

Impact of Performance-Based Financing on The Standards of Care-Delivery Rendered to Consumers in The Kumba Health District, SouthWest Region; Cameroon

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ABSTRACT

In recent years, Performance-Based Financing (PBF); a form of result based financing, has attracted global attention in health systems in developing countries. PBF promotes autonomous health facilities, motivates and introduces financial incentives to motivate health facilities and Health-Care Providers to attain pre-determined targets.

This study was aimed at assessing the impact of Performance-Based Financing in the standards of care delivery rendered to consumers in the Kumba Health District, Southwestern Cameroon. A hospital and community based comparative and cross-sectional research design were used for this study. Data were collected in 9 randomly selected health facilities and in the catchment areas of the selected health facilities. Data were collected using structured questionnaires and analyzed using SPSS statistics 21 and were considered significant at $P \leq 0.05$. Results revealed that Health-Care Providers in Kumba Health District have a good level of knowledge on PBF and PBF services and also good motivation. Respondents in confessional health facilities were 3.5 times (OR=3.58, 95% CI: 1.53- 8.42, $P=0.003$) more motivated compared public facilities. Respondents in private were 1.8 times (OR=1.82, 95% CI: 0.264-1.78, $P>0.05$) more motivated compared to confessional facilities. And conversely, public services were 4.2 times (OR=4.18, 95% CI: 1.53- 8.42, $P=0.003$) more affordable than private. Confessional services were 2.1 times (OR=2.11, 95% CI: 0.264- 1.78, $P>0.05$) more affordable compared to private services.

The findings reveal a good implementation of PBF in the Kumba Health District despite the poor sharing of information in some health facilities and the low level of implementation of household visits.

Keywords: Performance-Based Financing, Health-Care Providers, community, financial incentives, public services, health facility, implementation.

Introduction

The Performance Based Financing (PBF) according to the WHO is a health financing strategy based on results (outputs) and builds on a contractual relationship between the different actors of the health system. It is different from the classical health financing mechanism of inputs where the health structure receives a certain number of inputs for the running of its operations and not linked to any obligation of results (performance). Thus, PBF leads to the financing of health care and services of a health facility depending on its activity as

depicted by predefined performance indicators. Consequently, it constitutes a strong motivating factor for the amelioration of quality of care (as an example, it can be expected of the health centers to improve on the manner in which patients are received so as to increase the attendance of the facilities as well as the income) and financial accessibility of patients (with increased income for the health facility through PBF subsidies it can be expected that the charges on patients be reduced to encourage more attendance or use of the facility). Within this system of health financing, the

health facilities are expected to put in place new strategies to serve as many patients as possible while respecting the norms of the Ministry of Public Health and generating more funds for the facility. These strategies could range from just better reception of patients through the improvement of the state of the structure, equipment, staff motivation, reduction of charges (fees) to patients, etc.

PBF usually starts with pilot projects after which scaling up to the national level is attempted. Such has been the case in Rwanda, where successful PBF pilot projects which were started in 2002 covering by 2005 about 40% of the health delivery network, which convinced the Ministry of Health of their effectiveness, after which PBF was scaled up to national level during 2006. Burundi was a similar case: pilot projects were started in 2006, expanded to cover 40% of the country by 2009, which were scaled up nationwide in April 2010. PBF seeks to improve the performance of the health systems in low and middle-income countries. In Africa, this strategy has been introduced in many developing countries over the past decade: for instance, in Cambodia, Haiti, Afghanistan, Indonesia, Democratic Republic of Congo, Rwanda, Burundi, Cameroon, Central African Republic, Benin, Nigeria, and Mali. The approaches in various contexts differ; but they all aim at increasing the efficiency, effectiveness, quality, and equity of health services offered to the population. The PBF approach generates interest from Ministries of Health who are looking for ways to reach the health Millennium Development Goals 4 and 5; *the millennium development Goals*, European Union Report on *Millennium Development Goals 2000-2004* improving maternal health high on the agenda. PBF approaches have been especially successful in improving access to curative services and increasing the uptake of preventive services such as vaccination in children and pregnant mothers, voluntary counseling and testing for HIV, institutional deliveries and the use of modern family planning methods. While increasing the volume of services, PBF also increased considerably the quality of these services.

The increasing use of PBF and its perceived benefits is now leading proponents to promote it as a strategy to address structural problems and to introduce more generalized health system reform, as testified by the recent paper in the Bulletin of the World Health Organization "Performance-based financing: just a

donor fad or a catalyst towards comprehensive health-care reform?" (WHO, 2011). In 2009, the Ministry of Public Health in Cameroon, working in partnership with the World Bank, funded the Cameroon Health Sector Support Investment Project. The five-year US\$25 million initiative was designed to support the provision of key maternal and child health services through performance-based financing. In 2014, additional financing of US\$40 million through the Health Results Innovation Trust Fund was allocated to support the introduction of PBF in the three northern regions of the country, which have the nation's poorest health outcomes (UNICEF, WHO, World Bank). Presently, the PBF has been implemented in regions namely the Littoral, East, Northwest; South West and the Far North, North and Adamawa Regions of Cameroon. And a national health policy was signed by the Minister of Public Health to implement the PBF strategies in all the regions of Cameroon. The districts were selected to target the poorest populations in the country.

In Sub Saharan African countries, Cameroon inclusive, the burden of health expenditures are mostly attributed to common endemic diseases such as malaria, typhoid, tuberculosis and diarrheal because they constitute the majority of the public health problems, due to their recurrent nature they are major causes of morbidity and mortality. The analysis of the epidemiological situation of the country reveals the following diseases as major causes of morbidity and mortality: Malaria, Acute Respiratory Infections, Diarrheal diseases, Malnutrition, HIV/AIDS, Tuberculosis and injuries. Life expectancy at birth in Cameroon stands at 53 years. The maternal mortality rate is 1000 per 100,000 live-births and the neonatal mortality rate is 40 per 1000 life-births. The Infant Mortality rate stands at 82 per 1000 life-births while the under-five mortality rate is 131 per 1000 life-births. The Vaccination coverage for measles is 80% for 2008. Assisted deliveries (skilled) stood at 62% in 2004, (UNICEF, 2011)

Available evidence shows that the heaviest burden of health care costs, particularly those that are considered catastrophic, falls on the poorest (Xu et al., 2003). Although the costs of paying for episodes differ by disease type, regressive cost burdens are always found among the poorest households in both urban and rural areas for all categories of illnesses studied

(Chuma et al, 2007). In most countries, a high incidence of catastrophic health expenditures was found especially on the poorest quintiles of the population. The costs of health care for households often leads to inequalities in access to care as the poor are deterred from the use of healthcare thus preventing healthcare services from reaching those most in need of it. In Cameroon, out of pocket payments (OOP) remain an important source of funding for healthcare, and it accounts for almost all of the private expenditures on health (Gerend and Magloire, 2008). These direct payments place a huge financial burden on individuals, some households completely refrain from seeking care in an attempt to avoid the cost. The net effect is often that many households incur greater costs in the long run due to possible complications from illnesses arise which could have been avoided if care was sought earlier. Poor health has a considerable impact on the economic sustainability of households, especially in places which lack effective health insurance policies and have poor resource settings. (Xu et al, 2001). Payment and risk management mechanisms in most African countries are weakened by low coverage of the population and the very high charges for health care since people mostly pay out of pocket each time they receive care, this creates inequalities in treatment seeking and in favor of those with higher ability to pay (Carrin, 1999).

Due to the widespread call for control and elimination of malaria and the challenge of meeting the Millennium Development Goals of 2015, there is, therefore, the need to find better and less costly means, to add to the interventions already so common, (White et al, 2011). However, there has been a wide range of maternal and infant mortality control, elimination and interventions whose efficacy and effectiveness have increased in some countries. According to the Health Wikipedia everybody at some time in their life, and often on many occasions, will need some kind of medical attention and treatment. When medical care is required, ideally the patient should be able to concentrate on getting better, rather than wondering whether he or she has got the resources to pay for all the bills. This view is becoming more commonly held in nearly all the developed nations. It goes a long way towards helping in the funding of a free health care policy because the resources allocated to health facilities throughout PBF is sufficient enough to compensate for the burden of free health care, it helps correct inequities as it gives

equity and quality bonuses to ensure that all individuals can benefit from similar services Since 1990, the number of children under 5 who die every year, mainly from preventable causes, has reduced by nearly 50 percent – from 12.6 million in 1990 to 6.6 million in 2012. Roughly 44 percent of those deaths occur in the first 28 days of life. Although the neonatal mortality rate fell from 33 deaths per 1,000 live births in 1990 to 21 per 1,000 in 2012, still 2.9 million newborn babies died in 2012 (Mortality rates table, UN Inter-agency Group for Child Mortality Estimation (UNICEF, WHO, World Bank, UN Population Division, 2014).

When contracting began in Asian countries in the 1990s it was common wisdom that it could only work in the presumed relatively 'business-oriented' Asia but not in other continents. When PBF became successful in Rwanda in 2006 it was believed to work due to its disciplined government and workforce but that it was unlikely to work in other African countries. Recently, there is evidence that PBF has had good results in Burundi, Cameroon and even in the unstable region of Eastern Democratic Republic of Congo and the Central African Republic (Soeters, Fristsche, and Meessen, 2011).

Over the past 15 years, Performance-Based Financing has been implemented in an increasing number of developing countries, particularly in Africa, as a means of improving health worker performances. And the PBF became more popular because for the population PBF systems potentially offer better quality services with more and respectful qualified personnel. The politicians consider PBF interesting to answer to demands from their electorate, Aid agencies like PBF if it may achieve Millennium Goals and other social objectives. For the personnel, PBF is interesting because it increases their remuneration and they may find PBF attractive because they earn more when they work more. The Government authorities find PBF attractive in order to quickly and efficiently improve social services and thereby the status of the population. And the Ministries of Finance may appreciate PBF as it can show results for the budget it consumes (Soeters et al., 2011).

The PBF intervention is gaining significant momentum as a solution to poor performance and the health worker crisis in low-income countries, particularly in Africa due to the stagnating health outcomes and little

progress towards achieving the Millennium Development Goals, low coverage of services, inefficient use and allocation of services, limited physical and financial access to health care services. But even with the PBF initiative, the health system in Cameroon is still troubled with a certain number of difficulties linked to health care delivery. These include: Underuse of health centers and services for curative and promotional care; low coverage for preventive care; Insufficient continuous care (referrals) and usually of poor quality; high staff absences and acute shortages in the hard to reach areas; and inequitable health services distribution with limited access to health care by the poor and vulnerable and the hard to reach. The PBF initiative addresses most of these issues especially those of access, quality of care and health service organization. There is a complete inequitable distribution of health personnel in Africa. Without a foundation of skilled human resources, healthcare systems cannot function adequately or effectively, particularly in the public sector and at the primary level of care.

Research Questions

1. How knowledgeable are Health-Care Providers of Kumba health district on PBF and its services?
2. What is the impact of PBF incentives on Health-Care Providers in the Kumba health district?
3. What is the level of implementation of PBF in Kumba health district?

Objectives of the Study

General objectives

The main objective of this study was to evaluate the impact of PBF on the standards of care-delivery relatively to staff performance and motivation and to assess the level of implementation in the Kumba health district.

Specific Objectives

The specific objectives of the study included to;

1. Assess the knowledge of Health-Care Providers on PBF and PBF services in Kumba health district;
2. Determine the impact of PBF incentives on the welfare of Health-Care Providers in the Kumba health district.

3. Evaluate the level of implementation of PBF in the Kumba health district.

Significance of the Study

The project PBF was implemented in Cameroon to help achieve the eight millennium development goals emphasizing mostly on the goals related to mother and child health, fight against HIV/AIDS and poverty. One of the main vision of the Ministry of public health behind this project is health care access to all, this is the reason why the project is present in all the health facilities without discrimination. This study will help evaluate the level of implementation so far in the different categories of health facility in the KumbaHealth District and the motivation of Health-Care Providers vis-à-vis the PBF project.

Methodology

Description of the Study Area

This study was conducted in the Kumba Health District (KHD) in the South West Region of Cameroon. KHD is one among the 3 and 18 districts of the Meme Division and southwest region, respectively with an estimated human population of 377 645 inhabitants (updated population, May 2017). There are one hundred and seventy-eight communities in the district, some of which are rural while others are urban. Indigenes of the district are made up of Bafor, Balon, Barombi, Bakundu, Oroko and Balue as main tribes among which there is some sub such as the Bakosi, the Bayangi, the Bakweri and part of the Nigerian community. However, the area attracts individuals from other tribes and ethnic groups including the Semi-Bantu and Foulbe from all over the country for farming, business, and studies.

Kumba has a Cameroon-type equatorial climate characterized by fairly constant temperatures ranging from 18°C-29°C with an average humidity of 80% and two seasons: a short dry season (November–March) and a long rainy season (March-November).

Classification of Health Areas

The Kumba Health District has a total of 28 approved health facilities (16 public and 07 privates and 05 confessionals [25 health centers and 3 hospitals])

located in 12 health areas namely BangaBakundu, Big Bekondo, Big Ngbandi, DikomeBalue, EkombeBonji, Fiango, KumbaMbeng, KumbaPulletin, Kumba town, Massaka, Mukonje, and Ntam). With KumbaMbeng, Kumba Town and Fiango being the urban areas with

the highest catchment population. The three hospitals of the Health District are found in these zones with the Kumba District Hospital in Kumba Town, The Presbyterian General Hospital in KumbaMbeng and Hope clinic in Fiango health area.

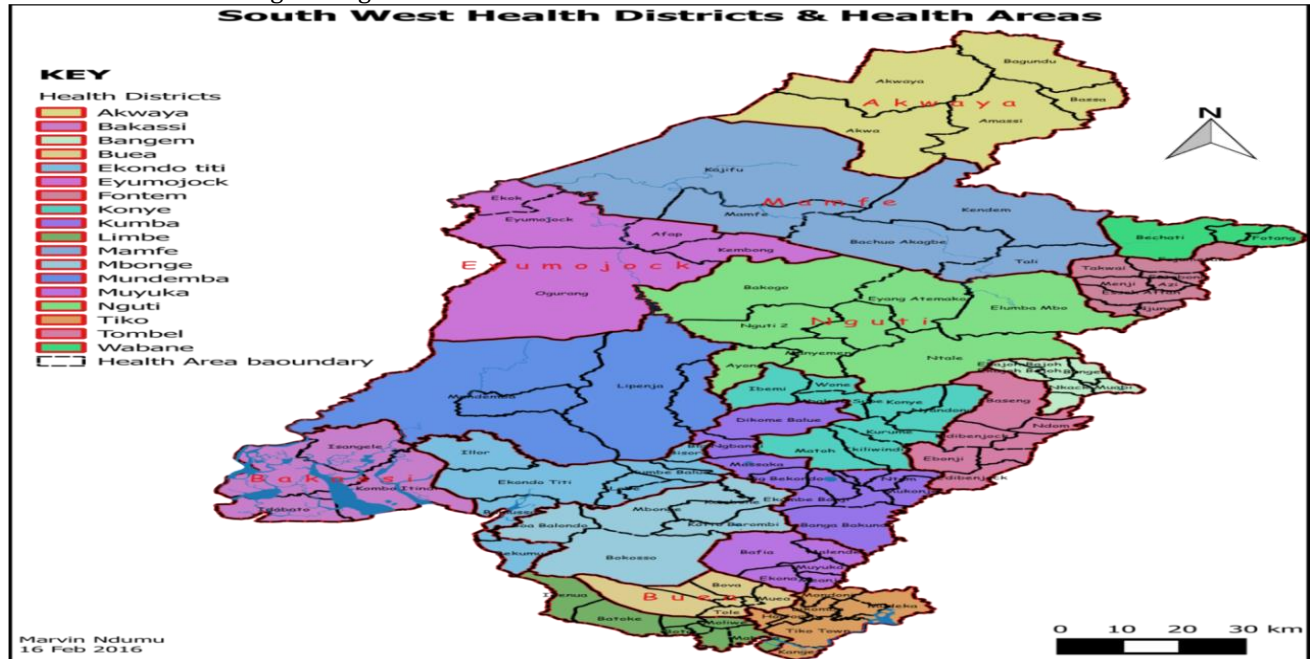


Figure 6: The Southwest Region Health District and Health Area Map (2017)

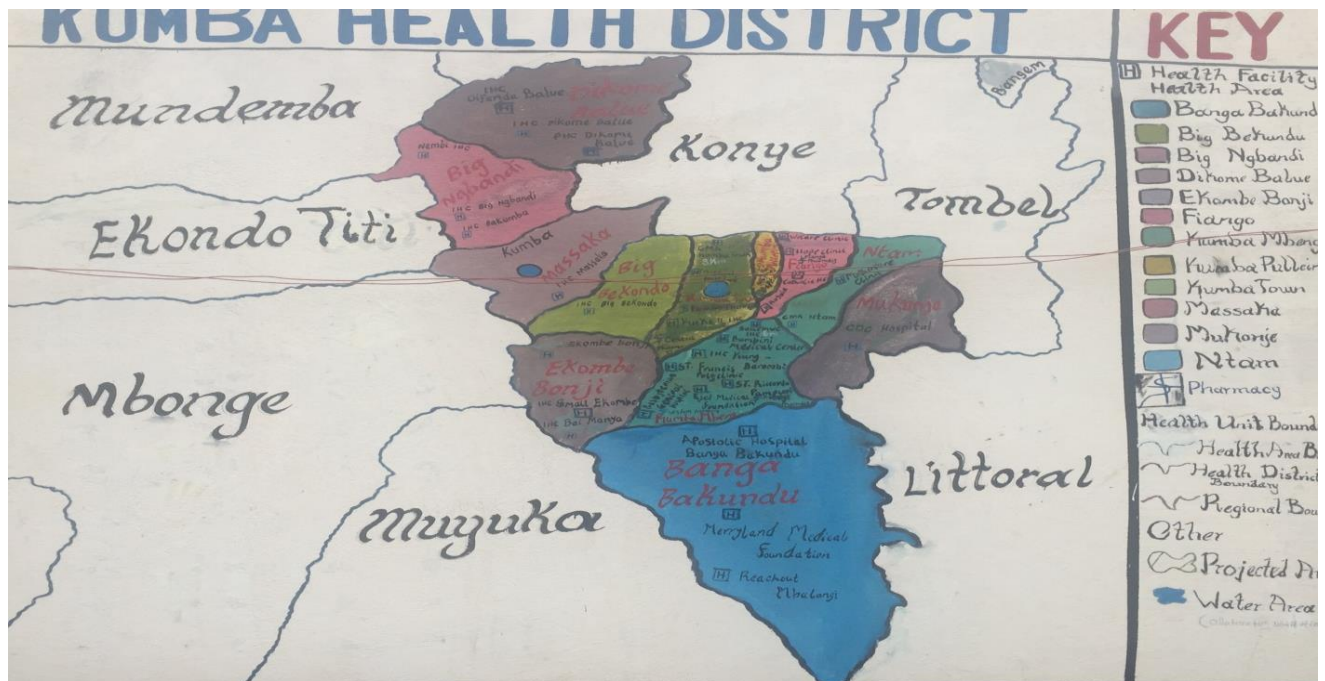


Figure 7: The Kumba Health District Map (2017)

Research Design and Population

The study conducted from January to August 2017 was a hospital and community cross-sectional survey. The study was descriptive and analytical and consisted of determining the impact of the PBF project on the working condition in health facilities and the level of awareness and satisfaction of health care users.

The studied population consisted of randomly selected public, private and confessional health facilities in the Health District, then Health-Care Providers and users from the communities of the selected health facilities also randomly chosen. The facilities selected were those in which we could find together at least a medical doctor, a nurse, and a laboratory technician. And the users were those aged 18 years and above.

Inclusion criteria:

- Health facilities in the Kumba Health District, having at least a medical doctor, a nurse and a laboratory technician (or assistant).
- Health facility clients aged 18 years and above (18 years because it's the maturity age in Cameroon) source: section 4, article 80 of the law No 2016/007 of 12 July 2016, stating that any citizen aged 18 years of age is fully responsible.

Exclusion Criteria:

- Health facility out of the Kumba Health District
- Health facility not having together a medical doctor and a nurse and a laboratory technician
- Clientless than 18 years old of age

Sample Size and Sampling Technique

The sample size for this study was determined based on the Yaro Yamane's approach for the finite population (Yamane, 1967). This approach takes into consideration a 5% error margin and 95% CL.

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n= the expected sample size (let us name in this case:
n1= the expected population of health facility users and
n2= the expected population of Health-Care Providers.

So $n = n1 + n2$

N = the finite population out of which the sample was drawn. ($N = N1 + N2$)

e = the level of significance

The estimated population size of inhabitants in the Kumba Health District was $N1 = 377\ 645$ given by the 2016 population statistics and the estimated population size of health staff in the selected facilities was $N2 = 359$ from the July 2017 health facilities Business planning statistics. The level of significance (e) is 0.05 or 5%. Applying the above formulae we have:

$$n1 = \frac{377645}{1 + 377645(0,05)^2} = 399$$

$$n2 = \frac{359}{1 + 359(0,05)^2} = 189$$

$$n = 399 + 189 = 588$$

The minimum sample size to be considered for questionnaire distribution was 450 distributed as 300 questionnaires for the community and 150 for health personnel.

Data were collected from 9 health facilities selected from the Health District. We used all the 3 confessional HFs available in the District, the 3 public HFs who respected the selection criteria and a simple random sampling was done to determine the 3 privates HFs. A ballot was made with the names of the 6 privates HFs who previously respected the selection criteria and 3 of them were blindly picked up. A number of 9 HFs were retained for the study and distributed as follows:

1. Public Health Facilities

Medialized Health Centre Ntam, Medialized Health Centre Kumba Town, District Hospital Kumba.

2. Privates Health Facilities

Bambini Medical Foundation, Ejed Clinic, Hope Clinic.

3. Confessional Health Facilities

Kumba Baptist Health Centre, Catholi Health Centre Fiango, Presbyterian General Hospital Kumba.

Survey and Data Collection

Instrument

Pre-tested Interviewer- administered the structured questionnaire and observational checklist were used for data collection. Both open and closed-ended questionnaire was used. Most of the open-ended

questions contained multiple response variables (MRV) and were transformed into binary variables measure study outcomes. The questionnaire was designed to obtain information from participants on the knowledge on PBF, the contribution of PBF incentive on working condition and the level of implementation of PBF.

Two questionnaires were designed for this study, one for the hospital survey and the second for the community.

The first part of the questionnaires was structured to contain an aspect of basic demographics including gender, occupation, level of education and denomination. The second part was structured to capture information regarding their knowledge about PBF, the contribution of PBF incentives and the level of implementation of the PBF project. This was done using questions on knowledge of the project principles, evaluation of staff and bonus sharing. Also, we used the aspect of the household visit to assess the extent of implementation in the communities.

Data Collection Procedure

In addition to the researcher, three skilled research assistants (interviewers) were recruited and trained to administer the structured questionnaire. They were trained on the tools to be used, the purpose of the study and how to approach respondents and obtain consent. Data were collected by face-to-face interviews of respondents aged 18 years and above gotten from households randomly selected in the catchment area of the chosen facilities. Also, administration in the health facilities was done to all the medical doctors, nurses and laboratory technicians present at the time of the survey. Prior to data collection, the purpose of the study was carefully explained to the respondent and his/her verbal informed consent obtained before the questionnaire was administered. Completeness of the questionnaires was ensured in the field by ensuring that all questions administered and answered were properly entered in the provided space provided in the questionnaire.

Prior to the design of questionnaires and data collection, the researcher successfully completed an online course on "Protecting Human Research

Limitations of the Study

The language was a limitation in this study because the investigator was working in a rural area where the majority of the population speak and understand only their local language. This language barrier has made communication difficult in some communities. To solve this limitation the investigator recruited a member of the community concerned who was used as a translator in case a participant does understand neither French nor English.

Accessibility to some communities' area was also a constraint because of the poor condition of roads in the rural area but the investigator hired.

Data Entry and Analysis

Data were double entered using MS-Excel 2013 then imported to SPSS Statistics 20.0 (IBM Corp, Atlanta, GA, USA) for analysis. The statistical software SPSS was programmed to signal missing or out-of-range values so that all data that were not correctly recorded were identified and appropriately managed. At the initial step of the data analysis, frequency distributions of variables were produced. Associations were established between variables of different measures through cross-tabulations. Further analysis included data summaries such as proportions, percentages, ratios and standard deviation. Data analysis as well included various statistical test such as the Chi-square test, the test of significance of associations between categorical variables and to test the statistical significance of continuous variables were also used. The analyzed data were presented in the form of tables and charts.

Ethical Considerations

Ethical clearance was obtained from the Institutional Review Board of Saint Monica University. Authorization was also gotten from the Kumba District Health Service. Only individuals who volunteered to participate after a clear enlightening on the study objectives, risks, and possible benefits were enrolled. Confidentiality was maintained using ID codes on questionnaires.

Participants" presented by The National Institutes of Health (NIH) Office of Extramural Research. Certification Number: 2410196.

Results

The purpose of this study was to identify the “Impact of PBF on the Standards of Care-Delivery Rendered to Consumers in the Kumba Health District”.

Data collected were processed following the research questions posed in the first chapter of this study and

presented here. The chapter was divided into two parts, the first for the Health-Care Providers and the second part for the users. Data collection and analysis was done to bring a light on the impact of PBF in the Kumba Health District.

4.1 Analysis of Health-Care Providers Responses

Demographic information of Respondents (Health-Care Providers)

Table 3: Demographic Characteristics of Health-Care Providers (N = 150)

Table3. Above summarizes the demographic characteristics of the population of Health-Care Providers used for the study. A total of 150 respondents from 9 health facilities were enrolled. The

majority were nurses (46.7%), mostly females (64.7%) and aged between [30-45] years (47.3%). They were single in a majority (63.3%) and from public health facilities (44.7%).

Demographics		Frequency	Frequency percentage (%)
Gender	Male	53	35.3
	Female	97	64.7
Age group	[18-29]	57	38
	[30-45]	71	47.3
	>45	22	14.7
Marital status	Married	51	34
	Single	95	63.3
	Others	4	2.7
Occupation	Medical doctors	9	6
	Nurse	70	46.7
	Laboratory technicians	36	24
	Others	35	23.3
Health facility	Public	67	44.7
	Private	47	31.3
	Confessional	36	24

4.2 Knowledge of Health-Care Providers on PBF and its Services

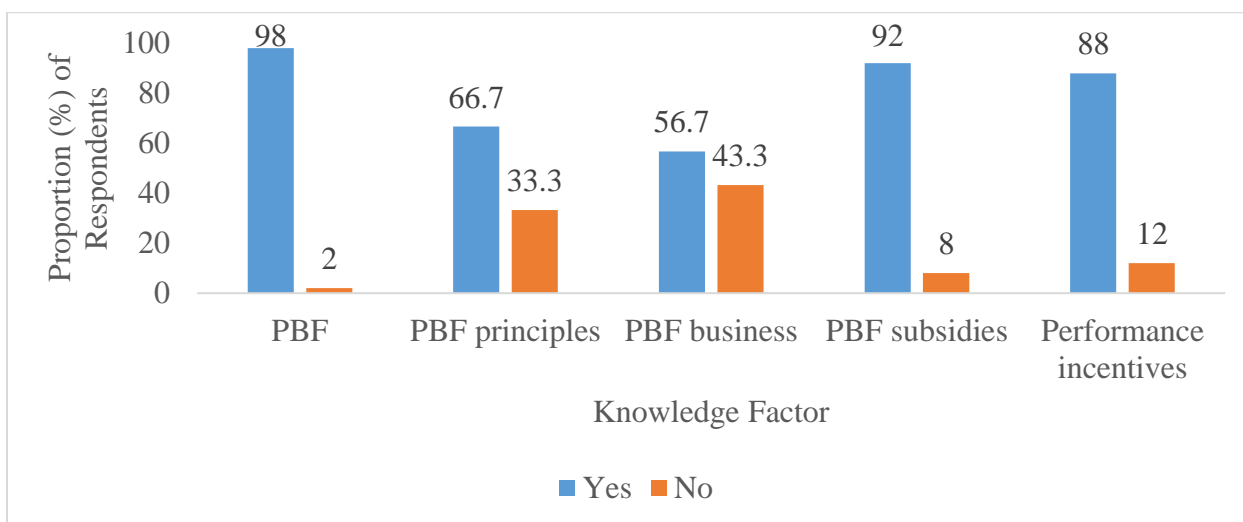


Figure8: Respondents' Level of Knowledge of PBF and PBF Services

The level of knowledge of PBF and PBF services presented in figure 8 above reveals that majority out of 150 responses were knowledgeable on PBF and related

services. PBF (98%), PBF subsidies (92%), performance incentive (88%), PBF principles (66.7%) and the PBF business plan (56.7%).

Table 4: Respondents Level of Knowledge of PBF and PBF Services(N = 150)

knowledge factor	Responses			
	Yes		No	
	Frequency	Percent (%)	Frequency	Percent (%)
PBF	147	98	3	2
PBF principles	100	66.7	50	33.3
PBF businessplan	85	56.7	65	43.3
PBF subsidies	138	92	12	8
Performance Incentive	132	88	18	12

Level of Appropriate Knowledge of PBF and Services

A participant with correct responses for at least three or less of the aspects was considered to have good and poor knowledge, respectively of PBF and services. The

majority [132(88.0%)] of respondents had good knowledge, while 18 (12.0%) had a poor overall knowledge of PBF and services.

Demographics		Good Knowledge of PBF and Services (%)	Significance	
			Chi-square	P-value
Gender	Male	49(92.5)	1.539	0.215
	Female	83(85.6)		
Age group	18-29	49(86.0)	0.587	0.063
	30-45	64(90.1)		
	>45	19(86.4)		
Marital status	Married	45(88.2)	0.659	0.719
	Single	84(88.4)		
	Others	3(75)		
Occupation	Medical doctor	9(100)	5.873	0.118
	Nurse	58(82.9)		
	Laboratory technicians	31(86.1)		
	Others	34(97.1)		
Health facility	Public	62(92.5)	3.61	0.165
	Private	38(80.9)		
	Confessional	32(88.9)		

Table 5: Demographics and Good Knowledge of PBF and Services

Male respondents 49(92.5%) tended to have more knowledge of PBF and services than females 83(85.6%) through the relationship was not significant (P>0.05). 64(90.1%) of respondents aged between [30-45] had more knowledge compared to those aged >45 years, 19(86.4%) and then those aged [18-29] years representing 49(86.0%). The highest level of knowledge of PBF was observing in public hospitals

(92.5%), then in confessionals (88.9%) and lastly in privates (80.9%). Further analysis demonstrated that there was no significant relationship between respondents' demographics and good knowledge of PBF and services (P>0.05).

The highest level of knowledge of PBF and related services was observed among medical doctors 9(100%) followed by others 34(97.1%) representing mostly auxiliary staff, laboratory technicians 31(86.1%) and nurses 58(82.9%).

4.3 Contribution of Performance Incentives on Health-Care Providers Condition

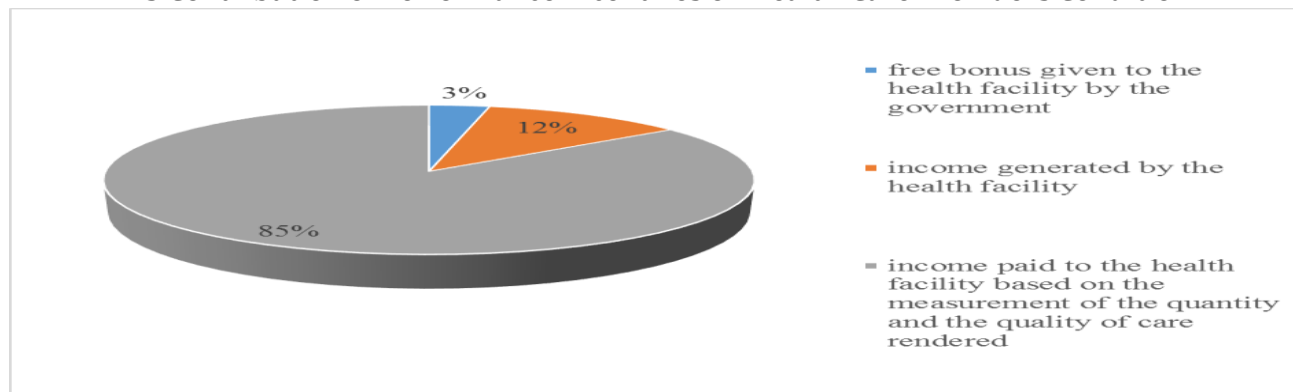


Figure 9 above, demonstrating the level of knowledge of respondents on the source of subsidies in their health facility reveals that out of the 150 staff assessed, the majority i.e. 85% said it was an income paid to the

HF based on the measurement of the quantity and the quality of care rendered, 12% said it was generated in the HF and finally 3% said it was a free bonus given to them by the government.

The incentive to staff and criteria

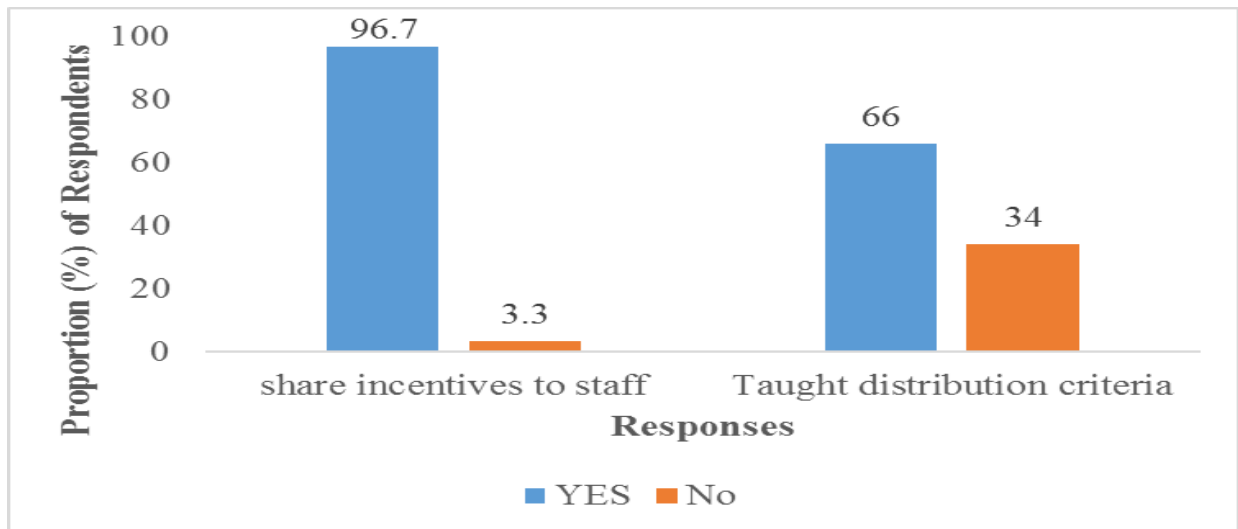


Figure 10: Responses to the Sharing of Performance Incentives

Of the one hundred and fifty (150) responses, 145(96.7%) share incentives in their HF against 5(3.3%) and 99(66%) against 51(34%) were taught the distribution criteria.

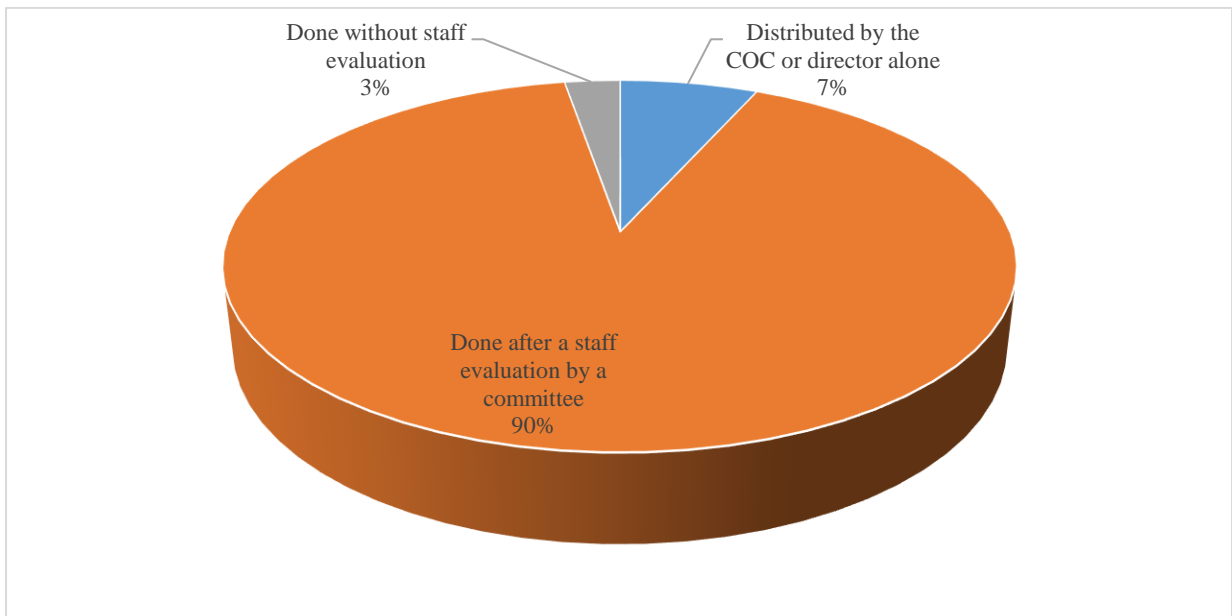


Figure 11: Responses on how Performance Incentives are shared

The researcher investigated to know how the incentive is been shared in HFs. 136(90%) stated it was done after a staff evaluation by a committee,

10(7%) said it was done by the COC or director alone and 4(3%) said it was done without any evaluation.

4.4 Impact of PBF incentives on health worker condition

Table 6: Motivation of PBF incentives in doing the job

Motivation in doing the job

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	83	55.3	55.3
	no	67	44.7	100.0
	Total	150	100.0	100.0

Majority of respondents [83(55.3%)] reported were motivated by PBF incentives while [67(44.7%)] were not motivated.

Table 7: Relationship Between Demographics and PBF Motivation

Demographics		PBF Motivation	Significance	
		n (%)	Chi-square	P-value
Gender	Male	34(64.2)	2.578	0.108
	Female	49(50.5)		
Age group	[18-29]	39(68.4)	6.849	0.033
	[30-45]	35(49.3)		
	>45	9(40.9)		
Marital status	Married	28(54.9)	0.058	0.97
	Single	53(55.8)		
	Others	2(50)		
Occupation	Medical student	5(55.6)	0.727	0.867
	Nurse	41(58.6)		
	Laboratory Technologist	18(50.0)		
	Others	19(54.3)		
Health facility	Public	24(35.8)	19.16	0.000
	Private	35(74.5)		
	Confessional	24(66.7)		

There was a significant difference at the level of age group and category of Health facility as shown in table 7 above Respondents in the [18-29] age group were 2.2 times (OR=2.22, 95% CI: 1.077-4.610, P=0.031) more motivated compared to >45 age group. Respondents in the [30-45] age group were 3.1 times (OR=3.13, 95% CI: 1.132-8.653, P=0.028) more motivated compared to >45 age group.

Respondents in confessional health facilities were 3.5 times (OR=3.58, 95% CI: 1.53- 8.42, P=0.003) more motivated compared public facilities. Respondents in private were 1.8 times (OR=1.82, 95% CI: 0.264-1.78, P>0.05) more motivated compared to confessional facilities.

Single Health-Care Providers 53(55.8%) were more motivated compared to the married 28(54.9%) and others (widows) 2(50%). No association was found

between gender ($P=0.108$), marital status ($P=0.97$), occupation ($P=0.867$) and PBF motivation.

Relationship between Level of Appropriate Knowledge of PBF and Services and level of Motivation

No relationship between good knowledge of PBF and services and level of motivation ($P=0.303$).

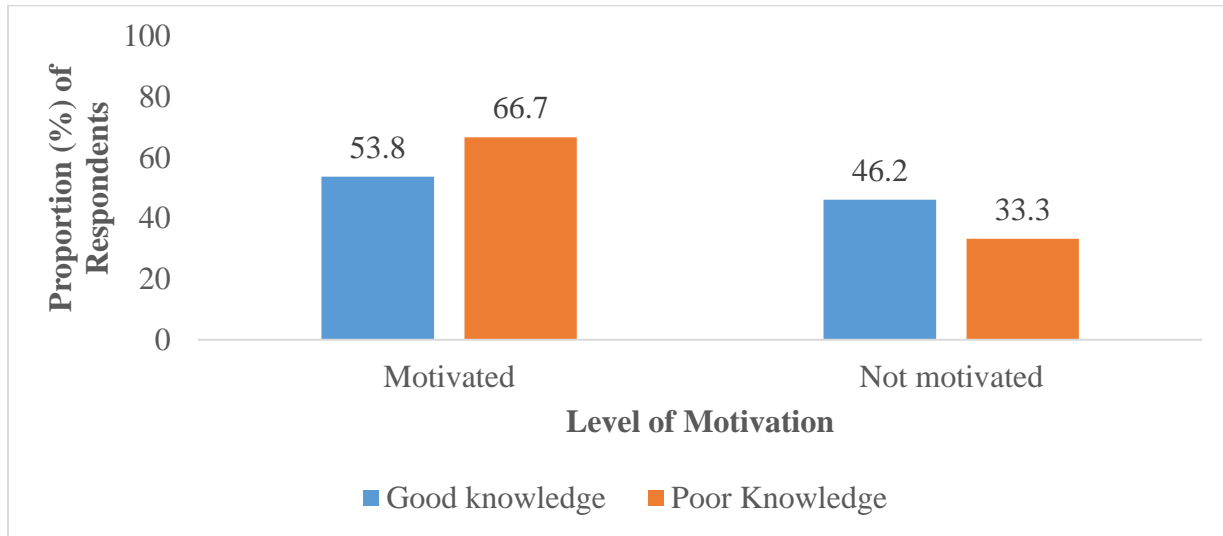


Figure 12: Relationship between Good Knowledge and Motivation

Negative Impacts Such As Unsatisfactory Personal Practice or Poor Quality of Care Associated With the

Non-Distribution or Poor Distribution of Incentives to Health-Care Providers

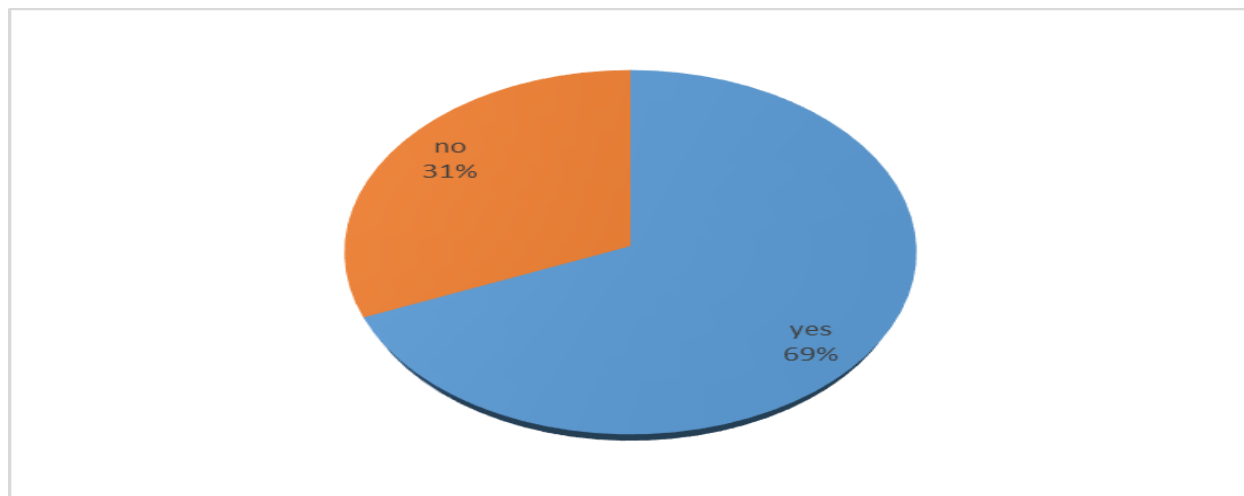


Figure 13: Respondents' opinions on the non-distribution or poor distribution of incentives

Majority of respondents 103(68%) said yes to the eventuality of possible negative effects related to the

non-distribution or poor distribution of incentives to Health-Care Providers and 47(31%) said no

4.5 Level of implementation of PBF in Kumba Health District

Comments:

1. Health facilities: level of implementation was high at the level of health facilities due to the fact the knowledge level of PBF and services were a high couple to the fact that most Health-Care Providers were motivated by PBF services.
2. Consumers:

A total of 300 inhabitants living in the district were randomly selected to assess the level of implementation of PBF services.

Table 8: Demographics of Inhabitants

Demographics		Frequency	Percent (%)
Gender	Male	136	45.3
	Female	164	54.7
Age group	18-29	116	38.7
	30-45	113	37.7
	>45	71	23.7
Religion	Christians	274	91.3
	Muslims	13	4.3
	Others	13	4.3
Marital status	Married	156	52
	Single	118	39.3
	Others	26	8.7
Occupation	Unemployed	80	20.6
	Farmer	33	11
	Civil servant	53	17.7
	Businessman	134	44.7

Majority of respondents were females 164(54.7%) compare to male 136(45.3%). [18-29] age group 116(38.7%) was more than [30-45] 113(37.7%) and

>45, 71(23.7%). Respondents were Christians in majority 274(91.3%), married 156(52%) and business men 134(44.7%).

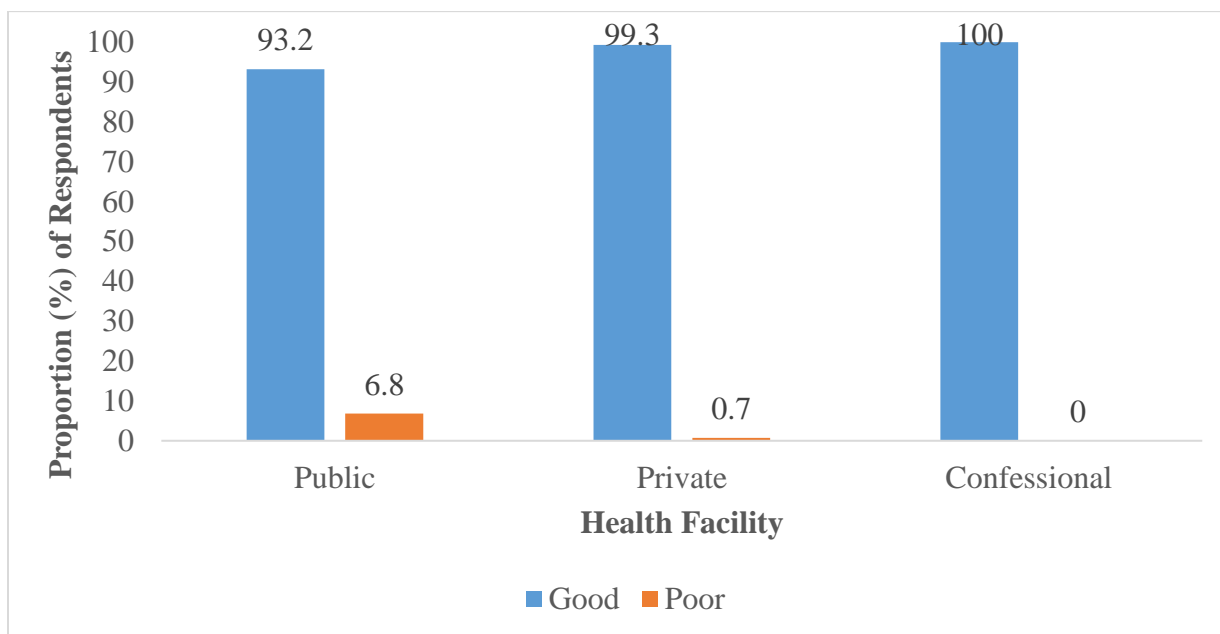


Figure 14: Relationship between Quality of Service and Health Facility visited

Majority of visited health facility were privates 136(45.3%), followed by the public 132(44.0%) and lastly the confessional 32(10.7%).

The quality of service in the confessional health facilities was good at 100%, then private at 99.3% and the public at 93.2%

There was a significant difference in the quality of services offered by the health facilities (P=0.012).

Table 9: PBF Services and Level of Implementation

Services	Responses [n (%)]			Significance	
	Health facility	Good	Poor	Chi-square	P-value
Quality of service	Public	123(93.2)	9(6.8)	8.927	0.012
	Private	135(99.3)	1(0.7)		
	Confessional	32(100)	0(0)		
Cost of service		Affordable	Expensive	41.014	0.000
	Public	81(61.4)	51(38.6)		
	Private	31(22.8)	105(77.2)		
Home visit		Yes	No	0.078	0.418
	Public	74(56.1)	58(43.9)		
	Private	78(57.4)	58(42.6)		
	Confessional	22(68.8)	10(31.2)		

Majority of respondents found out the quality of service to be good 290(96.7%), cost of service to be expensive, 175(58.3%) and they received a home visit team in their home 174(58.0%)

There was a significant difference at the level of quality of service and cost of service between health facilities as shown in table 9.

Respondents reported confessional services were 2.5 times (OR=2.52, 95% CI: 1.077-4.610, P=0.031) better than public services. Private services were 1.8 times (OR=1.79, 95% CI: 1.132-8.653, P=0.028) better than public services.

Conversely, public services were 4.2 times (OR=4.18, 95% CI: 1.53- 8.42, P=0.003) more

affordable than private. Confessional services were 2.1 times (OR=2.11, 95% CI: 0.264-1.78, P>0.05) more affordable compared to private services.

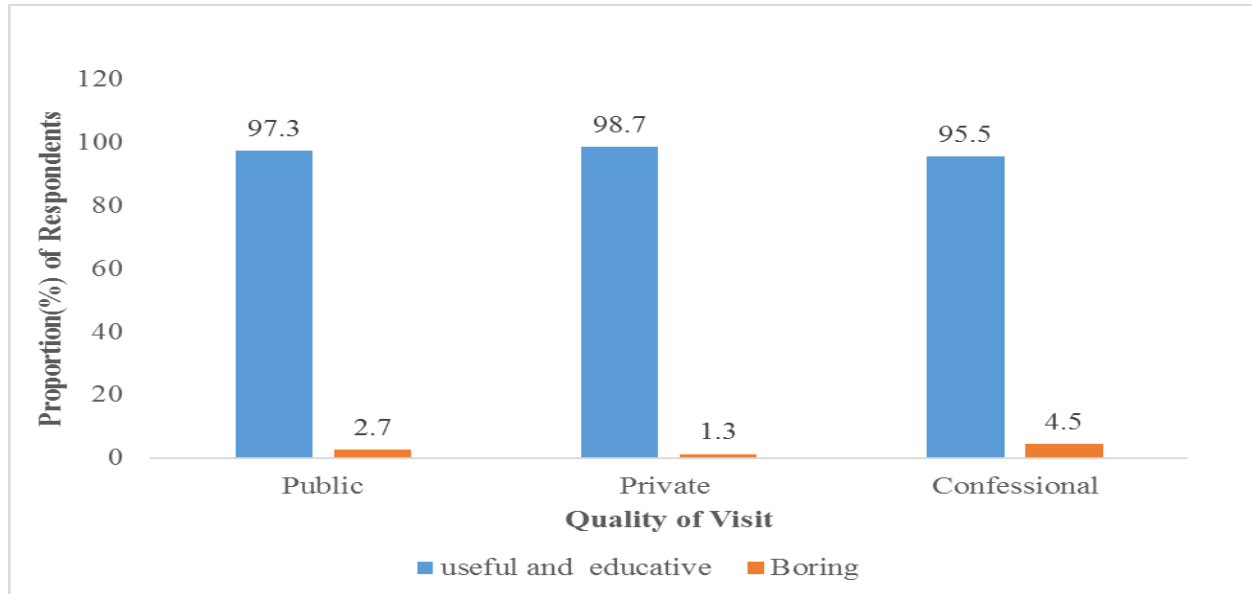


Figure 15: Quality of home visits and Health Facility

From figure 14 above, of the respondents who had home visits [174(58.0%)], majority of them [170(97.7%)] found it useful and educational whereas only 4(2.3%) found it boring.

Though there was no significant difference between the quality of the home visit and health facilities (P>0.05), it was higher in private health facilities [77(98.7%)] than public health facilities [72(97.3%)] and confessionals [21(95.5%)].

Discussion

The PBF intervention is gaining significant momentum as a solution to poor performance and the health worker crisis in low-income countries, particularly in Africa due to the stagnating health outcomes and little progress towards achieving the Sustainable Development Goals (SDGs), low coverage of services, inefficient use and allocation of services, limited physical and financial access to health care services. But even with the PBF initiative, the health system in Cameroon is still troubled with a certain number of difficulties linked to health care delivery among which poor governance. The overriding purpose of this study was to assess the impact of PBF on the standards of care-delivery rendered to consumers in the Kumba Health District. This study will provide adequate information that will be used to better the condition of Health-Care Providers and the quality of care rendered in health facilities. This chapter discusses the findings of the study. The discussions are based on the findings

in relation to the research objectives and other related studies.

5.1 Discussion of Findings

5.1.1 Knowledge of Health-Care Providers on PBF and PBF Services

The results of this study revealed that healthcare providers are well knowledgeable about PBF and other PBF related services. The knowledge percentage rate of PBF, in general, was 98%, for particular services, we had 92% for knowledge on PBF subsidies, 88% for performance incentive, 66.7% for PBF principles and finally 56.7% for a business plan. We can observe that there is a good level of knowledge of PBF and PBF services in general by Health-Care Providers (table 4). Also, responses reveal that the most knowledgeable age group was [30-45]. Explanation of this can be that the 30-45 age group is the most active age group in the society made of young adults and they are also the one with the most need. In Cameroon, it is relatively at this age that young men start to create their own family. The general knowledge of Health-Care Providers on

PBF will help them to implement better some of the PBF concepts such as creating good job descriptions for staff, creating quarterly business plans for their facilities, costing for their services and entering service agreement with the government, improved record keeping, customer care and involving community as partners in running their facilities (Manongi. et al.,2014).

Results further reveal that public health facilities were more knowledgeable on PBF and PBF services than the privates and confessional health facilities. Public health facilities, with the implementation of the PBF project, have had their autonomy to function by themselves and many of them are contempt with that, they have to produce their funds before using them and this is a system which was already being practiced by the privates and confessional health facilities. This could be seen as the reason why they have more knowledge because the more you are motivated on something the more you will learn about it.

Result of analysis on fig. 9 reveals that only 3% of respondents had poor knowledge of the source of the PBF subsidies paid to the health facilities. The majority, 85% knew the real source of the subsidies and 90% positively knew the criteria of bonus (incentives) distribution to the staff reason why most of them (83%) stated being motivated by the PBF incentives in doing their job.

5.1.2 Impact of PBF Incentives on Health-Care Providers

Results of this study showed that performance incentives are appropriately shared in the majority of health facility in the Kumba Health District. 96.7% said they receive incentives against 3.3% who said they don't. Sharing of bonuses to staff is good because this will help to boost the quality of service, this goes in the same light with a study done some years ago on profit sharing to boost employee productivity and satisfaction. "We all know that people respond to incentives. Economics 101 teaches that workers put forth greater effort when these efforts are rewarded financially, and top talent tends to gravitate toward jobs and firms where rewards are geared to performance" (Alex and Freeman, 2016). Out of those receiving, 66% were taught the criteria for sharing that's how they will be evaluated and how the bonus will be calculated, 34% were not taught which was not appreciated by the staff.

Evaluation and motivation are will always have the highest positive impact when it is done transparently. Results of this study revealed that 90 % of the respondents answered that the sharing of incentives was done after staff evaluation by a committee. The committee is usually made up of staff working in a different department of the institution and these members are rotatory so that all staff of the institution will take part in the evaluation.

Findings revealed that respondents in the [18-29] age group were 2.2 times (OR=2.22, 95% CI: 1.077-4.610, P=0.031) more motivated compared to >45 age group. Respondents in the [30-45] age group were 3.1 times (OR=3.13, 95% CI: 1.132-8.653, P=0.028) more motivated compared to >45 age group. This is confirmed by the observation made above where the [30-45] and [18-29] age groups were the most knowledgeable on PBF and PBF services.

Results further reveal that respondents in confessional health facilities were 3.5 times (OR=3.58, 95% CI: 1.53- 8.42, P=0.003) more motivated compared public facilities. Respondents in private were 1.8 times (OR=1.82, 95% CI: 0.264-1.78, P>0.05) more motivated compared to confessional facilities. This can be explained by the fact that private health facilities are personal business belonging to individuals. They actually need to work hard in order to maximize their profit meanwhile confessional health facilities belong to churches and public to the government where they still perceive some funds from.

It was observed that there was no relationship between good knowledge of PBF and services and level of motivation (P=0.303). This means that independently of their knowledge on PBF and PBF services the workers tend to still be motivated by the project as results showed that those with the highest level of poor knowledge (66.7%) were more motivated than those with the low level of poor knowledge (33.3%).

The non-sharing of motivation or poor sharing of motivation to the staff can act as a demotivating factor in producing quality health care and also promote more negative habits such as private

practices, this was confirmed by (68%) of the respondents who participated to this study.

5.1.3 Level of implementation of PBF in KHD

Analysis and results above revealed that level of implementation was high at the level of health facilities due to the fact the knowledge level of PBF and services were a high couple to the fact that most Health-Care Providers were motivated by PBF services and principles.

At the level of consumers, we observed that private health facilities were the most visited surely because of their marketing strategies more convincing, followed by the confessional and lastly the public. It was also found that there was a significant difference in the quality of services offered by the health facilities ($P=0.012$).

Confessional health facilities were revealed to have the highest level of good service, Respondents reported confessional services were 2.5 times ($OR=2.52$, 95% CI: 1.077-4.610, $P=0.031$) better than public services. Private services were 1.8 times ($OR=1.79$, 95% CI: 1.132-8.653, $P=0.028$) better than public services. A study done in the same light by a team of the World Bank in Bangladesh concluded that no significant differences could be found between the satisfaction of public and private patients regarding the service received. And conversely, public services were 4.2 times ($OR=4.18$, 95% CI: 1.53- 8.42, $P=0.003$) more affordable than private. Confessional services were 2.1 times ($OR=2.11$, 95% CI: 0.264-1.78, $P>0.05$) more affordable compared to private services. This is simply because private health facilities always inflate the cost of their services and medications to make more profit.

Results further showed that only (58%) of the respondents received a home visit team in their household and (97.7%) of these found it very useful and educative. Home visit mostly is used to assess clients and solve their existing problems in their home, it is also used as a marketing strategy to

publicize the type and cost of service rendered in the health facility.

5.2 Conclusions

Health-Care Providers, in general, have good knowledge of PBF and PBF services. The knowledge rate was 98% in general, 92% for PBF subsidies, 88% for performance incentive, 66.7% for PBF principles and finally 56.7% for a business plan. We can conclude from this study that the level of knowledge on the business plan is somehow low because this is the mother tool for contracting in PBF which all the staff is supposed to master. This limited knowledge of the health facility business plan will lead to the conclusion of a partial application of the participatory management principle in the Kumba Health District. We also observed that the level of knowledge on PBF and PBF services was higher in public health facilities than in private and confessionals.

Results further showed that performance incentives are appropriately shared in the majority of health facilities in the Kumba Health District, the sharing criteria are well known and the source of funds as well. Results also revealed that younger workers [18-29] were more motivated than older [30-45] and above. And respondents in confessional health facilities were 3.5 times more motivated compared to public facilities. Respondents in private were 1.8 times more motivated compared to confessional facilities. The level of motivation does not depend on the level of knowledge of workers.

Results revealed that the level of implementation of PBF was high at the level of health facilities due to the fact the knowledge level of PBF and services were a high couple to the fact that most Health-Care Providers were motivated by PBF services and principles. Implementation of PBF was also well carried out at the level of the community through household visits as stated by 58% of respondents and 97.7% scored it to be very useful and educative.

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