

## EVALUATION OF PERFORMANCE BASED FINANCING PRACTICES AMONG HEALTH WORKERS IN NIGERIA

**Saka Mohammed Jimoh**

*Department of Epidemiology and Community Health Faculty of Clinical Sciences, College  
of Health Sciences, University of Ilorin, Nigeria  
Email: sakamj1@yahoo.com*

**Dennis Egga Kudu**

*Nasarawa State Ministry of Health, Nigeria*

**Ige Elisha Taiye**

*Department of Epidemiology and Community Health Faculty of Clinical Sciences, College  
of Health Sciences, University of Ilorin, Nigeria*

### Abstract

*Performance Based Financing (PBF) is an approach to health financing that shifts attention from inputs to outputs, and eventually to the outcomes of health services. The study evaluated the health workers' knowledge, attitude, practice, quality of health care, motivation, infrastructural development as well as addressing the shortage of health work force. A descriptive cross sectional study was conducted among 315 health workers in Nigeria. The majority of the respondents demonstrated good knowledge, however, there was a statistically significant difference in the knowledge of the respondents in the primary health facilities in terms of their age groups. More than half of the respondents agreed strongly that PBF makes them more proactive in carrying out their daily duties with patient's satisfaction. Qualitative analysis showed that the carrot-stick approach in PBF was a real motivator, the carrot was the bonus (incentives) given or withholding to the health workers for good or poor quality service provided. Most of health workers stayed later than closing time to ensure the health services are provided. On infrastructural development, well-constructed and maintained incinerator for waste disposal and running water were installed at all of the health facilities among many other infrastructures. Also, more health workers were employed including laboratory technicians.*

**Keywords:** *Performance, Evaluation, PBF, Health Workers, Nigeria*

## Introduction

For any organization, profit or nonprofit, its existence depends on the preset performance targets and with the highest possible quality standards. The performance of a task is judged against pre-determined and well-understood standards of accuracy, completeness, cost, and speed. In a contract, performance is defined as the fulfillment of an obligation in a way that relieves the performer of contractual obligations (Upadhaya, Munir, & Blount, 2014). However, the mission of most organizations including healthcare providers is high performance of the work force along with delivering high quality service. Healthcare is the maintenance or improvement of health through diagnosis, treatment, prevention of disease, illness, injury and other physical and mental impairments in human beings. Health professionals (providers and practitioners) in the fields of dentistry, midwifery, nursing, pharmacy, psychology, and other health professions provide healthcare services. It also includes the provision of primary, secondary, and tertiary healthcare, as well as public health services (WHO, 2013). The operation of the health system services varies from country to country. However, a strong financial mechanism, a well-trained and suitably compensated personnel, trustworthy data on which to base decisions and policies, and well-maintained facilities and logistics to supply quality medications and technology are the bedrock of any country's health system implementation (WHO, 2013).

The healthcare financing system is a process in which revenues are allocated from primary and secondary sources, such as out-of-pocket payments (OOP), indirect and direct taxes, donor funding, co-payments, voluntary repayments, and mandatory repayments, and accumulated in fund pools to share risk across large

population groups, with the revenues being used to purchase goods and services from public and private providers for identified population needs, such as healthcare (Carrin, Evans, & Xu, 2007). The manner in which a country finances its healthcare system is a key factor in achieving universal health coverage (Uzochukwu et al., 2015).

The transmission of money or material commodities conditional on executing a quantifiable action or meeting a predefined performance target is known as performance-based financing (PBF). It is a health-system strategy that focuses on outcomes, which are defined as the quantity and quality of service outputs (Unger & Killingsworth, 1986). This strategy comprises establishing health institutions as autonomous bodies dedicated to achieving health-related objectives. Multiple performance frameworks for regulatory responsibilities, the performance buying agency, and community empowerment are also included. PBF uses market forces but strives to address market failings in order to achieve health gains, while also aiming for cost control and a long-term mix of revenues from cost recovery, government, and international contributions (Unger & Killingsworth, 1986). PBF is a flexible approach that continuously seeks to improve through empirical research and rigorous impact evaluations which lead to best practices (Soeters et al., 2011).

The study seeks to evaluate knowledge attitude, practice, quality of healthcare services motivational and challenges with the implementation of performance-based financing among healthcare workers in primary and secondary health facilities in Nasarawa State in Nigeria. The study aimed to contribute to the body of knowledge on health care financing and to stimulate intellectual discussion by policy makers on long-term viability

and sustainability. Ultimately, for possible nationwide adoption of the performance-based financing as an alternative to health financing in Sub-Saharan Africa.

**Literature review**  
**Health Service Packages: Complementary Package of Activities**

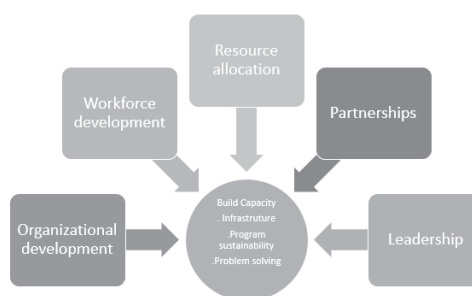
The PBF health service packages are carefully designed to respond to health problems facing the Nigerian population. PBF is an innovative, results-oriented method that rewards providers for meeting pre-determined, measurable performance goals. Financial compensation and public recognition are examples of incentives. Similar incentives might be utilized to encourage community members to use the health facility's services. For example, diapers may be given to mothers who give birth in a health facility or food stuff to patients who have completed a full course of tuberculosis treatment. PBF can increase the quality of healthcare services while also stabilizing or lowering their costs, assisting in the efficient use of limited resources, encouraging community participation, and improving employee motivation, morale, and retention (Gish, 1982).

The performance-based finance was pioneered in nations such as Cambodia, Rwanda and Burundi to extraordinarily good consequences; several other countries such as Zambia, Cameroon, Zimbabwe, and Nigeria have explored the method, Performance-based financing is helping generate better, more inclusive and more accessible health services, it is a crucial component of achieving universal health coverage (WHO, 2010). The PBF and universal health coverage are connected in three key areas. These categories include (a) establishing basic and complementary health-care packages, (b) expanding health-care coverage for

the general public, especially the poorest, and (c) boosting access to high-quality health-care services.

**Capacity Building to improving quality in Performance-Based Financing**

Low-income countries' healthcare systems are frequently hampered by reasons such as a poorly qualified health workers and a lack of suitable facilities, among others (Zeitzi et al., 1993). People, institutions, and legal frameworks interact systematically to mobilize and allocate resources for health management, prevention, and care of diseases, illnesses, and injuries, which affects health workers' and infrastructure capability. Individuals and organizations' capacity is described as their ability to perform functions effectively, efficiently, and sustainably (UNDP, 2008). Capacity building is defined by some authorities as "the development of long-term skills, structures, resources, and commitment for change in health and other sectors" (NSW, 2001). Individuals, groups, teams, organizations, inter-organizational coalitions, and communities can all benefit from capacity building activities (Bush, 1999).



**FIGURE 1. CAPACITY BUILDING FRAMEWORK**

### **Organizational development in capacity building for PBF**

This refers to the procedures and practices which guarantee that an organization's structures, rules, systems, procedures, and practices are aligned with its goals, values, and mission in order to effectively manage change. A learning organization is one that focuses on adopting new ways of functioning in order to respond to changes in strategic orientations. The PBF instituted many organizational policies and framework in the management of health care facilities, most of which are until now, alien to healthcare sectors in Nigeria: The concept includes but not limited to the following:

- a. Concept of business plan.
- b. Measurement and verification of quality.
- c. Health facility autonomy and governance: accountability and facility specific drug revolving fund.
- d. Health facility finance management and indices tool.
- e. Health worker incentivized motivation in form of bonus payment.

### **Workforce development in capacity building for PBF**

Workforce development can be defined as a process that is initiated within a firm and communities in accordance with the system's defined strategic priorities for ensuring that the people who work in these systems have the skills and commitment to contribute significantly to community and organizational goals. Within companies and communities, the term "workforce" refers to both paid and unpaid employees. At the starting up of PBF program, all the facilities managers were trained on implementation modalities and guidelines for successful operation and implementation of PBF in all the

facilities.

For the implementation of PBF, skilled midwives are posted in specialized units such as antenatal care and delivery wards. However, where skilled midwives are unavailable or in inadequate numbers, the facility has the autonomy to employ the required workforce, if the it can afford it. Resources are scarce and always will be, and according to Maslow as one need is met, more would arise to be met. Only prudent allocation of scarce resources based on the needs.

### **Resource allocation in capacity building for PBF**

Resources allocation is primarily concerned with the efficient use of resources and can be thought of as an economic process, not only a planning process (Deeble, 1999). It necessitates both technical and allocative efficiency to ensure that the mix of goods and resources yields the greatest benefit to society. 'Resources' refers to the materials required to run a program. People, physical space, administrative support, planning tools, and financial help are all included. It can also incorporate 'in kind' allocation commitments from inter-organizational groupings or partners. The availability and long-term viability of resources is frequently a deciding factor in whether or not a program is launched or sustained.

During the PBF implementation, the initial lump sum is given to health facilities which have subdivided infrastructure and other areas. For instance, 50% of the money is allocated for infrastructural development, for example, painting walls, mending leaks etc. or purchasing computers and other equipment either the operations theater, laboratory, labor ward or wherever such new equipment is required, while the remaining half is used as Drug Revolving Fund.

## **Leadership development as capacity building**

It is a function of training, experience and personality of people in an organization. There are indeed a plethora of theories of leadership, however, none may be sufficient in all circumstances, as an amalgamation of theory depends on the prevailing circumstances. Within a capacity building approach, healthcare workers seek to foster the characteristics of leadership within programs and across organizations by developing and building leadership qualities in themselves and others. Building and improving the leadership skills of healthcare managers at different levels of the healthcare system is the hallmark of PBF so as to enable it to make plans and develop strategies.

## **Partnership**

There has been a rising development of international partnerships with peer to peer support for improvement in health care (Pekka & Jeffrey, 2017) as such formation and maintenance of partnership is an integral part of the PBF program. Some of partnership groups are the community, the patients themselves, implementing partners, local government health authorities and the states ministries of health and among healthcare facilities. The outcomes of these partnerships could be in the form of shared goals, relation, planning and implementation, monitoring and evaluation of sustained outcomes. In general, the survival of any organization depends upon its capacity to provide intended goods and/or services for which it was established. This is even significant in the healthcare sector. The health sector needs to have the capacity (human and material resources) to provide quality healthcare service to the population. Incapacity in one domain, either human

or material, invalidates the other. The best-trained worker is only as good as the tool available to them and vice versa.

## **Methodology**

This study was carried out in Nasarawa State, North Central Nigeria. Nasarawa was carved out of old Plateau state on October 1, 1996 with Lafia as its capital. It is located at coordinates and has 13 local government areas. It has a population of 2,040,112 (2006 Census) and a total area of 27,117 km<sup>2</sup>. Nasarawa is bounded in the north by Kaduna state, in the west by the Abuja Federal Capital Territory, in the south by Kogi and Benue states and in the east by Taraba and Plateau states. Due to proximity to the Federal Capital Abuja, there are varied ethnic groups from all over the country. Major ethnic groups are Eggon, Alago, Gwari, Mada and Hausa-Fulani. The state is reputed to have large deposits of solid minerals such as salt, barite, and bauxite mined largely in small scale, often illegally. Agriculture is the mainstay of the economy as the population is involved largely in subsistence farming.

Nasarawa state has two tertiary hospitals, Dalhatu Araf Specialist Hospital, Lafia and Federal Medical Center, Keffi, 17 General Hospitals (twelve of which operate Performance-based financing), 728 PHCs (235 are PBF sites) and tens of private hospitals, maternities and clinics (there 14 PBF private sites). All general hospitals in Nasarawa state implement some form of performance-based financing as one of the three pilot states. In the same vein, at least one primary healthcare center per ward in each LGA implements the same program.

The study design is a descriptive cross-sectional survey using both qualitative and quantitative methods through structured questionnaires and key

informant interviews. The study population were all categories and cadres of healthcare workers in public primary and secondary health facilities that implement the performance-based financing program. Healthcare workers in tertiary or private healthcare and public health workers in facilities not implement the PBF program were excluded.

In order to avoid selection systems, bias multistage sampling technique was used to select 315 respondents. In stage 1, two local government areas (LGA) were selected by balloting from each of the three senatorial districts. In stage 2, from each of the selected local government area level one secondary health facility was randomly selected by balloting (where there were more than one of such in the LGA but where there was only one, that one was taken). Stage 3, at the ward level. Two wards were randomly selected by balloting and since each ward had one PHC implementing PBF; it was chosen as such. In stage 4, in each of the selected health facilities, respondents were selected by simple random sampling to whom questionnaires were administered until the sample size was attained.

However, eight key interviewees, four each from primary and secondary health facilities heads were purposively chosen from the selected study site to which key informant interviews were conducted. Two instruments were used for data collection in this study: An interviewer-administered structured questionnaire containing 37-item and 6-item questions for Key Informant Interview (KII). The questionnaires were administered to all categories of staff while KIIs were conducted with the heads of the facilities or at least a management staff member. Research assistants were recruited and trained on the skills of conducting the interview, the importance

of informed consent and other social skills. Key Informant Interviews were conducted by the researcher himself in English, three were done face-face and five were conducted through telephone. The KIIs were recorded using a phone with recording capability and then transcribed. A structured interviewer's administered questionnaires were administered to selected healthcare workers in selected primary and secondary healthcare facilities in Nasarawa. The questionnaire was developed to capture all of the study objectives.

In order to properly evaluate the health worker on performance-based financing, the knowledge questions were developed, scored and graded. There were nine question items in the knowledge section of the questionnaires; score of 1 was allocated to each correct answer and zero for each incorrect response. The Likert scale (5-0) was used to assess the attitude of respondents towards PBF; 5 represents a very good attitude while 0 represents a very poor attitude. The Attitude Section contained 11 questions. The cumulative is cross tabulated using chi square statistics to determine the difference or association between variables of interest. The Practice Section contained 11 questions. A "yes" response scored 1 point and a "no" response scored 0. The test of validity and reliability was conducted on the tool.

The questionnaires were retrieved, checked for completeness, clean code and edited using a computer. The data from structured questionnaires were analyzed using Statistical Package for Social Sciences Version 20 (SPSS) software. For key informant interviews, the audio recordings were transcribed and classified into relevant main and sub teams. Frequency tables, simple percentages, bar and pie charts were used to present descriptive statistics. Cross tabulation of important variables was done. Chi

square test was used to determine significance of differences or associations of variables of interest at p-value >0.05.

## Results and Findings

**TABLE 1: RELATIONSHIP BETWEEN SOCIO-DEMOGRAPHIC VARIABLES AND LEVEL OF KNOWLEDGE OF RESPONDENTS**

Variables	Knowledge					$\chi^2/\rho$
	Primary (%)		$\chi^2/\rho$	Secondary (%)		
	Poor	Good		Poor	Good	
<b>Age Groups</b>			16.042/ <b>0.014</b>			25.062/ <b>0.001</b>
≤ 24	12 (30.0)	28 (70.0)		1 (50.0)	1 (50.0)	
25 – 29	3 (5.5)	52 (94.5)		2 (10.5)	17 (89.5)	
30 – 34	7 (12.7)	48 (87.3)		0 (0.0)	38 (100.0)	
35 – 39	3 (7.5)	37 (92.5)		0 (0.0)	35 (100.0)	
40 – 44	0 (0.0)	2 (100.0)		4 (9.5)	38 (90.5)	
45 – 49	0 (0.0)	5 (100.0)		0 (0.0)	30 (100.0)	
50 – 54	0 (0.0)	0 (0.0)		0 (0.0)	29 (100.0)	
≥ 55	0 (0.0)	3 (100.0)		0 (0.0)	5 (100.0)	
<b>Gender</b>			0.562/ 0.453			9.422/ <b>0.002</b>
Male	10 (10.6)	84 (89.4)		0 (0.0)	113 (100.0)	
Female	15 (14.2)	91 (85.8)		7 (8.0)	80 (92.0)	
<b>Level of education</b>			19.603/ <b>0.001</b>			75.544/ <b>&lt; 0.001</b>
Primary	0 (0.0)	7 (100.0)		2 (25.0)	6 (75.0)	
Secondary	4 (66.7)	2 (33.3)		0 (0.0)	27 (100.0)	
CHEW	13 (8.3)	33 (91.7)		3 (75.0)	1 (25.0)	
CHO	5 (8.2)	56 (91.8)		0 (0.0)	2 (100.0)	
Diploma	0 (0.0)	3 (100.0)		2 (2.3)	84 (97.7)	
First degree	0 (0.0)	3 (100.0)		0 (0.0)	47 (100.0)	
Post graduate	0 (0.0)	0 (0.0)		0 (0.0)	26 (100.0)	
<b>Type of employment</b>			4.208/ <b>0.040</b>			9.959/ <b>0.002</b>
Permanent	6 (7.0)	80 (93.0)		2 (12.5)	175 (87.5)	
Volunteer	19	95		5 (11.1)	40 (88.9)	
<b>Category of staff</b>			3.929/ <b>0.047</b>			2.615/ 0.106
Management	5 (6.6)	71 (93.4)		0 (0.0)	53 (100.0)	
Non-management	20 (16.1)	104 (83.9)		7 (4.8)	140 (95.2)	

There was a statistically significant difference in the knowledge of the respondents in primary health facilities in terms of their age groups as all of them were above the age of 39 and had good knowledge. A significant number of

the male respondents had good knowledge in both primary and secondary health facilities. Male respondents, 100% have been identified as the major contributors to good knowledge among the respondents in secondary health facilities.

**TABLE 2. ASSOCIATION BETWEEN SOCIO-DEMOGRAPHIC CHARACTERISTICS AND ATTITUDE TOWARDS PBF**

Variables	Attitude					
	Primary (%)		$\chi^2/\rho$	Secondary (%)		$\chi^2/\rho$
	Poor	Good		Poor	Good	
<b>Age Groups</b>						
≤ 24	0 (0.0)	40(100.0)	5.326/ 0.503	0 (0.0)	2 (100.0)	7.454/ 0.383
25 – 29	2 (3.6)	53 (96.4)		0 (0.0)	19 (100.0)	
30 – 34	0 (0.0)	55(100.0)		2 (5.3)	36 (94.7)	
35 – 39	0 (0.0)	40(100.0)		4 (11.4)	31 (88.6)	
40 – 44	0 (0.0)	2 (100.0)		4 (9.5)	38 (90.5)	
45 – 49	0 (0.0)	5 (100.0)		2 (6.7)	28 (93.3)	
50 – 54	0 (0.0)	0 (0.0)		2 (6.9)	27 (93.1)	
≥ 55	0 (0.0)	3 (100.0)		0 (0.0)	5 (100.0)	
<b>Gender</b>						
Male	1 (1.1)	93 (98.9)	0.007/ 0.932	6 (5.3)	107 (94.7)	1.140/ 0.286
Female	1 (0.9)	105(99.1)		8 (9.2)	79 (90.8)	
<b>Level of education</b>						
Primary	0 (0.0)	7 (100.0)	1.947/ 0.856	0 (0.0)	8 (100.0)	2.324/ 0.888
Secondary	0 (0.0)	6 (100.0)		2 (7.4)	25 (92.6)	
CHEW	1 (1.1)	86 (98.9)		0 (0.0)	4 (100.0)	
CHO	1 (2.8)	35 (97.2)		0 (0.0)	2 (100.0)	
Diploma	0 (0.0)	61(100.0)		8 (9.3)	78 (90.7)	
First degree	0 (0.0)	3 (100.0)		2 (4.3)	45 (95.7)	
Post graduate	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	

**TABLE 3: ASSOCIATION BETWEEN SOCIO-DEMOGRAPHIC CHARACTERISTICS AND ATTITUDE OF RESPONDENTS TOWARDS PBF**

Variables	Attitude					
	Primary (%)		$\chi^2/\rho$	Secondary (%)		$\chi^2/\rho$
	Poor	Good		Poor	Good	
<b>Type of employment</b>						
Permanent	0 (0.0)	86 (100.0)	1.524/ 0.217	12 (7.7)	143 (92.3)	0.583/ 0.445
Volunteer	2 (1.8)	112(98.2)		2 (4.4)	186 (93.0)	
<b>Category of staff</b>						
Management	1 (1.3)	75 (98.7)	0.123/ 0.725	2 (3.8)	51 (96.2)	1.153/ 0.283
Non-management	1 (0.8)	123(99.2)		12 (8.2)	135 (91.8)	



Only the 25-29-year-old age group had 2 respondents (3.6%) with poor knowledge of performance-based financing in the primary health facilities and all other age groups had good knowledge compared to those in secondary health facilities that have respondents with poor knowledge cutting across the majority of the age groups. Male respondents appeared to have better knowledge across both primary and secondary health facilities but statistically, it is not significant. Educational qualifications are statistically not significant in the attitude towards performance-based financing among health workers in primary and secondary health facilities. All permanent employees in primary health facilities had good attitude towards PBF (n=86) while in secondary health facilities, 143 (92.3%) out of 155 respondents had positive attitude. For

contractual staff (volunteers), 2 (1.8%) and 2 (4.4%) had poor attitude towards PBF from primary and secondary health facilities respectively. The type of employment, either permanent or contractual had no significant effect on the attitude of healthcare workers towards performance-based financing. Only one management staff member (1.3%) had a poor attitude towards PBF from a pool of 76 respondents from primary healthcare facilities while in secondary, there were 2 (3.8%) out of 51 respondents. The categorization of healthcare workers as management or non-management staff appeared to have no significant effect on his/her attitude towards performance-based financing in primary and secondary health facilities with P values 0.725 and 0.283 respectively.

**TABLE 4. ASSOCIATION BETWEEN SOCIO-DEMOGRAPHIC CHARACTERISTICS AND PRACTICE PBF BY RESPONDENTS**

Variables	Practice					
	Primary (%)		$\chi^2/\rho$	Secondary (%)		$\chi^2/\rho$
	Poor	Good		Poor	Good	
<b>Type of employment</b>			26.791/ <b>&lt; 0.001</b>			0.341/ 0.559
Permanent	3 (3.5)	83 (96.5)		75 (48.4)	80 (51.6)	
Volunteer	38 (33.3)	76 (66.7)		24 (53.3)	21 (46.7)	
<b>Category of staff</b>			17.462/ <b>&lt; 0.001</b>			10.758/ <b>0.001</b>
Management	4 (5.3)	72 (94.7)		16 (30.2)	37 (69.8)	
Non-management	37 (29.8)	87 (70.2)		83 (56.5)	64 (43.5)	

The relationship between socio-demographic characteristics of respondents showed significant differences with gender and the level of education of the respondents as more literate respondents had good practice of performance-based financing. Age groups and types of

employment of the respondents showed no significant relationship with the practice of performance-based financing.

## Results of Key Informant Interviews

TABLE 5. DISTRIBUTION OF KEY INFORMANTS

Respondent	Primary	Secondary	Total
Male	2	1	3
Female	2	3	5
Total	4	4	8

Table 5 above shows the distribution of key informants used in the KIIs. It shows that primary and secondary health facilities each had 4 interviewees. The distribution of interviewees by genders shows that 3 males (2 from primary and 1 from secondary levels) participated in this part of the study, while 5 females (2 from primary and 3 from secondary respectively) participated in the KIIs.

The topic analysis revealed six major themes: (1) health quality indicators, (2) performance evaluation mechanisms, (3) health worker motivation, (4) infrastructure development, (5) staffing shortages, and (6) obstacles. According to the findings of this survey, every respondent had a good view toward the PBF's role in assisting and motivating them to enhance the quantity and quality of health services. They stated that the PBF had a good impact on their job in a variety of ways.

### Health Quality Indicator

A significant proportion of respondents (62.5%) were of the opinion that health quality indicators were based on the best international practices for which their facility must imbibed for quality service to their clients. Yet, some indicators of quality care are out of line with the current development in the dynamic field of medical practice. The example given was the tracer drugs for essential drugs. They suggested that this needs to be reviewed in line with the current keeping.

One head of a secondary health facility said:

*For many reasons, we as health workers forgot or at least, ignored what health quality indicators are. PBF simply awakened us to their existence. It was difficult at the beginning but in the program is gradually becoming a second nature.'*

### Motivation of health workers

All interviewees agreed that health workers became more motivated in carrying out their respective duties since the commencement of the performance-based program. The carrot-stick approach in PBF was a real motivator. The carrot is the bonus given to personnel for high quality service. The stick is the withholding of the bonus (incentive) and reduction in total finance that comes to the facility for poor quality services. Some workers stay later than their closing time to ensure that jobs/duties were professionally executed.

### Infrastructural development

All respondents (n=8) believe that PBF has made a positive impact on the infrastructural development of their facility. Basic equipment was procured for the laboratory, operation theatre, labor room and other service points that require them or there are plans to equip them. One head of a secondary health facility said:

*Before the coming of PBF, waste disposal was unorganized, without a proper place for disposal. Now there is a well-constructed and maintained incinerator for waste disposal. And for the first time, there is running water in the facility among many other infrastructures.'*

Another head of a primary healthcare center said:

*'Before PBF the facility was in dire need of face-lift. There were few and bad waiting chairs, the roofs were leaking, the painting peeled off, but now, all these have been fixed. I feel good coming to work every day.'*

#### **Solving manpower shortages**

The majority of respondents believed that there were rampant workforce shortages in their facilities. The PBF is, therefore, seen as both a threat and opportunity. The threat arose when there are glaring quality lapses occasioned by shortages of personnel to do the needful. The opportunity comes in the autonomy granted to facilities employ volunteer personnel on an ad-hoc basis according to the need and capacity.

One head of a primary health facility said:

*'For more than 3 years, there were no laboratory personnel in the facility, which impeded our ability to offer good comprehensive service to our client. But when PBF program started in this facility 3 years ago, were able to employ 2 laboratory technicians; there are similar instances in other units.'*

Another one said:

*'This facility was almost non-functional with staff strength of two; myself and a health attendant. Today there are eight of us.'*

#### **Challenges of PBF**

The three major challenges identified by respondents were shortage of workforce, poor infrastructure and the inability to pay subsidy for the services verified and purchased for the facilities. The number of clients has increased because of the increased quality and range of services but the increases in workforce fall short of demand.

One head of secondary health facility said:

*'I am the only a permanent physician in the facility; one is on a National Youth Service Corp member and the other is a volunteer whose stipend is paid by the facility. There is a limit to what the facility can do.'*

Another challenge identified is poor infrastructure and utilities like deteriorating physical structure, poor equipment, lack or poor power and water supplies. All key informants interviewed lamented that NSHIP was unable to pay subsidy for the services rendered and purchased.

One head of a primary health facility said:

*'We have not received any financial assistance from the PBF program since the last quarter of 2017. I have 4 volunteer staff members that we have not been able to pay their stipend. Imagine the number of moody faces I have to endure daily at work. The difficult part is that, there is no much information coming through. We can scarcely afford even cleaning materials to keep the facility running now. Our superior keeps coming for assessment, what can we do without money?'*

## Discussion of Findings

The study aimed to evaluate the health workers' knowledge, attitude, practice, quality of health care, motivation, infra-structural development as well as addressing the shortage of health work force in Nigeria. The analysis showed that most of the health workers had direct responsibility for producing quality healthcare regardless of whether or not they are directly involved in patient care. In addition, a significant proportion of respondents indicated that carrying out their duties effectively was essential for the overall attainment of the quality of healthcare, as a large number the respondents demonstrated good cumulative knowledge level in performance-based financing which is in tandem with another study carried out in Burundi (Rudasingwa & Uwizeye, 2017). Also, there is no significant difference between the level of knowledge and the level of healthcare facility ( $p=0.154$ ). It followed then that with some effort, any health worker irrespective of their area of practice at any level of healthcare can understand and appreciate basic concepts and operation inherent in performance-based financing program in the provision of healthcare. Moreover, findings from this study show that there is significant association between the qualifications of the respondent and their level of cumulative knowledge ( $p<0.05$ ). This finding shows education and continuous training of healthcare workers are prerequisite for increasing the quality of service.

Performance-based financing program had motivating factors for a large number of the health workers as most of the respondents demonstrated positive attitude at both primary and secondary health facilities. Moreover, a significant proportion of respondents indicated they are more aware and proactive in carrying

out their daily duties.

More than half of respondents believed PBF do not increase their workload. This finding implies that healthcare workers do not see the PBF program as a different entity, but merely refocusing their daily duties to more directed goals for quality improvement and maintenance. In this study, most of the respondents indicated that community participation ensured quality of service and do not consider the involvement of the community as meddling in the professional affairs of the health facility. This finding shows that respondents saw the community as partner in the provision of good health service not as a meddling outsider. This finding is in line with the goals and objectives of Alma Atta declaration (IC, 2020) which advocated for the full participation of the communities in the planning, implementation and evaluation of all health activities, projects and programs in their communities for the attainment of health for individuals and families in their communities.

The majority of respondents signified that PBF program had made a positive difference to the quality of their daily work output. This finding is consistent with prior research (Rudasingwa & Uwizeye, 2017). Very high proportion of respondents indicated that they want the PBF program to continue in their facilities. This shows that the PBF program is widely accepted at primary and secondary health facilities, and therefore, there is a good chance of its long-term success. Because, habit change especially changes from recognized comfort zones even for better is very difficult (Schrivver et al., 2018). In addition, this finding shows that there is significant association between type of facility and attitude towards performance-based financing ( $p < 0.05$ ). In this study significant proportion of respondents indicated they knew

exactly what to do at any time as they have their duties completed explained to them by their superiors. This leaves no room for ambiguity as to duties to be carried out for the overall improvement in the quality of service. A good proportion of respondents signified that they have the basic tools to carry out assigned duties. This is an acknowledgement that no duties can be carried out effectively without requisite tools.

Most respondents also indicated that their immediate superiors (internal supervision) supervised their work closely. Supervision in healthcare is a context-dependent practice with multiple definitions, and is generally regarded as a core part of assuring and improving quality of patient care (Echebiri, 2015). Most respondents also indicated that superiors from the local government health authority (for primary health facilities) and the State Ministry of Health (for secondary) provide regular supportive supervisory visits to their facilities (external supervision). Supervision is generally geared at assuring performance, and typically uses normative or administrative tasks including inspective, support-based supervisory approach and to a lesser extent, formative and restorative, such as cooperative problem resolution and constructive feedback. A Cochrane study was unable to assess the effect of management oversight in underdeveloped nations, and graded the quality of evidence as low or very low. Moreover, almost half of respondents indicated that they do not know the exact amount of money that comes to their facilities and, more than half claimed they do not know about or have access to information on the expenditures of their health facilities. This finding is at variance with the policy of the PBF program, where all information pertaining to financing and expenditures of activities and projects are done

with utmost transparency with the full knowledge of all facility personnel. The findings may have been an expression of resentment of personnel towards management because no funds came to the facilities in the last six months prior to the study on PBF program. Most respondents in this study indicated that there is some form of periodic quality audit of the health facility. This audit consists of measuring outcome or process against well-defined standards, established using the principles of evidence-based practice. The aim of audit is to highlight the discrepancies between actual practice and the standards in order to identify the changes needed to improve the quality of care. The audit is essential to sustain gains in quality of service and reversal to what used to be the seemed to be the norm.

A significant proportion of respondents claimed that they are engaged in good practice in performance-based financing and there is significant association between the level of practice and health facility ( $p < 0.05$ ). This finding shows that although a significant number of respondents are said to be engaged in good practices, both in primary and secondary facilities, there is a significant association between the level of the health facility and practice. Therefore, there is a need for reorientation of healthcare workers at all level to adopt international best practices for the overall improvement and maintenance of healthcare services. Most of the key individuals interviewed in this study said that the PBF positively influenced the delivery of healthcare. This finding is consistent with other studies. There is some improvement in the quality health as indicators of quality health delivery are assessed regularly and, in most instances, increased the utilization of services thereby increasing the workload of personnel; consequently, making the

shortage of workforce more glaring.

The study also shows that healthcare workers are motivated to deliver more qualitative services to clients as a consequence of the carrot and stick motivation approach of performance-based financing programs. In PBF, for high quality of service, personnel are rewarded bonus payments (monetary incentive); a positive reinforcement but when it is low, the bonuses are withheld. Both of which have been known to motivate.

All interviewed personnel were of the opinion that poor health infrastructure and utilities in their facilities hampered their abilities to deliver good quality of services to clients. This finding is consistent with another study (Ojo, 1990). Electricity supply from the national grid is epileptic, where it exists. Alternative power sources like solar panels or diesel-powered generators should be provided to supplement the shortages. This creates other financial problems with the workforce needed to maintain this equipment. Only few respondents said that their facilities are connected to the public water supply while other respondents said they had to find alternative sources of water like wells and boreholes; the quality of which cannot be guaranteed.

The respondents also said they lack some basic equipment/machines required for quality service for their facilities. Some respondents observed that the space in their facilities is inadequate or need a facelift that is beyond the financial capacity of the facilities to handle. They conceded that infrastructural improvement and provision of utilities are embedded in the PBF program, but some of these infrastructural challenges were beyond the financial capacity of the facilities to cope. A previous study confirms these observations showing how health

facilities, with good functional infrastructure and personnel, demonstrate a better capacity to respond well to the PBF schemes than those with little investment and poor health facility management (Dieleman & Harnmeijer, 2006). All key informants (n=8) lamented that the National Strategic Health Implement Plan (NSHIP) did not pay their facilities for services verified and validly purchased in last six months. As a result, planned activities and projects have not been carried out since the last quarter of 2017. The delay in PBF payment is worst felt by voluntary personnel whose stipends have not been paid. The delays in PBF pay were a source of frustration and may ultimately lead to demotivation of healthcare workers and may have negative impacts on the quality of service they provide. This finding is consistent with another finding in Cameroon (DeAllegri et al., 2018).

Finally, all respondents indicated that human resource management for health as a major challenge in carrying out efficient health services required in the performance-based financing. Although rampant cases of workforce shortages are somewhat addressed at facility level within the limit of resources available to them, they have the autonomy to employ essential voluntary personnel to minimize incessant workforce shortages. The remuneration of core clinical staff like physicians, pharmacists, nurses and laboratory scientists is beyond the financial capacities of health facilities to attempt. This is in line with a World Health Organization report that Nigeria has the highest stock of human resource for health (HRH) but, like other 57HRH crisis countries, has densities that are still too low to effectively deliver essential health service (Adeloye et al., 2017). Often this shortage is a result of poorly planned and need based distribution of personnel and unwillingness of some

healthcare workers to work in semi-urban and rural areas.

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