Motivating health workers up to a limit: partial effects of performance-based financing on working environments in Nigeria

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Abstract

Background: In 2012, the Nigerian government launched performance-based financing (PBF) in three districts providing financial incentives to health workers based on the quantity and quality of service provision. They were given autonomy to use funds for operational costs and performance bonuses. This study aims to understand changes in perceived motivation among health workers with the introduction of PBF in Wamba district, Nigeria.

Methods: The study used a qualitative research design to compare perceptions of health workers in facilities receiving PBF payments in the pilot district of Wamba to those that were not. In-depth semi-structured interviews (n = 39) were conducted with health workers from PBF and non-PBF facilities along with managers of the PBF project. Framework analysis was used to identify patterns and variations in responses. Facility records were collated and triangulated with qualitative data.

Findings: Health workers receiving PBF payments reported to be ‘awakened’ by performance bonuses and improved working environments including routine supportive supervision and availability of essential drugs. They recounted being more punctual, hard working and proud of providing better services to their communities. In comparison, health workers in non-PBF facilities complained about the dearth of basic equipment and lack of motivating strategies. However, health workers from both sets of facilities considered there to be a severe shortage of manpower resulting in excessive workload, fatigue and general dissatisfaction.

Conclusions: PBF strategies can succeed in motivating health workers by bringing about a change in incentives and working conditions. However, such programmes need to be aligned with human resource reforms including timely recruitment and appropriate distribution to prevent burn out and attrition. As people working on the frontline of constrained health systems, health workers are responsive to improved incentives and working conditions, but need more comprehensive support.

Key words: Health worker motivation, performance-based financing, Nigeria

Key Messages

- Performance-based financing strategies can succeed in motivating health workers by increasing their monetary gains and bringing about a change in organizational structures—working environment, supervision, team cohesion. However, such programmes need to be aligned with human resource reforms including timely recruitment and appropriate distribution to prevent burn out and attrition.
**Background**

Many low- and middle-income countries (LMICs) have adopted performance-based financing (PBF) to improve health service delivery and outcomes (Fritsche et al. 2014). PBF is a results-based financing (RBF) approach where financial incentives are directed to providers, on a fee-for-service basis, contingent on the quality of services provided (Musgrove 2011). Although PBF has been found to increase institutional deliveries and preventive patient visits for maternal and child health (MCH) services (Basinga et al. 2011), improve productivity (Meessen et al. 2007) and quality of care (Basinga et al. 2011; Peabody et al. 2011; Dale 2014), the overall evidence of impact of PBF on health systems performance in LMIC remains inadequate (Witter et al. 2012).

By changing from input to output-based financing, PBF rests on the assumption that it will motivate health workers to ‘change behaviour significantly and achieve results’ and ‘translate their knowledge into better practice’ (Basinga et al. 2011; Oxman and Fretheim 2009). However, the effects of PBF on health worker motivation in LMIC have not been systematically evaluated and results remain mixed at best (Witter 2013). Even fewer studies have attempted to understand the ‘how and why’ of the impact of PBF on motivation (Basinga et al. 2011).

Studies with positive PBF findings such as in Zambia and Burundi report greater overall satisfaction and retention in PBF facilities as compared with non-PBF facilities (Das Gupta et al. 2003; National Population Commission and ICF Macro 2009), with health workers migrating to PBF facilities due to additional incentives (National Population Commission and ICF Macro 2009). Findings from Rwanda show that health workers found increases in salaries motivating (Soeters et al. 2006; Paul 2009; Kalk et al. 2010). They also reported that dysfunctional behaviour, such as absenteeism, decreased and appreciation for their work increased (Paul 2009; Kalk et al. 2010). Health workers in Kenya indicated higher satisfaction with increased salary especially since it greatly helped them to provide for their families (Population Council 2013). They were also motivated by the recognition received from the community and improved working conditions. In addition, a few studies also noted importance of performance feedback or ‘coaching’ introduced through PBF to have motivating influences on health workers (Kalk et al. 2010; Bertone and Meesen 2013; Population Council 2013).

On the other hand, a study from Afghanistan concluded that pay-for-performance did not affect extrinsic motivation of health workers (Dale 2014). Similarly, in other countries health workers were frustrated by irregularities in payment (Morgan 2010; Sengooba et al. 2012; Fox et al. 2013; Population Council 2013) and the relatively low incentives provided as compared with increased workloads undertaken (Witter et al. 2011; Fox et al. 2013). Moreover, PBF payments were found to be de-motivating in cases where the distribution was not transparent and perceived to be inequitable (Kalk et al. 2010; Witter et al. 2011; Fox et al. 2013). Finally, in Nepal and Democratic Republic of Congo, bonus payments were found to create conflict among health workers (Powell-Jackson et al. 2008; Huillery and Sehan 2013).

**PBF in Nigeria**

Nigeria has a large but under-performing health system which has not succeeded in reducing deplorable MCH indicators (Das Gupta et al. 2003; USAID 2008), despite spending 6% of GDP in 2012 on health. Findings from Demographic and Health Surveys have not shown significant improvements over time and continue to indicate wide regional disparities in population health (National Population Commission and ICF Macro 2009). In terms of service delivery, the federal, state and local governments are exclusively responsible for tertiary, secondary and primary services, respectively. The three levels of the health systems function in isolation resulting in poor coordination between primary and first referral services (The World Bank 2005). Furthermore, districts often suffer from delayed and unequal financial transfers (Oxford Policy Management 2011), and are infamous for lack of accountability for the financial resources received. The resulting combination adversely affects service delivery at the primary level as facilities are not equipped with adequate staff and essential drugs and equipment to provide adequate quantity and quality of health services.

In 2012, the Government of Nigeria, financed by the World Bank, announced the initiation of a RBF scheme in three states: Adamawa, Nasarawa and Ondo to address some of these challenges. Under this scheme, local government areas (LGAs) (equivalent to districts) were randomized to receive two types of financing—PBF or Decentralized Facility Financing (DIFF). Although the former included an output-based financing mechanism, the latter was in the form of block grants not tied to performance. Health facilities, purposively selected on the basis of availability of manpower, equipment and provision of MCH services, were chosen to receive either PBF or DIFF.

Before the rollout of RBF, a ‘pre-pilot’ for designing a context-specific PBF intervention was started in three LGAs, one in each of the abovementioned states, in December 2012. Under the PBF scheme, health facilities received financial incentives quarterly based on the quantity and quality of MCH and related services provided. They had autonomy to utilize these funds for operational costs and bonus payments for individual health workers, with a ceiling of 50% of total funds for the latter (National Primary Health Care Development Agency 2012). Bonus payments were allocated to individual health workers using a structured method called the ‘indice tool’ which monitored performance (including attendance, punctuality, volume of work, patient’s interactions) of each staff member. In addition, it took into consideration cadre and seniority of a member.

Given the lack of consensus on the impact of PBF on health systems and on health worker motivation specifically, the objectives of this study are 2-fold (a) to document experiences of and understand changes in perceived motivation of health workers since the introduction of PBF and (b) to contrast experiences of health workers in a LGA that incorporated PBF and one that did not, to assess motivational effects and the linkages to underlying work environments. In doing so, it aims to contribute to the empirical evidence on effects of PBF on health worker motivation focusing particularly on how and why these changes took place; including underlying reasons for potential negative or lack of effects.

**Methods**

To obtain an in-depth understanding of perceptions of health workers about their working environment and its effects on their motivation, particularly with the introduction of PBF, a qualitative research design comparing health workers from two differing LGAs was followed, drawing on semi-structured interviews with health workers and district managers, triangulated with facility records.

The study is located in Nasarawa state, in the north-central geopolitical zone of Nigeria, which was purposively selected for the RBF project. This study was conducted amongst facilities (a)
in Wamba LGA, where PBF had been implemented for about 18 months since December 2012 as a pre-pilot (b) in Nasarawa-Egggon LGA, among facilities that had been selected for receiving block grants as a part of the larger RBF study to be started in 2014. Thus, while the two sets of facilities in this study were initially chosen based on the same criteria for the main RBF scheme, they were at different points of receiving intervention at the time of data collection. Thus, health workers from all 11 health facilities in Wamba LGA implementing PBF were interviewed. In order to understand and compare perceptions of health workers not associated with PBF, eight health facilities from an adjoining LGA with similar social characteristics, Nasarawa-Egggon, were also selected.

From each facility in Wamba, the officer-in-charge (OIC) and another experienced clinical provider most engaged with PBF were purposively selected, resulting in a total of 22 respondents. A similar approach of interviewing OIC and an experienced provider was planned for Nasarawa-Egggon; however, in most facilities only one health worker was available, resulting in 12 interviews being conducted till data saturation was achieved. In addition, key informants including LGA primary health care (PHC) coordinators from both LGAs, and state PBF project managers were also interviewed. The LGA PHC coordinator, as a part of PBF, is expected to verify quality of services provided at PBF facilities using a standardized checklist on a quarterly basis.

A semi-structured interview guide was prepared for these interviews, allowing respondents to talk freely and bring up different topics and themes (Bernard 2006). Motivation, in the work context, was defined as ‘willingness to exert and maintain an effort to succeed at work, achieve the organization’s goals or to help the team reach it’s goals’ (Franco et al. 2000). On the basis of Franco et al.’s (2002) motivational outcome framework, all health workers were asked to describe their level of excitement, pride, commitment, contribution and effort associated with work. Interviews with respondents from non-PBF facilities discussed their environment at work and sources of motivation and frustrations. Discussions with key informants revolved around their observations regarding changes in motivation and performance of health workers since PBF started.

Interviews were conducted at the health facilities in 2013 by a team of two researchers. In addition to digitally recording the interviews, field notes and reflexive diary entries were also written. All audio recordings were transcribed verbatim and additional notes maintained by researchers were appended to the transcript. Researchers collected basic administrative information from each facility including attendance from the staff roster and working conditions. Last, data from the PBF monitoring system on quantity and quality of services were also obtained.

Data were analysed using framework analysis to identify commonalities and differences to find relationships between different parts of data whereby seeking interpretations clustered around specific themes (Ward et al. 2013). Five steps in data analysis were performed (Pope et al. 2000; Gale et al. 2013) beginning with developing a priori codebook based on study objectives and modifying it to include emergent themes following an initial review of data. Both researchers conducted line-by-line coding, using Atlast, for a set of transcripts. Findings were discussed to merge different codes and create new ones to develop a working analytical framework, which was subsequently applied to remaining transcripts. Data were then charted in an excel matrix by summarizing them from each transcript under a given category. Finally, common and divergent themes were identified and mapped with other categories to look for relationships and explanations. For example, for a health worker reporting improvement in his efforts since PBF was introduced, connections were reviewed to his descriptions of changes in staff dynamics, working conditions and additional incentives. Data from the interviews were also triangulated with administrative data obtained from the facility and PBF monitoring system. This enabled researchers to assess differences in responses across different types of facilities.

The study was approved by the author’s institute. Each interview was conducted in a private setting after taking oral consent.

Results

The following section describes the results of the study including (a) characteristics of respondents (b) perceived changes in motivation since introduction of PBF noted by respondents (c) changes in work environment due to PBF that potentially underpin changes in motivation and (d) comparison of work environment in non-PBF LGAs.

Characteristics of respondents

A total of 34 health workers from both the PBF and non-PBF LGA, along with five key informants from the district and state government participated in the study (Table 1). Most health workers had been in the medical profession for at least 10 years and belonged to the communities they were posted in. A majority wanted to become health providers to ‘save lives’. A few were encouraged by family members to join, while some were enamored by health providers, particularly nurses for their neat uniforms, based on their positive experiences of receiving treatment. Among PBF facilities, only the OIC had received training on PBF.

Perceived changes in motivation since introduction of PBF

In line with Franco et al.’s conceptual model of outcomes of work motivation, health workers were asked to describe changes in their excitement, pride, commitment, contributions and effort levels since the introduction of PBF. Most responded by saying they had become more excited to come to work knowing that they had a good working environment and high patient turnover (Table 2).

Before during the rainy season, a whole week would go by and you would not see one patient but now every day you will find no lack of patients in this clinic so it shows that the work that we are doing is good and seeing people trooping inside into this clinic makes me feel happy (ID151, CHO/OIC)

Health workers were reportedly honoured on receiving recognition and respect not only from their communities but also more broadly. They ‘felt large’ working in the biggest or neatest or best-equipped facility. They were also proud of their own personal accomplishments and of gaining more knowledge as compared with their colleagues in non-PBF facilities.

The pride I have is because we are known, I can say all over the world because of this PBF, in the internet you get name of my facility (ID151, CHO/OIC)

They talked about being ‘awakened’ by PBF and reportedly become more punctual about coming to work as well as conscientious about ‘what was expected of them’. This was resonated in responses
Table 1. Characteristics of respondents

| Number | PBF | Non-PBF | Key informants | Total |
|--------|-----|---------|----------------|-------|
| Sex    |     |         |                |       |
| Female | 11  | 10      | 1              | 22    |
| Male   | 11  | 2       | 4              | 17    |
| Age    |     |         |                |       |
| Mean (SD) | 46 (7) | 39 (9) | 49 (5) | 44 (8) |
| Respondent Cadre |         |       |                |       |
| Nurse/Midwife | 5       | 5      | 10              |       |
| Community Health Officer | 3       | 1      | 4               |       |
| Community Health | 8       | 6      | 14              |       |
| Extension Worker |         |       |                |       |
| Junior Community | 3       | 3      | 3               |       |
| Health Extension Worker |         |       |                |       |
| Laboratory Technician | 3       | 3      | 3               |       |
| PBF Consultant/Manager | 5       | 5      | 10              |       |

Respondents considered that their colleagues were as committed to and proud of the work as them. They were having increased workload and making sacrifices of their family time.

Changes in working environment attributed to PBF by health workers

Respondents from PBF facilities talked about experiencing striking changes in their working conditions since the introduction of PBF including improved community response, staff dynamics, structural changes in the work environment, institutional changes in supervision and financial incentives, and increased workload (Table 3).

Positive community response

According to administrative records, PBF facilities in Wamba, on average, experienced nearly tripling of patient consultations for outpatient care (National Primary Health Care Development Agency 2012).

Respondents credited lowered cost of treatment, provision of new services, such as family planning and laboratory diagnostics, their efforts to carry out ‘social marketing’ of their services, plus the availability of drugs and better physical condition of their facilities to increased patient volume. They also gave additional incentives such as toys and clothes to pregnant women in order to encourage them to deliver at their facilities.

Increase in workload

Almost all health workers talked about experiencing a heavier workload than before. Their facilities had been upgraded to 24/7 centres, making them rotate in shifts to provide round-the-clock services. However, with only two or three clinical staff in a facility, they had to each do two longer hours and were displeased about having to sacrifice their family time. Improved facility conditions, intensified outreach campaigns and lower cost of treatment, resulted in significantly higher patient volumes. A programme manager at the LGA level described the increase in workload as follows:

Changes in staff dynamics

All health workers interviewed mentioned having cordial relations with their colleagues and ‘were part of the same family’. Most also considered that the project had made them a more efficient team, particularly due to increased frequency of meetings for developing strategies to improve quantity and quality of services. A couple of them were also more conscious of being a team player since the index tool assessed them on that criterion. Driven by the common objective of maximizing their earnings they joined hands to ease each other’s burden of work.
Table 2. Qualitative changes in perceptions of motivation among health workers in PBF facilities

| Thematic areas                                      | Examples                                                                 |
|----------------------------------------------------|--------------------------------------------------------------------------|
| Excitement with bonus payments, better working conditions and increased patient turnover | The first bonus that was given to us, every staff was really impressed because every staff solve his immediate problem with it and was happy with it and every staff have the enthusiasm that he want to work to earn more by next quarter (ID131, CHEW/OIC) |
| Pride in self-efficacy and receiving recognition    | I’ve really changed the place. The credit now comes back to me that yes I’ve changed this place during my times because this place was not as it is now (ID181, CHO/OIC) I am happy that my name doesn’t stop here that it is somewhere in the WHO and World Bank. I never knew that my name will even go to anywhere like this (ID121, CHEW/OIC) |
| Conscientiousness and hard work                    | Supervision has made us put in more effort everybody is challenging himself so to put in his best and also with the PBF program everybody wants to put in his best so that his services will be marketable (ID141, CHEW/OIC) Before some people they were not even care to come to work but with this program they know that if they didn’t come it will affect them in their own bonus too (ID151, CHO/OIC) |
| Level of commitment                                | Let me not exaggerate I think both myself and my staff, we are 100% committed because we are doing all our best to see that this PBF comes to succeed and its succeeding based on our performance (ID191, CHEW/OIC) My eagerness to come to work at every time shows I am 100% committed to this work (ID1102, JCHEW) |
| Burn out and personal sacrifices                   | I have no time for my family because I am always here so I am more committed to this work (ID1102, JCHEW) Sometimes I think I should go back or resign because of the workload (ID172, Nurse) |

Now even though we know that everybody has his own section but if you are less busy and there is work in another section, we work together, so we work as a team now than before (ID151, CHO/OIC)

Another reason for the increased cohesiveness narrated by a few health workers was the fact that they now had a central bank account for the facility and every transaction was duly reported. This prevented the prior practice of opportunistic sales of drugs by some workers, usually OICs.

(Before) we do our treatment the money goes to our OIC, the OIC will pocket the money quietly, the subordinate will just be there like machine working for the OIC, but the coming of the PBF that one is cancelled. Whatever is got its for the clinic and its for all of us (ID142, Lab technologist)

**Reinforced supervision and monitoring**

The most notable changes experienced by respondents regarding external supervision were its frequency and intensity. Supervisors from the Local Government Primary Health Care Department were reported to visit these facilities on a monthly basis and used a structured supervisory checklist. They assessed structural quality components and treatment protocols followed by the staff. Given that the scores received on the checklist contributed towards determining bonus amounts, health workers considered this process to be vital to their success in the programme. They felt constantly monitored but were happy about the ‘supportive’ nature of the newly reinforced supervision. They also attributed putting in more effort to improve working conditions, particularly cleaning and disinfecting their facilities, to regular supervision.

Then they will grade it (checklist) and at the end they will total the points then divide it, by their own format which I don’t know, then give us the percentage. If we are improving we’ll see it with our eyes, if we are not improving then we will wake up. (ID1101, CHEW/OIC)

Respondents also discussed how receiving supervision from officials in higher authorities, particularly from Abuja, was a matter of pride for them. In addition, one health worker was also conscious of counter verification efforts to be conducted by the state government. She talked about being more careful while treating her patients knowing that they could be part of the project’s client satisfaction surveys.

(we have to be careful how we relate to the client because there will be a time when they will be assessed to know how were they treated in the facility so we have to take care to treat them ok so that when interview is being asked on them they will give us a positive feedback. (ID171, Nurse/OIC)

**Relations with local/state government and enhanced autonomy**

A few OICs also talked about having greater autonomy to purchase drugs or repair their facilities. They could decide, in consultation with their communities and without interference from LGA, how to spend PBF funds to further upgrade their facilities. Some even hired voluntary workers, both clinical and non-clinical, out of their bonus payments to manage increased demand though most relied on the state government for formal recruitment of additional manpower.

PBF made us autonomous, yes, we don’t depend on the LGA and what is coming to us they have nothing to do with it. It is only the clinic and the community because we manage the clinic and provide things that will help the community. (ID151, CHO/OIC)
Table 3. Perceptions of working environment among health workers in PBF and non-PBF facilities

| Thematic areas                              | Examples from                                                                 |
|---------------------------------------------|-------------------------------------------------------------------------------|
| **Structural environment: Drugs, equipment and infrastructure** | Before it was only one consultation room, one store but now see we have one, two, three consultation rooms and a lab so we constructed these with the help of the PBF (ID122, CHEW) |
|                                             | If an adult enters here most of them they want to take their BP and then you will lack what to do, you will just look stupid like that (ID221, CHEW/OIC) |
| **Salaries and financial incentives**       | Whenever the money (bonus) comes there is so much joy, you would even think they not receiving salaries because of the joy that comes with it (ID182, Lab technologist) |
|                                             | It (salary) doesn’t come on time and it’s not even enough though money can never be enough for human being but this one is too small. (ID242, Nurse) |
| **Relations with co-workers**               | Before everybody was working on his own, if I have my drugs I give to my patient and I put the money inside my pocket (ID111, CHEW/OIC) |
|                                             | We don’t have problem.you know even teeth and tongue they bite but they stay together so if we have problems we tackle it within ourselves (ID261, CHEW) |
| **Supervision**                             | Before we rarely have supervision by the local government but as of now with the PBF it is more strict and more frequent because they have to monitor the activities of this program and in fact their supervision helps to discover weakness and progress on the work (ID1101, CHEW/OIC) |
|                                             | When they do come they normally have check list that they do fill the information in and the supervision used to be okay, they have to know the number of patients seen, and notifying conditions like measles, cholera (ID242, Nurse) |
| **Community participation**                 | In this program we are giving (them) incentives ... we go to the market to buy small, small clothes. If a woman attends ante-natal clinic and comes back to deliver we give her incentives (ID161, Midwife/OIC) |
|                                             | There is this belief in the community that they don’t want to give birth in the clinic because they are used to it in fore fathers time and some of them are afraid of a token amount that are being charged like, the soap that is used in washing one or two things when they are here present. So that token amount and other materials and items discourage them from coming to the clinic but meanwhile some come but not all of them. (ID241, CHEW/OIC) |
| **Shortage of health workers**              | If we are enough staff, we can run at least three shifts, patients will come here and meet us. You know sometimes in the night because of lack of staff the patient will come in and not meet anybody, they will have to go to our houses (ID191, CHEW/OIC) |
|                                             | The challenge is that we don’t have adequate staff and the most problem that I am having right now, we have only one staff for night duty. Once if that staff is sick o his family is down or he has a burial then that shift is being shaken and have to make some arrangement and its not really sweet (ID211, CHO/OIC) |
| **Record keeping**                          | Before the PBF started the work wasn’t that much because we didn’t even keep records, when we treat and discharge the patient we just file the card, we don’t write the records like in the OPD registers. We didn’t even have the registers, you see, that was how it was before. (ID112, JCHEW) |
| **Patient Volume**                          | Sometimes the statistics will not be done at the stipulated time because too much work, truly this place we have so many registers. We have so many NGOs so everyone will like to get his own report (ID212, Nurse) |
| **Autonomy**                                | When we record patients in November, they were not up to ten but now I’m telling you from this month we have more than 100 patients and we are receiving those from other clinics, you know we are serving the whole ward (ID111, CHEW/OIC) |
|                                             | Sometimes depends on the weather, like now only yesterday we didn’t get patients but from last week we get about 10 or 11 people. Sometimes in the night is the problem, there’s nobody in the night. (ID281, CHEW/OIC) |
|                                             | They (LGA) will just promise us that they will come and repair it (generator) but up till now since last year they use to promise us but up till now we no see any sign of repairing (ID271, CHEW) |
Additional bonus payments

Although respondents did not rank performance bonuses as the most significant change brought about by the programme; each one described the effects of that change in their work. Most were very happy receiving additional payments and considered it to boost their morale, bring them joy, and allow them to take care of their families. These bonuses were reported to motivate them to work harder and become more punctual.

*If you want more money, work as much as possible, if you don’t want money, then you can sit at home...that’s how we have been doing*  
*(ID121, CHEW/OIC)*

*It motivates us a lot because the money helps us in many ways so most of the staff are putting more efforts and dedication to their duty*  
*(ID1101, CHEW/OIC)*

Bonus payments were calculated based on a performance evaluation framework called the indice tool. Each health worker was scored monthly against varied criteria including attendance, punctuality, workload, behaviour towards patients and colleagues. Most seemed to be content with the evaluation criteria and amount received relative to both their own inputs and their co-workers’ though sharing of bonus reportedly introduced a sense of healthy competition among them.

*Everybody knows his indice and what is expected. This thing is based on your work and performance, you could be a senior staff but a junior staff can earn higher than the senior ones because of the extra duties they perform*  
*(ID161, Midwife/OIC)*

However, respondents from one high performing facility thought the bonuses were not sufficient given the increased workload. Another interviewee considered that the amount was not substantial as compared with her usual salary. The state programme manager also confirmed that a recent raise in salaries of some cadres made the relative share of bonuses lower. A couple of OICs thought the indice tool was not favourable to junior and non-clinical staff and feared that they might quit or fail to function effectively. They argued that since everyone was working together to maximize payoffs, they were reluctant to work throughout and sometimes you get tired that you cannot even perform again  
*(ID191, CHEW/OIC)*

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*We are only about 2 or 3 trained staff here, so we cannot even run shifts, sometimes we come in the morning and you will have to work throughout and sometimes you get tired that you cannot even perform again.*  
*(ID1101, CHEW/OIC)*

Improved working environment

At least half of all respondents considered improvements in physical working conditions to be the most crucial change with the introduction of PBF. From ‘having nothing but a dilapidated structure which acted like a consulting unit’ they boasted of functional, newly renovated and furnished facilities stocked with required drugs and equipment. In addition, many facilities were also able to construct toilets, waste disposal pits, boreholes and in one case even residential quarters for staff. These improvements in their working conditions had a positive influence on their morale and ability to help communities.

*These changes in fact is giving us great job satisfaction and everybody is trying to see that he puts in his best. Without some of these structures you find out that sometimes you see a patient, but you are reluctant*  
*(ID151, CHO/OIC)*

Experiences of health workers at non-PBF facilities: key differences

Health workers from non-PBF facilities were also asked to describe motivating attributes of their working environment. The main differences between PBF and non-PBF, as described in Table 2, highlighted by health workers included lack of basic equipment, particularly for conducting deliveries and laboratory investigations, essential drugs and physical infrastructure. They usually prescribed drugs to patients who were expected to buy them from local vendors. Lack of basic drugs appeared to be the most significant demotivating factor, making respondents feel helpless about providing treatment to their patients. They considered this inability to provide cheaper treatment a reason for low utilization of their services. This response was emphatically different from those in PBF facilities wherein drugs were in sufficient supply and patient flow was ample.

They were disappointed with the support from the LGA for improving their working conditions but were aware that the

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However, respondents from one high performing facility thought the bonuses were not sufficient given the increased workload. Another interviewee considered that the amount was not substantial as compared with her usual salary. The state programme manager also confirmed that a recent raise in salaries of some cadres made the relative share of bonuses lower. A couple of OICs thought the indice tool was not favourable to junior and non-clinical staff and feared that they might quit or fail to function effectively. They argued that since everyone was working together to maximize payoffs, they were reluctant to work throughout and sometimes you get tired that you cannot even perform again  
*(ID191, CHEW/OIC)*

*If you want more money, work as much as possible, if you don’t want money, then you can sit at home...that’s how we have been doing*  
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*(ID151, CHO/OIC)*

Experiences of health workers at non-PBF facilities: key differences

Health workers from non-PBF facilities were also asked to describe motivating attributes of their working environment. The main differences between PBF and non-PBF, as described in Table 2, highlighted by health workers included lack of basic equipment, particularly for conducting deliveries and laboratory investigations, essential drugs and physical infrastructure. They usually prescribed drugs to patients who were expected to buy them from local vendors. Lack of basic drugs appeared to be the most significant demotivating factor, making respondents feel helpless about providing treatment to their patients. They considered this inability to provide cheaper treatment a reason for low utilization of their services. This response was emphatically different from those in PBF facilities wherein drugs were in sufficient supply and patient flow was ample.

They were disappointed with the support from the LGA for improving their working conditions but were aware that the
LGA also lacked financial resources to help them. For example, while a few facilities mentioned having a drug revolving fund, initially supported by the local government, most did not. A few health workers talked about being satisfied by their salaries, but most did not feel that they were ‘being given motivation in terms of money’, particularly for serving in remote areas. They resorted to their own means of motivating each other by providing small incentives such as meals, beverages and the like. In one particular health facility, the OIC had devised a system of sharing any surplus left from the drug revolving fund equally to her staff to motivate them. These cases were also clearly different from their counterparts in PBF facilities who spoke favourably about support received from the LGA and about receiving additional financial incentives as described earlier.

On the other hand, health workers in non-PBF facilities also reported to have cordial relationships with their co-workers whereby they supported each other and resolved their differences in an amicable way. However, lack of punctuality was often cited as the cause for friction. They received supervision, either on a monthly or quarterly basis, from different agencies such as the local government, state-led disease-specific programmes and Non-governmental Organisations. A couple of them mentioned the use of a checklist for disease-specific supervision activities. Respondents seemed content with the supervision they received though they did not mention any motivating effects. Similar to their colleagues in PBF facilities, these health workers also unanimously complained about the dearth of skilled providers preventing them from running shifts and dealing with the patient load.

Discussion

This study aimed at understanding how and why health workers’ perceptions about work environment and motivation changed as a result of a PBF scheme. Those receiving PBF payments reported to be ‘awakened’ by performance bonuses and improved working environments including routine supportive supervision and availability of essential drugs. They recounted being more punctual, hard working, committed and proud of providing better services to their communities and being recognized for it. Supervisors of the PBF project also considered a change in the attitudes of these health workers who had become more self-sufficient and diligent. In comparison, health workers in non-PBF facilities complained about the dearth of basic drugs and equipment and lack of motivating strategies or additional allowances. However, health workers from both sets of facilities considered there to be a severe shortage of manpower resulting in excessive workload, fatigue and general dissatisfaction.

These findings are drawn from only one out of the three pilot PBF districts. Although the selected district is the average performer of the three, it excludes perceptions of health workers from extreme ends of the spectrum. However, monetary and time constraints, along with security conditions in certain parts of the country, did not allow for a larger study sample. Additionally, respondents were contacted through the LGA PHC department given this was the official way to reach them. Moreover, respondents were also aware that they were participating in an analytical study under the PBF project funded by the World Bank. Hence, potential of social desirability bias in their responses cannot be ruled out. However, wherever possible, responses were triangulated with interviews by other co-workers and managers, as well as administrative data to counteract this possible bias. Despite these limitations, our findings can help elucidate certain aspects of how PBF affects motivation by changing work environments.

Does PBF affect motivation through purely extrinsic means?

Several theories in organizational psychology support the notion that PBF could influence motivation of health workers. For example, Maslow’s Hierarchy of Needs theory (Maslow 1954) suggests that by providing financial incentives that meet a worker’s basic needs (Agyepong 2004; Joint Learning Initiative 2004; Willis-Shattuck et al. 2008; Chandler et al. 2009; Akwataghibe et al. 2013), PBF could indeed have a motivating potential. Other theories such as Cognitive Evaluation Theory and Self-Determination Theory (deCharms 1968; Deci and Ryan 1985), caution that while PBF could enhance extrinsic motivation it can also reduce intrinsic rewards which are in the form of satisfaction from the content of the job itself (deCharms 1968). In line with these theories and existing empirical evidence, the ‘PBF package’ indeed appeared to improve perceived extrinsic motivation of health workers in Wamba, Nigeria (deCharms 1968; Gagné and Deci 2005; Soeters et al. 2006; Kalk et al. 2010; Bertone and Meesen 2013; Population Council 2013).

However, it is essential to note that it was not only individual bonus payments but also non-financial factors namely improved working conditions, including a more cohesive team, opportunities to enhance skills, reinforced supervision and recognition from the community that led them to reportedly work harder and qualitatively better. Non-financial incentives have been found to be significant in motivating health workers in Nigeria (Bhatnagar 2014). It also supports the notion that design of PBF is crucial and depends on a number of complementary factors (Oxman and Fretham 2009). A key distinction in responses between health workers in PBF and non-PBF facilities, despite the latter reportedly receiving regular supervision was the fact that supervision in PBF facilities resulted in performance feedback tied to incentives. Rigorous quantitative methods can be used to further develop and test hypothesis about the impact of monetary ‘incentives’ vs other effects (resources/supervision) of the PBF package on motivation of health workers.

Health workers perceived changes in the sense of belonging to their respective health facility, recognition they received for being a part of it and pride in its overall improvement. They also thought working relationships with their co-workers had become stronger and more energetic with the common goal of maximizing bonus payments both for themselves but also their facilities. In addition, a majority also considered the distribution of bonus to be fair relative to their position and amount of effort. These are important findings, particularly from organizational citizenship and justice perspectives. These organizational determinants have been found to be associated with improved job satisfaction of health workers and overall organizational effectiveness (Podsakoff et al. 1997; McAuliffe et al. 2009). In addition, a few studies have also established a positive relationship between PBF and organizational citizenship though they are based in other fields and developed countries (Hui et al. 2013). As the PBF in Nigeria scales up, further research on such issues could provide a deeper understanding of these organizational dynamics.

Is PBF as relevant or powerful within the Nigerian context?

A study on coping strategies of health workers from Nigeria shows that, despite having higher salaries as compared with other public
civil servants, health workers faced substantial income-expenditure mismatch resulting in them ‘illegally’ selling drugs and medical equipment (Akwataghibe et al. 2013). Based on findings from this study, a few considered the absolute bonus amount to be small relative to their salaries and efforts. Although the PBF programme reportedly replaced the opportunistic sale of drugs, one can question whether bonus payments are adequately making up for their coping strategies. A key informant considered this to be a concern particularly for senior staff, whose salaries had recently been increased, as they were relinquishing additional income of selling drugs on their own. Programme designers and managers need to monitor distribution of individual bonus payments closely in order to prevent health workers from losing interest or ‘gaming’. In addition, the size of the incentive required to bring about the desired change in behaviour needs to be studied in greater detail (Oxman and Fretheim 2009).

Such programmes also need to be aligned with human resource reforms including timely recruitment and appropriate distribution of skilled health workers to prevent burn out and attrition. The embargo on recruitment, skewed distribution amongst the active work-force and abrupt changes in government salary structures could be potential pitfalls. Since excessive workload was a common complaint, PBF planners need to be mindful of the ‘double-bind’ phenomenon in which time taken for record keeping could conflict with attending to patients (Magrath and Nichter 2012). In the absence of new recruitment, programme managers could provide additional trainings to health workers, particularly non-OICs, to manage record keeping more efficiently.

Based on lessons learnt from other settings (Witter et al. 2011; Sengooba et al. 2012), planners and policy makers in Nigeria need to be cognizant about effects of delays in payment and inconsistent design of PBF on health worker motivation and performance. Most health workers were dismayed by the reduction in their bonus amounts due to an unexpected, mid-point change of prices of their services and agitated by delays in payments. Although the study was conducted during the pilot phase, as PBF scales-up, policy makers should be coherent about its design and timely implementation.

Conclusion

PBF strategies can be successful in motivating health workers by bringing about a change in incentive schemes and working conditions. In addition, changes in intensity and nature of supervision and staff dynamics also contribute towards encouraging health workers to put in their best efforts. However, scope of PBF may not be sufficient to solve outstanding structural constraints and needs to be aligned with other health systems reforms to improve health worker motivation and performance. As people working on the frontline of constrained health systems, health workers are responsive to improved incentives and working conditions, but need more comprehensive and consistent support.

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Conflict of interest statement. None declared.

Ethical clearance

The study was approved by the Institutional Review Board at Johns Hopkins School of Public Health, USA and the National Health Research Ethics Committee, Nigeria.

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