Opportunities and Barriers to community participation in Performance-based financing in Zambia

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Zambia

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REVIEW OF OPPORTUNITIES & BARRIERS TO COMMUNITY PARTICIPATION IN PERFORMANCE BASED FINANCING (PBF) PROGRAMME IN ZAMBIA

A thesis submitted in partial fulfillment of the requirement for the degree
Of

Master of Public Health

By

Kaiko Mukololo

Declaration:

Where other people's work has been used (printed source or internet or any other source) it has been acknowledge carefully and referenced in accordance with the guidelines of the department.
The thesis "Opportunities and Barriers to community participation in performance Based Financing in Zambia" is my own work.

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Lastly I thank God for this opportunity bestowed upon me

Abbreviations

ACT	Artemisinin-based Combination Therapy
AEDES	Agence Européenne pour le Dévéloppement et la Santé
ANC	Antenatal care
AZT	Zidovudine
BCC	Behavior Change Communication
BP	Business Plan
C1	Control 1
C2	Control 2
CBO	Community Based Organization
CSO	Central Statistics Office
CBoH	Central Board on Health
CHW	Community Health Worker
CARE	Cooperative for Assistance and Relief Everywhere
CHAZ	Churches Health Association of Zambia
COSA	Comité de Santé
CORDAID	Catholic Organization for Relief and Development Aid
CP	Community Participation
CSO	Central Statistics Office
D-RBFSC	District RBF Steering Committee
DHMT	District Health Management Team
DID	Difference In Difference
DMO	District Medical Office
DDCC	District Development Coordinating Committee
DPT	Diphtheria, Pertussis and Tetanus
DSC	District Steering Committee
DALY	Disability Adjusted Life Years
EMOC	Emergency Obstetric Care
EmONC	Emergency Obstetric and Neonatal Care
FP	Family Planning
FBO	Faith Based Organization
GDP	Gross Domestic Product
GNI	Gross National Income
GRZ	Government of the Republic of Zambia
GGE	General Government Expenditure
GGHE	General Government Health Expenditure
HC	Health Centre
HF	Health Facility
HR	Human Resource
HCC	Health center committees
HDI	Human Development Index
HMIS	Health Management Information System
HRBF	Health Results Based Financing
HRITF	Health Results Innovation Trust Fund
HIV/AIDS	Human Immune Virus/Acquired Immune Deficiency Syndrome
ICER	Incremental Cost Effectiveness Analysis
IE	Impact Evaluation
IGA	Income Generating Activity
ITN	Insect Side Treated Net
IPT	Intermittent Preventive Treatment
IRESCO	Institute for Research Socio-Economic Development and Communication
LiST	Lives Saved Tool
LMIC	Low Middle Income Country
LRI	Lower Respiratory Infections
MCH	Mother and Child Health
MCDMCH	Ministry of community Development Mother & Child Health

MDG	Millennium Development Goals
MMR	Maternal Mortality Ratio
MOH	Ministry of Health
MPH	Masters of Public Health
NCDs	None Communicable
NHA	National Health Accounts
NHCC	Neighborhood Health Center Committee
OOP	Out Of Pocket
NGO	None Governmental Organization
P-RBFSC	Provincial RBF Steering Committees
PDCC	Provincial Development Coordinating Committee
PBF	Performance-based financing
PBF -SC	Performance Based Financing Steering Committee
PE	Process Evaluation
PIU	Project Implementation unit
PNC	Postnatal Care
PHC	Primary Health Care
PMO	Provincial Medical Office
PPP	Purchasing Power Parity
QALY	Quality Adjusted Life Years
RBF	Results Based Financing
RBFI	Result Based Financing Intervention
SC	Steering Committee
SES	Social Economic Status
TBA	Traditional Birth Attendant
TB	Tuberculosis
TOT	Training of Trainers
THE	Total Health Expenditure
TFR	Total Fertility Rate
USD	United States Dollar
UHC	Universal Health Coverage
UNDP	United Nations Development Programme
WCBA	Women of Child bearing Age
WHO	World Health Organization

Glossary

Community participation in health, also called public or consumer involvement, can be defined as a process by which community members, individually or collectively with varying levels of commitment: develop capability to assume greater responsibility to assess there own health needs and problems, plan and implement solutions, create and maintain organization in support of these efforts, evaluate effects and adjust accordingly goals and programs (World Health Organization 1978)

Performance Based Financing (PBF): "defined as a system approach that uses a fee for service to purchase results from providers defined as quantity or quality of service outputs. The approach entails making facilities autonomous agencies that work for the benefit of health or education related goals and their staff. Multiple performance frameworks for regulatory functions, contract development and verification and community empowerment characterize PBF(Soeters 2016). Fritsche goes further to relate PBF to a system of health reforms, because of the several changes to the health system that come with it, like paying providers FFS on top of there salaries(Musgrove 2010)

Results Based Financing (RBF): Cash payment or non-monetary transfer to a sub-national government, manager, provider, payer or consumer of health services after pre- defined results have been achieved. It is an umbrella term that includes different types of interventions like conditional cash transfers, PBF, cash on delivery (Musgrove 2010)

Contract development and verification agency (CDV) is the institution that develops contracts with providers such as health facilities schools etc. they verify outputs and coach staff in use of management tools. CDV agencies are separate from regulator (governance) that ensures results are verified in order to trigger incentive payments. They are responsible for coaching, business plans and indices management most PBF systems have a 2 to 4 medical and community verification officers stationed in each district responsible for verifying quality and subcontracting CBO to conduct community verification, directly reporting to them (Soeters 2015)

Regulator: defined as rules designed to control conduct of those it applies to. They are official rules that have to be followed (Soeters 2015)

ABSTRACT

Background: Zambia has made progress in reduction of key indicators like Child Mortality Rates between 1990 and 2014 from 193 to 75 per 1000 live births. Despite the reductions, inequalities remain, human resource shortages. And inefficiency in health returns despite relatively high expenditure. Outcomes such as MMR, IMR indicate poor health returns. PBF was introduced in order to address the challenges

Objective of study: To critically examine how community participation is operationalized in PBF experiences in Zambia in order to identify gaps, make recommendations for health workers, policy makers and other key stakeholders to tackle the challenges

Methodology: was through literature review of both published, unpublished data and peer-reviewed literature. The study adapted and modified the World Bank PBF conceptual framework for the HRITF

Findings: Community members were given an important role to play but findings indicate that they passively participated in PBF activities and did not fully exploit their role

Recommendations: I recommend that further research be conducted to document the opportunities or barriers to community participation in PBF. I further recommend for separation of contract regulation, community empowerment and verification roles to ensure accountability and strengthen community voice. Lastly but not the least incentives should be provided to community actors for their role in PBF

Key words: RBF, PBF, Community, participation and Social accountability

Word count: 12,350

History of community participation Zambia and Globally

As one of the RBF trainers involved in training HC, DMO, Hospital staff and community members countrywide, I noticed that conducting training programs of community members and facility staff in the same sessions, using the same materials and methods was a challenge in terms of effective communication due to the language barrier and technical gaps between community members and health personnel. Equally result-based financing (RBF) was complex as it was new to most of them at the time. From 2012 to 2014 I was part of the project team based at provincial level and my role brought me in contact with community members in districts on a routine basis throughout the pilot phase. Again I noticed the important role communities had been given but they were seemingly not able to fully utilize it to its full potential. A common question from community members was why they were not paid for their role in the project, and the start of community PBF.

In initial years, elected members of the community were meant to be volunteers providing services and acting as an interface between community and HF (Soeters 2015); later on there was a shift towards social accountability relations to consult them, to make services more responsive (Devarajan & Reinikka 2004). Community participation (CP) was introduced in the 1970's. Articulated by WHO at Alma-Ata in 1978, it was reinforced as a strategy to archive "Health For All By The Year 2000; Primary Health Care (PHC)"(Zakus & Lysack 1998). PHC was proposed as a strategy to address social, economic and political causes of poor health outcomes and promote equity in distribution of resources(World Health Organization 1978 & Zakus & Lysack 1998).

To improve health systems, Zambia adopted PHC in 1987. Through the Bamako initiative, reforms were introduced countrywide in the public sector (1992) to look at issues of leadership, accountability and partnerships. A vision was set, " to provide equity of access to cost effective healthcare as close to the family as possible for all Zambians". Health center committees (HCC) were developed supported by community based volunteers (NHC's, CHW's and TBA's)(Ngulube et al. 2004) as the interface between the community and health facilities (HF) (Joseph 2014). Participation through joint management and financing between the community and health system led to a shift from free health care to fee-for-

service system. The policy had limited success as most HCCs failed to assume their new roles effectively to bring about positive impact both at HC and community level (Ngulube et al. 2004)

The aim of this study is to 1. Describe and review current experiences of PBF in Zambia, 2. Analyze the role of communities in the design and implementation of PBF experiences in Zambia, 3. Review literature on experiences and contributions of CP within PBF and formulate recommendations on how the community can be involved to improve access and quality of health care services.

The thesis will give a brief description of the key demographic, social economic, contextual issues of Zambia and its health system; describe the problems upon which RBF was piloted (2012-2014). It will then go on to outline the justification, objectives and methods of data collection. Results from a literature review shall be analyzed in the discussion section through specific objectives and conceptual framework. Based on outcomes, recommendations will be made.

This review will aim towards contributing to the existing body of knowledge of community PBF, particular to Zambia. It will show evidence and best practices to inform future recommendations on how to improve policies and practices of CP and PBF in Zambia. Relevant policy makers and stakeholders may benefit from this thesis to improve heath services interactions with community members to improve health outputs in Zambia

The study is in partial fulfillment of the requirement for MPH and for my individual goal to not only understand public health but how to effectively engage non state actors in public health, particularly in PBF to build my skills as a young PBF advocate and practitioner out make a difference in my future endeavors.

1. BACKGROUND INFORMATION

1.1 General Information about Zambia

1.1.1 Geography and socio-demography

Zambia is a landlocked country located in southern Africa with a total surface area of 752,612 square km. Administratively the country is divided into 10 provinces, which are further divided into 74 districts (CSO et al. 2014).

Figure 1 Map of Zambia

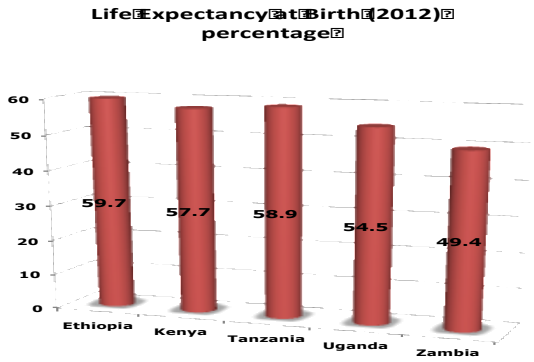
Source: United Nations 2016

1.1.2 Population composition and distribution

Figure 2: Population

Population Composition & Distribution Zambia & Life Expectancy

Population	15.2 Million
Urban population	60.55
Rural population	39%
Below 15 years	50%
Children below 5yrs	17%
Population 65yrs>	3%
Life expectancy/ Regionally	51.2/ 54.7 years
Life expectancy LMIC	65.8

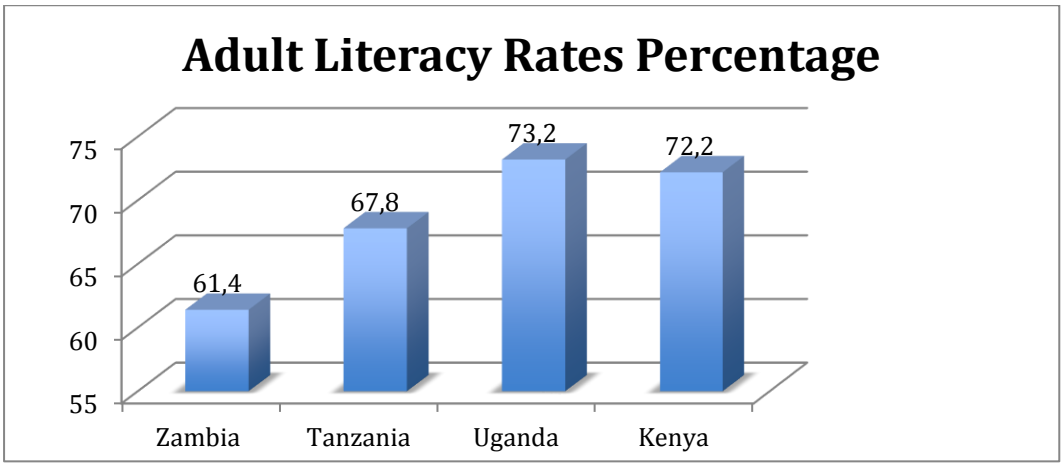


Source: Sopitshi A. et al 2015, CSO et al. 2014, World Development Indicators World Bank

1.1.3 Education attainment

Since 2002 there is a free basic education policy. 64% and 82% women and men respectively are literate. Primary enrolment was 73% in 1998 to 94% in 2012, completion rates moved from 68% to 91%. Adult literacy rates remain the lowest in the region at 61.4% in 2012 (Sopitshi A et al. 2015, Engstrand 2013, CSO et al. 2014 & World Bank 2015).

Figure 3: Region Adult Literacy rates



Source UNDP (2014)

1.1.4 Economy

Zambia is a LMIC country with a GDP of $27 Billion in 2014, Gini index of 57.5%, GNI per capita of US$ 1,760 in 2014 and a projected economic growth rate of 7% per annum. The GDP per

capita was at $1, 095 in 2012 (Sopitshi A. et al 2015 & World Bank 2015)

General government revenue from GDP is projected to increase from 20% in 2010 to 23% in 2016 (World Bank 2014).

Zambia recorded economic growth from 2004 to 2012 due to favorable policies, rising copper prices and progress on debt relief and privatization (World Bank 2015). Despite growth, 74.5% people live under a $1USD a day and 42% are extremely poor (Sopitshi A. et al. 2015, Central Statistical Office 2011). 15% are unemployed, mostly youths and females (Sopitshi A. et al. 2015). There is unequal distribution of resources between the rich and the poor; showing high-income inequality, with most resources held by the richest 20% of the population. Rural poverty remains high at 77.9% in 2010, a drop from 80.3% in 2006 but still double the urban rate despite growth (World Bank 2015).

High economic growth and capital inflows over the recent years have led to infrastructure development and a decline in urban poverty from 29.7% in 2006 to 27.5% in 2010 (Central Statistical Office 2011), leading to high demand for better quality services that cannot be satisfied by the health system (Engstrand 2013). In terms of political stability, Zambia lags behind in HDI at 163 out of 187 countries and on a number of MDG indicators, governance, corruption issues, debt burden, institutional capacity and ineffective spending. It scores low on voice and accountability, regulatory quality, rule of law and government effectiveness (World Bank 2015).

1.1.5 Socio cultural and religious values

Zambia is multi cultural mostly of African descent with 72 tribes and ethnic groups, over 80 languages across 10 provinces; the major language groups are Bemba, Kaonde, Lozi, Lunda, Luvale, Nyanja and Tonga. English is the official language used for education, commerce and trade (Engstrand 2013, Sopitshi A. et al 2015). Religious freedom is generally respected in Zambia. 87% of the population is Christian, 1% Muslim and Hindu while 12% are considered as other, adhering to traditional beliefs or indigenous religions(CSO et al. 2014)

1.1.6 Characteristics that affect health

Social cultural, religious beliefs and practices such as early marriage and traditional male circumcision, risky sexual behavior practices such as transactional or inter generational sex, multiple concurrent

partnerships and early sexual practice are common (CSO et al. 2014, National Aids Council 2014).

There is high gender inequality in access to education, health, decision making and control of resources such as land and employment opportunities (World Bank 2015, Milimo M 2004). Equally there exists Gender discrimination and social restrictions for example lack of women in advisory committees, gender based violence (Demessie et al. 2005)

High poverty rates, disparity in access to services such as safe water and sanitation exist at 35% in urban and 19% in rural. There is inequality in access to nutrition and primary school opportunities, posing a challenge to the health status of the population (Sopitshi A. et al 2015, World Bank 2015)

1.1.7 Strategies to improve health

Addressing malaria and HIV/AIDS remains one of the key issues in order to have a wider impact as they have affected the health status of most of the Zambian population. Other areas of need include maternal and child problems. Malaria deaths declined by 50% between 2000 and 2008, leading to a decline in all cause mortality rate of under five children by 29% between 2002 to 2007. HIV/AIDS related strategies have been largely regarded as successful (World Bank 2010).

1.2 Health reforms

Since 1992, Government put in place reforms such as decentralization, delegation in planning, management, decision-making and control of health services to districts, HCs and communities.

1.2.1 Decentralization

The policy is guided by a decentralization plan of 2013 with emphasis placed on devolution of functions. It aims to realign central, provincial and district or sub district roles to ensure harmony in management and implementation of activities Government has moved responsibility of maternal and child health and nutrition to MCDMCH to scale up community access to the services. The ministry is better equipped to provide integrated care, as it is responsible for community development, social welfare and PHC (Consultation 2016)

Even though reforms highlight equity and delivery of quality services as "close to the family as possible". It has been noted though that macroeconomic measures such as social sector cuts in spending have negatively affected implementation. Furthermore governments failure to fund health services and *de-institutionalization* of healthcare to home based care for chronic diseases such as TB and HIV/AIDS has impacted women and girls more than men as it has led to women not being employed and girls dropping out of school to care for the patient, or head the family (Demessie et al. 2005).

1.2.2 Vision 2030 and Sixth National Development Plan

Zambia's development outline is guided by the vision 2030 and sixth national development plan (2013-2016). Both contain goals such as reducing hunger and poverty. The vision states long-term strategies that link all sectors of governance to reach sustainable development. These were tailored to achieve health related MDGs of 2015, increase access to HFs and ensure availability of health workers. They were meant to reduce disease burden, maternal and infant morbidity, mortality rates and increase life expectancy by providing a continuum of quality healthcare services (Sopitshi A. et al 2015)

Government adopted PBF as a strategy in fifth National Development Plan for 2011 to 2015 (Vledder et al. 2013)

1.3 Health system overview

Table showing key indicators, disease burden, innovation and challenges

Health system	No of doctors /1000 population	0.06 (2010)
	No of nurses /1000 population	0.07 (2010)
	% Births with skilled attendance	53.6% (2010)
	Infant mortality rate	53 per 1000 (2013)
	Under 5 mortality rate	44 per 100,000 population
	Average life expectancy	57 years
	Maternal mortality	483 per 100,000 population (2010)
Disease burden	HIV/AIDS Prevalence	14.3% (2013)
	Deaths due to HIV/AIDS	24%
	Deaths due to chronic diseases	26.83% (2008)
	Deaths due to violence	2.77%
	Deaths due to maternal conditions	1.53%
Innovation challenges	• Human resource shortages • Funding	

	• Poor capacity to meet healthcare needs
Innovation opportunities	• Diverse funding mechanisms • Training CHWs • Community based innovations

Source Zambia Country profile (Sopitshi A. et al. 2015)

1.3.1 Organization of health system

NGOs and FBOs assist government to provide healthcare services but Ministry of Community Development Mother and Child Health (MCDMCH) and Ministry of Health (MoH) deliver services, formulate policy and manage referral services from level 2 provincial hospitals to level 3 tertiary institutions. MoH manages training institutions and statutory boards. MCDMCH provides PHC services from community, health posts, health centers and district hospitals (WHO 2013, Sopitshi A. et al 2015 & Ministry of Health 2016)

1.3.2 Human Resource situation

HR constraints remain a key issue requiring long-term measures. There is a shortage of health workers: Medical officers, nurses, licentiates, pharmacists and midwives (Ministry of Community Development Mother and Child Health 2013, World Health Organisation & Ministry of Health Zambia 2010)

The country is operating at less than half the recommended benchmarks at 0.07 nurses per 1000 population instead of 2.3 doctors and midwives per 1000 population (WHO 2006). A HR strategic plan 2011 - 2016 is in place to tackle HR challenges with strategies such as needs based posting, improved conditions of service, increasing number of health workers and coordinating training programs across all levels. There are limited finances for recruitment and low numbers of graduates from training institutions and inadequate training and education systems (Ministry of Health 2012, World Health Organisation & Ministry of Health 2010).

1.3.3 Health financing

5.4% to 6.6% of Zambia's GDP goes towards healthcare financing, the benchmark for Africa is 15% according to the Abuja Declaration. Partners such as Global Fund to fight TB and Malaria, Pepfar and several FBOs support healthcare financing strategy. There is a social health insurance scheme to mobilize resources. CHAZ (FBO) complements government efforts by providing about 50% of rural healthcare services and 35% countrywide. The informal sector remains large and mostly unregulated with various players some untrained like TBAs, traditional healers, and CHWs (Sopitshi A. et al

2015). Total Health Expenditure (THE) as a percentage of GDP decreased over 10 years from 7% between 1998 and 2004, to 5% between 2012 and 2014 (NHA).

1.3.4 Health Systems performance

Zambia has improved outcomes for example by reducing HIV/AIDS prevalence in adults 15-49 years from 16.1% to 14.3% between 2002 and 2007. TB cure rate improved from 79% in 2005 to 86% in 2008 (Ministry of Health 2011). Under Five-mortality rates decreased from 192 to 89 deaths per 1000 live births between 1990 and 2012; LMIC 53 per 1000 (WHO 2014). The reductions were however were not enough to achieve MDG 2015 targets (Central Statistical Office & Ministry of Health 2014).

At 5.9 births per woman in 2010, TFR remains one of the highest in the world leading to high infant mortality and malnutrition rates (World Bank 2014)

Figure 4: Selected Health Status and utilization indicators

Selected health status and utilization indicators			
	2010		
	Urban	**Rural**	**National**
Outcome indicators			
Total Fertility Rate (birth per woman)	4.6	7	5.3
Contraceptive prevalence (%of women ages 15-49)	42	27.6	32.7
Chronic malnutrition prevalence (% of under -5 children)	39	47.9	45.4
HIV prevalence (% of adults aged 15-49 years who are HIV positive)	19.7	10.3	14.3
Service coverage indicators			
Delivered by skilled providers (% of pregnant women)	83	31.3	46.5
Full immunization coverage (% of children aged 12-23 months)	71.2	66.2	67.6
ARI treatment coverage (% of under-5 children)	63.4	38.9	46.6
Children with diarrhoea who received ORT or increased fluid (% of under -5 children)	75.7	73.6	74.3
Children with fever who sought treatment from a facility/provider same day/next day (% of under -5 children)	25.2	24.3	24.5
Children who slept under an ITN last night (% of under-5 children)	50.9	60.1	57
Women who slept under an ITN last night (% of pregnant women)	52.3	60.9	58.2

Source *2012 Zambia National Malaria indicator survey: *2007 Zambia Demographic and health survey, and *2010 Zambia census of population and housing (World Bank 2014)

1.3.5 Country disease profile

Besides an increase in NCDs, Zambia's has a generalized HIV/AIDS epidemic, with a prevalence of about 14.3% among adults. Urban areas compared to rural areas are more affected; women are equally more infected than men. High HIV prevalence and incidence has resulted in high co-infection with TB from 60%-70%, a leading cause of morbidity and mortality among adults 15-49 years (chirwa

2009, Ministry of Health 2013, National Aids Council 2014 & UNDP 2013)

MoH has prioritized efforts towards reducing HIV/AIDS through for example scaling up of ART, leading to 446, 841 out of 481, 545 or 90% of eligible adults accessing treatment in 2012. A 50% reduction in new infections and death was seen between 2000 and 2012 with a 60% decrease in adult infections. Seasonal epidemics such as cholera affect the Zambian population, due to inequity in access to water and sanitation services, water sources and hygiene behavior (Central Statistical Office & Ministry of Health 2014).

2. PROBLEM STATEMENT, OBJECTIVES METHODOLOGY

2.1 Problem Statement

Zambia has made progress in reduction of key indicators like Child Mortality Rates between 1990 and 2014 from 193 to 75 per 1000 live births, Maternal Mortality Rates (MMR) from 580 to 398 deaths per 100,000 live births; still high compared to other LMIC countries (CMR 61 deaths per 1000 live births). Mortality rates of children under 5 years of age reduced from 190.7 deaths per 1000 live births in 1992 to 137.6 per 1000 in 2010. Infant mortality rate before the age of one reduced from 107.2 deaths per 1000 live births in 1992 to 76.2 deaths per 1000 in 2010 (UNDP 2013).

Despite the reductions, inequalities remain for example Skilled Birth Attendance nationally was at 46.5% (2013-2014); rural areas were at 31.1%, urban areas at 83% (2010). Immunization rates improved from 77% in 1992 to 137.6% in 2010. For children 12-23 months the national average was at 67.6%, urban areas were at 71.2% and rural areas at 66.2% (Central Statistical Office, Ministry of Health 2014 & World Bank 2014)

There is a also a shortage of health workers with a 59% gap in number of clinical staff countrywide (World Bank 2014) at 0.07 nurses per 1000 population instead of 2.3 nurses, doctors and midwives per 1000 population (WHO 2006). Unequal distribution of existing workforce, poor conditions of service, unsatisfactory working conditions and weak HR management systems characterize the health system. Human resource are unable to meet workforce needs due to HIV related illness, attrition, emigration, low motivation, absenteeism and unequal distribution. Rural areas are more affected, as they are unable to attract and retain staff. (National HIV/AIDS/STI/TB COUNCIL 2014, Sopitshi A. et al 2015).

At 11%, General Government Health Expenditure (GGHE) as percentage of General Government Expenditure (GGE) is relatively high when compared to other LMIC. With the Total Health Expenditure (THE) at $195 (PPP), 55% or $107 (PPP) as public expenditure exceeds $86 per capita spending, enough to provide a minimum package of care if compared to the $85 benchmark. It is however noted that allocative inefficiencies, governance and corruption issues affect management of funds; for example Auditor Generals Office reported misuse of funds led to government reimbursing over US$3.2 million to cooperating partners in 2013. Delays in release of district grants to health facilities (more than 33% districts), and less funds receipted for service delivery (20%

HC's) and other reasons contribute to inefficiency of the system as seen through outcomes MMR, Infant mortality and system capacity (beds, physicians) indicating poor health returns (World Health Organization 2011, Central Statistical Office, Ministry of Health 2014 & World Bank 2015)

Despite a free Primary health care policy and a relatively reasonable Out of Pocket Allowance (OOP) at 30% in 2014 (risk for impoverishment is higher if OOP is below 20%), Challenges remain such as the country's large geographical size and a varied terrain (World Health Organization 2010).

PBF was introduced in the Zambian health system to counter or address a number of health system issues and because of a growing body of evidence showing a positive link between PBF, service coverage and improved quality (Renaud et al. 2014, Grittner 2013, Basinga et al. 2009, Toonen et al. 2012).

Within the PBF design, beneficiaries and communities are important as:

1. Indirectly their increased use of services leads to more incentives for health workers
2. Direct involvement in PBF for example through basic service provision of care or through social mobilization

Community participation in health has a long history as the Alma Ata and the World Development Report of 2004 highlight. CP is integrated in most PBF design.

A lot has been written about community participation but evidence remains weak making it difficult to answer whether it is useful and effective (Molyneux et al. 2012). Specifically in relation to PBF few studies besides for Rwanda and Burundi have discussed the potential and actual role of community participation in PBF.

2.2 Justification for the thesis

Since 2011, through my involvement with the Zambian PBF I observed that community members had an important role to play, practically; it was not exploited to its full potential. It is with this background that the thesis will attempt to review objectively and systematically PBF experiences in Zambia, how the community were part of these processes, besides benefiting, what role were they meant to play, what role they actually played and what lessons could be learnt to better engage the community.

Limited research is available on effective community engagement in PBF in Zambia. The thesis will try to add to the existing body of knowledge

To evaluate any program, several dimensions must be examined (Witter et al. 2013). Most PBF studies focus on performance of services. Other areas should include HR, health financing and governance: governance structures, mechanisms for monitoring results, social accountability, power relations, perceptions of stakeholders and CP (Ridde et al. 2014)

PBF pushes for clarity of functions of health system actors through questioning accountability of those in charge, noting that currently few debates on PBF have given attention to how PBF strategies interact with CP (Falisse et al. 2012)

MoH cannot effectively at the same time purchase, regulate, provide and also offer feedback on performance of services: an external voice, which can be through CP is key for example to verify quality of results, type of services to be purchased, at what price, and to make health services respond better to demand, needs and wants of the population (Fritsche G, Soeters R 2015, WHO 2015).

According to WHO, Universal Health Coverage (UHC) will not be achieved without improved access to socially appropriate quality services that meet population needs and demands. In order to increase amount of PBF incentives earned through health service utilization by users, there is need for reforms that reorient services from health facility (supply), to those that place people and communities at the center of decision making (demand) (WHO 2015)

For community members to be seen not only as consumers with potential to offer feedback on quality, or representatives who attend meetings, but also as stakeholders with easily identifiable roles, able to participate irrespective of SES, rural or urban based. PBF aims to improve autonomy and capacities at HF level, it is therefore a good idea to ensure improvements are according to the community; leading to responsiveness of health services (Rifkin 2014, Toonen et al. 2009, Falisse et al. 2012 & Kantengwa et al. 2010) hence the need for this thesis.

A weak link between public spending and improved health outcomes calls for governance structures to be strengthened. Community engagement can enhance governance. Furthermore Social accountability is emerging as a way to give power to individuals or

patients especially the poor over health workers through direct or indirect participation to demand accountability: combining right to information, service delivery and action for change and better health outcomes (Morgan 2012 & Barder 2006)

2.3 Aim

To critically examine how community participation is operationalized in PBF experiences in Zambia in order to identify gaps, make recommendations for health workers, policy makers and other key stakeholders to tackle the challenges

2.4 Specific objectives

1. To critically describe and review current experiences of PBF in Zambia
2. To critically analyze the role of communities in the design and implementation of PBF experiences in Zambia
3. To review the literature on experiences and contributions of CP within PBF
4. Discussion, conclusion and recommendations

2.5 Methodology

Search strategy and data
A literature review will be conducted for this study. Published and unpublished literature will be reviewed

Various websites will be visited such as World Health Organization (WHO), World Bank (WB), Ministry of Health (MoH), Zambia and Central Statistical Office (CSO). Reports books, fact sheets, policy documents, guidelines and standards will be used

Google scholar, Scopus, PubMed and VU e-library will be used to obtain published peer reviewed and grey literature. The articles will be screened through reading of abstracts to determine inclusion or exclusion. Bibliographies will be used to find related articles and key people contacted for information

Search words to find literature for each objective are indicated below.

Figure 5: Research Table

Source	Search word used
PubMed Google scholar VU e-library Websites of Ministry of Health Zambia Websites of WHO, WB, UN	OR "RBF ", PBF, P4P, PBI, CCT RBF Impact Evaluation Zambia" (Community participation OR community engagement OR community involvement) AND (developing countries) Health system Health expenditure Health reforms Impact evaluation Effectiveness OR Community participation Role of community Social accountability Zambia The terms were used individually or combined

Inclusion and exclusion criteria: only literature written in English that can be applied in the context of CP, PBF/RBF will be included. Articles without access to full texts, will not be used

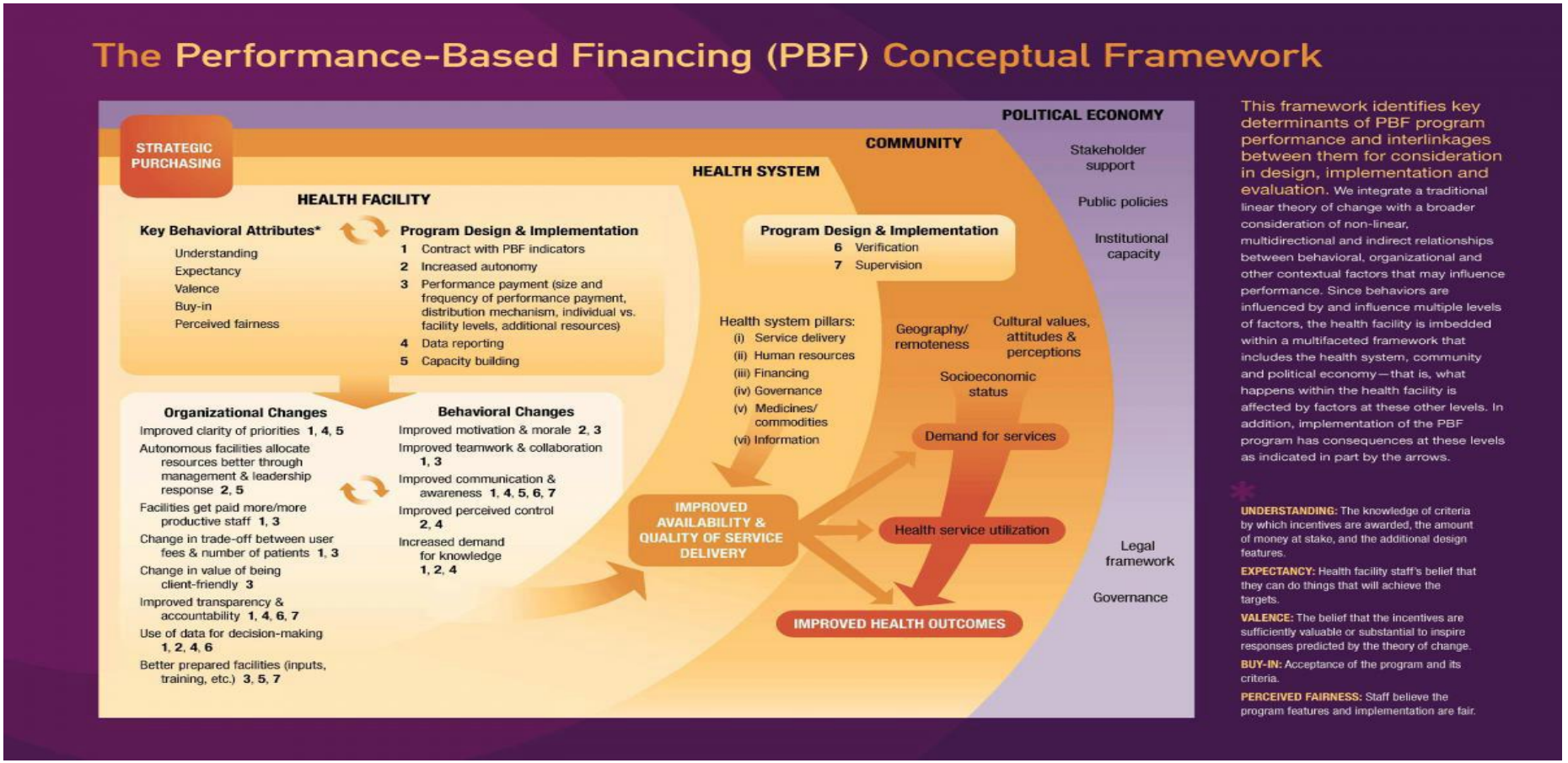
2.6 Conceptual Framework

Many frameworks have been used to explore CP. The similarity of most is some type of hierarchy, with minor differences observed due to context or purpose of study. CP frameworks may not be fully able to analyze CP in PBF as the indicators may not align to the broadness of participation across PBF principles (Rifkin et al. 1988).

To be systematic in analyzing CP in PBF, the WB-PBF framework will be used focusing mainly on seven-design and implementation features core to most PBF initiatives; to verify whether the community is involved in design and implementation and if so how, to what extent and for what purpose. Certain elements have been combined so as not to be repetitive, for example data reporting and verification. I will only focus on areas where the community play a role or have a potential to. I will also add my own personal experience to findings of CP in Zambia. To explain the framework, the WB PBF toolkit, PBF course manual by Gyorgy Bela Fritsche and Robert Soeters et al and WHO websites will be used.

Refer to Annex 1 on page 55 for research questions used to analyze the framework .

Figure 6: PBF framework



Source World Bank (Heath Results Innovation 2014). See annex 3 on page 56 for full description of framework

2.6.1 Adapted version of WB-PBF framework for this study

Contextual and other issues will be introduced as part of the Zambian background in chapter 1 or as an annex; because despite importance, the focus of the thesis is limited to the seven PBF program and design features of this particular framework. The assumption is that CP in health activities will lead to improved outputs such as increased utilization of health services; this shall be explored further

2.6.2 Limitation of study and analysis

See chapter five

A feasibility scan to see how far the Zambian PBF adapted the principles of PBF in its design to allow for an analytical review of some key issues across the whole system was used, I introduced the scan to reduce bias, as there is limited data for CP in PBF in Zambia and therefore it seemed better to review the design to see how far it was planned for from the start. The scores of the scan show a ranking between 0 to 5, with 0 showing unavailability according to my knowledge and 5 definitely available; of particular interest are the issues relevant to CP such as community verification and visit to house following protocol. Refer to Annex 6 on page 59

2.6.3 PBF Framework: Program design and implementation

Figure 7: Summary of conceptual framework, see Annex 7 on page 70 for full description of the PBF framework

	Functions /steps	**Description of functions/steps**
1	**Contract with PBF indicators**	For roles and responsibilities of stakeholders to be clear, specifying services to be contracted, fees per service, rules for verification and payments for performance (Fritsche et al 2014 & Toonen et al. 2012).
2	**Autonomy**	• For checks and balances and support in: • In planning for, use and management of resources (procure, repairs or manage facility bank account). • To engage in hiring, firing, discipline of staff or control clinic-opening hours • To manage and report income and expenditure in a systematic and transparent way (Jurien Toonen et al. 2009 & Fritsche,Soeters 2014).
3	**Performance payment**	• To review size, frequency of payment, distribution mechanism, individual or facility levels and additional resources. Payment based on performance

4	**Data reporting and Verification**	• Reporting: to collect, compile, manage, analyze, and use data to increase availability of quality, valuable, timely and accurate data for decision making (World Health Organization 2008) • To check performance (quantity and quality) of none incentivized indicators; • To give feedback on perception of quality care and cost of treatment by the clients (Borghi et al.2013). • To be contracted by a contract development and verification agency to verify data • To undertake surveys to obtain patients perspective on quality of care • Verification at community level if services indeed had been delivered, to ensure objectivity of reporting and reduce cheating (Fritsche, et al 2014). It may include also asking for feedback on quality of services experienced. • It may be done **ex ante** (monthly performance checks of primary registers and patient cards for legibility, correctness, to prepare a provisional invoice) or • **Ex post** verification (or **counter verification**) after payment is made, to check if intended people indeed benefitted, and to appreciate level of client satisfaction (Fritsche, Soeters 2015; Toonen et al. 2009 & Meessen et al. 2011)

3. REVIEW OF PBF EXPERIENCES IN ZAMBIA

Several payment mechanisms have been used to denote PBF such as "Result Based Financing", "Pay For Performance" Performance Based Incentives", normally authors use the terms interchangeably. For the purpose of this thesis the operational term is PBF.

3.1 Description PBF in Zambia: Design & Implementation

History

Zambia had several PBF initiatives through various institutions for instance NGO's like PLAN, CARE, CIDRZ and CHAZ. CHAZ had a Pay for Performance (P4P) project in 3 Dioceses funded by CORDAID (2007-2009). The EU through CORDAID funded CHAZ $740,000 for RBF activities in eight facilities (Luapula and Northern province).

3.1.1 Katete Pre-pilot 2008-2011

With the "aim of informing content, process and overall design of the broader PBF project", PBF was piloted in Katete district through World Bank support using a fee-for–service PBF approach to increase staff retention and reduce maternal and child mortality. TBA's were given "gifts" for every five pregnant mothers referred to the clinic, food was provided for ANC mothers and best performing centers were paid $285 per quarter. This led to a 4% increase in immunization coverage of children below one year of age and 14% increase in curative consultations between 2008 and 2012. HMIS and process evaluation findings showed positive results in allocation and use of resources due to improved autonomy, strengthened supervision, utilization, better quality services, improved data collection and CP (World Bank 2014, Ministry of Health Zambia 2011 & Chansa et al. 2015).

Stakeholders reported an increase in demand of services by the community. A volunteer interviewed stated that patients were willing to seek services based on there advice. Availability of data entry clerks and other CHWs allowed qualified staffs time to do other things like giving more care to patients and administrative tasks, hence improving quality. Involvement of community to implement and monitor activities led to accountability in resource use, decision-making and management of facilities. The recommendation from the Katete pilot was for community actors to be incentivized with clarity in guidelines, clear unit prices and services to be undertaken (Ibid)

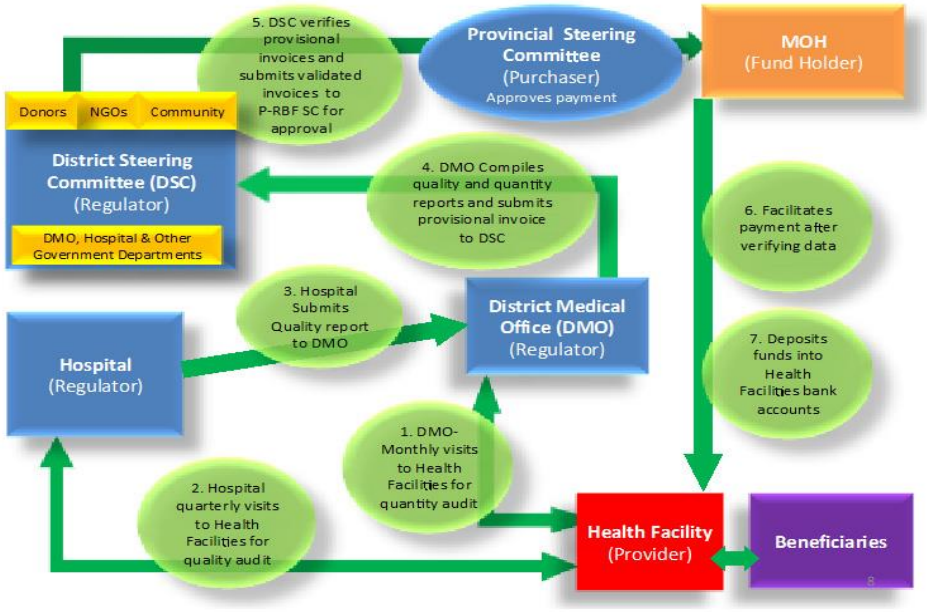
The focus of this thesis will be on the MoH implemented PBF pilot program implemented from 2012-2014, supported by a trust fund (HRITF) placed at, and managed by, the World Bank, and funded by Norway and Britain that was designed on the basis of findings from the Katete PBF pre-pilot (Chansa et al. 2015).

3.1.2 PBF Pilot 2012-2014

Through a $17 million HRITF grant a pilot was conducted in 10 provinces covering 203 health facilities and 9.2% of the population, Representing 1.5 million people. The program targeted 67,650 children aged 0-11 months, 338,248 children 0-59 months and 372,073 WCBA. Following the success of the pilot, government was given US$ 48.9 Million to scale up PBF for the period 2016 onwards (World Bank 2015, Vledder et al. 2013, Ministry of Health 2011 & Friedman et al. 2015)

MoH and World Bank purchased quantity and quality services using a fee-for-service scheme to link indicators to payments (Vledder et al. 2013). The public health system was used to implement PBF (Chansa et al. 2015). MoH HQ/PIU provided overall coordination. Regulation and purchasing of services was through PMO after PSC validation of reported services (Ministry of Health 2011)
PMO and MoH HQ/PIU conducted audits and Technical supportive supervision to districts.

Figure 8**:** Zambia RBF Model 2012 to 2014: Roles and stakeholders



Source: Ministry of Health 2011

The district PBF-Steering Committee (PBF-SC) consisted of community members, government, NGO's and civil society organizations that collectively regulated, verified reported services, monitored quality, and ensured compliance with standards.

DMO's and Hospitals acted as internal regulators through quantity and quality assessments respectively. Health centers provided services while an external firm independently verified and confirmed submitted data through patient tracing (Vledder et al. 2013, Toonen et al. 2009 & Ministry of Health 2011).

CP was through Neighborhood Health Center committees (NHC) and district PBF-SC membership, co-signing of health center PBF contracts, Bank accounts and social mobilization to name a few (Ministry of Health Zambia 2011).

Contract with PBF indicators: four elements characterize PBF in Zambia. These are autonomy, CP, instruments (Business plans, contracts, external verification, funds) and separation of function of policy formulation, service delivery and regulation (performance assessment, quality assurance, training and supervision). To manage the initiative, several contracts between stakeholders were established (Ministry of Health Zambia 2011, Toonen et al. 2009)

Figure 9 RBF Contracts for intervening districts (2012-2014)

No.	Contractor	Beneficiary
1	MoH/PMO	DMO performance Contract
2	DMO	Hospital Quality verification Contract
3	DMO	Health Center Performance Contract
4	Health In-charge	Staff Motivation Contract
5	DMO staff	DMO staff Motivation Contract
6	MOH/PIU	External Data Verification

Source: Project Implementation Manual 2011

Entitlements for Intervention & Control districts

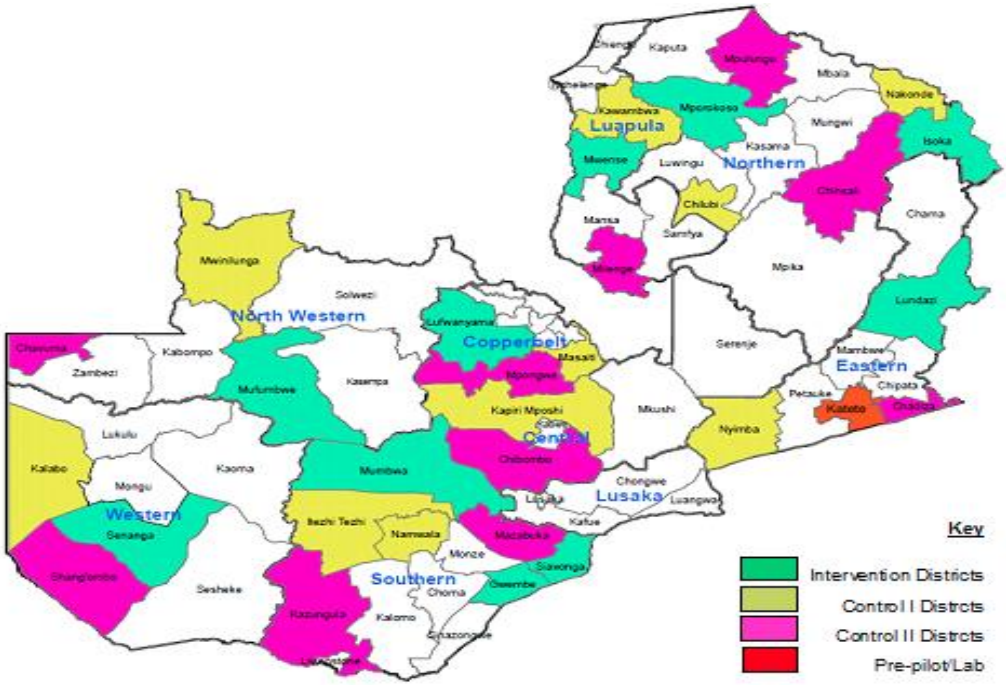
Facilities in the RBF-Intervention districts received funds tied to performance while Control-1 districts received funds that were not tied to performance but could be used to upgrade the facility, buy drugs and equipment, pay outreach allowances but not staff bonuses. Control-2 districts were taken as pure controls, "business as usual" receiving no additional funds (Ministry of Health Zambia, 2011).

Figure 10: Entitlements

RBF Intervention	Control 1	Control 2
EmONC equipment +RBF incentives	EmONC equipment +average RBF incentives	EmONC equipment, Business-as-usual

RBF Project Implementing manual, 2011

Figure 11 Map of RBF Participating districts countrywide: intervention & control districts. Refer to Annex 1 for intervening and control district list and populations attached.



Source Project Implementing Manual (GRZ), 2011

Figure 12: Quantity Incentivized Indicators plus unit Fees

	Indicator	Unit Price (US$)
1	Curative Consultation	0.2
2	Institutional Deliveries by Skilled Birth Attendant	6.4
3	Antenatal Care (prenatal and follow up visits)	1.6
4	Postnatal visit	3.3
5	Full immunization of children under one year	2.3
6	Pregnant women receiving 3 doses of malaria IPT	1.6
7	Family Planning users of modern methods at the end of the month	0.6
8	Pregnant women counseled and tested for HIV	1.8
9	Number of HIV pregnant women given anti-retroviral therapy prophylaxis (Niverapine and AZT)	2.0

MoH RBF Project Implementing Manual, GRZ

Quality Areas for assessment

Weights were assigned to different service areas using a quality tool after which the final mark is divided by the total, to multiply by a 100 to give a final percentage score, that was used in the PBF incentive calculations, together with the quantity indicators above (Ministry of Health Zambia 2011)

Figure 13: Quality areas

Service Area	Weight
Curative Care	35
Antenatal Care	55
Family Planning	45
Expanded Program on Immunization	38
Delivery Room	65
HIV Services	16
Supply Management	21
General Management	18
Health Management Information System	18
Community Participation	9
Total	320

Source MoH RBF Project Implementing Manual, 2011

Autonomy of health facility: Staff in RBFI districts could use 60% of funds as incentives and 40% to purchase medical equipment, generators, furniture, drugs or supplies. They could hire local staff and use in-kind incentives to increase usage (Ministry of Health Zambia 2011). Direct transfers of funds to the HC accounts enabled fiscal decentralization. Community members as co-signatories to the accounts increased accountability and transparency (Vledder et al. 2013 & Friedman et al. 2015)

Data reporting and Verification/Accountability: Hospital teams conducted quality assessments at health centers to verify quantities reported, as incentives may lead to cheating. Monthly verification of HC quantity audits was done by DMO by comparing HC self-assessment with primary registers. PMO facilitated internal and external audits and verifications to the districts. MoH contracted an external agent to conduct counter verification twice during project period to check for accuracy, completeness and validity of self-reported data. Client tracer surveys of the community for receipt of service and perceived quality of service were done focused on deliveries by skilled attendants and full immunization of children below one year (Ministry of Health 2011 & Friedman et al. 2015)

Equity: The capital city Lusaka was not part of the pilot to ensure no overlap during impact evaluation as it already had forms of PBF through NGOs. The project was set in rural areas due to low coverage rates of MCH interventions and to enhance efficiency in resource targeting. Remoteness, geographical contexts and matching criteria that included a deprivation score were considered in selecting districts for intervention and matching with control

districts (1 and 2). The pilot had to answer one of the policy questions, "Whether rural or remote incentives area incentives result in increased health outcomes or greater staff retention". The classification led to redefining of certain districts as urban, rural or remote in RBF-I and C-1 to determine allowance. SES, distance from administrative center was used. Centers sampled as remote were paid 25% more (Ministry of Health Zambia 2011).

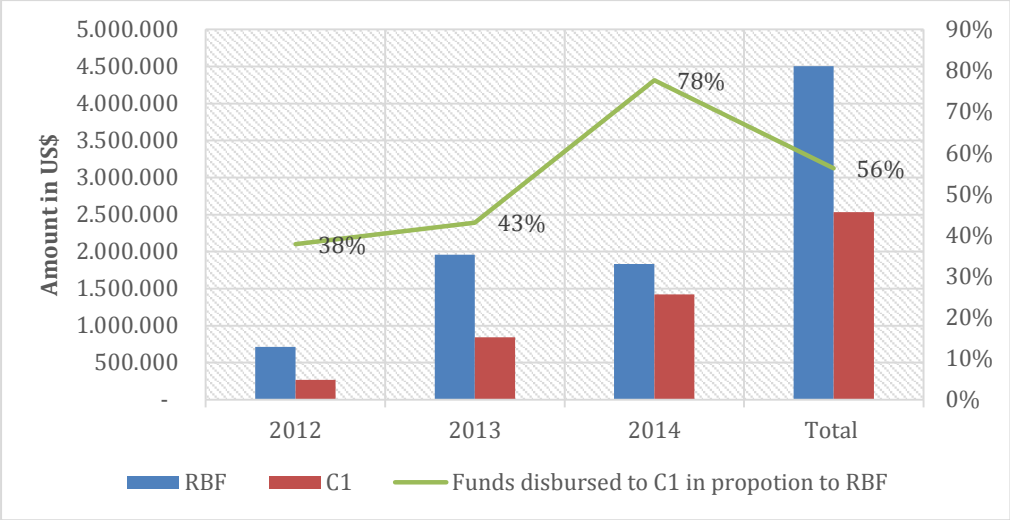
A cost and health impact analysis conducted showed positive results, hence expansion to five provinces for the period 2016 onwards (The World Bank 2014).

5. FINDINGS of PBF APPROACH IN ZAMBIA IN GENERAL

5.1 Results impact evaluation PBF pilot Zambia

Performance payment: Only 56% of funds to C1 districts were received due to the difference in financing mechanisms; channeling through DMO, and retirement after use unlike RBFI districts. C1 districts were found to have low capacity to access funds available to them due to low absorptive capacity; 38% in 2012, 23% in 2013 and 78% in 2014 (where they were meant to receive the same average amount as in the RBFI districts). Managers in C1 districts used funds to centrally procure, and only remaining amounts were disbursed compared to RBFI districts where all funds reached the centers directly (Friedman et al. 2015).

Figure 14 Disbursement of C1 funds compared to RBF funds.

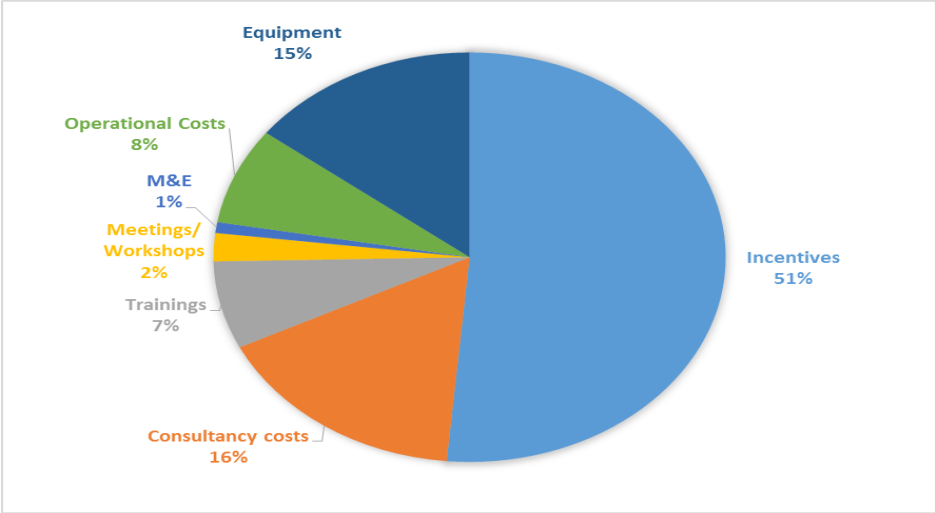


Source (Friedman et al. 2015)

Key behavioral attributes: staff in RBF-I districts received on average incentives equating to 10% of their salaries. RBF positively impacted governance and health worker motivation through intensified M&E, which was not the case for control districts (Friedman et al. 2015).

In the Zambian PBF pilot, 51% of funds was spent on incentives; equipment was procurement by Medical stores and MoH centrally. Zambia's PBF program complemented traditional input based financing on some programs or activities (Mkandawire et al. 2014).

Figure 15: Pie chart showing PBF expenditure overall



Source (Friedman et al. 2015)

Organizational changes: in order to increase amount of incentives earned, staff were noted to work longer hours, taking shorter time away from work, paying more attention to patients and reducing absenteeism. Capacity building and supervision led to better use of business plans, improved clarity of tasks in implementation and increase in bonuses and reinvestment of funds; for example staff at Chinemu HC in Lufwanyama invested about 26% bonuses instead of 40% leading to 22% increment on their salaries (Vledder et al. 2013). When compared to C1 districts, RBF facility staff showed a statistically significant level of autonomy compared to C1 districts on service provision, clarity on policies and procedures overall (Friedman et al. 2015).

Behavioral changes: Health workers in RBFI districts had more job satisfaction due to rewards and work conditions. Staff turnover was also lower even in rural areas with staff more likely to feel well compensated compared to control districts. Facilities in RBFI districts were better prepared due to trainings, supervision and incentives. HCC's were more active in RBFI districts compared to C2 districts. There were more frequent staff assessments, and higher number of assessments in RBFI compared to C1 and C2 districts, showing more CP, accountability in planning, resource use and service delivery (Friedman et al. 2015)

Improved Availability and Quality of service delivery

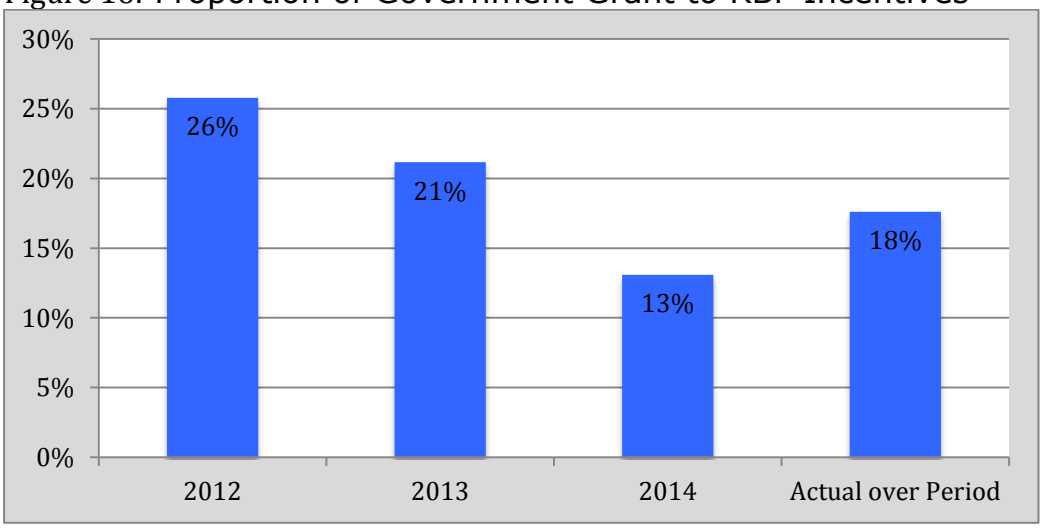
Demand for services: use of injectable contraceptives showed a statistically significant improvement compared to other FP methods, calculated at a national coverage of 21.9% (comparable to 19.3% in the DHS 2013). The timing of the first ANC coverage increased in RBFI districts compared to control districts but generally there was a rise in the indicator across all three districts. RBFI districts

improved quality and increased utilization of postnatal services by 7.8%. Institutional deliveries increased by 13% when comparing RBFI to C2 districts and 18% when C1 was compared to C2 districts. So institutional deliveries by skilled attendants showed great improvement across all districts but mostly in C1 districts (MoH 2015). Full vaccination dropped in control districts but remained constant in RBFI districts, suggesting protectiveness of RBF towards immunization coverage (Friedman et al. 2015)

Health workers in RBFI districts spent more consultation time with patients compared to C1 and C2 districts. Quality care of institutional deliveries: RBFI group improved by 3.1% compared to C2. Similarly 2.8% for ANC, 2.3% for vaccination, and 9.7% for FP. C1 districts also showed improvement when compared to C2 districts

During the project phase, the routine MoH grant for administrative costs of the HF was 18% of the RBF incentives; disbursement of grants declined from 26% (baseline) to 13% (end line). RBFI districts spent 47% on bonuses and 53% for reinvestment between 2012 and 2014 (Friedman et al. 2015)

Figure 16: Proportion of Government Grant to RBF Incentives

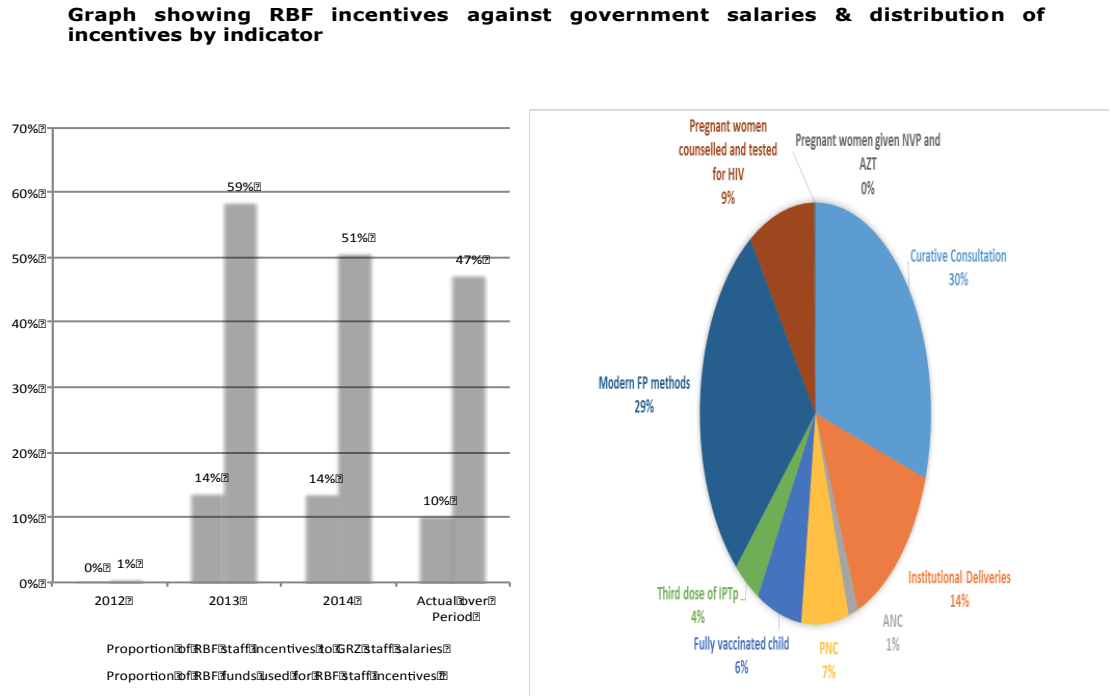


Source (Friedman et al. 2015)

RBF incentives amounts were only 10% of routine government salaries. This was partly due to the increment in salaries of government workers of up to 200% 6 months into the project. To limit the effects of the change, the funding mechanism was changed from "stick to carrot" to "carrot to carrot" so that the quantity score would not be multiplied to quality, thereby reducing the amount of incentives available but would instead have an incremental effect on the quantity score (Fritsche , Soeters 2015 & Friedman et al. 2015).

See annex 4 for the killing assumption of the project and annex 5 for the ideal characteristics on page 58 and 59

Figure 17: Pie chart showing PBF expenditure overall



Source (Friedman et al. 2015)

6. FINDINGS of PBF APPROACH ON THE COMMUNITY

6.1 Contract with PBF indicators

Formal community role
Oversight: signatory to HF bank accounts and contracts and Business plans

Design: CP was meant to familiarize community members with RBF contracts for checks and balances. Ensure staff and health committee members were aware of opportunities, implications and together with health workers, develop, undertake strategies and conduct monthly performance evaluation of staff using RBF indices tool; the In-charge was assessed using the health center quality score after assessment by hospital team. The community was to co-manage HF revenue using contracts for bonuses, minimum reinvestment or operational costs and to ensure documents were accessible for scrutiny by interested parties. They were to ensure that indicators (incentivized & none incentivized) improved and represented HF and community members in key interactions like mission visits, exchange visits (Ministry of Health 2011).

Community members were to inform DMO of changes to equipment, availability of registers, management tools and technical skills of health center that may limit achievement of results. They were to ensure actions taken were not against policies or ethics and were to offer complaints in writing to RBF-DSC in case of dispute such as fraud (Ibid)

Findings: In-charges assessed staff with chairpersons as witnesses. Community representatives as well as the staff to be assessed were sometimes absent from evaluations but later both signed as present. Community members mostly passively observed the business-planning process, later signed, but they were rarely able to calculate targets, analyze outputs or propose strategies, or financially plan due to relatively low education levels. They were able to assess issues in the community if engaged using the right tools according to findings of the health literacy trainings to RBF intervening districts. HCC chairpersons were not all able to control payments this was mostly regulated and understood by health workers (in charges)(Gaventa John 1980). Sharing of funds against contract terms was in some cases reported for example HC staff using the individual indices tool to award him/herself a quality score to use for incentives pay instead of quality score awarded to center which may be lower; a disadvantage of participation (Cooke & Kothari 2001 & Ministry of Health 2009)

National, Provincial and District medical offices were more instrumental in ensuring funds were used for planned activities than HCC.

Communities were given cash and in-kind incentives to implement RBF activities for example TBAs were paid for escorting pregnant mothers at the discretion of staff as they were no community incentivized indicators besides routine HCC activities such as meetings and scrutiny of documents

HCC members represented HF and communities, mostly as passive attendees in workshops or meetings with limited control of health workers once back on ground. Community members had little knowledge over medical ethics or policies to manage issues of abuse due to asymmetry of knowledge (World Bank & United States Agency for International Development 2009 & Ngulube et al. 2004). Some with knowledge rarely reported anomalies by staff; these were found through routine supportive supervision, quality or quantity audits by MoH/PIU, P/DMO or the Hospital teams. Some community members reported fraud informally to P/DMO. Others

demanded for reinvestment and information when well organized. In some cases HCC members were able to enforce sanctions for example with assistance from a local traditional leader and DMO Chitungulu HCC members in Lundazi district in Eastern Province were able to transfer an in-charge and another staff on suspicion of resource misuse. Settling of disputes and suspension of contracts was mostly through MOH/PIU or P/DMO. Most members of HCC understood some practical elements when well explained but had limited power over health workers. Supervisors were needed to constantly reinforce best practices.

6.2 Autonomy

Formal community role
In-charge and another HC staff with HCC chairperson and another committee member acted as signatories to the HC bank accounts (Friedman et al. 2015)

Design: To use funds according to RBF contract terms, community members were added to the panel have separation of function so that In-charges did not undertake activities and also sanction release of funds. None-state actors not on government payroll were expected to be more objective, focused on serving the interests of the community hence increasing accountability (Siddiqi et al. 2009 & Mikkelsen-Lopez et al. 2011)

Findings: Community members sometimes signed payment vouchers without BP and even after signing, some health workers did not purchase what was planned for or misused funds. Most community members accompanied staff for bank withdrawals but could not enforce controls or report health workers for misuse of funds. Health workers mostly enforced controls through P/DMO or MoH/PIU via increased financial audits, fiduciary trainings, quarterly income and expenditure reporting.

6.3 Performance payment

Formal community role
Stewardship, active participants

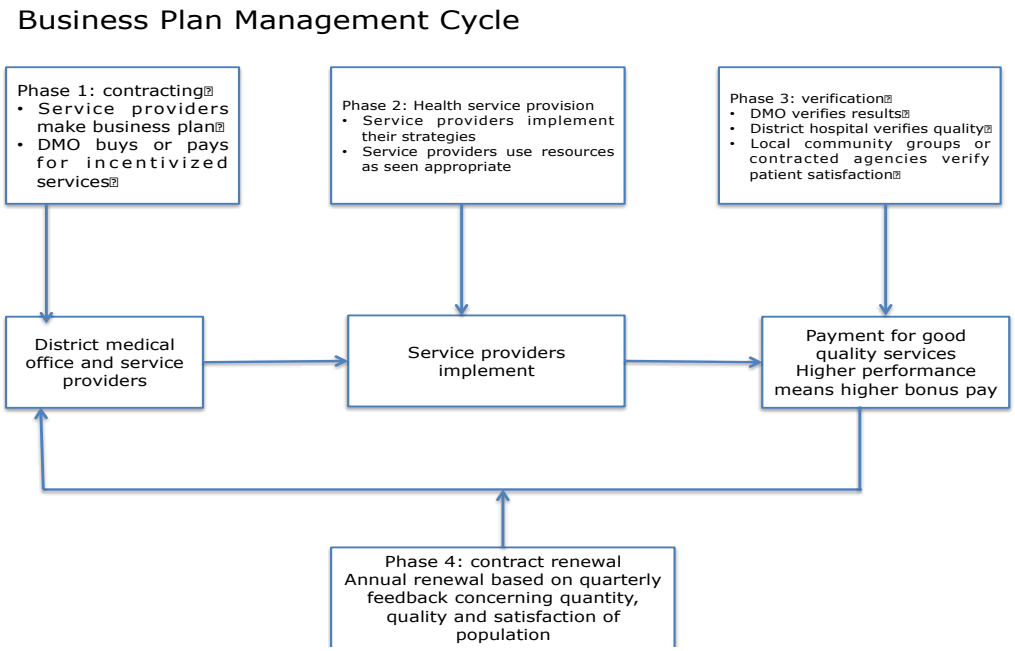
Design: Health workers to organize regular meetings with HCC to review individual and health facility performance against targets, calculate incentives, additional resources for reinvestment and so on

Findings: Even though payments were sometimes late or wrongly calculated, towards the end of the project most staff correctly

calculated income and expenditure in form of staff bonuses, with community members acting as witnesses, mostly passively participating, as observers not directly paid themselves. Some HCC members were paid cash or in-kind for undertaking health service demand-generating activities

4. Data reporting and Verification
Formal community role
Governance: to undertake HF monthly self Assessment, verify DMO quantity audits, co-sign business plan quarterly and participate in PBF-SC

Figure 18: Business Plan Cycle



Source Project Implementing Manual, 2011

Design: To represent the community in HF-RBF related activities like BP making or RBF-SC with staff, HCC members, and outreach post representatives, CHW's, representatives of clinics, NGOs, and CBO's. The BP specified social marketing strategies, analyzed HR situation, projected revenues, expenditure and targets. HCC members were part of the meeting to validate quantity and quality indicators performance against targets, to approve amounts for payment and verify patient satisfaction (Ministry of Health 2011 & Toonen et al. 2009)

HCC members with staff came up with monthly activity summary reports or self assessments by counting indicators in registers to tie outputs to incentives so that community members were made

aware of how much was available to the HF in the coming quarter, to understand the reason behind the scores and to provide justifications for performance from community perspective. They verified audits with HC and DMO staff respectively. Through RBF-SC's (district and province), information on RBF and related issues from structures such as PDCC and DDCC was disseminated to community structures such as NHCC, therefore assisting community members to make informed decisions (Ministry of Health Zambia 2011)

Findings: Community representatives attended meetings but sometimes did not contribute effectively due to the technical nature of discussions. Equally some members did not always give feedback to HCC members after attending meetings. Sometimes, HCC members actively or passively participated in quantity and quality assessments depending on level of knowledge, interest or availability at HC, noting that some HCC members were also HF employees. Definitions of some indicators were complex for some members to count with minimal error, hence passively observing and later signing. There were reports of HCC members signing invoices after HC and DMO staff had already done self-assessment and quantity audits in their absence. Community members did not conduct client tracer surveys as part of routine implementation. The way the community was engaged in verification processes can be termed mobilization as health workers conducted needs assessments, decided goals, activities and provided resources with a timeframe. Decisions were not necessarily transparent and community members were told how and when to engage with little skill or knowledge transfer (Rifkin et al. 2007)

7. LITERATURE REVIEW ON CP AND PBF

7.1 Rwanda

7.1.1 Contract with PBF indicators

Formal community role
Beneficiaries, Providers care in ten service areas and conduct verification

Design: A Supply side community PBF scheme for CHW's was available to provide services, while Demand side incentives were given to beneficiaries. Community members were also paid for quality in reporting and good management.

Findings: Issues were inadequate indicators and tools, limited physical accessibility of catchment areas coupled with low reporting capacity due to low educational levels. CP supported decentralization efforts (Renaud & Semasaka 2014)

7.1.2 Performance payment

Formal community role
Recipients of incentives

Design: Motivation to increase quality and coverage

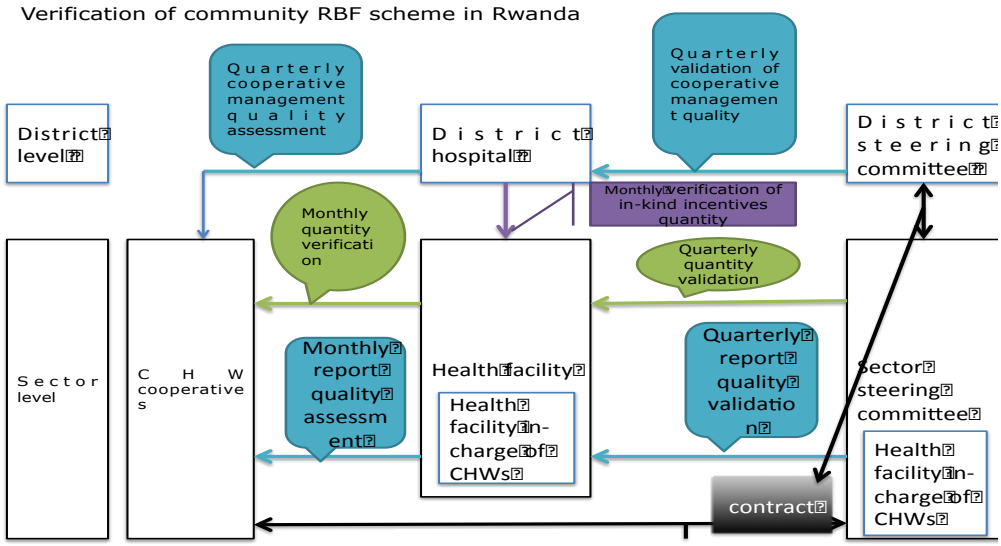
Findings: For every client referral, quality was measured in terms of accuracy, timeliness in reporting and complete participation in community HMIS before payment was made. Payment ranged from USD 2, 795 to USD 9,317 per quarter; in addition IGA's contributed 6 to 13% of cooperatives income. In-kind benefits were given to women seeking care from HF (Renaud & Semasaka 2014)

7.1.3 Data reporting and Verification

Formal community role
Reporting and Counter/verification

Design: community HMIS forms had fifty routine indicators and ten quantity indicators for the scheme. RBF SC signed contracts, purchased and validated results. They met patients directly to verify receipt of services: done 'purposively' when there was a specific problem detected or randomly using a predefined tool. SC could also visit one or more village quarterly (Renaud & Semasaka 2014).

Figure 19: Verification framework



Verification of PBF, the Case of Community Demand Side in Rwanda, 2014

Findings: Errors detected were mostly unintended than due to fraud like CHWs misinterpreting definitions. 97% of patients registered to have received services by CHWs were traced in community. Similar numbers reported for a HC study. There were no sanctions for none compliance. In-kind incentives distributed were not analyzed due to poor recording. Overall integration of CP within the whole health system led to fraud detection, low costs, ownership, and HMIS strengthening. It also led to decentralized results, variable standards, tools and processes and procedures from one district or HC to another (Renaud & Semasaka 2014).

Figure 20: Performance of indicators

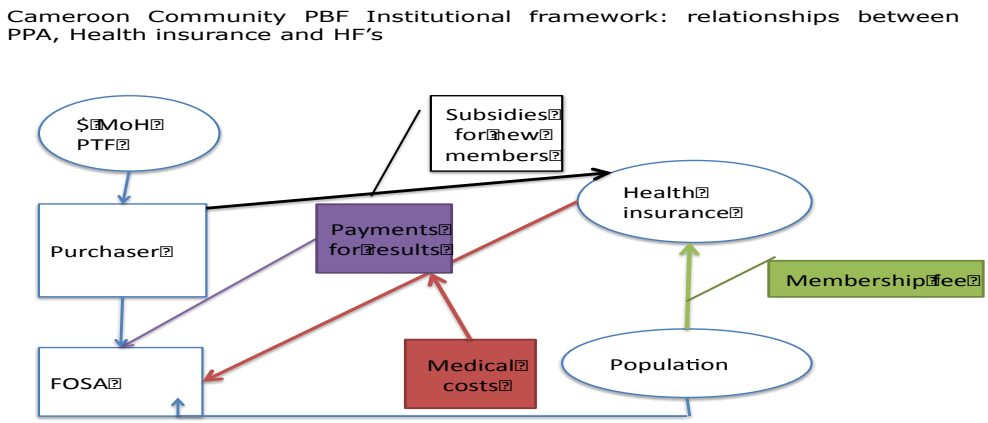
Issue	Rating
Indicators accurately assessed by CHW's	48%
Overestimated	23%
28% underestimated by	8%
Reduction of error rates	147% -7%
Quality: 4th Quarter (2010-2011)	•Timeliness & completeness: 68% -79% •Accuracy: 68%-79% •Management of quality: 81%-89%

7.2 Cameroon

7.2.1 Contract with PBF indicators

Formal community role
Verification, HF management, Resource mobilization, Service organizing and needs assessment

Figure 21: PBF Institutional Framework



Source S Atanga 2014

Design: To collect, evaluate and use community perception on quality of services to contribute to HF activities. Through subcontracts community members implement activities, organize and share information on risks at community level. They undertake social mobilization and collaborate with health personnel to find solutions to health problems (S Atanga 2014).

Has an indicator called household visit following a protocol(Soeters 2015)

Findings: Through census CHW identified beneficiaries for example Njimikom hospital identified 2,383 in 2014 from 176 in 2013. CHWs were paid for constructing and ensuring use of latrines, conducting growth monitoring of children 0 – 5 years and organizing BCC. They referred clients to the HF thus overcoming utilization barriers. 10% improvements in indicators were seen plus service experience and enhanced collaboration between health workers and community. Equally volunteerism reduced (S Atanga 2014)

7.2.2 **Autonomy**

Formal community role
Advisory: Recruitment, dismissal of staff and allocation of resources

Design: To improve efficiency in resource use

Findings: Due to formal roles and legal status of health committees, more staff were employed leading to increased to responsiveness to socioeconomic factors like immunizations on holidays (S Atanga 2014)

Figure 22 Percentage change in number of staff and motorcycles

	1st quarter 2013	1st quarter 2014
2 staff or less	54%	11%
Motorcycle	57%	60%

Source S Atanga 2014

7.2.3 Performance payment

Formal community role
Referral of patients, verification

Design: Motivation

Findings: CHWs were paid individually for referring clients using vouchers or referral cards (PBF), conditional upon verification of results by HF. Community mutual health insurance schemes (FOSA) were financed through IGA's and grants from the purchaser through contracts after submitting BPs. CBO were paid for conducting verification (S Atanga 2014)

Data reporting and Verification

Formal community role
Reporting and verification

Design: A representative CBO with no links to HF is selected by fund holder (AEDES/IRESCO) and health teams through tenders to avoid conflict of interest (Joseph 2014). To ensure transparency HCC members witness sampling of patient names from registers. The CBO undertakes verification and identifies the poorest potential beneficiaries quarterly and confirms physical existence of reported patients, their perception of average cost of treatment, and quality of care. Findings are then communicated to purchasers for verification. Where there is no CBO the fund holder can contract directly community verification agents. Comparisons of community information to facility registers allows the fund holder to determine correctness of reported data before determining final quality score for the HF (Ibid)

Findings: CBOs were selected via tenders. CBO's surveys enabled 3% to 5% of randomly selected patients to be interviewed on quality of care of assisted deliveries, pre-natal and outpatient care, immunization or hospital care. Scores obtained contributed to the overall HF quality score. Head of health committee co-signed BP's, leading to improved monthly M&E and resource utilization. Some committees were not fully operational hence signed BP's without fully participating in the making. Head of HCC were able to refuse to sign a plan they were not sure of (S Atanga 2014 & Consortium 2012)

7.3 Burundi – 2010

7.3.1 Contract with PBF indicators

Formal community role
Verification, patient satisfaction surveys: see table below:

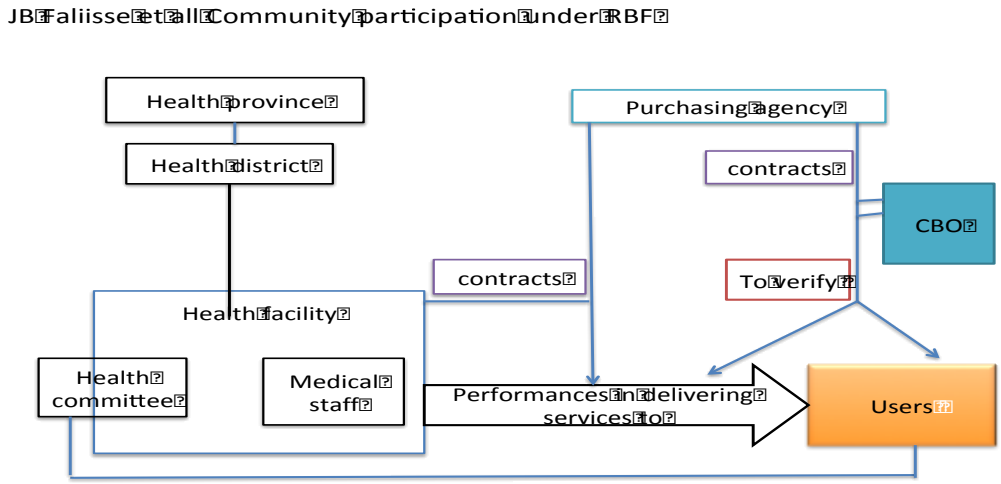
Figure 23: Difference between COSA & CBO

	COSA	CBO
Role	Regulation	Verification
Legitimacy	Elected	Chosen by purchaser/peers, operational at least 2 years
Relation with HF	Board of trustees	Not allowed
Relation with purchaser	None coaching is likely	Contracts 1 year based on performance
Transmission of community concerns	To health workers at HF	To purchasing agency, then to HF's. Information used during contracting of HC by purchaser

Source Falisse et al. 2012

Design: COSAs together with staff to manage HF (funds, health promotion). They had decision rights to hire, fire staff, define selling price of drugs, consultation fee, order drugs and participate in developing BP plan. CBOs to verify and validate results (Falisse et al. 2012) to confirm existence of patients and conduct patient satisfaction, facility score makes up 40% of facility's quarterly bonus (Morgan 2012)

Figure 24: PBF Framework



Source Faliisse et. Al 2012

Findings: COSA's supported staff more than represented the population. Elections for COSA membership lacked transparency. 50% of COSA's surveyed didn't renew membership (some in more than 7 years). Few staff considered COSA's views in decision-making. Few community members knew about COSA's compared to CBOs who were able to meet 60 to 80 users per quarter. Reports or minutes by COSA's were not fully analyzed unlike for CBOs. COSA's in PBF areas performed better than those in none PBF areas (Falisse et al. 2012).

CBO's did not directly enforce change as they had limited decision rights at HF (part of design). CBO feedback was discussed at the RBF-PSC level by CDV agencies and regulator and feedback given to the HF. Contracts could be denied if HF did not consider feedback. The patient satisfaction score was weighed into the quality bonus payment(Soeters 2015). 100% of CBO's understood and only played their PBF role and did not try to control running of HF. only 5% CBO questionnaires were poorly filled in. CBO activities were primarily driven by financial incentives than contributing to health system development (reported by 24%). Though formally implied, COSAs had low rights at HF. They were said to poorly communicate with the community and inefficient in undertaking assigned roles and mainly did tasks given by health workers. CBOS had good leadership and were better organized compared to COSAs(Falisse et al. 2012).

7.3.2 Performance payment

Formal community role
Recipients

Design: Incentive

Findings: CBOs were paid $1 or $2 per validated questionnaire. An official guideline for MoH provides for compensation for COSA's but this was mostly ignored. Through PBF most HF paid COSAs $3 per member monthly, performance based (Swiss tropical scheme). Funds contributed on average 40% of HF budget (Falisse et al. 2012). Both COSA and CBO comprised of members with above average SES (mostly teachers). Only 34.1% were illiterate below the national average (World Bank 2011). CBO's were chosen if with a minimum number of members of high literacy. Generally they were said to observe these criteria compared to COSA's (Falisse et al. 2012)

7.3.3 Data reporting and Verification

Formal community role
Verification

Design: For CBO to verify HC performance (Falisse et al. 2012)

Finding: CBO's conducted surveys to verify results declared by HC's, and perceptions of satisfaction with the services by the beneficiaries. It was hard to assess COSA's as their legal framework was incomplete and most members were not aware of their roles unlike CBOs. When interviewed only 13% of COSAs said they represented community views to health authorities; most thought they were to communicate from HF to the community. There were conflicts over decision rights between the COSA and the HF workers. COSAs mostly focused on issues such as sensitization, referral of patients and filing. In reality they had less rights and had no idea how and when to lead there members and had limited activities besides the supportive role to health workers; 43% reported having no idea what to do (Busogoro 2010 & Falisse et al. 2012)

8. DISCUSSION, CONCLUSION AND RECOMMENDATIONS

Findings show that community members may be involved on different aspects or steps of the PBF process. Following the framework these include contract design with PBF indicators, autonomy of health facilities; performance payments; and data reporting and verification of results. These are also the main themes for discussion. This thesis discusses the role of communities in PBF in Zambia in terms of design and implementation. It also relates experiences of PBF from literature and finally I will discuss main issues or findings will be discussed and recommendations presented on issues around community involvement.

Usefulness of the framework to the study: the World Bank PBF framework used for the study was suitable to answer objectives this thesis. It was easy to adapt the framework to look at the potential and challenges for community participation in the context of PBF. There was limited information on community participation in PBF from Zambia with the exception of the Katete experience, which meant I had to base the findings on my personal experience, which may have led to bias.

Purpose or focus of the study
The present study investigates potential and challenges to community engagement in performance based financing in Zambia

Review current experiences of PBF in Zambia
1. Contract with PBF indicators
Community members had an indirect contract through HF and DMO to co-manage HF in PBF implementation; they had no clear direct incentivized indicators or individual contracts with expectations or sanctions for non-delivery unlike staff who could lose incentives if they did not comply.

The case is different in Rwanda where community members had contracts, 10 incentivized quantity indicators and also clearly defined roles (Renaud & Semasaka 2014) Cameroon also had contracts for community members with a variety of roles such as verification, resource mobilization, providing services and health promotion. Burundi through CBO engaged the community via contracts with clearly defined roles and rewards based on performance upon verification of results.

One of the recommendations of the pre-pilot was for community actors to be incentivized as they were also contributing to the increase in indicators. Some representatives highlighted that;

"volunteers and TBAs should have contracts, be given clear guidelines and incentives for each service they render at community level" (Chansa et al. 2015). In order for them to be effective, their roles need to be clearly defined and formalized so that they can be held accountable for results

The PBF pilot was set in rural areas with no urban districts for comparison. It would have been good to review PBF, CP and HF interactions in different settings as the rural experience may not be generalizable to more urban settings for scaling up purposes. In the Zambian PBF model, there were no equity bonuses for coverage vulnerable people. A remote area equity bonus was relatively low at 25% compared to Rwanda at 80%; this may explain the minor gains observed by HCs that received more (Friedman et al. 2015). Community members could be involved in identifying the vulnerable and conduct verification through contracting a CBO as seen in other PBF programmes such as in Cameroon and Rwanda

Engaging communities may be less expensive than traditional ways of oversight and accountability as they have more information about local contexts and would be able to effect social sanctions better than outsiders. Collective action may not necessarily impose formal sanctions but may lead to other costs: reputation, political costs and formal accountability measures being initiated (Morgan 2012 & Croke 2012).

Community members were reported to be passive in processes, likely due to language or tool barriers. There is need to evaluate the extent to which community members have the capacity to contribute to processes; whether they agree with or understand what they are validating, do they add their true views to the interactions. "Whoever decides what the game is about decides who gets in"; Gaventa notes that participation is not limited to making decisions but also to the exclusion of issues, stating that organizations normally have a bias towards certain issues. Participation studies must therefore focus on who gets what, when, how and who is left out, and the relation of the two. Noting that none participation may be linked to ignorance or indifference, absenteeism, a reflection of the dominance of the needs of the people not engaging (Gaventa 1980)

It may not be possible for community members to play some PBF roles effectively due to low education levels of most HCC members as they are selected based on elections and not literacy levels. Findings did not state "how" community members were to ensure good performance of indicators, "or that actions taken were not in

conflict with ethics or policies". They may not have been prepared to undertake this role; furthermore there may have been asymmetry of knowledge due to differences in levels of education between health workers and community members. Arnstein relates this mode of engagement to manipulation or tokenism. When representation is legitimate and causes a shift from mere participation to health system changes then the system can be termed as responsive because changes have been influenced by ideas or concerns of community members through formally introduced structures (Arnstein 2004, Molyneux et al. 2012)

Some HCC members worked at HF and were therefore not likely to effect some checks and balances. Health workers may influence demands for change to reach the right audience or implementing stage through threat of sanctions, intimidation and use of the system, norm, precedent rule or procedure that shape or strengthen mobilization bias (Gaventa 1980)

Furthermore, health workers could manipulate tools with limited consequences. Participation approaches may cause manipulation of information on planning for personal gain. If externally induced, participation can be a tool to attract funds and justify government or international interests. Participation therefore has different meanings and development agencies tend to apply it in a way that fits their agenda (Cooke & Kothari 2001).

Quoting Cornwall (2000), Molyneaux et al. notes that accountability issues may lead to citizens not accessing the right services, leading to the need for improved community accountability, which is hailed to be a necessary right to improve quality of care and appropriateness of health services for the clients, satisfaction with the services and utilization (Molyneux et al. 2012)

2. Autonomy

Providers in Zambia could hire qualified staff via PBF. Mostly it was done for volunteer CHWs, data entry clerks and in some cases qualified retired staff. They could not hire/fire staff on government payroll: an opportunity for CP through feedback to affect staff contracts. Health workers may use there powers wrongly as they have more information than citizens, are underpaid, with fixed and low salaries that are not based on performance. Civil servants are equally not easy to dismiss, leading to a weakness in the accountability structure due to the weak incentives or disincentives to perform or account for quality performance or health outcomes (Morgan 2012). The case is different for Cameroon where

community members had legal mandate to provide oversight in hiring, firing and financial management

There exists a shared autonomy between health workers and community members to collaborate and come up with strategies to improve performance and make decisions over use of resources. Ideally community members have power to refuse to sign what they do not condone through withholding their signature.

The Zambian model mixes roles in that HCC members assist in planning; the same people again are expected to verify the business plan and results. Synthesis studies of HCCs in several counties show that although community members were tasked to work with health facility staff to represent the views of the community, most HCC members were not known in community, and equally did not have direct influence over budgets and had even less power over the clinics; this was reported in Zimbabwe, Tanzania, Mexico and Cameroon. In Nigeria they were reported to be excluded from co-management of user fees, evolving funds, priority setting and decision-making but left to identify clients for fee exemption. A study in Zambia found that communities were taking up more roles, however success of community members to assist uptake of health services by fellow community members was mixed (Loewenson & Rusike 2004 & Molyneux et al. 2012). Even without PBF they are not effective, it would be better therefore to have a CBO reporting to an independent institution to get objective feedback from the community. This analysis is in line with findings of Faliisse et al. comparing the role of COSAs to that of CBOs

In the Katete pre-pilot, health centers and NHCs had a shared role of coming up with strategies to improve service delivery. NHC members highlighted that mechanisms in place gave them mandate to plan and supervise staff in rewarding incentives and also to monitor and evaluate HF activities. Headmen were reported to keep registers of newborn babies and would thus track vaccination of these children. Community members discussed the trends and also signed provisional invoices monthly. Some NHC members interviewed indicated that they were able to give data about their centers, as they were aware of what was occurring and could come up with recommendations on how to change (Chansa et al. 2015)

3. Data reporting and verification

DMO contracted level one and two hospitals to undertake quality assessment at HF level. Hospitals therefore counter verified the work of DMO's (supervision, regulation, PBF Quantity Audits). In the Zambian health system, DMOs supervise level one hospitals. In

other PBF models DMO undertakes the regulatory role while quality assessment is left to the CDV agency: the CDV agency then subcontracts a CBO to undertake community surveys (Robert 2015). The Zambian PBF pilot design had no separation of CDV, community provision, and regulation roles. The Project implementing unit undertook the CDV role.

The findings have not shown PBF reporting indicators for community members besides in BP, steering committee meetings and self-assessments. This was also reported for other countries through a synthesis study of several countries (Toonen et al. 2009). The case is different in Rwanda, which has a community HMIS made of 50 routine indicators plus 10 community indicators. They have also integrated CP within the whole health system leading to fraud detection, low costs, ownership, and HMIS strengthening, noting that low educational capacity also hindered reporting (Renaud & Semasaka 2014)

Verification in Zambia has a lot of opportunity to be effective but questions remain such as how representative HCC members are, or how they express the views of the community. Findings did not show, what tools or competences are available to community to make a judgment on client views**.** Cameroon PBF on the other hand uses CBO selected in a transparent manner to conduct verification. The selection of patient to be verified is done in the presence of HCC members. Results are compared and thus community voice is enhanced compared to traditional ways of engaging the community such as HCC. This is a more unbiased way to get community perceptions and to reduce cheating by HF thereby improve accountability of health services.

CBO on there own can not conduct reviews on quality as they may lack competences to do this but through a CDV agency the skills are available and equally there is a separation of functions; this can allow for the HCC to conduct patient mobilization and be paid incentives for escorting mothers, while reporting to the health workers and the CBO to check on quality and report to a separate entity

4. Performance payment

In the Zambian PBF pilot community members had no incentives tied to their contracted roles but they were to co-manage PBF. According to Soeters (2015), it is irrational to expect community members to support PBF activities for free; "community providers are to conduct health promotion activities with incentives paid to staff or committee members". Further elaborating that these

activities must have a quality component, enough funds and qualified staff for effectiveness. Rwanda PBF had both community (demand) and providers (supply) indicators. There were in-kind benefits to clients and standard fees for referral of clients by community members. The cooperatives also had other sources, such as income generating activities, and the system was said to complement health workers efforts. Several studies have shown that community members want to receive incentives for their roles, as Meuwissen puts it, "they complained about handling a lot of money, needing money but being told its not available to them" (Meuwissen 2002)

Health workers organized activities and performance reviews for individuals or HF to calculate incentives and targets. Community members were normally not paid for there roles and could not control size and frequency of payments. According to Soeters et al In PBF community members are not supposed to play the role of controlling payments as they lack capacity to do so. But the design of the Zambian PBF suggests a role for HCC in internal management. In Cameroon a CBO is paid incentives to refer clients to facility. Cameroon showed that community members could be engaged in a variety of roles such as managing finances from different sources such as IGAs, CBHI and PBF in a systematic way using a BP hence assuming a higher level of participation

It must be noted that erratic flow of funds may demotivate health workers and community volunteers, reducing their participation in the project. Reduced volunteerism and increased demand can lead to work overload for qualified staff therefore consistency in payment is key (Chansa et al. 2015)

Conclusion

PBF has a potential to increase outputs through CP for example by giving power to patients or clients over providers via competition, social accountability or other means like tying incentives to defined results and using qualified community members to ensure adherence to roles. Health sector spending has increased significantly in recent years, with the increase, positive changes have been seen such as financial and political commitments. It is however noted that increased spending does not automatically lead to improved health outcomes, governance is important to link inputs to outcomes. Accountability for results by citizens, providers, patients and the state is crucial

Findings have shown that community participation can complement traditional methods of governance of health services through social

accountability. This can be done using formal contracts, with indicators, clear targets and rewards for achieving measurable performance using community adapted tools to budget for community participation activities that are measurable and achievable

Examination of results in relation to existing research
Findings are broadly consistent with other studies done in Rwanda, Burundi and in general community participation studies. The observations of the weaknesses of HCC are not new therefore as they tally with those of COSAs in Burundi for example, with few differences

Importance of findings
This is the first study to my knowledge to examine community participation in PBF in Zambia; only Rwanda, Burundi and a few other countries have assessed CP and PBF

Limitation of study and analysis
The Zambian results may not be generalizable to other contexts due to design, language, health system differences or other issues. Reports and Impact Evaluation findings for the project had limited amount of information on CP. Equally my search did not yield enough information on CP and PBF in Zambia. In order to reduce bias I introduced the PBF feasibility scan (See Annex), findings relevant to community participation and PBF were be explored in the discussion Only literature written in English was reviewed.

CP in PBF is a new concept in Zambia and globally, hence limited available peer reviewed studies from Zambia. This restricted the ability to triangulate findings using multiple sources. The literature review used project reports and online sources as well as personal experiences, with its limitation.

Generalizations that can be made from results
Although the study was for Zambian PBF, some generalizations could be possible as most healthcare systems in Africa have similar community structures.

Recommendations
Recommendations to improve community participation are based on findings on Zambia of this thesis and other interventions explored that have been successful elsewhere.

A. Recommendations for policy makers (Government, MoH, World Bank

1. Further research- the impact evaluation results was skewed towards health service providers and not community participation even though both had roles. I recommend further research into how the PBF affected CP and community members in particular as a follow up to this review

2. There is need to strengthen separation of function between the roles of regulation, community empowerment and service provision in order to make the system more responsive to the needs and demands of the population
   - This can be done through subcontracting a CBO to conduct community verification to obtain perception of the quality of care of the services, results of which should affect subsequent payments of incentives to health facilities
   - CBO to report to the purchaser of services or another agency such as the CDV agency and not directly to the health center in order to limit conflict of interest
   - Specific user friendly tools, procedures and clear performance frameworks to be developed and adapted to local context and language for ease of understanding by community members
   - SMART indicators and incentives to be attached to the roles and results, with sanctions for none performance clearly spelt out; for example home visits, TB patient drop out recovered or follow up for family planning.
   - Incentives to be attached to these roles and reimbursed as PBF output indicators
   - Operational research to be conducted to make the indicator context specific
   - A voucher scheme to be part of the CP-PBF design as a demand side strategy as seen from other countries where community PBF has been implemented to offer vouchers or referral notes using CCT through community members

B. Recommendations for health workers

- Health workers should facilitate availability of accurate data for sampling of community members
- Health workers should supply adequate services to meet the demand that will be generated from lower levels
- Health workers to facilitate payment of incentives to CHWs who refer clients

C. Recommendations for community members

- Through an independent CBO, community members not attached to health facilities to be contracted to conduct verification of results to ensure objectivity in the

monitoring of the service, a short route to accountability in order to enhance the ability of the population to complain or affect the income of service providers through accountability to users (Molyneux et al. 2012 & Standing 2004)

- Community members to be involved in selecting or approving recipients of incentives by identifying the vulnerable in their communities to access cheaper services using vouchers.
- Use existing community structures such as NHCC to conduct social mobilization. In Cambodia a similar approach was undertaken, which showed positive results. Context is different but it may still be applicable (Ibid)

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Annex 1: RBF Intervention (RBFI) and Control (C) Districts by Province and Total Population(Mkandawire et al. 2014)

Province	RBFI	Population	C1	Population	C2	Population
Central	Mumbwa	226,171	Kapiri Mposhi	253,786	Chibombo	303,519
Copperbelt	Lufwanyama	78,503	Masaiti	103,857	Mpongwe	93,380
Eastern	Lundazi	323,870	Nyimba	85,025	Chadiza	107,327
Luapula	Mwense	119,841	Kawambwa	134,414	Milenge	43,337
Northern	Mporokoso	98,842	Chilubi	81,248	Chinsali	146,518
	Isoka	72,189	Nakonde	119,708	Mpulungu	98,073
North-Western	Mufumbwe	58,062	Mwinilunga	104,317	Chavuma	35,041
Southern	Siavonga	90,213	Namwala	102,866	Mazabuka	230,972
	Gwembe	53,117	Itezhi-tezhi	68,599	Kazungula	104,731
Western	Senanga	126,506	Kalabo	128,904	Shangombo	93,303
TOTAL		**1,247,314**		**1,182,724**		**1,256,201**
Eastern	Katete	243,849				
TOTAL		**1,491,163**				

Annex 2: Research questions

1. What contribution is relevant and appropriate of community involvement in PBF, what is effective?
2. How can PBF improve community participation in Zambia
   - What role has been defined for communities in the seven program and design features in PBF, and for what reason What were the aims, what were they meant to do and why
   - In practice, how did it work
   - Who was involved, how, in what, how did this participation work, how did it contribute
   - What were the advantages or constraints
3. General or other experiences
   - Why should communities be involved in PBF experiences
   - What is expected of CP, what is the aim of CP in PBF
   - How can we justify their participation in PBF
   - What is the evidence that CP is beneficial?
   - Who should be involved to represent the community
   - How should they be involved
   - In what should they be involved in
   - What role do communities have in PBF
4. What Conclusions and recommendations can be drawn from the evidence?
   - How to increase community participation in PBF through governance of HF, health services or social accountability?
   - How to measure community participation

Annex 3: PBF Framework

Strategic purchasing: may apply to all levels of the health system. Implies determining what to purchase, from whom, for whom and by how much to enable purchasers change PBF indicator fees regularly based on budget and choice, for underprovided or underutilized services at community or health facility level. It entails purchasing well-defined basic and complementary packages through PBF. Services bought should provide "value for money" and cost less per life saved (cost effective). Purchasers must be careful in selecting services by analyzing and buying into government priorities or for example when coverage of specific services is high, purchasing quality of care (Gyorgy Bela Fritsche, Robert Soeters 2014 & Toonen et al. 2012)

Health Facility (HF) Level

Key behavioral attributes: involves understanding incentives awarded, amounts and other design features. Expectancy is individual's belief that activities they do will achieve results. Valence on the other hand is the belief that incentives are valuable enough to inspire change. 'Buy in' is perception of fairness in terms of belief in program features and fairness in design and implementation.

Program design and implementation

1. Contract with PBF indicators: A governance instrument clarifying roles, services available, fees and rules for verification and payments for performance. Examples include health facility contracts, individual health worker and SC member's contracts (Gyorgy Bela Fritsche, Robert Soeters 2015 & Toonen et al. 2012).

2. Autonomy of health facilities in PBF is key. There must be enough resources (user fees, incentives, grants, HR) and freedom to manage resources to increase quantity and quality of services through procurement, repairs or managing of facility accounts. Facilities should be able to hire, fire, discipline staff or control clinic-opening hours to improve outputs. They must also be able to manage and report income and expenditure in a systematic and transparent way (Toonen et al. 2009, Gyorgy Bela Fritsche, Robert Soeters 2015 & Toonen et al. 2012).

3. Performance payment: looks at size and frequency of payment, distribution mechanism, individual or facility levels and additional resources. A predictable regular payment cycle must be in place.

4. Capacity building: looks at providing support for performance-enabling strategies like skill enhancement, technical competence and organizational frameworks. It may entail coaching, supervision and intersectoral forums for planning and decentralization. It can also be through providing equipment, staff or incentives.

Health system level
Program design and verification
5. Data reporting and Verification: data reporting involves the collecting, compiling, managing, analyzing, and use of data by stakeholders to increase availability of quality, valuable, timely and accurate data for better decision making (WHO 2011 & WHO 2008).

Verification is important in PBF to limit neglect of none incentivized indicators. Other risks include reduction in quality care, transfer of patients and manipulation of data (gaming) (Borghi et al. 2013) Verification is cross cutting to the health system and community level in the framework.

It must be separated from supervision, preferably conducted by separate teams as it is summative in nature, "involving periodic collecting, interpreting, or acting on information through assigning scores or levels of performance (quantity or quality). Supervision on the other hand is formative as it not used to assign marks but may engage an individual in the learning process so they know what and how to improve" (Ruiz-Primo & Furtak 2006, Kubi 2016 & Toonen et al. 2012).

There must be separation of verification function from purchasing, fund holding, provision, regulation and community feedback on quality of services to ensure objectivity and reduce cheating. It may be done ex ante (monthly performance checks of primary registers and patient cards for legibility, correctness, to prepare a provisional invoice) or ex post (**counter verification**) after payment is made to check if intended people benefitted, and level of client satisfaction (Gyorgy Bela Fritsche, Robert Soeters 2015, Toonen et al. 2009 & Meessen et al. 2011)

7. Supervision: may be measured and rewarded through applying checklists, coordination, capacity building and management of PBF systems. Rewards for supervision must be enough for performance payments and costs, and informed by continuous M&E. There must be clear sanctions for not following rules (disincentives) (Gyorgy Bela Fritsche, Robert Soeters 2014)

Community Level: All health sector activities are ideally for community benefit. The system must therefore place people at center of decision-making and be responsive to there needs. When combined with external determinants, CP influences PBF approaches and outcomes, through regular feedback (client satisfaction surveys), checks on accountability and quality of care delivered by providers to improve reliability of measurements of indicators (Toonen et al. 2009, Ministry of Health 2014, WHO 2015, WHO 2002 & WHO 2008).

Organizational and behavioral changes: strategic purchasing of indicators across all levels, combined with key behavioral attributes and program design elements at HC level should lead to clarity of priorities, autonomy in resource allocation and increase in incentive and productive staff. This should lead to increase in coverage of patients, client friendliness in facilities and transparency as well as accountability through data use in decision-making.

Behavioral changes: include motivation, morale or teamwork and collaboration between health professionals and stakeholders. May also involve improved communication, awareness, perceived control and demand for knowledge by stakeholders

Interaction of all these elements with the health system should lead to availability and delivery of **quality** services; increased **demand** and **utilization** of healthcare, hence improved health **outcomes**.

Annex 3: Drugs supplied by MSL to PBFI and control districts
Medicine and commodities in PBF districts supplied by Medical Stores Limited before and after PBF per capita were at $ 1.33, $2.59 and $2.17 respectively in PBF intervening, control 1 and 2 districts. They increased to $3.05, $3.98 and $3.33 respectively during the project period. PBFI district showed the largest increase indicating better preparedness of centers.

Annex 4: Killing assumptions in the PBF project design and how to tackle them

Conditions that may have made Zambian PBF pilot not be too efficient. They are necessary to know to improve the design of the program.

- Authorities did not separate functions of provision, regulation and contract development & verification. PIU was part of MOH, PBF TS's were stationed at PMO, reporting to medical officer; CDV role was performed by PIU not separated from regulation and no CBO contracted to conduct community verification

- Facilities depended on central distribution for their inputs (essential drugs, equipment) they were able to purchase minimal equipment and supplies like BP machines but generally MSL had monopoly e.g. EmONC equipment
- They were only 9 indicators
- There was no hospital PBF in place to purchase referral indicators

The underlying reasons for the killing assumptions may be the following:

- The project administrative costs were too high may have been due to large geographical size of the country, difficulties in terrain
- Government officials, NGO's may have been reluctant to trust health centres with autonomy to purchase essential drugs
- Policy makers are weary of changing existing systems before they are sure of project results. For example procurement or administrative procedures

Annex 5: PBF Basic characteristics:

1	Separate the functions of regulation, provision, fund disbursement, contract development & verification and community empowerment;
2	Stimulate competition for contracts among facilities and other stakeholders;
3	Promote public-private partnerships with equal treatment of public, religious and private providers;
4	The regulator at national, regional and district level defines output, quality and equity indicators. They cost public budget with equity bonuses for vulnerable regions, facilities and individuals. They interfere when facility is a danger to public health, or is engaged in criminal activities.
5	Providers are autonomous to hire and fire, set user fees and respond to government defined packages and patient or consumer demand;
6	Providers assure that revenues and expenditures are balanced while providing quality and equitable services with motivated staff at the risk of non-renewal of contract and bankruptcy;
7	CDV agencies negotiate contracts, verify results and coach managers to use business plans and indices instruments; the subsidy payments are done by a different organization.
8	Local community groups enhance patient interests and health facilities conduct social marketing;
9	Promote efficiency and cost containment, CDV agencies and government pay cash or (bank transfers) instead of inputs in kind. Facilities have free choice to purchase inputs from independent distributors in competition;
10	Seek economic multiplier effects to generate employment, economic growth and tax revenues by deliberately injecting cash into the local economy;
11	Extend the PBF system towards other sectors than health.

Source (Soeters 2015)

Annex 6 Feasibility scan

Feasibility scan (Fritsche G, Soeters R 2015) showing how far some elements that were part of the design. It is by no means

prescriptive or the only way to design a PBF project, of particular interest is criteria are 4, 13 and 19

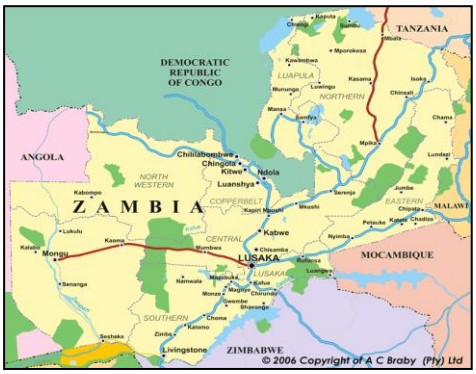
Feasibility criteria how far Zambian programme was "PBF"		**Points**
1. PBF program budget is not less than $ 4 (simple intervention) - $ 6 (more complex intervention with many equity elements) per capita per year of which at least 70% is used for provider subsidies, local NGO contracts and infrastructure input units	General	3
2. The PBF project has at least 25 output indicators for which facilities receive subsidies and a system of composite quality indicators with incentives	General	2
3. The PBF program finances the full health centre and hospital health packages and is not restricted to a limited number of vertical program activities	General	2
4. The PBF program contains the community indicator "visit to household following a protocol" to be applied by all primary level principal contract holders.	General	0
5. The project includes (or is part of) baseline and evaluation household and quality studies that establish priorities and allow measuring progress	General	5
6. Cost recovery revenues are spent at the point of collection (facility level)	Provider	0
7. Provider managers have the right to decide where to buy their inputs	Provider	2
8. The project introduces the business plan	Provider	5
9. The project introduces the indices tool for autonomous management	Provider	5
10. CDV agencies sign contracts directly with the daily managers of the providers – not with the indirect owners such as a religious leader or private person.	Provider	5
11. Provider managers are allowed to influence cost sharing tariffs	Provider	0
12. Provider managers have the right to hire and fire	Provider	1
13. There is a CDV Agency that is independent of the local authorities with enough staff to conduct contracting, coaching and medical & community verification.	CDV Agency	1
14. There is clear separation between the contracting and verification tasks of the CDV agency and the payment function	Payment Agency	2
15. CDV agents accept the promotion of the full government determined packages (this in Africa mostly concerns discussions about family planning)	CDV Agency	3
16. The PBF system has infrastructure & equipment investment units, which are paid against achieved benchmarks based on agreed business plans	CDV Agency	0
17. Public religious and private providers have an equal chance of obtaining a contract	CDV Ag	0
18. There are geographic and/or facility specific equity bonuses	Equity	5
19. The project provides equity bonuses for vulnerable people	Equity	0
TOTAL		**41%**

Source table (Soeters 2015), score is based on my experience in Zambia

Annex 6: Contract between District Health Management Team and Health facility

Republic of Zambia
Ministry of Health

PERFORMANCE BASED FINANCING (PBF) CONTRACT BETWEEN DISTRICT HEALTH MANAGEMENT TEAM AND HEALTH FACILITY



Between Purchaser:

DHMT of the District: …….

Represented by District Director of Health:

Mrs. /Mr…… (On behalf of Ministry of Health):

On the one hand,

And

Provider: .....Health Centre

Represented by: Mrs. / Mr. ……..... Health Centre Team Leader

Mrs. / Mr.: ……Health Center Chair Person
On other hand;

It is freely agreed as below:

Article I: Principles of the Performance Based Financing

This contract of performance between the Ministry for Health and the Health center has the aim of increasing the use of the basic services of quality by the population. All of that by reinforcing the financial incentives for the teams of the health centers and by increasing their decisional rights on the organization of their own operations.
The strategy of performance based financing lies within the scope of the national policies of health and reduction of poverty.

The Performance based Financing does not replace the other strategies of reinforcement of the health system. It is articulated on these strategies and seeks the harmony. It is discounted that the Performance Based Financing will improve the general environment of work of the teams, including their technical capacity. It is thus expected that the Performance Based Financing will contribute positively to the quality of the care.

The Ministry for Health reserves the right to amend the formula of its support for the health centers to the expiry of this contract.

Article II: Nature of this agreement
This Contract establishes the mutual obligations of the Ministry for Health and the Health center signatory within the framework of the strategy of Performance Based Financing.

Article III: Contract type and amount of bonus
This is a fee-for-service contract with performance payments based on the number of interventions delivered. The payment will be a team bonus, which will be divided among individual health facility staff based on a graduated salary scale. The health facility will also receive an additional 25% of the total amount earned for reinvestment towards activities that contribute directly to attainment of performance targets.

Engagements of the Committee of Health and the Team Leader of the Health center for the entry in the Performance Based Financing strategy
Under the present contract, the Health center is represented by the health center chairperson and the Team Leader. The Committee of health must take care that the funds generated by PBF are managed in the general interest of the health center. These incomes must be used to implement initiatives likely to contribute to the best of public health.

The health center Chairperson and the Team Leader undertake:
1. To develop the strategies to be implemented by the team of the Health center to achieve the goals aimed by the Performance Based Financing;
2. Not to undertake actions in contradiction with the national policy of health and the medical ethics;
3. To inform the DHMT Direction of any change in the equipment and the technical skills of the health center, which could put in danger its technical capability to produce the activities, remunerated by the strategy of Performance Based Financing;
4. To ensure availability of the registers of activities and various management tools;

5. To make sure that all necessary documents are accessible to interested parties for the execution of the contract;
6. To report any fraud committed at the health center to Steering committee (By writing to the representatives of the Health centers, and District Director of Health) on behalf of any person in responsibility of control of the activity;
7. To be completely transparent regarding the share and use of funds generated by the Performance Based Financing and in accordance with the Motivation Contract;
8. To take sanctions against individuals responsible for professional misconduct;
9. Not to pay bonuses which is higher to an individual as fixed by the Ministry of Health
10. To allocate a minimum of 25% of the total revenues of the Performance Based Financing for the expenditure in the operation costs except remuneration and trainings;
11. To support the Community actors to carry out their own strategies of the Performance Based Financing;
12. In the event of litigation in the execution of this contract, the Health Team Leader and chairperson will lodge a complaint with the Steering committee through their representative

Representation of the Health center in the Steering committee
The Health centers of the district will be represented at the Steering committee by zonal Team Leaders

Article IV: Payment schedule
The PBF District Steering Committee shall validate the facility's performance against the indicators specified in the performance payment plan in Article **VI** on a quarterly basis. The Committee bases the award amount the facility may earn on the scores attained in both the quantity and quality audits.

Article V: Reporting requirements
The DHMT shall collect all records and the provisional invoice to the District Health Information Officer for reconciliation by the 7th day of the month following the end of each quarter.

Article VI: Mode of payment
Bonuses will be paid to the health facility no later than 45 days after the quarter in which they were earned. Performance payments will be paid out as team bonuses in the form of a cheque to the health facility. The end amount will be deposited into the Health Facility Bank Account.
At the end of each quarter, the achievement of indicators described in article on the annex 3 will be assessed and verified. The awarded fee will thus reflect the total number of interventions delivered in a given quarter.

Article VII: Payment calculations
The quarterly payment is determined by two factors:
Quantity audit: Before 7th day of the following month, members of the DHMT will review the entries in the designated registers and compare it to the numbers recorded during their self assessment and make monthly provisional invoice.

Qual audit: Each indicator will be assessed once a quarter by the Hospital contracted by the DHMT to conduct quality audit that will be factored into the payment. This is to ensure that the services delivered met the agreed upon quality standards.
The payment will therefore be calculated as follows: Quantity earned*Quality score = quarterly incentive payment.

Justification of the use of the receipts of the Financing Based on the Performance
The use of the funds earned with the Performance Based Financing strategy is with discretion of the health center committee within the limits fixed in Article **III** of this contract. Against this background the health center in charge, should ensure that all documents are well secured.
All payments made to staff and other beneficiaries should be clearly signed or thumb printed.

Article VIII: External validation
A third party will be contracted to verify quality of reporting and quality of HMIS data being collected at DHMT and facility levels. Random spot checks will be carried out down to household level on a periodic basis for verification of results. The DHMT and Health Facility will grant full access to relevant records as requested.

Misreporting
If any irregularities are discovered in subsequent periods, bonuses must be repaid and all missing money must be returned. Irregularities include items such as stealing, or falsification of records. Subsequently, the health facility will be barred from the incentive scheme for a period of 12 months.

Article IX: Business Plan
The health centre will submit the Business Plan for twelve months (see format appendix 5) within three months after signing this contract.
Business plan specifies the strategies to be implemented to increase the quantity and the quality of the services.
This plan will indicate the essential resources (human, material and financial) to achieve the business plan of and to reach the objectives.
The Health centre Business Plan approved by the DHMT is an integral part of this contract. The absence or the non-observance of the Business Plan will involve the cancellation of this Health centre Performance Based Financing Contract

Article X: Non-incentivized indicators
During the implementation of PBF, the health facility agrees to participate in the "target-based cluster group". If the non-incentivized indicators fall below 80 percent of the expected trend (based on historical data) at any time during this period, the Facility agrees to meet with the DHMT to discuss the situation and define corrective measures. If the downward trend continues, the DHMT reserves the right to nullify this contract. The Facility agrees to participate in all organized PBF technical assistance and capacity building activities.
Done in duplicate at …….. On ……/……/2010

For Ministry of health, District Director of Health of the district of……

Mrs. / Mr.: ……....

And

Chairperson of District PBF Steering Committee (District Council Secretary)

Mrs. /Mr.: …….

For Health Center of ……

Team Leader of Health Centre:

(*Name, Signature and stamp of HC*)……

Health center Chair Person:

(*Name & Signature)*……