries.

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