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Purchasing Public Health: A Critical Examination of Performance-Based Financing in Rwanda

Introduction

It is widely acknowledged that dysfunctional health systems are a major barrier to citizens' attainment of the right to health in the poor world, especially throughout Sub-Saharan Africa. The WHO states that weak African health systems are "a major underlying cause of ill health"[1] on the continent, writing that Africans "get sick and die because the systems for disease prevention and control are not in place or – if they are – they do not function properly."[2] For many Africans, basic healthcare is geographically or financially inaccessible, and for many others, local health systems may be "unresponsive, inefficient, inequitable and even unsafe."[3] The importance of improving poor-country health system functioning is gaining greater recognition by the global health community as it becomes clear that failures in service delivery have caused much of the past decade's vastly increased global health spending to be ineffective. Kim and Porter argue that "the biggest obstacle for improving [worldwide] health outcomes is a failure of delivery,"[4] and call for greater research on means by which health system functioning can be improved in developing countries.

Performance-based financing (PBF) is increasingly advocated by donor countries and international institutions as a strategy for improving health system performance in poor countries.[5] PBF seeks to improve incentive structures so that health workers are more motivated to provide accessible and good quality services. Low health-worker motivation to perform well is a substantial

[1] WHO 2006, 105
[2] WHO 2006, 105
[3] Paul, 1
[4] Kim and Porter, 2
[5] Oxman and Fretheim, 4

problem in Sub-Saharan Africa; it is widely documented that healthcare providers' poor work attitudes, absenteeism, and shirking of duties limit access to services across the continent. [6] PBF aims to increase motivation by financially rewarding healthcare providers for doing a good job. Typically, it involves paying health facilities money for doing certain jobs well or for meeting certain criteria. While efforts at PBF have had mixed results worldwide,[7] Rwanda is often promoted as an example of PBF having succeeded on a national scale. Kalk et. al. write: "The Rwandan [PBF] example has been frequently portrayed as particularly successful. It is increasingly recommended because it seems to offer 'greatest marginal impact on the poor' and 'better value for money spent.'"[8] Has Rwanda found a way to increase health worker motivation and thereby improve health system functioning through PBF? What lessons can be learned from Rwanda's experience with PBF, and how generalizable are they to other poor countries? An in-depth and critical examination of performance-based financing in Rwanda will serve researchers and policy-makers well as they attempt to gain insights as to how health system delivery can be improved in resource-poor settings.

This paper considers Rwanda's PBF program from a right-to-health perspective, attempting to elucidate from it mechanisms through which health system functioning can be further improved in Rwanda and in poor settings generally. After presenting background information on Rwanda and its PBF scheme, the paper examines the ways in which PBF succeeds and fails at improving access to good health for Rwandans. It then considers what both the Rwandan government and the international community could do to improve the PBF program's performance. In an effort to shed greater critical light on PBF, the paper subsequently expounds on the values, constructions and assumptions that underlie the approach. It ends by considering the extent to which PBF schemes

[6] Oxman and Fretheim, 4
[7] Oxman and Fretheim, 4-5
[8] Kalk et. al., 182

similar to Rwanda's could be implemented in other poor countries, and by examining what broad lessons Rwandan PBF can teach about health system improvement in the developing world.

Background Information on Rwanda and its Performance-Based Health Financing

Rwanda is one of the poorest countries in the world. Its population of 9.9 million[9] lives on an average of $0.70 USD per day,[10] and 80 percent of Rwandans are rural farmers.[11] Rwanda has a rapid annual population growth rate of 2.8 percent and two-thirds of Rwandans are under twenty years old.[12] The country ranked 158th out of 177 nations in the UN Human Development Index, and three-fifths of Rwandans survive on less than one dollar a day.[13] Although Rwanda has made great strides in recovering socially, economically and politically since its 1994 genocide, many Rwandans still lack access to clean water, sanitation, adequate food, education, and basic health care.[14] Rwanda has a typical epidemiological profile for Sub-Saharan Africa with an HIV prevalence of 3 percent.[15] Rwanda's government, led by Paul Kagame, is credited with being very capable and effective (if substantially authoritarian) by African standards, and has implemented a bold set of reforms under the umbrella title "Vision 2020" which aim at moving the country toward rapid economic growth and general societal wellbeing.[16]

Beginning in the early 2000s, Rwanda's government implemented several major health system reforms; donor coordination policies, community-based insurance aimed at increasing healthcare access for the poor, and PBF all aimed to improve both access to and quality of health

[9] Porter et. al. 2009, 1
[10] Rusa et. al., 191
[11] Porter et. al. 2009, 1
[12] Porter et. al. 2009, 1
[13] Porter et. al. 2009, 1
[14] Porter et. al. 2009, 3
[15] Rusa et. al., 191
[16] Republic of Rwanda Ministry of Finance and Economic Planning, "Rwanda Vision 2020"

services.[17] Rwandan health spending also quadrupled between 2000 and 2006.[18] The combined reforms and increased health budget appear to have achieved substantial success at improving national health: Rwanda's infant and child mortality rates have both plunged by nearly 50% since 2000,[19] and overall life expectancy has risen by two years since 2004,[20] in spite of a growing national AIDS epidemic. The reforms and increased spending have not, however, significantly brought down rates of malnutrition, fertility, maternal mortality, and HIV,[21] and major health system capacity problems remain. It is estimated that Rwanda's health sector employs only 30 percent of the staff that would be needed to deliver minimal services to the full public,[22] and only $34 USD per capita per year is spent on health, with 40 percent of this coming from donors and 25 percent from user fees.[23] Low health spending results in very low health worker salaries.

The nationwide expansion of performance-based health financing was inspired by the perceived successes of two donor-funded pilot projects in Butare and Cyangugu provinces. Based on lessons learned from the pilot projects, and in conversation with international donors (primarily Belgium, the US, and the World Bank), the Rwandan government created a national PBF health scheme. The plan pays health facilities a pre-designated fee for each time they provide one of a set of specific services. For instance, a health facility receives $0.46 USD for each pregnant woman it gives a tetanus vaccine to, $0.18 USD for every child who receives a preventative care visit, and $4.59 for every woman who delivers in the facility (assuming full service quality).[24] The other financially rewarded services are: curative care visits, first prenatal care visits, having women complete four prenatal care visits, starting women on family planning, resupplying a woman with

[17] Logie et. al. 2008
[18] Kalk et al., 186
[19] Kalk et. al., 185
[20] World Bank, "Country Data: Rwanda"
[21] Rusa et. al., 191
[22] Porter et. al., 5
[23] Rusa et. al., 191
[24] Basinga et. al., 31

contraceptives, giving malaria drugs to pregnant women, referring at-risk pregnancies to district hospitals, emergency transfers of women to district hospitals for obstetric care, fully vaccinating children, referring malnourished children for treatment, other emergency referrals,[25] and a set of HIV/AIDS services.[26] The financial reward that health facilities get for each of these services depends upon a "quality of care" score, given by a peer evaluator, which measures the quality of thirteen services.[27] PBF payments are given to health facilities as a whole, and it is the facilities' responsibility to divide them among staff. Payments are supplied to health facilities by fundholder NGOs authorized by the government, and the PBH scheme is largely funded by outside donors.[28] Deliveries of services are recorded by the health facilities themselves with some local regulatory oversight,[29] and health facilities are left to make their own decisions regarding clinic operation, including whether or not to charge user fees.[30]

How Does Rwandan PBF Succeed in Providing the Right to Health?

Because national PBF expansion occurred at the same time as increases in health spending and other health system reforms, it is impossible to separate the health impacts of PBF from these other confounding variables. The best data on the isolated health impacts of Rwandan PBF thus come from evaluations of pilot projects which compare PBF districts to districts that received equivalent increased health funding that was not distributed in a PBF scheme. Several such evaluations have all demonstrated dramatically positive health results from PBF.[31] For instance, after PBF was instituted, Cyangugu's institutional delivery rate increased to four times that of its

[25] Basinga et. al., 31
[26] Rusa et. al., 204
[27] Rusa et. al., 204
[28] Kalk et al., 184
[29] Rusa et al., 205
[30] Soeters et al., 886
[31] Soeters et al., 886

comparison district and family planning coverage increased to 28 times that of its comparison district.[32] A comparison of PBF and non-PBF provinces during the nation-wide scale-up showed that, between 2001 and 2004, curative care visits increased 23% more in PBF provinces than in non-PBF provinces.[33] Institutional deliveries, family planning, and measles coverage increased 8%, 2.6%, and 10% more (respectively) in PBF provinces than in non-PBF provinces.[34] Additional comparitive studies indicate similar health gains from PBF, as do before-and-after data (although before-and-after studies are subject to substantial confounding).[35]

A significant caveat to this positive numerical data is that every major quantitative evaluation of PBF in Rwanda focused almost exclusively on indicators that PBF schemes financially reward. An extensive literature search revealed only one outcome that was measured in *any* quantitative PBF evaluation that was *not* paid for by the PBF scheme being evaluated: a before-and-after study (again, highly subject to confounding) showed that out-of-pocket health expenditures decreased 62% in Cyangugu after PBF implementation.[36] Because basically the only variables used to quantitatively evaluate the PBF schemes are the variables that the schemes pay for, no quantitative evaluation considers what happens to procedures that are *not* financially rewarded by PBF. Such evaluations fail to indicate whether non-rewarded services atrophy as a result of increased clinical emphasis on rewarded services. Thus, the quantitative data do not tell us whether health services in general are improving as a result of PBF, only that *PBF is effective at improving delivery of the services for which it pays*.

Only one ethnography-based evaluation of Rwanda's PBF policy was found in the literature. Kalk, Paul and Grabosch conducted semi-structured interviews with hospital staff, patients, hospital

[32] Logie et al., 4
[33] Rusa et al., 197
[34] Rusa et al., 197
[35] Loevinsohn, 142
[36] Soeters et al., 886

management, national health officials, and others involved in developing and implementing PBF.[37] This study revealed a broad consensus among health workers that PBF had increased motivation and performance. The results report that 56% of health workers interviewed "stated that [PBF] gives them a feeling that their work is appreciated more and that the salary increase is motivating."[38] Kalk et al. write that because of PBF:

> Dysfunctional behaviour (such as absenteeism) became rare. Though responsibilities and procedures were regulated beforehand, these features received more attention because of the incentives attached to them. Health staff declared to feel an 'increasing responsibility' for their work.[39]

Health workers stated that PBF had created a previously non-existent "feedback loop" between management and staff, and that management had become more supportive of the staff.[40] Both patients and health workers reported that patients were being treated more as "clients" because of PBF.[41] A sense of team spirit which fostered increased communication and participation was reported to have developed in clinics, because health workers saw themselves as working together for group financial rewards.[42] 96% of medical staff stated that "PBF has encouraged them to work better,"[43] and 96% said that it has "increased their feelings of responsibility for the service quality."[44] Furthermore, 88% of health workers reported that PBF has "made it more difficult to misbehave."[45] Examples were reported of how PBF had led to more services being provided, and had spurred innovative efforts to increase access to these services and to actively recruit more people to use them.[46]

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[37] Kalk et al. 2010
[38] Paul, 13
[39] Kalk et al., 185
[40] Kalk et al., 185
[41] Kalk et al., 185
[42] Kalk et al., 185
[43] Paul, 14
[44] Paul, 14
[45] Paul, 13
[46] Kalk et al., 185

It is hard to know the extent to which some of these positive reviews are simply due to the fact that PBF increased funding and salaries. Perhaps some of these same responses would have been given to *any* funding increase, regardless of its mechanism. It has been estimated that PBF *doubled* many health workers' salaries and allowed hospitals to hire new staff and buy more equipment.[47] It thus represented an enormous increase in both health funding and the quality of health workers' jobs. It is to be expected that any such funding increase would be regarded very favorably by health workers and management alike. However, PBF incentives seem to explain some positive reports (such as increased team spirit and increased attention to work) better than a general funding increase does.

In summary, quantitative evaluation universally shows that PBF leads to better delivery of the services it incentivizes, but no data has been collected regarding its impact on non-incentivized services. Ethnography reveals that PBF has achieved its goal of motivating health providers to work harder and better and to minimize negligence. However, as will be shown the next section, ethnography also indicates substantial negative impacts of PBF which the quantitative evaluations did not pick up on (indeed, they could not have identified these negative impacts because they essentially only examine incentivized services).

How Does Rwandan PBF Fail at Providing the Right to Health?

Not all health workers interviewed by Kalk et al. held a positive view of PBF. Half saw its purpose as control, rather than support, and 32% denied that it was useful at all and said that the government should simply trust medical staff instead.[48] Many health workers spoke of an "ethical conflict" created by PBF between doing what was medically needed and what would get them

[47] Paul, 14-15
[48] Kalk et al., 185

money. Obtaining PBF rewards demanded that health workers spend a substantial amount of time filling out forms, and they reported often being forced to choose between devoting time to form-filling or care-giving.[49] Kalk et al. document: "Neglect of essential activities as a result of additional workload created by the [PBF] system… was regularly reported. It was emphasized that such neglect included potentially life-preserving activities in the intensive care unit of hospitals."[50] PBF created other perverse incentives such as "not distributing the last drug box of the pharmacy to avoid a stock-out"[51] (which would have decreased the clinic's "quality rating"), or even motivating health workers to perform unnecessary procedures on patients.[52] Health workers emphasized that PBF's indicators were "imposed from outside without knowledge about local contexts and needs."[53]

There was a broad consensus among health providers that while PBF caused clinics to focus on increasing rewarded indicators, it did not cause them to improve health in ways that were not financially rewarded.[54] Many cited the ironic fact that indicators which were "supposed to inform about a 'bigger issue behind them'"[55] had become dissociated from the "bigger issue," because PBF had made them into ends unto themselves. Eldridge and Palmer sum up this problem by citing Goodhart's Law: "When a measure becomes a target, it ceases to be a good measure."[56] When indicators became rewarded by PBF, they stopped being good measurements of overall population health. Hence, quantitative evaluations that *only measure these indicators* do not adequately evaluate general public health and completely miss the ethnographically observed fact that

[49] Kalk et al., 185
[50] Kalk et al., 185-186
[51] Kalk et al., 186
[52] Kalk et al., 186
[53] Kalk et al., 185
[54] Kalk et al., 186
[55] Kalk et al., 186
[56] Eldridge and Palmer, 164

"overworked staff invest all their energy into the remunerated activities and their proper documentation, and tend to neglect other core tasks for the sake of the incentives."[57]

While PBF may motivate health workers to work harder, it is not clear that it always (or even generally) motivates them work toward doing what is in the best interest of public health. In many cases, ethnography reveals the opposite to be true. It is not at all surprising that health workers whose salaries "barely [allow] feeding a family"[58] would be tempted to focus almost all of their time on tasks that make them extra money, neglecting other important public health demands. While the vast majority of Rwandan health workers report serving others to be their primary professional motivation,[59] it is easy to understand how essential personal needs could prompt them to choose to make money instead of to promote health when PBF presents them with such an "ethical conflict."

How to Improve Rwanda's Performance-Based Financing

Both quantitative and ethnographic data on PBF in Rwanda suggest that the policy has substantially motivated health workers to improve delivery of the services it financially rewards. PBF appears to have spurred increased health system organization, teamwork, work ethic, and innovation in delivering rewarded services, which has improved both the quality and accessibility of these services. These service delivery improvements are significant, and at times dramatic, and there is no doubt that PBF has made certain positive impacts on public health. Ethnographic investigation, however, raises the question of whether PBF has led to an overall improvement in public health. Improvements in rewarded services may have come at the price of non-rewarded services being severely neglected. PBF created certain perverse incentives for doctors, forcing them

[57] Kalk et al., 187
[58] Kalk et al., 187
[59] Kalk et al., 184

at times to choose between obtaining money and doing what is in the interests of public health. How can the positive potential of PBF to improve health system functioning be harnessed while its negative impacts are minimized? This section seeks to propose means by which PBF could be made to function better in Rwanda.

First, it is clear that PBF fails to address the *underlying reasons why Rwanda's health system does not function well.* The country's health system is severely understaffed and underfinanced. PBF may improve worker motivation somewhat, but it cannot cause a health sector with only 30% of the staff it needs to suddenly be able to fulfill all of its functions well. If understaffing and lack of finances were significantly remedied, general Rwandan public health would improve and PBF would be both more effective and less harmful. Incentivizing a system that is greatly overstretched and underpaid to focus on certain services cannot help but draw its attention away from others. Kalk et al. write that health workers "frequently described [the PBF approach] as putting additional stress on a system already overstretched,"[60] and that "nearly all [health professionals interviewed] agreed that the infrastructure of the health institution they were working at was, despite some progress, completely inadequate."[61] Staffing the health system appropriately would enable facilities to improve delivery of PBF's rewarded services without neglecting others. Also, paying health workers livable baseline salaries would make them less financially dependent on PBF's incentives and more able to make the public-health-enhancing choice when faced with an "ethical dilemma" created by the scheme. Without deep staffing and salary increases, PBF mostly functions as an "aesthetic band-aid," shifting the system's focus to certain services and claiming that overall health has improved when these particular services improve. It does not provide the changes needed to dramatically improve the system.

[60] Kalk et al., 185
[61] Kalk et al., 185

Full financing and staffing of Rwanda's health system would require substantially increased international donation as well as commitment by the Rwandan government. Rwanda's government currently spends approximately 9.5% of its budget on health,[62] a proportion on par with other developing nations.[63] However, because Rwandan GDP is so low, this spending comprises only 33% of the money entering a vastly underfunded health system; the rest comes from donors and out-of-pocket payments.[64] Clearly, the Rwandan government cannot adequately fund its health system without greatly increased outside aid. It is essential that this increased aid be sustainably provided over the long term and that the Rwandan government has autonomy to control how it is spent.[65] Only then can Rwanda develop a coherent health plan that is adequately funded. The government will need to invest heavily in health worker training and salaries in order to bring about the 139% increase in the health workforce the WHO estimates is needed.[66] Only with substantial donor commitment and effective government action can Rwanda's health system be made to deliver adequate healthcare to the population.

Alongside the increased health system staffing and funding that are necessary for performance-based financing to operate effectively, PBF policies should be reformed at the local level to maximize their benefits while minimizing their negative impacts. Decisions about which services are remunerated, and how much is offered for them, should be made very carefully *on a local basis, based on local circumstances,* and *in close conversation with local health providers*. Policymakers must recognize that paying doctors to provide certain services will improve provision of those services, but will probably not improve overall health system functioning. Thus, service-based PBF should be seen only as a means of incentivizing certain key strategic services. Decision-

[62] Logie et al., 1
[63] "How Countries Spend their Money," Visualeconomics.com.
[64] Rusa et al., 191
[65] Logie et al., 2
[66] Paul, 4

makers should strongly consider what negative side effects might result from PBF plans, and should try to set up systems that minimize these. PBF schemes must always aim to further access to health for all Rwandans; to help PBF accomplish this, health facility user fees for the poor should be made illegal nationwide. Perhaps most importantly, local PBF schemes must be regularly evaluated, both quantitatively and ethnographically, and evaluations must aim to discover any and all negative side effects they might have. PBF policies should be modified as a result of these evaluations.

The Rwandan government should also begin piloting an approach to performance-based financing in which district health systems are financially rewarded for improved *general health statistics* in their districts. Such an approach to PBF would reward health *outcomes* rather than service *inputs*, thus harnessing the innovation-inducing power of PBF to *directly* incentivize providers to improve public health. It would encourage health facilities to focus on improving both the social determinants of health and the outcomes of care. It would also strongly promote expansion of services to those who need them most. Outcome-based PBF schemes should still probably incentivize some preventative services which will not have an immediate positive impact on health statistics, such as vaccination. They should also decrease rewards to facilities when certain geographic areas have worse health statistics than most others, in order to encourage equitable access to services. Financial rewards from outcome-based PBF should be extended to community health workers, as their work substantially impacts health in all districts.[67] Although such an output-based approach would require regular monitoring of health statistics, which would be expensive, these statistics would tell health facilities if their approaches were working and what they needed to improve. Output-based PBF could be a highly effective means of providing the right to health, and, given the potential of PBF to increase health worker motivation and innovation, such an approach merits pilot testing in Rwanda.

[67]Binagwaho 2009

Regardless of the form that PBF takes in Rwanda, it is absolutely essential to its success that donor organizations supply adequate and reliable funding over the long term. PBF is largely financed by foreign donors and, as Kalk et al. write, "the sustainability of the approach has to be questioned: If the funding comes to an end, deep depression of staff motivation far below original levels might follow."[68] Foreign donors must understand that it will be a long time before Rwanda can finance PBF without assistance and they must recognize themselves as essential participants in Ooms et al.'s concept of "sustainability that relies on a combination of domestic resources and predictable, open-ended foreign assistance."[69] This same understanding, of course, must apply to foreign donors' funding of Rwanda's health system in general. If donor organizations value Rwandans' rights to health, they must supply long-term, predictable financing in order to ensure these rights.

Values, Constructions and Assumptions Associated with PBF

As Rwandans seek to improve their performance-based financing system and as other countries consider implementing similar programs, it is important that policymakers are critically aware of some of the values, constructions and assumptions that often underlie PBF plans. Understanding how a policy both reflects and promotes certain values and perspectives enables us to critically examine these values and perspectives themselves, thereby improving our critical outlook on the policy. As the Rwandan case has illustrated, PBF can represent a "quick-fix" approach toward health system improvement. A "quick-fix" perspective assumes that there is an easy, technical way of solving a problem that bypasses the hard work of addressing that problem's underlying determinants. "Quick-fixes" very rarely, if ever, exist in reality, and it is important for

[68] Kalk et al., 8
[69] Ooms et al., 2

policymakers to always appreciate the need to address the root causes of problems. In Rwanda, implementing PBF without addressing inadequate health system staffing and funding created negative consequences.

PBF can also represent a top-down controlling approach that "plans for" health workers instead of "searching with" them for solutions. When administrators implement incentive structures without consulting local health workers and when blanket policies are put in place that do not take local variation into account, policies can obstruct, rather than improve, local efforts at promoting health. Health professionals might feel patronized and misused by externally-imposed systems that prescribe how their clinics should act, which could hurt their performance. Basing PBF rewards on health statistic outcomes could prevent much of this resentment because this approach rewards health facilities for doing a good job at promoting health without dictating to them how to do it.

Lastly, and perhaps most importantly, the indicators that a PBF scheme rewards reflect which aspects of health are considered most valuable by policymakers. The fact that Rwanda's PBF focuses incentives on safe pregnancy, neonatal and child health, HIV/AIDS, vaccination, and contraception means that these health challenges become more valued than others by the health system. Health challenges that are left unrewarded, for instance improving mental health or the social determinants of health, assume lesser significance in the system. Thus, any service-based PBF incentives create certain groups who "win" and certain groups who "lose." It is essential that policymakers are aware of the health-related values that their PBF schemes reflect.

Conclusion: Lessons for Other Countries?

This analysis has attempted to elucidate the good and the bad elements of Rwanda's performance-based financing policies, and to propose how the system could be improved. It has revealed that while PBF holds the potential to improve some aspects of health system functioning, it

can be harmful if not carried out well, and it is certainly no substitute for addressing the structural deficiencies at the root of poor health system performance in Rwanda, in Africa, and in much of the developing world. Such an analysis raises the question of whether health systems in other resource-poor countries could successfully adopt PBF as a strategy for improving performance. What conditions are required for PBF to succeed? Firstly, PBF requires a state with enough capacity to oversee and regulate a complicated system of money transfer. It requires relatively low levels of corruption as PBF involves money passing through several sets of hands. Of course, a government must be able to finance both the incentives and the administrative costs necessary for PBF; for a very poor country like Rwanda, this typically necessitates sustained donor support. For PBF to have a meaningful impact on public health, health services must be widely accessible (Rwanda's community-based insurance ensured that this was the case), at least somewhat capable, and staffing and salaries must be at least minimally decent; the more overstretched and underpaid a health system is, the more likely PBF is to have negative consequences.

Regardless of whether a nation has the capacity to implement performance-based financing, critical examination of Rwanda's experience with PBF provides lessons for any poor-country policymaker looking to improve a health system. Governments must involve implementers in decision-making processes, and programs must be tailored to local circumstances. Policymakers must always consider the larger barriers to the right to health and resist "quick-fix" thinking. They must also pay close attention to how their plans incentivize actors. Policy evaluations must be thorough, they must be approached critically, and they must actively seek out negative side effects. Ethnography must comprise a part of policy evaluation because it is the only means of shedding light on the *human mechanisms* through which programs operate. Most fundamentally, policymakers must keep the right to health at the core of their perspective at all times and must consistently search for means by which social justice in health can be achieved.

Appendix: Summary of major findings and policy recommendations

Major findings:

- The introduction of performance-based financing (PBF) in Rwanda has motivated health facilities to improve delivery of financially rewarded services. Provision of rewarded services has increased significantly, and at times dramatically, as a result of PBF. PBF has inspired health workers to innovate in delivery methods and to aggressively work to expand access to rewarded services.
- PBF has likely decreased health facilities' attention to and delivery of non-rewarded services. It has created "ethical conflicts" in which health workers must choose whether to provide necessary care or to take actions that will gain them financial rewards from PBF.
- Health workers widely view PBF as controlling and feel that the indicators rewarded do not adequately reflect local contexts and needs.
- Because PBF has turned rewarded indicators into ends in themselves, these indicators no longer accurately reflect broad public health status
- Quantitative evaluations of PBF have focused almost exclusively on how the program impacts delivery of rewarded services, without considering how it affects provision of non-rewarded services.
- It is unclear whether PBF has made an overall positive or negative impact on Rwandan public health

Policy recommendations:

- PBF can only function effectively if staffing and funding of Rwanda's health system are greatly increased. Accomplishing this will require substantial commitment from Rwanda's government and sustained, long-term donor financing
- Health facility user fees for the poor should be made illegal throughout Rwanda.
- PBF should be carefully reformed nationwide. The blanket national remuneration plan should be eliminated, and locally-specific financing schemes should be composed on a local basis, in close consultation with local health providers.
- All PBF schemes must be regularly evaluated, both quantitatively and ethnographically, and evaluations must aim to discover any and all negative side effects. PBF policies should be modified as a result of these evaluations.
- The Rwandan government should begin piloting a PBF scheme in which district health systems and community health workers are financially rewarded for improved general health statistics in their districts
- Donors must sustain funding of Rwandan PBF over the long term

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